

**PRESEASON REPORT I**  
**STOCK ABUNDANCE ANALYSIS**  
**AND**  
**ENVIRONMENTAL ASSESSMENT PART 1**  
**FOR 2011 OCEAN SALMON FISHERY**  
**REGULATIONS**



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## LIST OF ACRONYMS AND ABBREVIATIONS

BY	brood year
CDFG	California Department of Fish and Game
CoTC	Coho Technical Committee (of the PSC)
Council	Pacific Fishery Management Council
CRFMP	Columbia River Fishery Management Plan
CVI	Central Valley Index
CWT	coded-wire tag
EA	Environmental Assessment
EEZ	exclusive economic zone (from 3-200 miles from shore)
EIS	Environmental Impact Statement
EMAP	Environmental Monitoring and Assessment Program
ESA	Endangered Species Act
ESU	evolutionarily significant unit
FMP	fishery management plan
FONSI	Finding of No Significant Impacts
FRAM	Fishery Regulatory Assessment Model
GAM	generalized additive models
ISBM	individual stock-based management
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 Horse Mountain where management emphasis is on Klamath River fall Chinook)
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 brights (bright hatchery fall Chinook released below McNary Dam)
MOC	mid Oregon coast
MSM	mixed stock model
MSA	Magnuson-Stevens Act
MSY	maximum sustainable yield
NA	not available
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOC	north Oregon coast
OCN	Oregon coast natural (coho)
OCNL	Oregon coast natural lake (coho)
OCNR	Oregon coast natural river (coho)
ODFW	Oregon Department of Fish and Wildlife
OPI	Oregon Production Index (coho salmon stock index south of Leadbetter Point)
OPIH	Oregon Production Index public hatchery

## LIST OF ACRONYMS AND ABBREVIATIONS (continued)

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)
SAB	Select Area brights
SCH	Spring Creek Hatchery (tule fall Chinook returning to Spring Creek Hatchery)
SHM	Sacramento Harvest Model
SI	Sacramento Index
SJF	Strait of Juan de Fuca
SOC	south Oregon Coast
SRFC	Sacramento River fall Chinook
SRS	Stratified Random Sampling
STEP	Salmon Trout Enhancement Program
STT	Salmon Technical Team (formerly the Salmon Plan Development Team)
TAC	Technical Advisory Committee ( <i>U.S. v. Oregon</i> )
URB	upper river brights (naturally spawning bright fall Chinook normally 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 salmon fishery management off the coasts of Washington, Oregon, and California. The 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) with established National Marine Fisheries Service (NMFS) ESA consultation standards. This report will be formally reviewed at the Council's March meeting.

This report provides 2011 salmon stock abundance forecasts, and an analysis of the impacts of 2010 management measures, or regulatory procedures, on the projected 2011 abundance. This analysis is intended to give perspective in developing 2011 management measures. This report also constitutes the first part of an Environmental Assessment (EA) to comply with National Environmental Policy Act (NEPA) requirements for the 2011 ocean salmon management measures. An EA is used to determine whether an action being considered by a Federal agency has significant impacts. This part of the EA includes a statement of the purpose and need, a summary description of the affected environment, a description of the No-Action Alternative, and an analysis of the No-Action Alternative effects on the salmon stocks included in the Council's Salmon Fishery management Plan (FMP).

The STT and Council staff 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 measures: Preseason Report II and Preseason Report III. These reports will analyze the impacts of the Council's proposed alternatives and adopted fishery management recommendations. Preseason Report II will constitute the second and final part of the EA, and will include a description of the affected environment relevant to the alternatives management measures considered for 2011 ocean salmon fisheries, a description of the alternatives, and an analysis of the environmental consequences of the alternatives. Preseason Report II will analyze the potential impacts of a reasonable range of alternatives, which will inform the final fishery management measures included in Preseason Report III. Together, these two parts of the EA will provide the necessary components to determine if a finding of no significant impact (FONSI) or Environmental Impact Statement (EIS) is warranted.

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 2010 regulations applied to 2011 abundance forecasts. Three 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 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, implementation of the 2011 ocean salmon fishery management measures, is to allow fisheries to harvest surplus production of healthy natural and hatchery salmon stocks within the constraints specified under the Salmon FMP, the Pacific Salmon Treaty (PST), and consultation standards established for ESA listed salmon stocks. In achieving this goal, management measures must take into account the allocation of harvest among different user groups and port areas. The Salmon FMP also establishes nine more general harvest-related objectives:

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

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

Implementation of 2011 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 consultation standards established for ESA-listed salmon stocks.

### *STT Concerns*

Forecast values of the Sacramento Index (SI) exceeded their postseason estimates in both 2009 and 2010. The SI is a combined-age index of adult SRFC ocean abundance, composed primarily of age-3 and age-4 fish. The current forecast model uses escapement of jacks in one year to predict the SI in the following year because of data limitations for this stock. Yet the escapement of jacks only conveys information about the 3-year-old component of the SI in the following year. In years when a strong cohort follows a

weak cohort, the 3-year-old component of the SI should comprise a larger portion of the SI than it did on average during the historic period for which data are available. This means that there is a potential for the SI forecast to be biased high in years when the strength of successive cohorts is increasing.

The 2011 SI forecast has been made under similar conditions as the 2009 and 2010 forecasts, with jack escapement used in making the forecast exceeding jack escapement in the preceding year. Hence there is potential for the 2011 SI forecast to be biased high.

Age-specific escapement and river harvest data can enable the formulation of age-specific abundance forecasts, which will likely reduce the bias associated with forecasting a combined-age index with information from a single year class. The STT strongly encourages the continued development of coded-wire tag (CWT) collection and scale ageing programs in the Sacramento Basin, which will help address some of these concerns.

## CHAPTER I: DESCRIPTION OF THE AFFECTED ENVIRONMENT

The affected environment relevant to establishing the 2011 ocean salmon fishery management measures consists of the following components:

- Target Species – Chinook, coho, and pink salmon
- ESA-listed salmon stocks
- Socioeconomic aspects of coastal communities, federally recognized Tribes, and states

A description of the historical baseline for these components of the affected environment is presented in the Review of 2010 Ocean Salmon Fisheries (PFMC 2011). The current status (2011 ocean abundance forecasts) of the environmental components expected to be affected by the 2011 ocean salmon fisheries regulation alternatives (FMP salmon stocks) are described in this report (Part 1 of the 2011 salmon EA); the Review of 2010 Ocean Salmon Fisheries (STT 2011) provides an 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.

Several components of the environment were determined to not be significantly affected by the proposed actions based on previous NEPA analyses and ESA consultations; they were therefore excluded from further analysis in this EA. These components included:

- Non-target species – Pacific Halibut, groundfish (NMFS 2003, PFMC 2006)
- Marine mammals – pinnipeds, killer whales (NMFS 2003, PFMC 2006, NMFS 2008)
- Seabirds (NMFS 2003, PFMC 2006)
- Ocean and coastal habitats, ESA critical habitat, and essential fish habitat (NMFS 2003, PFMC 2006)
- Biodiversity and ecosystem function (NMFS 2003, PFMC 2006)
- Unique characteristics of the geographic area (NMFS 2003, PFMC 2006)
- Cultural, scientific, or historical resources such as those eligible for listing in the National Register of Historic Places (NMFS 2003, PFMC 2006)
- Public health or safety (NMFS 2003, PFMC 2006)

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 was implemented, which would fail to meet the purpose and need described above. The analysis of the No-Action Alternative does, however, provide perspective that is useful in the planning process for 2011 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 (previously termed “management options”) to the status-quo management measures.

The component of the affected environment that is analyzed in this document consists only of the salmon stocks identified in the FMP (Appendix A). The 2011 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 and the proportion of the stock that succumbs to fishing related mortality is generally referred to as the exploitation rate; 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 2011 ocean salmon fishery regulation alternatives, including socioeconomic components and updated additional information on the biological components of the environment, will be presented in the Preseason Report II, to be issued after the March Council meeting.



## ***ABUNDANCE FORECASTS***

Abundance forecasts in 2011 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 I-1 and I-2. More detailed analyses of this subject are covered in Chapter II (Chinook) and III (coho). Information on pink salmon abundance and forecasts, which are only significant in odd-numbered years, is contained in Chapter IV. Council Salmon Fishery Management Plan (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 2011 ocean salmon fishing seasons may be constrained by other stocks, such as those listed under the ESA or subject to the PSC agreement, 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): Sacramento River Winter, Central Valley Spring, California Coastal, Lower Columbia River (LCR) natural tule, and Snake River Fall Chinook; and Central California and Southern Oregon/Northern California coho, as well as Interior Fraser (including Thompson River) coho.

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 1 of 4)

Production Source and Stock or Stock Group	2003	2004	2005	2006	2007	2008	2009	2010	2011	Methodology for 2011 Prediction and Source
<b>Sacramento Index</b>										
Fall	-	-	-	-	-	54.6 <sup>a/</sup>	122.2	245.5	729.9	Linear regression analysis of jack escapement on SI of the following year. STT
<b>Klamath River (Ocean Abundance)</b>										
Fall	310.2	216.3	239.8	110.0	546.2	190.7	505.7	331.5	371.1	Linear regression analysis of age-specific ocean abundance estimates on river runs of same cohort. STT.
<b>Oregon Coast</b>										
North and South/Local Migrating										None.
<b>Columbia River (Ocean Escapement)</b>										
Upriver Spring	145.4	360.7	254.1 <sup>b/</sup>	88.4	78.5	269.3	298.9	470.0	198.4	Age-specific linear regressions of cohort returns in previous run years. WDFW staff.
Willamette Spring	109.8	109.4	116.9	46.5	52.0	34.0	37.6	62.7	104.1	Age-specific linear regressions of cohort returns in previous run years. ODFW staff.
Sandy Spring	4.8	5.2	7.4	8.2	7.9	6.8	5.2	3.7	5.5	Recent year average. ODFW staff.
Cowlitz Spring	4.9	15.9	12.7	3.0	6.4	5.2	4.1	12.5	6.6	Age-specific linear regressions of cohort returns in previous run years. WDFW.
Kalama Spring	3.6	6.0	4.5	1.5	4.0	3.7	0.9	0.9	0.6	Age-specific linear regressions of cohort returns in previous run years. WDFW.
Lewis Spring	3.1	5.4	7.6	1.8	5.9	3.5	2.2	6.0	3.4	Age-specific linear regressions of cohort returns in previous run years. WDFW.
Upriver Summer	87.6	102.8	62.4 <sup>b/</sup>	49.0	45.6	52.0	70.7	88.8	91.9	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW
URB Fall	280.4	292.2	352.2	253.9	182.4	162.5	259.9	310.8	398.2	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW
SCH Fall	96.9	138.0	114.1	50.0	21.8	87.2	59.3	169.0	116.4	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW
LRW Fall	24.6	24.1	20.2	16.6	10.1	3.8	8.5	9.7	12.5	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW
LRH Fall	115.9	77.1	74.1	55.8	54.9	59.0	88.8	90.6	133.5	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW
MCB Fall	104.8	90.4	89.4	88.3	68.0	54.0	94.5	72.6	100.0	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 2 of 4)

Production Source and Stock or Stock Group		2003	2004	2005	2006	2007	2008	2009	2010	2011	Methodology for 2011 Prediction and Source
Washington Coast (Ocean Escapement)											
Willapa Bay Fall	Natural	2.4	4.1	3.2	2.0	2.0	2.5	2.0	2.0	2.0	Based on average 1999-2007 returns/spawner applied to Brood Years 2005-2008. WDFW Based on average 1998-2007 returns/release applied to Brood Years 2005-2008, adjusted by model performance. WDFW
	Hatchery	14.2	14.7	17.4	29.8	29.8	27.0	34.8	31.1	31.1	
Quinalt Spring/Summer	Natural	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Quinalt Fall	Natural	2.0	2.2	3.9	8.7	7.3	3.7	6.9	7.6	NA	Return per spawner by age with a 5 year adjusted average adjusted with brood year sibling return. Recent 5 year average return per spawner
	Hatchery	1.0	2.9	6.2	7.3	8.7	1.3	7.8	5.5	NA	
Queets Spring/Summer	Natural	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	NA	Recent 5 year average
Queets Fall	Natural	4.5	4.4	4.3	3.5	2.6	3.5	4.5	4.1	NA	Return per spawner by age with a 5 year adjusted average adjusted with brood year sibling return. Recent 5 year average return per spawner
	Hatchery	0.4	0.7	1.2	1.4	1.5	7.0	1.2	9.8	NA	
Hoh Spring/Summer	Natural	1.9	1.5	1.5	1.4	1.6	0.9	1.1	0.8	1.0	Forecast from returns per spawner using recent 5 year mean.
Hoh Fall	Natural	3.1	4.2	3.8	4.0	2.7	2.9	2.6	3.3	2.9	Forecast from returns per spawner using recent 5 year mean.
Quillayute Spring	Hatchery	1.0	1.4	1.2	1.7	1.3	1.7	2.0	1.5	1.4	Mean return per release using most recent 4 years, 5 year adjusted means for age-5 and age-6.
Quillayute Summer/Fall	Natural	7.4	7.8	6.7	6.8	7.7	6.0	6.8	7.5	8.8	Summer: Recent 5 year mean return per spawner. Fall: Returns per spawner mean recent 5 years.
North Coast Totals											
Spring/Summer	Natural	2.4	1.9	2.0	1.9	2.0	1.3	1.5	1.2	NA	
Fall	Natural	17.0	18.6	18.7	23.0	20.3	16.1	20.8	22.5	NA	
Spring/Summer	Hatchery	1.0	1.4	1.2	1.7	1.3	1.7	2.0	1.5	1.4	
Fall	Hatchery	1.4	3.6	7.4	8.7	10.2	8.3	9.0	15.3	NA	
Puget Sound summer/fall <sup>c/</sup>											
Nooksack/Samish	Hatchery	45.8	34.2	19.5	16.9	18.8	35.3	23.0	30.3	37.5	Brood release times average return/release rate (2007-2009 return years).
East Sound Bay	Hatchery	1.6	0.8	0.4	0.4	0.4	0.8	0.1	2.3	0.4	Brood release times 50% average return/release rate (2006 - 2009 return years)for Nooksack/Samish.
Skagit	Natural	13.7 <sup>d/</sup>	20.4 <sup>d/</sup>	23.4 <sup>d/</sup>	24.1 <sup>d/</sup>	15.0 <sup>d/</sup>	23.8 <sup>d/</sup>	23.4 <sup>d/</sup>	13.0 <sup>d/</sup>	14.3 <sup>d/</sup>	Adjusted age-specific average return rate per spawner.
	Hatchery	0.0 <sup>d/</sup>	0.5 <sup>d/</sup>	0.7 <sup>d/</sup>	0.6 <sup>d/</sup>	1.1 <sup>d/</sup>	0.7 <sup>d/</sup>	0.6 <sup>d/</sup>	0.9 <sup>d/</sup>	1.5 <sup>d/</sup>	Age-specific average return rate per smolt and appropriate year smolt releases.

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 3 of 4)

Production Source and Stock or Stock Group		2003	2004	2005	2006	2007	2008	2009	2010	2011	Methodology for 2011 Prediction and Source
Stillaguamish	Natural	2.0 <sup>e/</sup>	3.3 <sup>e/</sup>	2.0 <sup>e/</sup>	1.6 <sup>e/</sup>	1.9 <sup>e/</sup>	1.1 <sup>e/</sup>	1.7 <sup>e/</sup>	1.4 <sup>e/</sup>	1.8 <sup>e/</sup>	Natural plus supplemental production from average of FRAM CWT reconstruction and an independent environmental model to link to return rates of specific age classes. FRAM CWT reconstruction uses BY 1993-2003 tagged fish survival rates for supplemental forecast, and BY 1986-1993 recruits/spawner for the natural return.
Snohomish	Natural	5.5 <sup>e/</sup>	15.7 <sup>e/</sup>	14.2 <sup>e/</sup>	8.7 <sup>e/</sup>	12.3 <sup>e/</sup>	6.5 <sup>e/</sup>	8.4 <sup>e/</sup>	9.9 <sup>e/</sup>	7.4 <sup>e/</sup>	Recent year average brood recruits/spawner applied to the 2006-2009 parent escapements. Hatchery forecasts based on average CWT survival rates (yearlings: BY 1996-97; fingerlings: BY 2000-2003) from Wallace Hatchery applied to releases.
	Hatchery	9.4 <sup>e/</sup>	10.1 <sup>e/</sup>	9.9 <sup>e/</sup>	9.6 <sup>e/</sup>	8.7 <sup>e/</sup>	8.8 <sup>e/</sup>	4.9 <sup>e/</sup>	5.6 <sup>e/</sup>	5.2 <sup>e/</sup>	Yearlings based on CWT groups for Wallace Hatchery (BYs 1987 and 1992-1996). Fingerlings based on survival estimate from Tulalip Hatchery 1998-2003.
Tulalip	Hatchery	6.0 <sup>e/</sup>	7.6 <sup>e/</sup>	9.2 <sup>e/</sup>	10.0 <sup>e/</sup>	8.1 <sup>e/</sup>	4.1 <sup>e/</sup>	4.0 <sup>e/</sup>	3.4 <sup>e/</sup>	3.5 <sup>e/</sup>	CWT survival rates (1998-2003) multiplied by release numbers for brood years 2006-2009.
South Puget Sound	Natural	19.6	17.5	17.7	21.3	17.0	21.1	17.2	12.7	8.9	Puyallup R. recent five year average return per spawner applied to brood years contributing ages 3-6. For Nisqually, recent 5 year average (2004-2009 return years) of run sizes. Green R. spawning escapement in terms of natural origin adults.
	Hatchery	86.6	86.5	83.1	85.8	92.1	101.3	93.0	97.4	118.6	Average return at age multiplied by cohort release for Green, Carr Inlet, and Area 10E. Nisqually based on return rates/release for age-3 -5.
Hood Canal	Natural	3.6 <sup>d/</sup>	2.4 <sup>d/</sup>	3.1 <sup>d/</sup>	2.5 <sup>d/</sup>	3.8 <sup>d/</sup>	2.6 <sup>d/</sup>	2.5 <sup>d/</sup>	2.4 <sup>d/</sup>	2.2 <sup>d/</sup>	Natural fish based on the Hood Canal terminal run reconstruction-based relative contribution of the individual Hood Canal management units in the 2007-2010 return years.
	Hatchery	30.2 <sup>d/</sup>	27.2 <sup>d/</sup>	27.5 <sup>d/</sup>	27.7 <sup>d/</sup>	43.6 <sup>d/</sup>	34.2 <sup>d/</sup>	40.1 <sup>d/</sup>	42.6 <sup>d/</sup>	38.4 <sup>d/</sup>	Brood 2007 fingerling lbs released from WDFW facilities in 2008, multiplied by the average of postseason estimated terminal area return rates (total terminal run / hatchery fingerling lbs released three years previous) for the last four return years (2007-2010).
Hoko	Natural	-	-	-	-	-	1.1 <sup>e/</sup>	1 <sup>e/</sup>	1.8 <sup>e/</sup>	0.6 <sup>e/</sup>	Sibling regressions.
Strait of Juan de Fuca Including Dungeness spring run	Natural	3.4 <sup>d/</sup>	3.6 <sup>d/</sup>	4.2 <sup>d/</sup>	4.2 <sup>d/</sup>	4.4 <sup>d/</sup>	3.2 <sup>d/</sup>	2.4 <sup>d/</sup>	1.9 <sup>d/</sup>	2.5 <sup>d/</sup>	Dungeness and Elwha hatchery estimated by four-year average releases times average return rates. Dungeness wild estimated by smolts times average hatchery return rate. Elwha estimate separates hatchery and wild fish based on otolith sampling.
	Hatchery	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Hatchery production included in naturals.

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 4 of 4)

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- a/ Does not include the river harvest component. SI forecasts after 2008 include river harvest.
- b/ Beginning in 2005, the upriver spring/summer designation was changed, with stream type Snake Basin summer fish being combined with the spring stock.
- c/ Unless otherwise noted, forecasts are for Puget Sound run size (4B) available to U.S. net fisheries. Does not include fish caught in troll and recreational fisheries.
- d/ Terminal run forecast.
- e/ Expected spawning escapement without fishing.

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

Production Source and Stock or Stock Group		2003	2004	2005	2006	2007	2008	2009	2010	2011	Methodology for 2011 Prediction and Source
<b>OPI Area (Total Abundance) (California and Oregon Coasts and Columbia River)</b>		984.6	777.9	542.9	460.2	849.2	276.1	1,284.7	556.0	624.5	Abundance of all OPI components based on cohort reconstruction including all fishery impacts using Mixed Stock Model (MSM); prior to 2008 only fishery impacts south of Leadbetter Point were used (traditional OPI accounting). OPITT, see Chapter III for details.
OPI Public	Hatch	863.1	623.9	389.9	398.8	593.6	216.1	1,073.1	408.0	375.1	OPIH: 1969-2009 Columbia River jacks adjusted for delayed smolt releases and total OPI jacks regressed on 1970-2010 adults. Columbia/Coastal proportions based on jacks; Columbia early/late proportions based on jacks; Coastal N/S proportions based on smolts.
Columbia River Early		440.0	313.6	284.6	245.8	424.9	110.3	672.7	245.3	216.0	
Columbia River Late		377.9	274.7	78.0	113.8	139.5	86.4	369.7	144.2	146.5	
Coastal N. of Cape Blanco		29.3	16.6	11.5	8.6	7.0	1.7	7.3	4.4	3.6	
Coastal S. of Cape Blanco		15.9	19.0	15.8	30.6	22.2	17.7	23.4	14.1	9.0	
Lower Columbia River	Natura	NA	NA	NA	NA	21.5	13.4	32.7	15.1	22.7	Oregon: recent three year average; Washington: natural smolt production multiplied by 2008 brood marine survival rate. Abundance is subset of early/late hatchery abundance above.
Oregon Coast (OCN)	Natural	117.9	150.9	152.0	60.8	255.4	60.0	211.6	148.0	249.4	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 return.
STEP <sup>a/</sup>	Hatch	3.6	3.1	1.0	0.6	0.2	-	-	-	-	No forecast since 2007; releases discontinued.
<b>Washington Coast</b>											A variety of methods were used for 2011, primarily based on smolt production and survival. See text in Chapter III for details.
Willapa	Natur	31.8	36.7	35.9	30.3	24.4	35.1	33.5	20.4	47.8	
	Hatchery	57.5	55.0	56.4	37.7	37.2	25.5	59.4	78.7	64.7	
Grays Harbor	Natura	58.0	117.9	91.1	67.3	59.4	42.7	59.2	67.9	89.1	
	Hatchery	64.0	67.8	54.4	52.4	74.0	53.1	63.5	33.3	44.0	
Quinalt	Natur	47.7	50.5	44.9	28.8	18.6	17.4	16.3	16.7	22.9	
	Hatchery	20.6	18.2	33.6	34.5	22.7	24.5	26.2	26.6	35.5	
Queets	Natur	24.0	18.5	17.1	8.3	13.6	10.2	31.4	21.8	13.3	
	Hatchery	24.9	17.1	17.4	11.9	19.1	10.3	13.5	11.9	16.3	
	Supplemental <sup>b/</sup>	1.3	2.5	2.4	-	-	-	-	-	-	
Hoh	Natur	12.5	8.1	7.6	6.4	5.4	4.3	9.5	7.6	11.6	

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

Production Source and Stock or Stock Group		2003	2004	2005	2006	2007	2008	2009	2010	2011	Methodology for 2011 Prediction and Source
Quillayute Fall											
	Natural	24.9	21.2	18.6	14.6	10.8	10.5	19.3	22.0	28.2	
	Hatchery	15.2	20.9	22.1	10.4	18.1	13.0	39.5	17.7	31.0	
Quillayute Summer											
	Natural	1.8	1.1	0.8	1.1	1.0	1.1	2.2	2.8	2.8	
	Hatchery	5.4	6.1	6.1	4.0	6.4	4.2	12.9	3.2	5.4	
North Coast Independent Tributaries											
	Natural	14.8	12.7	8.5	8.1	3.2	3.2	11.1	4.2	21.6	
	Hatchery	11.0	4.3	5.6	3.2	4.1	5.0	14.1	5.7	11.8	
WA Coast Total											
	Natural	215.5	266.7	224.5	164.9	136.4	124.5	182.5	163.4	237.3	
	Hatchery	199.9	191.9	198.0	154.1	181.6	135.7	229.1	177.1	208.7	
<b>Puget Sound</b>											
Strait of Juan de Fuca											A variety of methods were used for 2011, 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.
	Natural	20.1	35.7	20.7	26.1	29.9	24.1	20.5	8.5	12.3	
	Hatchery	24.0 <sup>b/</sup>	28.7 <sup>b/</sup>	26.5 <sup>b/</sup>	20.5	18.4	9.5	7.0	7.8	15.2	
Nooksack-Samish											
	Natural	16.4	27.5	17.0	18.3	5.2	14.8	7.0	9.6	29.5	
	Hatchery	66.2	75.5	89.5	81.1	53.1	47.1	25.5	36.0	45.7	
Skagit											
	Natural	116.6	155.8	61.8	106.6	26.8	61.4	33.4	95.9	138.1	
	Hatchery	10.4	22.8	9.1	22.5	8.9	18.3	11.7	9.5	16.7	
Stillaguamish											
	Natural	37.8	38.0	56.7	45.0	69.2	31.0	13.4	25.9	66.6	
	Hatchery	1.3	0.5	0.2	1.2	0.0	0.1	0.0	5.4	0.6	
Snohomish											
	Natural	203.0	192.1	241.6	139.5	98.9	92.0	67.0	99.4	180.0	
	Hatchery	35.4	48.3	59.1	96.4	25.7	53.5	53.6	24.5	8.4	
South Sound											
	Natural	103.6	61.3	45.7	45.3	18.2	27.3	53.6	25.3	98.9	
	Hatchery	315.6	288.4	222.2	256.1	181.7	170.0	188.8	186.4	173.3	
Hood Canal											
	Natural	32.4	98.7	98.4	59.4	42.4	30.4	48.6	33.2	74.7	
	Hatchery	48.0 <sup>b/</sup>	43.1 <sup>b/</sup>	60.6 <sup>b/</sup>	57.9	54.8	35.0	52.0	51.2	74.9	
Puget Sound Total											
	Natural	529.9	609.2	541.9	440.2	290.6	281.0	243.5	297.8	600.1	
	Hatchery	501.0	507.3	465.2	535.7	342.6	333.5	338.6	320.8	334.8	

a/ Program ended in 2005.

b/ Strait of Juan de Fuca and Hood Canal Hatchery numbers in 2002-2005 include natural coho from secondary (hatchery) management zones.

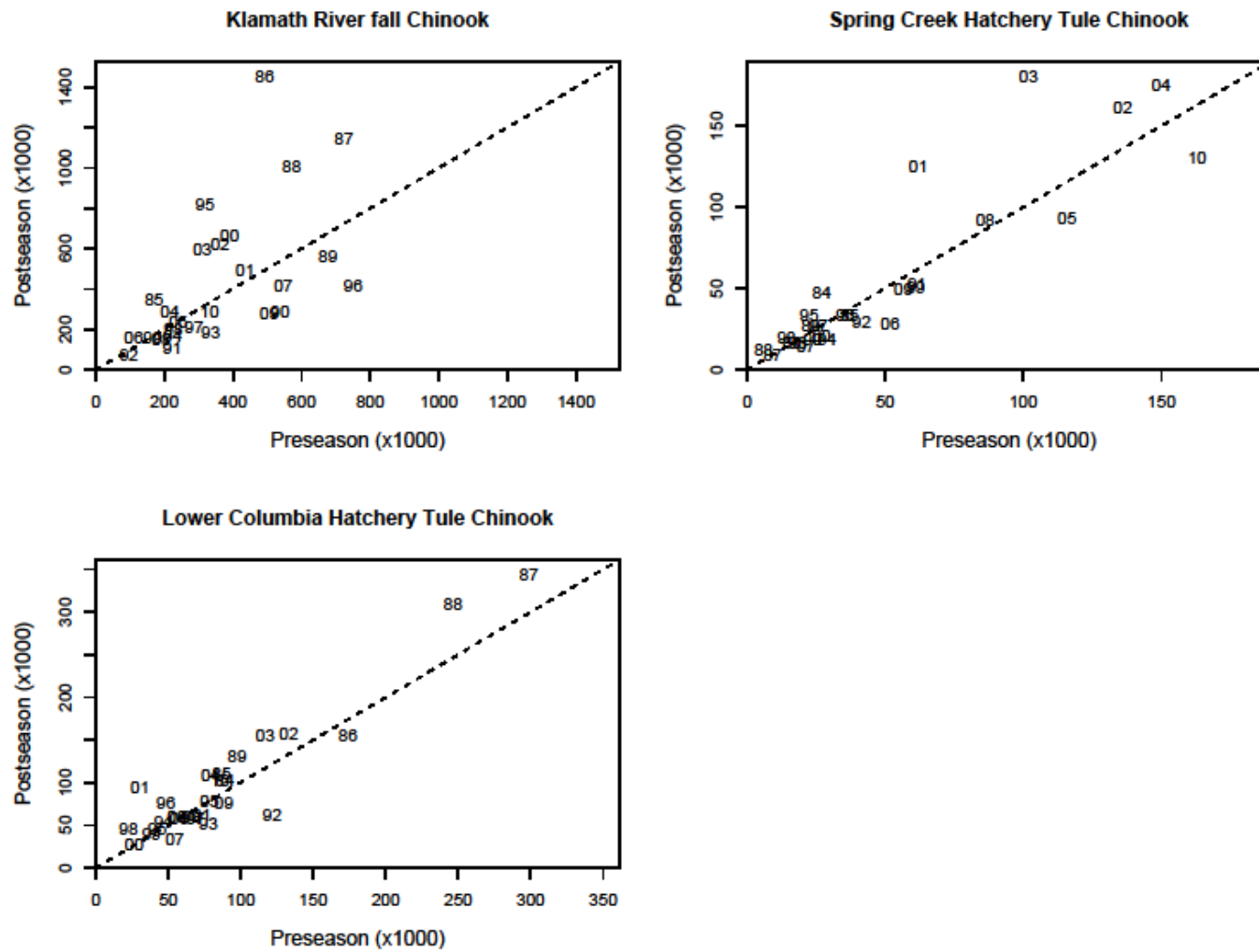


FIGURE I-1. Selected preseason vs. postseason forecasts for Chinook stocks with significant contribution to Council area fisheries.



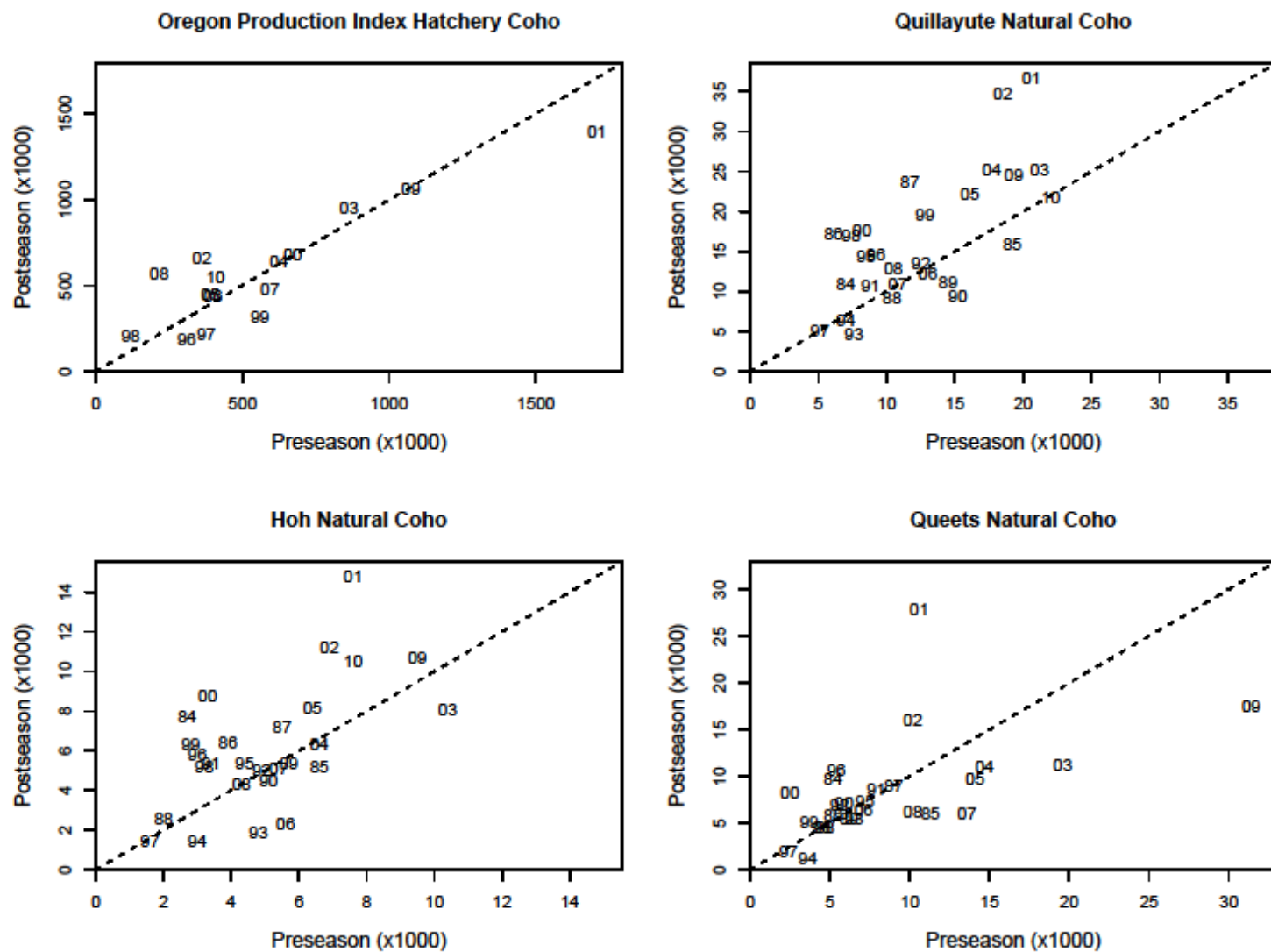


FIGURE I-2a. Selected preseason vs. postseason forecasts for coho stocks with significant contribution to Council area fisheries.

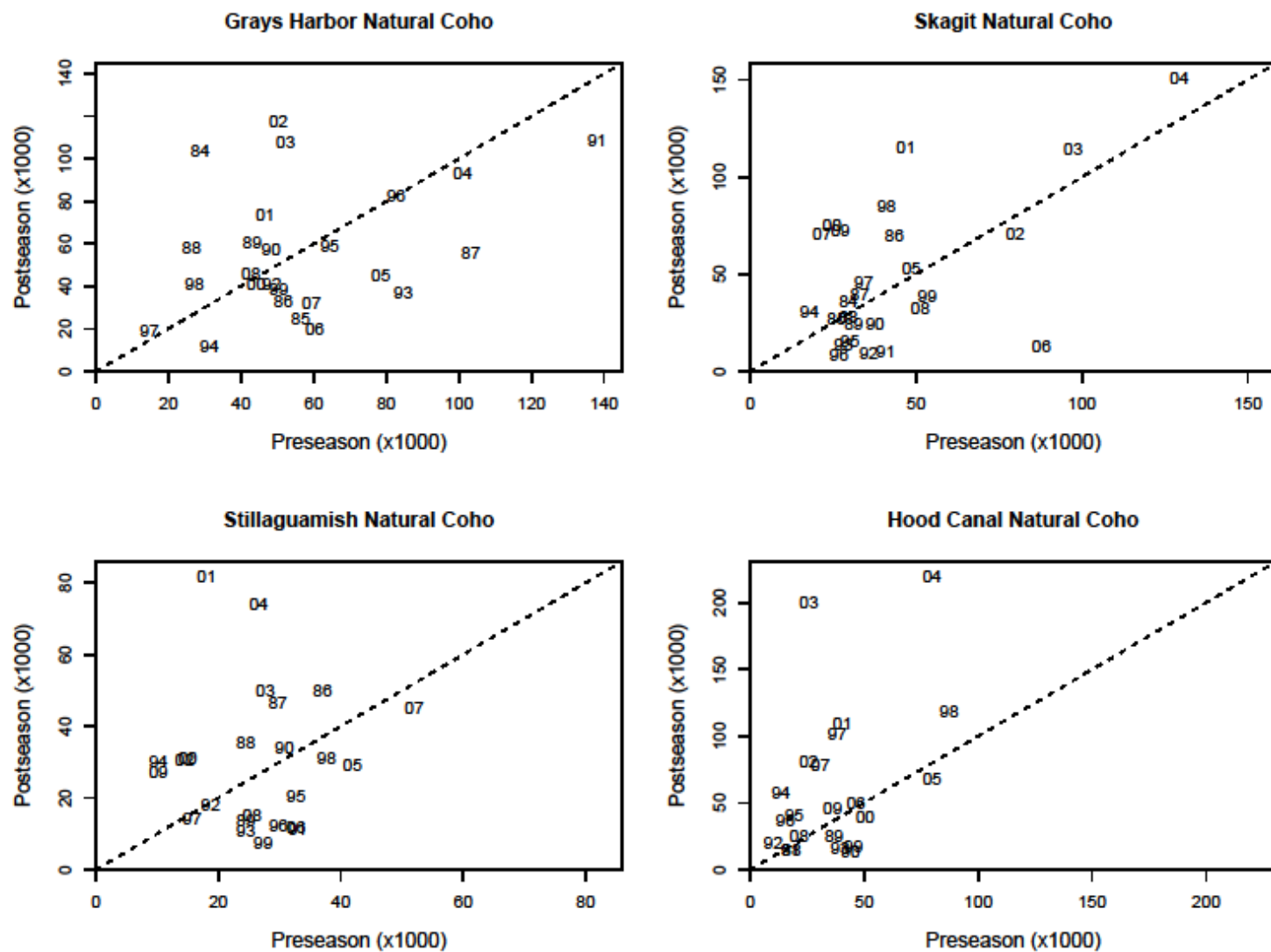


FIGURE I-2b. Selected preseason vs. postseason forecasts for coho stocks with significant contribution to Council area fisheries.

## CHAPTER II: AFFECTED ENVIRONMENT - CHINOOK SALMON ASSESSMENT

### CHINOOK STOCKS SOUTH OF CAPE FALCON

#### Sacramento River Fall Chinook

##### *Predictor Description*

The Council's Salmon FMP sets the escapement goal for SRFC as a range from 122,000 to 180,000 hatchery and natural area adults. This stock comprises a large proportion of the Chinook spawners returning to Central Valley streams and hatcheries. The Sacramento Index (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 adult spawner escapement (Table II-1, Figure II-1). The SRFC exploitation rate is the ocean and river harvest (and non-retention impacts) divided by the SI, and has varied significantly since 1983 (Table II-1). Since 1990, the SRFC exploitation rate has generally declined over time. In 2010 the SRFC exploitation rate was 18 percent.

The STT based the forecast of the SI on a zero-intercept linear model relating the previous year ( $t-1$ ) SRFC jack escapement to the SI in year  $t$  (Figure II-2). In addition to the mean SI predictor model, 95 percent prediction intervals for the SI are displayed in Figure II-2. To estimate prediction intervals, errors in the zero-intercept linear model were assumed to be additive and normally distributed. The interpretation of this interval is that a single future observation would be expected to be contained within this interval with 95 percent probability. The additive error structure of this model results in the lower bound of the prediction interval including zero for SI forecasts made at low jack escapement levels. While this may be somewhat unrealistic (one would expect a nonzero SI in year  $t$  to result from a nonzero jack escapement in year  $t-1$ ), the STT concludes that the error structure used for this model best approximates the true uncertainty in this forecast at the current time.

##### *Predictor Performance*

In 2010 the SI preseason forecast of 245,483 was 1.6 times its postseason value of 152,857.

##### *2011 Stock Status*

A total of 27,483 SRFC jacks were estimated to have escaped to Sacramento River basin hatcheries and natural spawning areas in 2010. The resulting 2011 SI forecast is 729,893 adult SRFC (Figure II-2). For the 2011 SI forecast, the upper bound of the 95 percent prediction interval is 1,228,114 and the lower bound is 231,671.

#### Klamath River Fall Chinook

##### *Predictor Description*

For Klamath River fall Chinook, 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-2). Historical abundance estimates were derived from a cohort analysis of CWT information (brood years 1979-2006). 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 small numbers of age-2 KRFC.

### *Predictor Performance*

Since 1985, the preseason ocean abundance forecasts for age-3 fish have ranged from 0.33 to 2.72 times the postseason estimates; for age-4 fish from 0.47 to 2.60 times the postseason estimates; and for the adult stock as a whole from 0.34 to 2.03 times the postseason estimates (Table II-3). The September 1, 2009 age-3 forecast (223,400) was 1.03 times its postseason estimate (217,062). The age-4 forecast (106,300) was 1.60 times its postseason estimate (66,452); and the age-5 forecast (1,800) was 3.51 times its postseason estimate (513) (Table II-3). The preseason forecast of the adult stock as a whole was 1.17 times the postseason estimate.

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-4). 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 Council's FMP conservation objective for KRFC (Amendment 9) permits an average natural spawner reduction rate via fisheries of no more than 0.67, with a minimum escapement of 35,000 natural spawning adults. The plan allows for any ocean and river harvest allocation that meets the spawner reduction rate constraint, provided it also meets the minimum escapement goal. The regulations adopted in 2010 were expected to result in 40,700 natural area spawning adults and an age-4 ocean harvest rate of 12.3 percent. Postseason estimates of these quantities were 37,222 natural area adult spawners and an age-4 ocean harvest rate of 3.9 percent (Table II-5).

### *2011 Stock Status*

The 2011 forecast for the ocean abundance of KRFC as of September 1, 2010 (preseason) is 304,600 age-3 fish, the age-4 forecast is 61,600, and the age-5 forecast is 5,000 fish.

Late-season ocean fisheries in 2010 (September through November) were estimated to have harvested zero adult KRFC; hence, no harvest will be deducted from the ocean fishery's allocation in determining the 2011 allowable ocean harvest.

Amendment 15 to the Salmon FMP (implemented March 26, 2008) provides for potential limited harvest of KRFC in ocean salmon fisheries during years that might otherwise be closed due to a projected shortfall in meeting the 35,000 natural spawner conservation objective, as long as this would not jeopardize the long term capacity of the stock to produce maximum sustainable yield on continuing basis. In 2011, there is no basis for invoking *de minimis* fishing under Amendment 15 because KRFC is not projected to fall short of the 35,000 floor.

KRFC triggered an overfishing concern in 2006, after failing to achieve a minimum of 35,000 natural area adult spawners in 2004, 2005, and 2006. The Council recommended that the overfishing concern be ended when KRFC exceeded 35,000 natural area adult spawners in three out of four consecutive years, or when escapement exceeded 40,700 natural area adults in two consecutive years. In 2010, KRFC satisfied the Council adopted criteria for ending the overfishing concern by exceeding 35,000 natural area adult spawners for the third time in four years (2007, 2009, and 2010).

### **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, Little, Mad, Eel, and Mattole rivers, and Redwood Creek. Except for the Smith River, these stocks 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 Klamath River fall Chinook age-4 ocean harvest rate to no more than 16.0 percent to limit impacts on these stocks. In 2010 the age-4 ocean harvest rate was 4.0 percent.

### **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, Canada, Washington, Oregon, and in terminal area fisheries. Minor catches occur in California fisheries and variable catches have been observed in southeast Alaska troll fisheries.

#### ***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.

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.

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. Quantitative abundance predictions are not made for these stocks.

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.

### **Predictor Description and 2011 Stock Status for NOC and MOC Groups**

Quantitative abundance predictions are made for all three of the coastal Chinook groups (NOC, MOC, and SOC), but are not used in annual development of Council area fishery regulations. Quantitative forecasts of abundance are based on sibling regression analyses from individual basin's escapement assessment data and scale sampling, which occurs coast-wide. Forecast data for the NOC are used in the PSC management process in addition to terminal area management actions.

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 (PFMC 2011, Chapter II, Table II-4 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, Alsea, and Elk rivers.

Basin-specific forecasts constitute 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.

### *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 annual spawner counts decreased from 2002 through 2008 despite excellent parental escapements indices in 2001 to 2004. The 2010 spawner counts were a 45 percent increase from 2009 (PFMC 2011, Appendix B, Table B-11). The 2011 NOC stock abundance is expected to be greater than the 2010 abundance.

Based on the density index of total spawners, the generalized expectation for NOC stocks in 2011 is above recent year's average abundance. Specifically, the 2010 spawner density in standard survey areas for the NOC averaged 87 spawners per mile.

### *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. Age specific ocean abundance forecasts for 2011 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.

The 2010 MOC density from standard survey areas was 92 adult spawners per mile, the highest since 2003 (PFMC 2011, Appendix B, Table B-11). Fall Chinook escapement goals are currently under development for the South Umpqua and Coquille basins of the MOC.

### **Predictor Description and 2011 Stock Status for South/Local Migrating Chinook**

Quantitative abundance predictions are not made for all of these stocks, although an abundance index for Rogue River fall Chinook has been developed. General trends in stock abundance for SOC Chinook stocks are assessed through escapement indices (PFMC 2011, Chapter II, Table II-4 and Figure II-3).

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). The 2010 Huntley Park escapement estimate and the resulting 2011 ROPI forecast was then scaled to the historical carcass survey-based ROPI. The 2011 ROPI forecast (16,800) consisting of age-3 (9,500), age-4 (6,300) and age-5 (1,000) are based on the average annual age-class strengths of the carcass-based ROPIs from 1991-2005. This data-set was truncated at 1991 because significant harvest restrictions that could affect age structure began that year. The 2011 ROPI is slightly higher than the recent three-year average of 13,400 (Table II-6).

### *Other Stocks*

Fall Chinook escapement goals and forecasts are currently under development for stocks south of the Elk 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). The average density from standard survey areas was 52 adult spawners per mile, the second highest observed since 2004 (PFMC 2011, Appendix B, Table B-8).

## **CHINOOK STOCKS NORTH OF CAPE FALCON**

### **Columbia River Fall Chinook**

#### *Predictor Description and Past Performance*

Columbia River fall Chinook stocks typically 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. 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 significant hatchery component. The lower river hatchery (LRH) tule, Spring Creek Hatchery (SCH) tule, and mid-Columbia brights (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 stocks generally mature at an earlier age than the bright fall stocks and do not migrate as far north. Minor stocks include the Select Area brights (SAB), a stock originally from the Rogue River.

Preseason forecasts of Columbia River fall 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 (return 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 results of planned ocean fisheries.

The 2011 return of 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 inriver fishery catches for years since 1964 (except for MCB, which started in the 1980's). Typically, only the more recent broods are used in the current predictions. 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 2010 Ocean Salmon Fisheries* (Appendix B, Tables B-15 through B-20). The 2010 returns for the five fall Chinook stocks listed in this report may differ somewhat from those provided in the *Review of 2010 Ocean Salmon Fisheries*, since ocean escapement estimates may have been updated after that report was printed.

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-7). The recent 10-year average March preliminary preseason forecasts as a percentage of the postseason estimates for the URB, LRW, LRH, SCH, and MCB are 1.01, 1.09, 0.93, 1.06, and 0.94 respectively. None of the stocks had a bias in the recent time series of March preliminary forecasts.

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-7) 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.

### ***2011 Stock Status***

The preliminary forecast for 2011 URB fall Chinook ocean escapement is 398,200 adults, about 123 percent of last year's return and about 153 percent of the recent 10-year average of 259,610.

The preliminary forecast for 2011 ocean escapement of ESA-listed Snake River wild fall Chinook is 17,500, about 114 percent of last year's preliminary return estimate.

Ocean escapement of LRW fall Chinook in 2011 is forecast at 12,500 adults, about 115 percent of last year's forecast, and about 81 percent of the recent 10-year average return of 15,360. The forecast is greater than last year's actual return and the spawning escapement goal of 5,700 in the North Fork Lewis River should be achieved this year depending on fishing regulations.

The preliminary forecast for 2011 ocean escapement of LRH fall Chinook is for a return of 133,500 adults, about 130 percent of last year's return and 144 percent of the recent 10-year average of 92,500.

The preliminary ocean escapement forecast of SCH fall Chinook in 2011 is 116,400 adults, about 89 percent of last year's return and 111 percent of the 10-year average of 104,900.

The preliminary forecast for the 2011 ocean escapement of MCB fall Chinook is 100,000 adults, about 127 percent of last year's return and about 110 percent of the recent 10-year average of 90,560.

## **Washington Coast Chinook**

### ***Predictor Description and Past Performance***

Council fisheries have negligible impacts on Washington coast Chinook stocks, and except for Willapa Bay fall Chinook, Hoh River Chinook and Quillayute River Chinook, forecast data is unavailable in time for publication of this report; therefore, preseason abundance estimates are not presented. However, abundance estimates are provided for Washington Coastal fall stocks in subsequent preseason fishery impact assessment reports prepared by the STT.

### ***2011 Stock Status***

The 2011 Willapa Bay hatchery fall Chinook ocean escapement forecast is 32,476, which is higher than the 2010 prediction of 31,135. The 2011 natural fall Chinook ocean escapement forecast is 4,341, which is higher than last year's prediction of 2,023, but still slightly less than the WDFW spawning escapement goal of 4,350.



For the Hoh River, the 2011 natural spring/summer Chinook ocean escapement forecast is 1,037, above the FMP conservation objective of 900. The natural fall Chinook forecast is 2,880, above the FMP conservation objective of 1,200.

The 2011 Quillayute hatchery spring Chinook ocean escapement forecast is 1,399 and the natural summer/fall Chinook forecast is 8,842 (1,299 summer and 7,543 fall). The FMP conservation objectives are spawning escapements of 1,200 summer Chinook and 3,000 fall Chinook.

### **Puget Sound Chinook**

Run-size expectations for various Puget Sound stock management units are listed in Table I-1. A comparison of preseason and postseason forecasts for recent years is detailed in Table II-8. The STT has not undertaken a review of the methods employed by state and tribal staffs in preparing these abundance forecasts. 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. Puget Sound Chinook were listed as threatened under the ESA in March 1999. Southern U.S. fisheries that impact Puget Sound Chinook are constrained by terms of a Resource Management Plan (RMP), and are exempted from ESA Section 9 take prohibitions under Limit 6 of the 4(d) rule.

#### ***2011 Stock Status***

##### **Spring Chinook**

Spring Chinook originating in Puget Sound are expected to remain depressed. Runs in the Nooksack, Skagit, White, and Dungeness rivers are of particular concern.

##### **Summer/Fall Chinook**

The 2011 preliminary forecast for Puget Sound summer/fall stocks is for a return of 244,377 Chinook, slightly higher than the 2010 preseason forecast of 225,664. The 2011 natural Chinook return forecast of 39,333 (includes supplemental category forecasts) is lower than the 2010 forecast of 42,981.

Since ESA listing and development of the RMP, 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 new approach is evaluated on an annual basis through the RMP.

### ***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 from June 12 through June 30, 2010 in the recreational fishery north of Cape Falcon. As in 2010, selective fishing options for non-Indian fisheries are under consideration in the ocean area from Cape Falcon, Oregon to the U. S./Canada border. Observed mark rates on Chinook in 2010 ocean fisheries in this area ranged from 50 to 70 percent. Based on preseason abundance forecasts, the expected mark rate for Chinook in this area for 2011 should be similar to those observed in 2010.

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

Year	SRFC Ocean Harvest				River Harvest	Spawning Escapement			Sacramento Index (SI) <sup>c/</sup>	Exploitation Rate (%) <sup>d/</sup>
	South of Cape Falcon <sup>a/</sup>					Natural	Hatchery	Total		
	Troll	Sport	Non-Ret <sup>b/</sup>	Total						
1983	248.0	86.7	0.0	334.7	18.1	91.4	18.8	110.2	463.0	76
1984	266.9	87.2	0.0	354.1	26.1	119.5	39.5	159.0	539.1	71
1985	359.5	160.2	0.0	519.7	39.3	209.5	29.9	239.3	798.3	70
1986	620.6	138.4	0.0	759.0	39.4	216.3	23.8	240.1	1,038.5	77
1987	687.9	176.3	0.0	864.2	32.0	174.8	20.3	195.1	1,091.3	82
1988	1,163.2	188.8	0.0	1,352.0	37.3	198.0	29.5	227.5	1,616.8	86
1989	606.5	160.1	0.0	766.5	25.0	126.7	25.9	152.6	944.1	84
1990	508.0	152.4	0.0	660.4	17.2	83.2	21.9	105.1	782.7	87
1991	301.0	90.8	0.0	391.8	26.0 <sup>e/</sup>	91.4	27.5	118.9	536.6	78
1992	233.3	70.5	0.0	303.8	13.3 <sup>e/</sup>	59.5	22.1	81.5	398.7	80
1993	342.8	115.8	0.0	458.6	27.7 <sup>e/</sup>	110.6	26.8	137.4	623.6	78
1994	303.4	165.7	0.0	469.1	28.9 <sup>e/</sup>	133.0	32.6	165.6	663.6	75
1995	730.7	390.3	0.0	1,121.1	48.5	253.5	41.8	295.3	1,464.8	80
1996	426.8	157.1	0.0	584.0	49.5	267.1	34.6	301.6	935.1	68
1997	582.4	219.5	0.0	801.9	56.6	279.6	65.2	344.8	1,203.3	71
1998	293.7	117.5	0.0	411.1	69.8 <sup>e/</sup>	168.1	77.8	245.9	726.8	66
1999	308.8	78.0	0.0	386.8	68.9 <sup>e/</sup>	353.7	46.1	399.8	855.4	53
2000	432.8	154.6	0.0	587.4	59.5 <sup>e/</sup>	369.2	48.3	417.5	1,064.4	61
2001	285.8	95.8	0.0	381.6	97.9	537.4	59.4	596.8	1,076.3	45
2002	458.2	194.6	0.0	652.8	89.2 <sup>e/</sup>	682.7	87.2	769.9	1,511.9	49
2003	508.3	109.0	0.0	617.3	85.8	413.4	109.6	523.0	1,226.1	57
2004	622.3	214.0	0.0	836.4	47.1	203.5	83.4	286.9	1,170.3	75
2005	370.4	128.0	0.0	498.3	65.0	210.7	185.3	396.0	959.3	59
2006	150.0	107.9	0.0	257.9	45.1	195.1	79.9	275.0	578.1	52
2007	120.0	32.2	0.0	152.1	14.3 <sup>e/</sup>	70.0	21.4	91.4	257.8	65
2008	3.2	0.9	0.0	4.1	0.1 <sup>e/</sup>	46.9	18.5	65.4	69.6	6
2009	0.0	0.2	0.1	0.3	0.0 <sup>e/</sup>	23.3	17.5	40.9	41.2	1
2010 <sup>f/</sup>	12.7	12.5	0.3	25.5	2.0 <sup>e/</sup>	85.7	39.7	125.4	152.9	18

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).

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 adult spawner escapement.

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

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

f/ Preliminary.

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

Year (t)	Ocean Abundance Sept. 1 (t-1)			Annual Ocean Harvest Rate Sept. 1 (t-1) - Aug. 31 (t)		Klamath Basin River Run (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	781.2	341.9	1,123.1	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	161.6	0.03	0.09	14.4	37.0	26.0	1.0	64.0
1995	784.3	28.7	813.0	0.04	0.14	22.8	201.9	18.3	2.6	222.8
1996	192.3	225.5	417.8	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	0.2	187.4
2002	513.6	98.9	612.5	0.02	0.15	9.2	94.6	62.5	3.7	160.8
2003	400.2	192.2	592.4	0.08	0.21	3.8	94.3	96.8	0.9	191.9
2004	159.6	105.1	264.6	0.12	0.34	9.7	33.2	40.7	5.3	79.2
2005	190.0	38.1	228.1	0.02	0.20	2.3	43.8	17.5	3.9	65.2
2006	90.6	63.4	154.0	0.01	0.10	26.9	18.5	41.6	1.3	61.4
2007	376.8	33.6	410.5	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	248.2 <sup>a/</sup>	21.1	269.3	0.00 <sup>a/</sup>	0.00	11.9	78.6	16.4	5.6	100.6
2010	217.1 <sup>b/</sup>	66.5 <sup>a/</sup>	283.5	NA <sup>c/</sup>	0.04 <sup>a/</sup>	16.7	46.2	44.4	0.4	91.0

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-3. Comparisons of preseason forecast and postseason estimates for ocean abundance of adult Klamath River fall Chinook. (Page 1 of 4)

	Preseason Forecast <sup>a/</sup>	Postseason Estimate	
Year (t)	Sept. 1 (t-1)	Sept. 1 (t-1)	Pre/Postseason
	Age-3		
1985	113,000	276,000	0.41
1986	426,000 <sup>b/</sup>	1,304,409	0.33
1987	511,800	781,198	0.66
1988	370,800	756,261	0.49
1989	450,600	369,828	1.22
1990	479,000	176,133	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	119,913	1.15
1995	269,000	784,260	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	617,098	0.57
2001	187,200	356,128	0.53
2002	209,000	513,561	0.41
2003	171,300	400,242	0.43
2004	72,100	159,560	0.45
2005	185,700	189,976	0.98
2006	44,100	90,606	0.49
2007	515,400	376,841	1.37
2008	31,600	67,993	0.46
2009	474,900	248,170	1.91
2010 <sup>c/</sup>	223,400	217,062	1.03
2011	304,600	-	-

TABLE II-3. Comparisons of preseason forecast and postseason estimates for ocean abundance of adult Klamath River fall Chinook. (Page 2 of 4)

Year (t)	Preseason Forecast <sup>a/</sup>	Postseason Estimate	Pre/Postseason
	Sept. 1 (t-1)	Sept. 1 (t-1)	
	<b>Age-4</b>		
1985	56,875	57,500	0.99
1986	66,250	140,823	0.47
1987	206,125	341,875	0.60
1988	186,375	234,772	0.79
1989	215,500	177,245	1.22
1990	50,125	103,951	0.48
1991	44,625	37,172	1.20
1992	44,750	28,169	1.59
1993	39,125	15,037	2.60
1994	86,125	41,736	2.06
1995	47,000	28,725	1.64
1996	268,500	225,521	1.19
1997	53,875	62,820	0.86
1998	46,000	44,733	1.03
1999	78,750	30,456	2.59
2000	38,875	44,176	0.88
2001	247,000	133,801	1.85
2002	143,800	98,928	1.45
2003	132,400	192,156	0.69
2004	134,500	105,051	1.28
2005	48,900	38,079	1.28
2006	63,700	63,383	1.00
2007	26,100	33,615	0.78
2008	157,200	81,366	1.93
2009	25,200	21,118	1.19
2010 <sup>c/</sup>	106,300	66,452	1.60
2011	61,600	-	-

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

Year (t)	Preseason Forecast <sup>a/</sup>	Postseason Estimate	Pre/Postseason
	Sept. 1 (t-1)	Sept. 1 (t-1)	
	<b>Age-5</b>		
1985	NA	11,113	NA
1986	NA	6,376	NA
1987	5,250	19,414	0.27
1988	13,250	14,632	0.91
1989	10,125	9,612	1.05
1990	7,625	7,767	0.98
1991	1,500	2,774	0.54
1992	1,250	1,444	0.87
1993	1,125	1,759	0.64
1994	500	1,468	0.34
1995	2,000	3,805	0.53
1996	1,125	787	1.43
1997	7,875	8,859	0.89
1998	3,250	2,382	1.36
1999	2,000	2,106	0.95
2000	1,375	1,051	1.31
2001	1,250	258	4.84
2002	9,700	6,933	1.40
2003	6,500	1,915	3.39
2004	9,700	17,170	0.56
2005	5,200	6,857	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 <sup>c/</sup>	1,800	513	3.51
2011	5,000	-	-

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

	Preseason Forecast <sup>d/</sup>	Postseason Estimate	
Year (t)	Sept. 1 (t-1)	Sept. 1 (t-1)	Pre/Postseason
	Total Adults		
1985	169,875 <sup>d/</sup>	344,613	0.49
1986	492,250 <sup>d/</sup>	1,451,608	0.34
1987	723,175	1,142,487	0.63
1988	570,425	1,005,665	0.57
1989	676,225	556,685	1.21
1990	536,750	287,851	1.86
1991	222,325	109,370	2.03
1992	96,000	69,115	1.39
1993	334,650	185,269	1.81
1994	224,625	163,117	1.38
1995	318,000	816,790	0.39
1996	749,425	418,580	1.79
1997	286,350	211,832	1.35
1998	225,250	201,914	1.12
1999	165,550	161,628	1.02
2000	389,850	662,325	0.59
2001	435,450	490,187	0.89
2002	362,500	619,422	0.59
2003	310,200	594,313	0.52
2004	216,300	281,781	0.77
2005	239,800	234,912	1.02
2006	110,000	159,225	0.69
2007	546,200	413,367	1.32
2008	190,700	152,259	1.25
2009	505,700	276,347	1.83
2010 <sup>c/</sup>	331,500	284,027	1.17
2011	371,100	-	-

a/ Original preseason forecasts for years 1985-2001 were for May 1 (t); converted to Sept. 1 (t-1) forecasts by dividing the assumed May 1 (t) number by the 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-4. Summary of management objectives and predictor performance for Klamath River fall Chinook.

Year(t)	Preseason Ocean Abundance Forecast <sup>a/</sup>		Postseason Ocean Abundance Estimate		Preseason Age-4 Harvest Rate Forecast <sup>b/</sup>		Postseason Age-4 Harvest Rate Estimate <sup>c/</sup>		Preseason Adult Harvest Forecast		Postseason Adult Harvest Estimate	
	Sept. 1 (t-1)	Age-3	Age-4	Sept. 1 (t-1)	Ocean	River	Ocean	River	Ocean	River	Ocean	River
1986	426,000	66,250	1,304,409	140,823	0.28	0.50	0.46	0.67	72,000	37,700	301,999	46,154
1987	511,800	206,125	781,198	341,875	0.28	0.53	0.43	0.44	121,200	78,200	277,224	73,265
1988	370,800	186,375	756,261	234,772	0.31	0.53	0.39	0.52	114,100	65,400	253,905	73,854
1989	450,600	215,500	369,828	177,245	0.30	0.49	0.36	0.70	128,100	67,600	125,117	54,340
1990	479,000	50,125	176,133	103,951	0.30	0.49	0.55	0.36	85,100	31,200	114,786	11,459
1991	176,200	44,625	69,424	37,172	0.13	0.28	0.18	0.45	16,700	12,800	9,872	13,581
1992	50,000	44,750	39,502	28,169	0.06	0.15	0.07	0.27	4,200	4,200	3,142	6,787
1993	294,400	39,125	168,473	15,037	0.12	0.43	0.16	0.49	20,100	22,500	11,355	12,808
1994	138,000	86,125	119,913	41,736	0.07	0.20	0.09	0.29	10,400	14,300	7,961	13,524
1995	269,000	47,000	784,260	28,725	0.07	0.32	0.14	0.19	13,500	18,500	32,233	21,637
1996	479,800	268,500	192,272	225,521	0.17	0.66	0.16	0.39	88,400	129,100	45,155	69,241
1997	224,600	53,875	140,153	62,820	0.10	0.43	0.06	0.26	17,600	26,500	8,656	17,764
1998	176,000	46,000	154,799	44,733	0.07	0.29	0.09	0.30	10,200	14,800	4,891	17,897
1999	84,800	78,750	129,066	30,456	0.10	0.28	0.09	0.45	12,300	18,100	5,116	16,942
2000	349,600	38,875	617,098	44,176	0.11	0.53	0.10	0.25	24,000	32,400	42,050	35,066
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	513,561	98,928	0.13	0.57	0.15	0.26	30,000	70,900	28,895	35,069
2003	171,300	132,400	400,242	192,156	0.16	0.50	0.21	0.28	30,600	52,200	70,684	39,715
2004	72,100	134,500	159,560	105,051	0.15	0.38	0.34	0.48	26,500	35,800	63,885	29,807
2005	185,700	48,900	189,976	38,079	0.08	0.16	0.20	0.19	7,100	9,600	12,826	10,001
2006	44,100	63,700	90,606	63,383	0.11	0.23	0.10	0.18	10,000	10,000	10,401	10,345
2007	515,400	26,100	376,841	33,615	0.16	0.63	0.21	0.56	30,200	51,400	30,244	33,884
2008	31,600	157,200	67,993	81,366	0.02	0.43	0.10	0.38	4,500	49,500	8,679	24,180
2009	474,900	25,200	248,170	21,118	0.00	0.57	0.00	0.40	100	61,700	52	34,040
2010 <sup>d/</sup>	223,400	106,300	217,062	66,452	0.12	0.49	0.04	0.40	22,600	46,600	4,235	33,031
2011	304,600	61,600	-	-	-	-	-	-	-	-	-	-

a/ Original preseason forecasts for years 1986-2001 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 assumed 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), 1986-2001, 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 (the 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.



TABLE II-5. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 1 of 4)

Year (t)	Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) )						River Fisheries (t)			
	KMZ			North of	South of	Subtotal	Ocean Total	Net	Sport	Total
	Troll	Sport	Subtotal	KMZ	KMZ					
HARVEST (numbers of fish)										
Age-3										
1986	35,632	4,876	40,508	73,777	122,913	196,690	237,198	8,100	18,100	26,200
1987	17,240	5,083	22,323	43,439	56,378	99,817	122,140	11,400	11,400	22,800
1988	15,999	5,165	21,164	24,317	107,971	132,288	153,452	12,500	15,600	28,100
1989	6,456	11,783	18,239	15,315	23,729	39,044	57,283	2,700	900	3,600
1990	81	4,357	4,438	36,579	11,006	47,585	52,023	1,300	1,400	2,700
1991	0	1,022	1,022	344	810	1,154	2,176	2,123	1,277	3,400
1992	0	0	0	972	0	972	972	970	251	1,221
1993	0	822	822	833	6,424	7,257	8,079	5,426	2,917	8,343
1994	42	604	646	0	3,387	3,387	4,033	4,543	965	5,508
1995	0	999	999	12,213	14,810	27,023	28,022	11,840	5,536	17,376
1996	0	0	0	0	9,314	9,314	9,314	12,363	3,661	16,024
1997	0	232	232	620	1,215	1,835	2,067	2,166	2,736	4,902
1998	0	6	6	298	466	764	770	2,231	5,781	8,012
1999	63	180	243	1,262	433	1,695	1,938	4,981	1,748	6,729
2000	404	3,282	3,686	8,604	25,203	33,807	37,493	22,458	4,893	27,351
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	9,915	11,416	12,420	11,734	6,258	17,992
2003	173	679	852	1,885	27,309	29,194	30,046	6,996	5,061	12,057
2004	402	971	1,373	9,719	7,331	17,050	18,423	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	477	477	32	341	373	850	2,388	13	2,401
2007	770	8,099	8,869	4,193	9,365	13,558	22,427	17,543	5,734	23,277
2008	0	0	0	0	0	0	0	3,225	608	3,833
2009 <sup>a/</sup>	0	52	52	0	0	0	52	19,820	4,715	24,535
2010 <sup>a/</sup>	84	23	107	0	1,335	1,335	1,442	13,190	1,884	15,074

TABLE II-5. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 2 of 4)

Year (t)	Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) )							River Fisheries (t)		
	KMZ			North of	South of	Subtotal	Ocean Total	Net	Sport	Total
	Troll	Sport	Subtotal	KMZ	KMZ					
HARVEST (numbers of fish)										
Age-4										
1986	7,745	1,113	8,858	23,486	31,913	55,399	64,257	17,000	2,900	19,900
1987	21,736	4,427	26,163	70,645	48,832	119,477	145,640	41,000	8,500	49,500
1988	11,870	3,596	15,466	26,381	50,296	76,677	92,143	38,600	6,200	44,800
1989	6,064	9,735	15,799	32,116	16,608	48,724	64,523	41,000	7,700	48,700
1990	3,997	2,919	6,916	39,627	10,624	50,251	57,167	6,000	2,200	8,200
1991	0	1,001	1,001	1,513	4,135	5,648	6,649	7,593	2,016	9,609
1992	171	55	226	1,783	12	1,795	2,021	4,360	723	5,083
1993	0	0	0	849	1,616	2,465	2,465	3,786	243	4,029
1994	0	1,124	1,124	1,168	1,499	2,667	3,791	6,666	818	7,484
1995	0	242	242	1,879	1,771	3,650	3,892	2,957	480	3,437
1996	773	3,464	4,237	10,337	20,741	31,078	35,315	43,959	9,080	53,039
1997	3	172	175	463	2,994	3,457	3,632	8,734	2,586	11,320
1998	0	105	105	3,942	0	3,942	4,047	7,164	1,822	8,986
1999	15	381	396	1,657	696	2,353	2,749	8,789	494	9,283
2000	117	895	1,012	2,327	1,076	3,403	4,415	6,733	756	7,489
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	918	1,752	7,855	30,007	37,862	39,614	22,754	4,592	27,346
2004	1,421	1,215	2,636	11,504	21,949	33,453	36,089	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	1,991	2,472	4,463	7,069	8,987	502	9,489
2008	6,376	1,105	7,481	546	113	659	8,140	17,891	1,260	19,151
2009	0	0	0	0	0	0	0	5,831	706	6,537
2010 <sup>a/</sup>	37	114	151	924	1,547	2,471	2,622	16,682	1,134	17,816

TABLE II-5. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 3 of 4)

Year (t)	Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) )							River Fisheries (t)		
	KMZ			North of	South of	Subtotal	Ocean Total	Net	Sport	Total
	Troll	Sport	Subtotal	KMZ	KMZ					
HARVEST RATE <sup>b/</sup>										
Age-3										
1986	0.03	0.00	0.03	0.06	0.09	0.15	0.18	0.05	0.11	0.16
1987	0.02	0.01	0.03	0.06	0.07	0.13	0.16	0.13	0.13	0.25
1988	0.02	0.01	0.03	0.03	0.14	0.17	0.20	0.12	0.15	0.28
1989	0.02	0.03	0.05	0.04	0.06	0.11	0.15	0.05	0.02	0.07
1990	0.00	0.02	0.03	0.21	0.06	0.27	0.30	0.11	0.12	0.23
1991	0.00	0.01	0.01	0.00	0.01	0.02	0.03	0.21	0.13	0.34
1992	0.00	0.00	0.00	0.02	0.00	0.02	0.02	0.14	0.04	0.18
1993	0.00	0.00	0.00	0.00	0.04	0.04	0.05	0.11	0.06	0.17
1994	0.00	0.01	0.01	0.00	0.03	0.03	0.03	0.12	0.03	0.15
1995	0.00	0.00	0.00	0.02	0.02	0.03	0.04	0.06	0.03	0.09
1996	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.32	0.09	0.41
1997	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.06	0.08	0.14
1998	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.10	0.14
1999	0.00	0.00	0.00	0.01	0.00	0.01	0.02	0.17	0.06	0.23
2000	0.00	0.01	0.01	0.01	0.04	0.05	0.06	0.12	0.03	0.15
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 <sup>a/</sup>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06	0.31
2010 <sup>a/</sup>	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.29	0.04	0.33

TABLE II-5. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 4 of 4)

Year (t)	Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) )						River Fisheries (t)			
	KMZ			North of	South of	Subtotal	Ocean Total	Net	Sport	Total
	Troll	Sport	Subtotal	KMZ	KMZ					
HARVEST RATE <sup>b/</sup>										
Age-4										
1986	0.05	0.01	0.06	0.17	0.23	0.39	0.46	0.57	0.10	0.67
1987	0.06	0.01	0.08	0.21	0.14	0.35	0.43	0.36	0.08	0.44
1988	0.05	0.02	0.07	0.11	0.21	0.33	0.39	0.45	0.07	0.52
1989	0.03	0.05	0.09	0.18	0.09	0.27	0.36	0.59	0.11	0.70
1990	0.04	0.03	0.07	0.38	0.10	0.48	0.55	0.26	0.10	0.36
1991	0.00	0.03	0.03	0.04	0.11	0.15	0.18	0.35	0.09	0.45
1992	0.01	0.00	0.01	0.06	0.00	0.06	0.07	0.23	0.04	0.27
1993	0.00	0.00	0.00	0.06	0.11	0.16	0.16	0.46	0.03	0.49
1994	0.00	0.03	0.03	0.03	0.04	0.06	0.09	0.26	0.03	0.29
1995	0.00	0.01	0.01	0.07	0.06	0.13	0.14	0.16	0.03	0.19
1996	0.00	0.02	0.02	0.05	0.09	0.14	0.16	0.32	0.07	0.39
1997	0.00	0.00	0.00	0.01	0.05	0.06	0.06	0.20	0.06	0.26
1998	0.00	0.00	0.00	0.09	0.00	0.09	0.09	0.24	0.06	0.30
1999	0.00	0.01	0.01	0.05	0.02	0.08	0.09	0.43	0.02	0.45
2000	0.00	0.02	0.02	0.05	0.02	0.08	0.10	0.22	0.02	0.25
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	0.34	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 <sup>a/</sup>	0.00	0.00	0.00	0.01	0.02	0.04	0.04	0.38	0.03	0.40

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-6. Rogue River fall Chinook inriver run and ocean population indices.

Return Year	Inriver Run Index in Thousands of Fish <sup>a/</sup>					Ocean Impact Rate by Age <sup>b/</sup>		Rogue Ocean Population Index (ROPI) in Thousands of Fish <sup>c/</sup>			
	Age-2	Age-3	Age-4	Age-5	Total <sup>d/</sup>	Age-3	Age-4-5	Age-3	Age-4	Age-5	Total
1980	0.4	0.2	0.9	0.6	2.1	0.23	0.55	5.2	4.0	1.4	10.6
1981	1.1	3.3	1.0	0.3	5.7	0.21	0.53	9.2	3.0	0.7	12.9
1982	0.7	1.3	1.3	0.1	3.4	0.30	0.52	9.8	2.9	0.3	13.0
1983	0.3	1.1	1.5	0.0	2.9	0.19	0.60	8.6	4.4	0.1	13.1
1984	0.4	1.2	1.8	0.1	3.5	0.08	0.38	9.9	4.7	0.2	14.8
1985	2.5	1.3	3.5	0.6	7.9	0.11	0.25	9.7	6.3	0.9	16.9
1986	3.1	12.5	2.3	0.5	18.4	0.18	0.46	71.3	5.9	1.0	78.2
1987	2.6	7.8	18.1	0.4	28.9	0.16	0.43	80.3	36.3	0.6	117.2
1988	1.4	4.8	25.2	1.5	32.9	0.20	0.39	17.3	47.9	2.5	67.7
1989	0.5	1.3	4.0	2.0	7.8	0.15	0.36	8.4	7.2	3.2	18.8
1990	0.0	0.3	1.4	0.2	1.9	0.30	0.55	6.0	4.7	0.5	11.2
1991	0.2	0.4	1.9	0.5	3.0	0.03	0.18	3.5	3.2	0.6	7.3
1992	0.5	0.3	1.5	0.5	2.8	0.02	0.07	4.4	2.4	0.6	7.4
1993	0.3	3.5	1.5	0.5	5.8	0.05	0.16	16.1	3.2	0.6	19.9
1994	0.5	0.8	5.8	0.9	8.0	0.03	0.09	3.0	9.5	0.9	13.4
1995	0.2	0.6	1.4	2.0	4.2	0.04	0.13	4.3	1.7	2.3	8.3
1996	0.1	0.4	1.8	0.1	2.4	0.05	0.16	2.4	2.8	0.1	5.3
1997	0.1	0.3	1.0	0.3	1.7	0.01	0.06	5.2	1.5	0.3	7.0
1998	0.0	0.5	2.8	0.3	3.6	0.00	0.09	3.8	3.9	0.3	8.0
1999	0.2	0.3	1.6	0.5	2.6	0.01	0.09	1.5	2.7	0.6	4.8
2000	0.2	2.0	0.8	0.6	3.6	0.06	0.10	9.9	0.9	0.6	11.4
2001	0.8	2.3	4.2	0.0	7.3	0.03	0.09	14.1	5.9	0.0	20.0
2002	0.9	4.0	7.1	0.8	12.7	0.02	0.15	32.2	9.1	0.9	42.2
2003	0.9	2.3	12.0	0.4	15.6	0.08	0.21	14.4	22.1	0.5	37.0
2004	0.4	0.6	4.9	2.9	8.8	0.12	0.34	3.9	9.7	4.4	18.0
2005 <sup>f/</sup>	NA	NA	NA	NA	NA	0.02	0.20	7.6	5.0	0.8	13.4
2006 <sup>f/</sup>	NA	NA	NA	NA	NA	0.01	0.10	4.9	3.2	0.5	8.6
2007 <sup>f/</sup>	NA	NA	NA	NA	NA	0.06	0.21	5.8	3.8	0.6	10.2
2008 <sup>f/</sup>	NA	NA	NA	NA	NA	0.00	0.10	6.9	4.6	0.7	12.2
2009 <sup>f/</sup>	NA	NA	NA	NA	NA	0.00	0.00	6.1 <sup>e/</sup>	4.0	0.7	10.7 <sup>e/</sup>
2010 <sup>f/</sup>	NA	NA	NA	NA	NA	NA	0.04	9.8 <sup>e/</sup>	6.5 <sup>e/</sup>	1.1	17.3 <sup>e/</sup>
2011 <sup>f/</sup>	NA	NA	NA	NA	NA	-	-	9.5 <sup>g/</sup>	6.3 <sup>g/</sup>	1.0 <sup>g/</sup>	16.8 <sup>g/</sup>

a/ Index based on carcass counts in spawning survey index areas. Carcass counts in 1978, 1979, and 1980 adjusted for prespawning mortality. Age composition developed from carcass scale sampling.

b/ Exploitation rates since 1981 are based on Klamath River fall Chinook cohort analysis, 1977-1980 based on 1981-1983 average.

c/ Based on cohort reconstruction methods. Index values for 2011 predicted from regression equations; postseason estimates are not available.

d/ Excludes age-6 fish.

e/ Preliminary, complete cohort not available, mean maturity rate used to derive estimate.

f/ Spawning surveys were discontinued 2005.

g/ Preseason forecast.

TABLE II-7. Predicted and postseason returns of Columbia River adult fall Chinook in thousands of fish. (Page 1 of 3)

Year	March Preseason Forecast <sup>a/</sup>	April STT Modeled Forecast <sup>b/</sup>	Postseason Return	March Pre/Postseason	April Pre/Postseason
<b>URB</b>					
1984	90.10	93.00	131.40	0.69	0.71
1985	159.10	159.10	196.40	0.81	0.81
1986	285.90	286.10	281.60	1.02	1.02
1987	436.40	436.40	420.70	1.04	1.04
1988	450.70	446.50	339.90	1.33	1.31
1989	234.00	231.80	261.30	0.90	0.89
1990	127.20	126.90	153.60	0.83	0.83
1991	88.80	88.90	103.30	0.86	0.86
1992	68.40	66.30	81.00	0.84	0.82
1993	84.50	82.70	102.90	0.82	0.80
1994	85.40	94.70	132.80	0.64	0.71
1995	103.70	125.00	106.50	0.97	1.17
1996	88.90	94.20	143.20	0.62	0.66
1997	166.40	158.00	161.70	1.03	0.98
1998	150.80	141.80	142.30	1.06	1.00
1999	147.50	102.10	166.10	0.89	0.61
2000	171.10	208.20	155.70	1.10	1.34
2001	127.20	132.70	232.60	0.55	0.57
2002	281.00	273.80	276.90	1.01	0.99
2003	280.40	253.20	373.20	0.75	0.68
2004	292.20	287.00	367.90	0.79	0.78
2005	352.20	354.60	268.70	1.31	1.32
2006	253.90	249.10	230.40	1.10	1.08
2007	182.40	185.20	112.60	1.62	1.64
2008	162.50	165.90	196.90	0.83	0.84
2009	259.90	269.80	212.00	1.23	1.27
2010 <sup>c/</sup>	310.80	319.10	324.90	0.96	0.98
2011	398.20	-	-	-	-
<b>LRW</b>					
1984	16.70	NA	13.30	1.26	NA
1985	12.90	NA	13.30	0.97	NA
1986	15.70	NA	24.50	0.64	NA
1987	29.20	NA	37.90	0.77	NA
1988	43.30	42.10	41.70	1.04	1.01
1989	27.30	26.90	38.60	0.71	0.70
1990	23.70	23.40	20.30	1.17	1.15
1991	12.70	12.70	19.80	0.64	0.64
1992	17.40	16.70	12.50	1.39	1.34
1993	12.50	11.90	13.30	0.94	0.89
1994	14.70	13.20	12.20	1.20	1.08
1995	12.40	11.50	16.00	0.78	0.72
1996	8.80	8.10	14.60	0.60	0.55
1997	7.50	7.20	12.30	0.61	0.59
1998	8.10	7.00	7.30	1.11	0.96
1999	2.60	2.50	3.30	0.79	0.76
2000	3.50	2.70	10.20	0.34	0.26
2001	16.70	18.50	15.70	1.06	1.18
2002	18.70	18.30	24.90	0.75	0.73
2003	24.60	23.40	26.00	0.95	0.90
2004	24.10	24.20	22.30	1.08	1.09
2005	20.20	21.40	16.80	1.20	1.27
2006	16.60	16.60	18.10	0.92	0.92
2007	10.10	10.00	4.30	2.35	2.33
2008	3.80	3.80	7.10	0.54	0.54
2009	8.50	8.60	7.50	1.13	1.15
2010 <sup>c/</sup>	9.70	10.00	10.90	0.89	0.92
2011	12.50	-	-	-	-

TABLE II-7. Predicted and postseason returns of Columbia River adult fall Chinook in thousands of fish. (Page 2 of 3)

Year	March Preseason Forecast <sup>a/</sup>	April STT Modeled Forecast <sup>b/</sup>	Postseason Return	March Pre/Postseason	April Pre/Postseason
<b>LRH</b>					
1984	70.40	89.00	102.40	0.69	0.87
1985	81.50	86.70	111.00	0.73	0.78
1986	171.60	173.90	154.80	1.11	1.12
1987	294.90	298.70	344.10	0.86	0.87
1988	267.70	246.50	309.90	0.86	0.80
1989	104.90	97.50	130.90	0.80	0.74
1990	68.50	65.50	60.00	1.14	1.09
1991	71.40	73.10	62.70	1.14	1.17
1992	113.20	121.50	62.60	1.81	1.94
1993	79.30	77.70	52.30	1.52	1.49
1994	36.10	46.50	53.60	0.67	0.87
1995	35.80	42.40	46.40	0.77	0.91
1996	37.70	48.30	75.50	0.50	0.64
1997	54.20	68.70	57.40	0.94	1.20
1998	19.20	22.50	45.30	0.42	0.50
1999	34.80	38.20	40.00	0.87	0.96
2000	23.70	26.40	27.00	0.88	0.98
2001	32.20	30.50	94.30	0.34	0.32
2002	137.60	133.00	156.40	0.88	0.85
2003	115.90	116.90	155.00	0.75	0.75
2004	77.10	79.00	108.90	0.71	0.73
2005	74.10	78.44	78.30	0.95	1.00
2006	55.80	57.50	58.30	0.96	0.99
2007	54.90	54.40	32.70	1.68	1.66
2008	59.00	55.90	60.30	0.98	0.93
2009	88.80	88.20	76.70	1.16	1.15
2010 <sup>c/</sup>	90.60	85.60	103.00	0.88	0.83
2011	133.50	-	-	-	-
<b>SCH</b>					
1984	21.30	27.00	47.50	0.45	0.57
1985	34.90	37.10	33.20	1.05	1.12
1986	16.00	16.20	16.60	0.96	0.98
1987	9.10	9.20	9.10	1.00	1.01
1988	6.50	5.90	12.00	0.54	0.49
1989	29.50	23.00	26.80	1.10	0.86
1990	27.30	23.70	18.90	1.44	1.25
1991	56.30	61.40	52.40	1.07	1.17
1992	40.90	41.30	29.50	1.39	1.40
1993	19.90	18.20	16.80	1.18	1.08
1994	20.20	28.90	18.50	1.09	1.56
1995	17.50	22.50	33.80	0.52	0.67
1996	27.60	35.40	33.10	0.83	1.07
1997	21.90	25.70	27.40	0.80	0.94
1998	14.20	14.20	20.20	0.70	0.70
1999	65.80	61.00	50.20	1.31	1.22
2000	21.90	26.90	20.50	1.07	1.31
2001	56.60	61.90	125.00	0.45	0.50
2002	144.40	136.00	160.80	0.90	0.85
2003	96.90	101.90	180.60	0.54	0.56
2004	138.00	150.00	175.30	0.79	0.86
2005	114.10	115.79	93.10	1.23	1.24
2006	50.00	51.80	27.90	1.79	1.86
2007	21.80	21.30	14.60	1.49	1.46
2008	87.20	86.20	91.90	0.95	0.94
2009	59.30	56.50	49.00	1.21	1.15
2010 <sup>c/</sup>	169.00	162.90	130.80	1.29	1.25
2011	116.40	-	-	-	-

TABLE II-7. Predicted and postseason returns of Columbia River adult fall Chinook in thousands of fish. (Page 3 of 3)

Year	March Preseason Forecast <sup>a/</sup>	April STT Modeled Forecast <sup>b/</sup>	Postseason Return	March Pre/Postseason	April Pre/Postseason
<b>MCB</b>					
1990	69.50	69.30	58.90	1.18	1.18
1991	48.40	48.50	35.40	1.37	1.37
1992	42.50	40.70	31.10	1.37	1.31
1993	33.00	32.30	27.50	1.20	1.17
1994	23.90	26.70	33.70	0.71	0.79
1995	25.00	30.00	34.20	0.73	0.88
1996	40.80	43.20	59.70	0.68	0.72
1997	72.10	61.90	59.00	1.22	1.05
1998	47.80	44.90	36.80	1.30	1.22
1999	38.30	27.70	50.70	0.76	0.55
2000	50.60	61.60	36.80	1.38	1.67
2001	43.50	45.30	76.40	0.57	0.59
2002	96.20	91.80	108.40	0.89	0.85
2003	104.80	94.60	150.20	0.70	0.63
2004	90.40	88.80	117.60	0.77	0.76
2005	89.40	89.73	98.00	0.91	0.92
2006	88.30	86.60	80.40	1.10	1.08
2007	68.00	69.10	46.90	1.45	1.47
2008	54.00	55.10	75.50	0.72	0.73
2009	94.40	97.90	73.10	1.29	1.34
2010 <sup>c/</sup>	79.00	74.60	79.00	1.00	0.94
2011	100.00	-	-	-	-

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 adequately 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-8. Comparison of preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.<sup>a/</sup> (Page 1 of 4)

Year	Preseason Postseason			Preseason Postseason			Preseason Postseason			Preseason Postseason		
	Forecast	Return	Pre/Postseason	Forecast	Return	Pre/Postseason	Forecast	Return	Pre/Postseason	Forecast	Return	Pre/Postseason
	<b>Nooksack-Samish</b>			<b>East Sound Bay</b>			<b>Skagit</b>			<b>Skagit</b>		
	<b>Hatchery and Natural</b>			<b>Hatchery</b>			<b>Hatchery</b>			<b>Natural</b>		
1993	50.4	32.3	1.53	3.2	3.8	0.84	1.0	1.4	0.71	14.0	6.9	2.00
1994	46.6	28.1	1.66	3.2	0.7	4.00	1.3	5.5	0.30	8.4	5.9	1.27
1995	38.5	22.3	1.73	3.5	0.2	17.50	1.6	3.4	0.48	5.0	9.2	0.52
1996	27.0	29.2	0.92	1.7	0.5	2.43	1.0	1.2	0.83	7.1	10.9	0.58
1997	34.0	41.7	0.99	1.2	1.2	1.00	0.1	0.0	-	6.4	6.1	1.03
1998	28.0	31.5	0.95	0.5	0.3	1.67	0.0	0.0	-	6.6	15.0	0.44
1999	27.0	42.1	0.66	2.3	0.3	7.67	0.0	0.0	-	7.6	5.3	1.46
2000	19.0	32.6	0.57	5.0	0.1	50.00	0.0	0.0	-	7.3	17.3	0.42
2001	34.9	64.7	0.55	1.6	0.9	16.00	0.0	0.0	-	9.1	14.1	0.65
2002	52.8	54.3	0.99	1.6	0.9	2.29	0.0	0.1	-	13.8	20.0	0.69
2003	45.8	30.0	1.51	1.6	0.2	8.00	0.0	0.3	-	13.7	10.3	1.38
2004	34.2	17.9	1.83	0.8	0.0	200.00	0.5	0.0	-	20.3	24.3	0.83
2005	14.5	15.9	1.07	0.4	0.0	13.33	0.7	0.4	3.50	23.4	23.4	0.99
2006	16.9	30.7	0.55	0.4	0.0	25.00	0.6	0.4	1.51	24.1	22.5	1.07
2007	18.8	32.7	0.57	0.4	0.0	66.67	1.1	0.4	2.75	15.0	13.0	1.15
2008	35.3	34.2	1.03	0.8	0.0	0.00	0.7	0.2	3.50	23.8	15.0	1.59
2009	23.0	25.7	0.89	0.1	0.0	25.00	0.6	0.1	6.00	23.4	12.5	1.87
2010 <sup>b/</sup>	30.3	NA	NA	2.3	NA	NA	0.9	NA	NA	13.0	NA	NA
2011	37.5	-	-	0.4	-	-	1.5	-	-	14.3	-	-

TABLE II-8. Comparison of preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.<sup>a/</sup> (Page 2 of 4)

Year	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason
	<b>Stillaguamish<sup>c/</sup> Natural</b>			<b>Snohomish<sup>c/</sup> Hatchery</b>			<b>Snohomish<sup>c/</sup> Natural</b>			<b>Tulalip<sup>c/</sup> Hatchery</b>		
1993	NA	1.3	-	1.6	2.7	0.58	4.9	5.5	0.89	2.8	1.4	2.03
1994	NA	1.3	-	1.8	5.4	0.33	4.5	5.0	0.90	2.8	1.8	1.59
1995	1.8	0.9	1.92	2.2	4.0	0.54	4.3	4.0	1.08	2.3	8.5	0.27
1996	1.3	1.2	1.04	6.7	4.6	1.47	4.2	5.9	0.71	2.7	11.5	0.24
1997	1.6	1.2	1.36	7.7	12.0	0.64	5.2	4.4	1.19	4.0	8.7	0.46
1998	1.6	1.6	1.03	6.5	4.7	1.37	5.6	6.4	0.88	2.5	7.2	0.35
1999	1.5	1.1	1.36	7.8	4.7	1.65	5.6	4.8	1.16	4.5	15.2	0.30
2000	2.0	1.7	1.21	6.2	1.9	3.20	6.0	6.1	0.98	5.0	8.3	0.60
2001	1.7	1.4	1.22	4.1	0.9	4.57	5.8	8.4	0.69	5.5	5.1	1.08
2002	2.0	1.6	1.25	6.8	2.6	2.66	6.7	7.3	0.92	5.8	5.2	1.12
2003	2.0	1.0	1.98	9.4	5.8	1.63	5.5	5.6	0.99	6.0	8.7	0.69
2004	1.9	1.6	1.19	3.3	6.4	0.52	10.6	11.2	0.95	6.8	6.5	1.05
2005	1.7	1.2	1.42	4.4	4.0	1.10	14.1	5.0	2.82	6.4	7.4	0.86
2006	1.0	1.3	0.77	2.8	4.3	0.65	11.0	8.8	1.25	9.3	5.8	1.60
2007	1.0	0.8	1.27	3.5	6.6	0.53	12.7	4.0	3.18	8.4	6.1	1.38
2008	0.6	1.8	0.34	3.8	6.2	0.61	7.4	8.4	0.88	2.7	3.9	0.69
2009	1.7	1.3	1.29	4.9	2.0	2.45	8.4	2.3	3.65	4.0	0.8	5.00
2010 <sup>b/</sup>	1.4	NA	NA	5.6	NA	NA	9.9	NA	NA	3.4	NA	NA
2011	1.9	-	-	5.2	-	-	7.4	-	-	3.5	-	-

TABLE II-8. Comparison of preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.<sup>a/</sup> (Page 3 of 4)

Year	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason
	<b>South Puget Sound Hatchery</b>			<b>South Puget Sound Natural</b>			<b>Strait of Juan de Fuca Hatchery</b>			<b>Strait of Juan de Fuca Natural</b>		
1993	61.8	43.1	1.68	26.5	9.6	1.34	0.7	1.0	3.50	3.1	1.6	1.29
1994	52.7	49.9	1.08	18.0	10.5	0.60	3.9	1.2	2.44	1.0	1.0	2.00
1995	49.6	75.4	0.67	21.7	24.9	0.63	3.0	0.7	30.00	0.9	2.3	0.33
1996	51.9	53.2	0.89	19.0	16.5	0.53	2.8	1.4	14.00	0.9	2.0	0.29
1997	65.1	38.3	1.40	18.2	15.9	0.88	2.2	1.0	7.33	0.8	2.9	0.23
1998	67.8	49.6	1.24	21.8	14.6	0.79	1.7	1.7	1.00	0.9	2.1	0.47
1999	59.4	67.3	0.71	19.6	33.5	1.15	1.9	0.7	2.71	0.9	2.7	0.33
2000	77.5	47.4	1.39	17.5	39.5	1.26	2.0	1.2	1.67	1.1	1.7	0.65
2001	73.7	76.6	0.76	16.2	44.6	0.80	0.0	1.7	0.00	3.5	2.0	1.75
2002	90.8	69.2	1.07	16.9	58.5	0.79	0.0	1.6	0.00	3.6	2.2	0.97
2003	86.6	56.6	1.14	19.6	31.0	1.28	0.0	1.3	0.00	3.4	2.8	0.72
2004	86.5	66.4	1.16	17.5	24.5	0.61	0.0	1.4	0.00	3.5	4.1	0.85
2005	83.1	73.9	0.95	17.7	19.1	0.46	0.0	1.4	0.00	4.2	2.0	2.00
2006	85.8	105.1	0.82	21.3	42.2	0.50	0.0	1.2	0.00	4.2	3.0	1.39
2007	83.0	147.1	0.56	17.0	29.7	0.57	0.0	0.8	0.00	4.4	1.3	3.38
2008	101.6	95.1	1.07	21.1	30.9	0.68	0.0	0.7	0.00	4.5	1.2	3.75
2009	93.0	77.3	1.20	17.2	13.0	1.32	0.0	1.5	0.00	3.4	1.3	2.62
2010 <sup>b/</sup>	97.4	NA	NA	12.7	NA	NA	0.0	NA	NA	3.7	NA	NA
2011	118.6	-	-	8.9	-	-	0.0	-	-	4.5	-	-

TABLE II-8. Comparison of preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.<sup>a/</sup> (Page 4 of 4)

Year	Preseason Forecast	Postseason Return	Pre/Postseason
<b>Hood Canal</b>			
<b>Hatchery and Natural</b>			
1993	NA	9.2	-
1994	11.7	8.1	1.44
1995	11.5	7.8	1.47
1996	3.9	16.2	0.24
1997	9.0	30.2	0.30
1998	2.7	20.9	0.13
1999	6.7	30.4	0.22
2000	14.0	34.4	0.41
2001	19.2	38.8	0.49
2002	25.3	36.9	0.69
2003	24.0	59.4	0.40
2004	29.6	47.0	0.63
2005	30.5	39.3	0.78
2006	30.2	40.9	0.74
2007	47.5	44.0	1.08
2008	36.8	41.0	0.90
2009	42.6	44.0	0.97
2010 <sup>b/</sup>	45.0	41.0	1.10
2011	40.6	-	-

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 inside Puget Sound.

b/ Postseason returns are preliminary.

c/ These numbers 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, the Stillaguamish and Snohomish Rivers; harvest in sport fisheries in Area 8D and the Stillaguamish and Snohomish Rivers; and escapement.

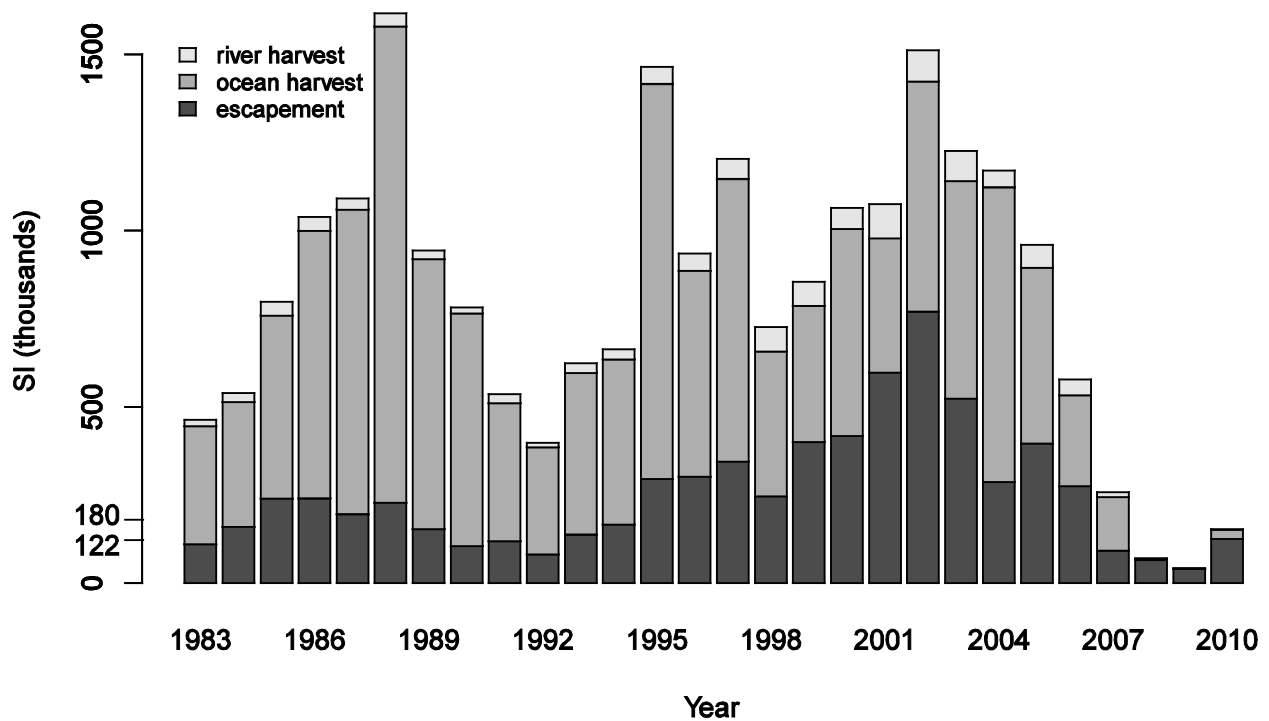


FIGURE II-1. The Sacramento Index (SI) and relative levels of its components. The Sacramento River fall Chinook escapement goal range of 122,000-180,000 adult spawners is noted on the vertical axis.

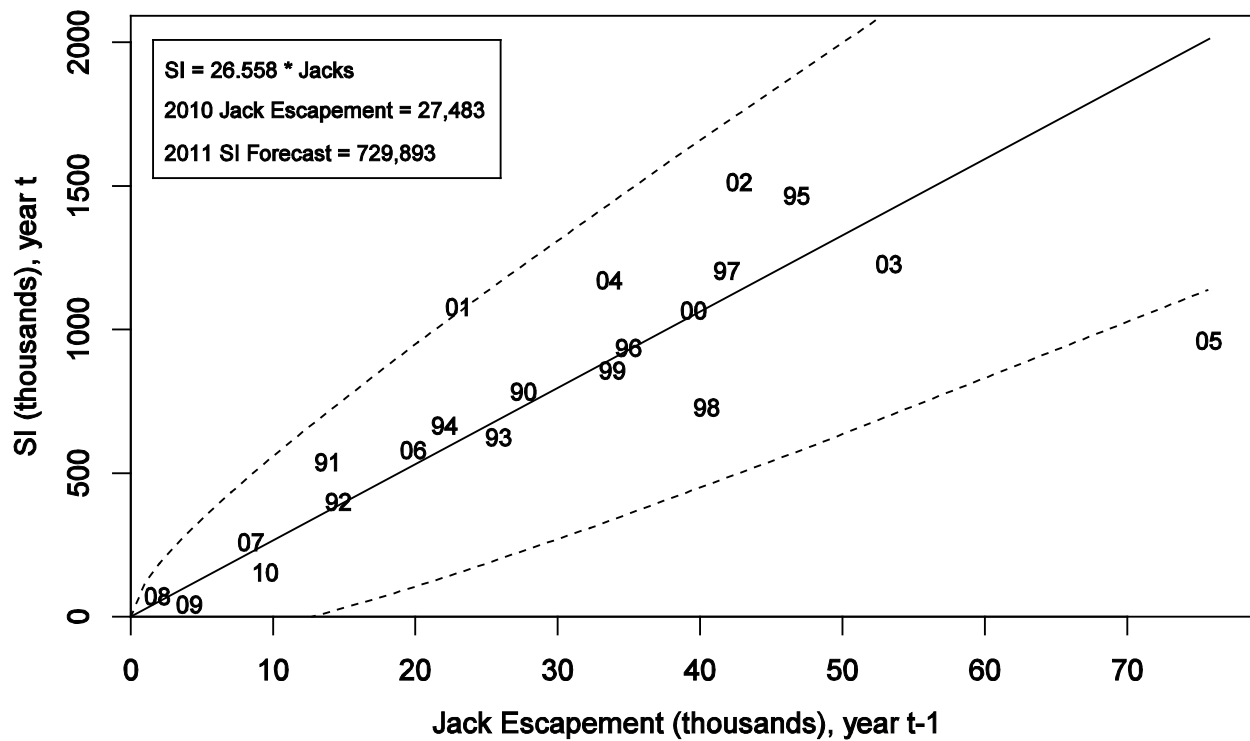


FIGURE II-2. Regression estimator for the SI based on previous year's escapement of Sacramento River fall Chinook jacks, 1990-2010. Years shown are SI years.

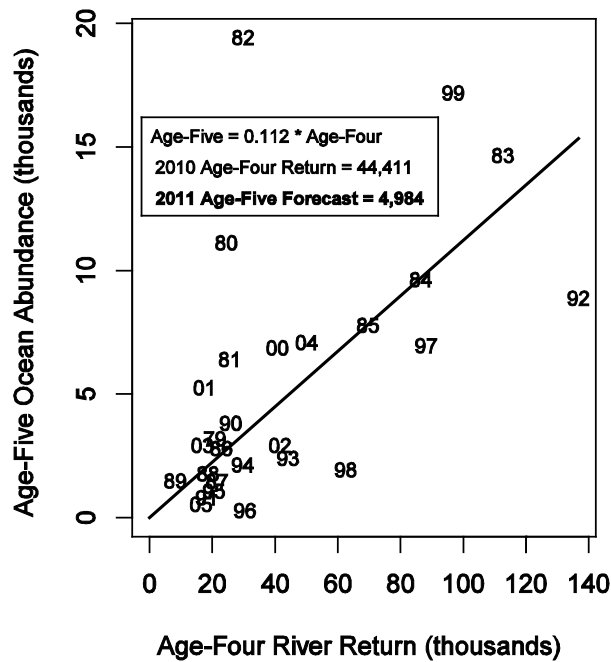
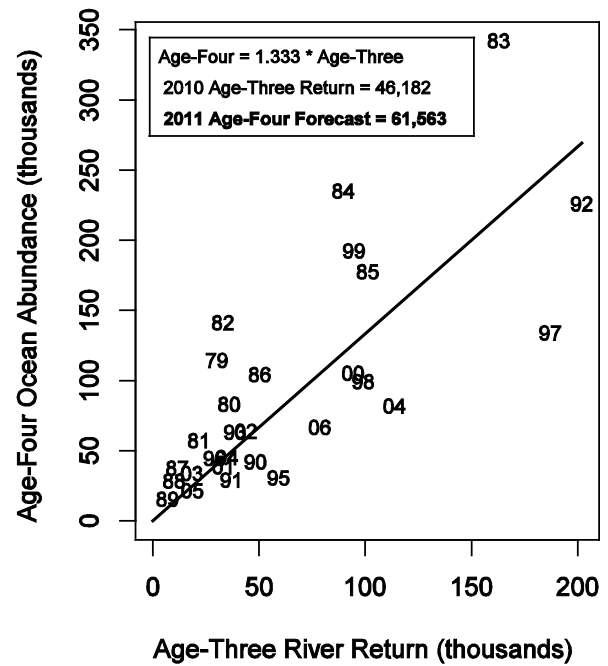
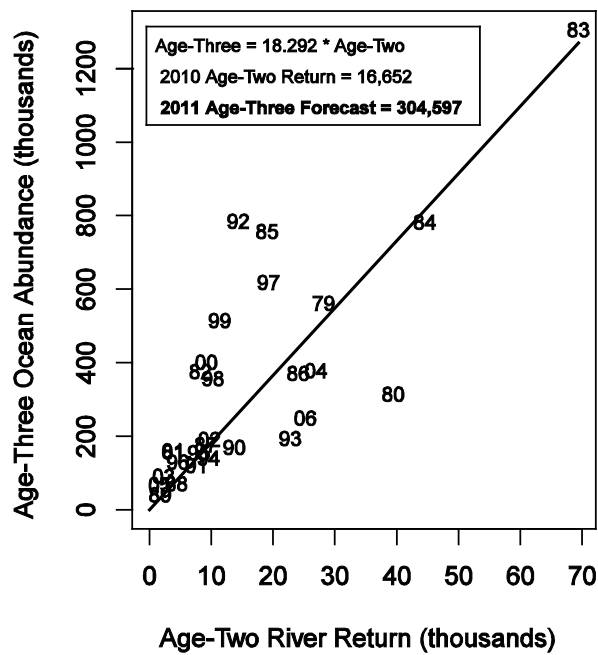


FIGURE II-3. Regression estimators for Klamath River fall Chinook ocean abundance (September 1) based on that year's river return of same cohort. Numbers in plots denote brood years.

## CHAPTER III - COHO SALMON ASSESMENT

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

#### *(OREGON PRODUCTION INDEX AREA)*

The majority of coho harvested in the 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) public hatchery (OPIH), (2) Oregon coastal natural (OCN), including river and lake components, (3) Lower Columbia natural (LCN), and (4) natural and hatchery stocks south of Cape Blanco, Oregon, which include the Rogue, Klamath, and Northern California coastal stocks.

A stratified random sampling (SRS) study implemented in 1990 indicated an overestimation of annual OCN spawner escapement, which had previously been based on nonrandom standard index surveys. Because the stock composition of the OPI area ocean impacts is based on the proportions of the OPI ocean escapements, a reduction in OCN spawner escapement meant that traditional OCN ocean impacts and abundances were overestimated, while traditional ocean impact and abundance estimates for other OPI area stocks had been underestimated. Starting in 1992, the Council adopted an abundance adjustment procedure for use in assessing fishery impacts. This procedural change, based on improved estimates of OCN spawner escapements, adjusted traditional index abundances of the other OPI area stocks. To achieve targeted exploitation rates and spawner escapement goals, the various OPI area stock abundance index predictions were scaled in the Coho FRAM to reflect the results of the ongoing OCN spawner study and are referred to as SRS abundances. In 1998, after eight years of SRS abundance estimates, the historic OPI data set was rescaled to reflect the revised OCN abundance estimates. Beginning in 1998, a random site selection procedure based on the Environmental Protection Agency's Environmental Monitoring and Assessment Program (EMAP) has been used instead of the SRS methodology. The random survey sampling provides abundance estimates consistent with SRS estimates.

Beginning in 1998, with the availability of a long-term data set in SRS values and the random survey sampling values, all OPI area stock abundances were projected using random sampling accounting. Direct comparisons of 2011 abundance forecasts with recent year preseason abundance forecasts and postseason estimates, are reported in Table III-1. All fishery impacts and escapements from Coho FRAM are reported in random sampling values.

Beginning in 2008, a new method was developed to estimate coho abundances for both the natural and hatchery components of the Columbia River and the Oregon coast. The traditional method of stock abundance estimation used only catch data from Leadbetter Point, Washington, to the U.S./Mexico border. The assumption in the SRS accounting was that OPI stocks that were caught north of the OPI area were balanced by northern stocks that were caught inside the OPI area. This assumption was valid as long as fisheries north and south were balanced. However, in recent years, fisheries to the south have been more restrictive than those to the north, leading to underestimation of harvest of OPI area stocks. In addition, the estimation technique was not consistent with the methods used in Coho FRAM. The Mixed Stock Model (MSM) used for constructing the FRAM base period data was used to estimate the contribution of various coho stocks, including the OPI area stocks, to ocean fisheries and was based on CWT recoveries and associated tag rates. The MSM includes all fisheries that impact a particular stock and therefore should provide a better overall accounting of total harvest and mortality of both Columbia River and Oregon coast coho stocks. The new run size estimates are based on the 1986-1997 base period and backwards FRAM run reconstructions for more recent years. The Oregon Production Index Technical Team (OPITT) decided to use the MSM run reconstruction database for future accounting and

forecasts. The MSM estimates were refined for use in 2009, with particular attention to the base period reconstruction for OCN coho. In 2010 the relationship between the SRS and MSM time series was reconsidered. The changes in fishery effort patterns that resulted in biased harvest estimates began in the mid- to late-1990s, so the first few years of the MSM time series should be equivalent to the SRS time series. This was used as justification to use the MSM data set as a continuation of the SRS time series starting in 1986. In 2011 the OPI hatchery and OCN predictors used the longer, merged time series. This results in a higher level of statistical significance for the predictors and lower residuals in most recent years.

### **Public Hatchery Coho**

OPI area public hatchery coho smolt production occurs primarily in Columbia River facilities and net pens. Several facilities located in Oregon coastal rivers and in the Klamath River Basin, California, collectively produce fewer coho. OPI area smolt releases since 1960 are reported by geographic area in Appendix C, Table C-1.

### *Predictor Description*

Prior to 2008, the OPIH stock predictor was a multiple linear regression with the following variables: (1) Columbia River jacks (Jack CR), (2) Oregon coastal and Klamath River Basin jacks (Jack OC), and (3) a correction term for the proportion of delayed smolts released from Columbia River hatcheries (Jack CR \* [SmD/SmCR]).

In 2008 the stock predictor was modified slightly from that used in previous years. Because of the shorter data set (1986-2007 vs. 1970-2007) and the near-total phase-out of coastal coho salmon hatcheries, the factor for Oregon and California jacks (Jack OC) was not significant in the regression. A simplified model with all OPI jacks combined into one term (Jack OPI) was used, and all parameters were significant. In 2011 the longer (1970-2010) time series was used with the simplified model.

The OPIH stock predictor is partitioned into Columbia River early and late stocks based on the proportion of the 2010 jack returns of each stock adjusted for stock specific maturation rates. The coastal hatchery stock is partitioned into northern and southern coastal stock components. The northern OPIH coastal stock is comprised of hatchery production from the central Oregon Coast. The southern OPIH coastal stock is comprised of hatchery production from the Rogue River basin in southern Oregon and the Klamath and Trinity basins in northern California. The 2011 partition was based on the proportion of the smolt releases in 2010.

For the 2011 abundance forecast, the data base includes 1970-2010 recruits and 1969-2009 jack returns (in thousands of fish). The model was:

$$\text{OPIH}(t) = a + b ( \text{Jack OPI}(t-1) + c ( (\text{Jack CR}(t-1) ( [\text{SmD}(t-1)/\text{SmCR}(t-1)]) )$$

Where:

$$\begin{aligned} a &= -87.98 \\ b &= 19.48 \\ c &= 25.69 \\ \text{adjusted } r^2 &= 0.94 \end{aligned}$$

The OPIH stock data set and a definition of the above terms are presented in Appendix C, Table C-2.



### *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. The 2010 preseason abundance prediction of 408,000 OPIH coho was 74 percent of the preliminary postseason estimate of 551,300 coho.

Since 1983, the OPIH predictor has performed well. The years with the highest variations were due principally to high interannual variability in the jack-to-adult ratios.

### *2011 Stock Status*

Using the appropriate values from Appendix C, Table C-2, the OPIH abundance forecast for 2011 is 375,100 coho, 92 percent of the 2010 prediction and 68 percent of the preliminary 2010 postseason estimate.

### **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.

### *Predictor Description*

#### **Oregon Coastal Natural Rivers**

From 1988-1993, the abundance of OCNR index coho was forecasted using a modified Ricker spawner-recruit model. The predictor related OCNR recruits to the parent brood stock size incorporating an adjustment for ocean survival based on OPI hatchery smolt to jack survival the previous year. Due to a tendency to over-predict abundances, the database in the predictor was shortened from 1970-1991 to 1980-1991 in 1992 and 1993.

Because of concern that the adopted OCNR model did not adequately incorporate environmental variability, an alternative model was used to predict the 1994 and 1995 index abundances. The model used ocean upwelling, sea surface temperatures, and year to predict OCNR index coho abundance. The year term was included in the model to reflect an observed decline in stock productivity.

For 1996-1998, the environmental based model without the year component was used in predicting OCNR stock abundances. In addition, the predictions were in SRS rather than traditional index accounting. The OCNR environmental variables were annual deviation from the mean April-June Bakun upwelling index at 42° N latitude (UpAnom), and annual deviation from the mean January sea surface temperature at Charleston, Oregon (JanAnom).

For 1999-2002, the environmental-based model with the year component included was used to predict OCNR stock abundances.

For 2003-2007, the same environmental-based model without the year component that was used for 1996-1998 was used in predicting OCNR abundance.

In 2008, OPITT adopted a new abundance time series based on MSM run reconstructions and backwards FRAM modeling. This time series starts in 1986, in contrast to the SRS time series, which starts in 1970. There is much less contrast in the environmental variables in the shorter time period than there was in the longer period. In addition, there appears to be a weaker relationship between abundance and the environmental variables in recent years.

For 2008, several models using the MSM time series were considered. These all tended to predict higher abundances than what would reasonably be expected and none were statistically significant. In the absence of a satisfactory model, OPITT examined patterns in ocean conditions and hatchery jack returns and determined that the 2007 postseason abundance estimate of 50,000 coho was the most appropriate forecast for 2008.

In 2009 the MSM base period estimates for OCN coho were revised to resolve some of the issues raised in 2008. As the new estimates were not available until the day before the prediction was due, there was little time to explore predictive relationships. There were indications that the revised data set was better correlated with environmental data, and the new environmental indicators looked promising. For 2009 and 2010, however, a variation on the adopted predictor was chosen. The adopted predictor was based on JanAnom in the return year and UpAnom in the year of ocean entry. In some years, an additional variable, Year, was added to capture a long-term downward trend in the data that was not represented in the environmental time series. With the recent shift in ocean conditions this linear trend was no longer apparent, but the pattern in residual errors of the predictor matched the regime shifts in 1990 and 2000. Until a more objective index of regime changes could be incorporated in the predictor, an index variable called RegInd (Regime Index) was used for the 2009 and 2010 predictor. This variable flags the cold regimes (1986-1989, 2001 - 2009) with a 0 and the warm regimes (1990 - 2000) with a 1, and by itself explains over 50 percent of the variability of the time series.

For 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.

The GAM with 3 predictor variables 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.

GAM Model Predictor used for 2011 forecast was:

Ensemble Mean of six forecasts based on environmental conditions and spawners.

Variables			Prediction	$r^2$	OCV <sup>a/</sup>
PDO	Spring Transition (Julian date; t-1)	Log Spawners (t-3)	234,400	0.77	0.70
PDO	Multivariate ENSO Index (Oct-Dec; t-1)	Upwelling (July-Sept; t-1)	277,700	0.78	0.69
PDO	Spring Transition (Julian date; t-1)	Multivariate ENSO Index (Oct-Dec; t-1)	240,200	0.76	0.69
PDO	Upwelling (July-Sept; t-1)	Sea Surface Temperature (May-Jul; t-1)	208,400	0.78	0.69
PDO	Sea Surface Height (Apr-June; t-1)	Upwelling (July-Sept; t-1)	181,400	0.77	0.68
PDO	Upwelling (Sept-Nov; t-1)	Sea Surface Temperature (Jan; t)	200,200	0.76	0.67
Ensemble Mean			221,600	0.81	0.74
(90% prediction intervals)			(117,600-418,600)		

a/ OCV – ordinary cross-validation score

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

### **Oregon Coastal Natural Lakes**

Since 1988, except for 2008, 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). Production from these systems has declined substantially from the levels observed during 1950-1973, but has steadily increased in recent years. Following the same reasoning used for the OCN Rivers predictor in 2008, OPITT chose to use the 2007 postseason abundance estimate of 10,000 coho for the 2008 preseason prediction instead of using the most recent three-year average.

For 2011, OPITT chose to use the most recent three-year average adult stock abundance which predicts 27,800 coho.

### ***Predictor Performance***

Recent year OCN preseason abundance predictions are compared to postseason estimates in Table III-1. Since 2000 the OCN predictor has under estimated abundance except for 2005 and 2007. The 2010 preseason abundance prediction of 148,000 OCN coho was 55 percent of the preliminary postseason estimate of 266,800 coho.

### ***2011 Stock Status***

The 2011 preseason prediction for OCN (river and lake systems combined) is 249,400 coho, 169 percent of the 2010 preseason prediction and 93 percent of the 2010 postseason estimate (Table III-1). The 2011 preseason prediction for OCNR and OCNL components are 221,600 and 27,800 coho, respectively.

### **Private Hatchery Coho**

There have been no Oregon coastal PRIH coho smolt releases since 1990.

### **Salmon Trout Enhancement Hatchery Coho Smolt Program**

### ***Predictor Description***

From 1988 to 2007, preseason abundance predictions for Oregon coastal STEP index coho smolt production facilities were based on the Council-approved procedure, which involved multiplying the average smolt to adult survival rate by the ratio of the current OPI jack survival to the previous year's OPI jack survival.

### *Predictor Performance*

Recent year STEP preseason abundance predictions are compared to postseason estimates in Table III-1.

### *2011 Stock Status*

Due to changes with the STEP program, releases were discontinued after the 2004 brood and forecasts were discontinued in 2008 (Table III-1).

## **Lower Columbia River Natural**

### *Predictor Description*

The 2011 prediction for the Clackamas River is based on the recent 3-year cohort average counts at North Fork dam. The Clackamas forecast for 2011 is 800 wild fish at North Fork dam. The forecast for other Oregon lower Columbia natural (LCN) populations, including the Sandy River, are 3-year averages of recent year abundances based on spawning ground counts. The 2011 ocean abundance forecast for all Oregon areas combined is 4,600 coho.

The 2011 prediction for the Washington LCN coho populations are derived by combining estimates of natural smolt production based on watershed area and a predicted 2008 brood year marine survival rate of 3.3 percent. The 2011 adult ocean abundance forecast for Washington LCN coho is 18,100 coho.

### *Predictor Performance*

The LCN stock predictor methodology was developed in 2007. The preseason abundance compared to the postseason estimate is presented in Table III-1. The 2010 preseason abundance prediction of 15,100 LCN coho was 49 percent of the preliminary postseason estimate of 30,800 coho.

### *2011 Stock Status*

The 2011 prediction for LCN coho is 22,700 coho (Table III-1). This ocean abundance estimate includes both Oregon and Washington LCN components.

## **Oregon Production Index Area Summary of 2011 Stock Status**

The 2011 combined OPI area stock abundance is predicted to be 624,500 coho, which is 112 percent of the 2010 preseason prediction of 556,000 coho and 76 percent of the 2010 preliminary postseason estimate of 818,100 coho. The 2011 OPI area forecasts are compared to historical abundances in Table III-2.

## **WASHINGTON COAST AND PUGET SOUND COHO STOCKS**

### **Predictor Description and Past Performance**

A variety of preseason abundance estimators currently are employed for Washington coastal and Puget Sound coho stocks (Table I-2). These estimators are used to forecast preseason abundance of adult ocean (age-3) recruits.

The performance of preseason abundance forecasts (adult ocean recruits) cannot be evaluated at this time because postseason run reconstructions for U.S. and Canadian coho production units have not been completed. A comparison of expected preseason and postseason ocean escapements for Washington coastal and Puget Sound stocks in recent years is presented in Tables III-3 and III-4. Postseason estimates of 2010 ocean escapements for some of these stocks were not available. The comparison of preseason and postseason estimates of ocean escapement reflects annual errors in abundance estimates, deviations in ocean fisheries from preseason expectations, and variations in ocean distributions of stocks as described

in the introduction. Fishery impact levels anticipated preseason may be substantially different than those that actually occur.

## **2010 Stock Status**

### *Washington Coastal Coho*

#### **Willapa Bay**

The 2011 Willapa Bay hatchery coho abundance forecast is 64,658 ocean recruits compared to a 2010 preseason forecast of 78,700. The natural coho forecast is 47,788 ocean recruits, compared to a 2010 preseason forecast of 20,400. Both the hatchery and natural forecasts are based on a regression of hatchery or natural jacks on terminal adult hatchery or natural returns for the 1994-2007 brood years

#### **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. The abundance forecast for Grays Harbor natural stock coho for 2011 is 89,097 ocean age-3 recruits. The forecast for hatchery stock ocean abundance is 43,958 ocean age-3 recruits.

The natural coho forecast consists of an estimate of smolt production in the Humptulips and Chehalis basins multiplied by a PDO based marine survival rate.

The 2011 hatchery coho forecast of 43,958 is an estimate of smolt releases from on- and off-station sites, multiplied by the average return per release for four years (2004-2007 BY) and then expanded to ocean recruit abundance based on CWT recoveries for 2000-2001 return years.

#### **Quinault River**

The 2011 forecast for Quinault natural coho is 22,947 ocean recruits, an increase of 37 percent from the 2010 forecast of 16,706. This forecast is based on the mean estimate of recent ocean recruits for 2004 through 2009. All natural coho are unmarked.

The Quinault hatchery coho forecast is 35,545 ocean recruits. This return is from an estimated release of 643,592 smolts, and is based on a recent 5-year average smolt return rate of 5.52 percent for the Quinault National Fish Hatchery. The number of marked coho is estimated at 30,811 and unmarked coho at 4,733.

#### **Queets River**

The 2011 Queets natural coho forecast is 13,279 ocean recruits, a decrease of 39 percent compared to the 2010 forecast level of 21,823. This forecast represents the estimated smolt production (238,055) multiplied by an expected survival rate of 5.6 percent. The survival rate estimate is based on a binomial logistic regression model developed by Quinault Fisheries Department. This model consists of a regression of Queets survival rates from return years 1993-2007 as estimated using backward FRAM run reconstructions, and the standardized monthly mean Pacific Decadal Oscillation (PDO) values from January through August for the corresponding years the smolts entered salt water.

The 2011 Queets hatchery (Salmon River) coho forecast is 16,331 ocean recruits, an increase of 27 percent compared to the 2010 forecast of 11,900. This forecast is based on a smolt release of 712,685 multiplied by the recent 10 year average marine survival rate (2.3 percent). Approximately 89 percent of the fish released from the Salmon River facility were marked with an adipose fin clip.

### **Hoh River**

The 2011 Hoh River natural coho forecast is 11,625 ocean recruits, an increase of 53 percent compared to the 2010 forecast of 7,608. This forecast is based on estimated smolt production per square mile of watershed from the Clearwater tributary to the Queets River (648 smolts/square mile), multiplied by the size of the Hoh watershed (299 square miles), for a total of 193,752 smolts. The total natural smolt production estimate was then multiplied by an expected survival rate of 6.0 percent. Because freshwater production is measured directly in the Queets River, marine survival estimates for the Queets are used when forecasting Hoh wild coho marine survival. The Queets PDO model developed by the Quinault Fisheries Department estimates a 5.6 percent marine survival rate for Queets wild coho. This was used as the base rate and then increased according to the pattern of increasing marine survival moving north on the coast. This base rate of 5.6 percent was increased to 6.0 percent for the Hoh River.

No hatchery production is projected for the Hoh system for 2011.

### **Quillayute River**

The 2011 Quillayute River summer natural and hatchery coho forecasts are 2,796 and 5,403 ocean recruits, respectively. The natural component run size is based on the estimated total summer coho smolt production (39,947) and a projected ocean survival rate of 7.0 percent. This is a higher ocean survival rate than the 5.0 percent used in 2010. The Queets PDO model and Elwha jack returns result in a 5.6 percent marine survival estimate.

An examination of the return rates of both hatchery releases and natural smolts indicates that hatchery return rates are 1.5 to 2.0 percent below natural returns. Thus, for the hatchery component, an ocean survival rate of 5.0 percent was selected. The survival rate of 5.0 percent was multiplied by a release of 108,054 smolts. Approximately 99 percent of the fish were marked with an adipose fin clip; an additional 853 unmarked smolts were released. The 2011 forecast abundance of natural summer coho is essentially the same as the 2010 forecast, while the hatchery forecast is 69 percent higher than the 2010 forecast.

The 2011 Quillayute River fall natural and hatchery coho forecasts are 28,191 and 31,042 ocean recruits, respectively. The 2011 forecast abundance of natural Quillayute fall coho is 28 percent higher, and the hatchery forecast is 75 percent higher, than their respective 2010 forecasts. The forecast for the natural component is based on the estimated total fall coho smolt production (402,728) multiplied by an expected marine survival rate of 7.0 percent, which was the same as used for the summer natural returns above. The fall hatchery production forecast was based on the same prediction of marine survival (5.0 percent) used for the summer hatchery coho forecast, multiplied by a release of 620,841 smolts. Approximately 86.9 percent of the hatchery fish were marked with an adipose fin clip.

The basin total coho smolt production estimate (summer and fall stocks) was derived using the estimated coho smolt production in the Clearwater Basin of 90,737, which is 1.43 times its average production during the years a smolt trap was operated on the Bogachiel River (1987, 1988 and 1990) and 1.49 times its average production during the years a trap was operated on the Dickey River (1992-1994). Using 1.43 as a multiplier of the estimated average smolt production of the Quillayute system excluding the Dickey (217,257) yields an estimated production of 311,263 coho smolts. The Dickey production yields an additional 131,410 smolts to the system. The total freshwater production for the basin is estimated to be 442,674 smolts. Smolt production was apportioned according to brood year natural spawning escapements of summer and fall coho to yield the smolt estimates for each natural population.

### **North Washington Coast Independent Tributaries**

Production from several smaller rivers and streams along the North Washington Coast (Waatch River, Sooes River, Ozette River, Goodman Creek, Mosquito Creek, Cedar Creek, Kalaloch Creek, Raft River, Camp Creek, Duck Creek, Moclips River, Joe Creek, Copalis River, Conner Creek), which flow directly into the Pacific Ocean, is forecast as an aggregate. Generally, stock assessment programs on these systems are minimal. The 2011 forecast of natural coho production for these independent streams is 21,590 ocean recruits, based on a prediction of 600 smolts per square mile of watershed drainage, 424 square miles of watershed, and an expected marine survival rate of 8.5 percent. This rate was the average of the jack-based and the PDO models.

The hatchery forecast of 11,815 ocean recruits is developed from linear regression model estimates of marine survival, predicted by the jack return rate for coho from the Makah National Fish Hatchery. The predicted marine survival of 8.98 percent for the brood year 2008 was multiplied by the 2008 brood year smolt release (248,891) from the Makah National Fish Hatchery. For the 2008 brood year release, 83 percent were marked with an adipose fin clip.

### ***Puget Sound***

The 2011 total hatchery and natural coho ocean recruit forecast for the Puget Sound region of 981,000 38.5 compared to a 2010 forecast of 613,930. The hatchery coho forecast is 380,900 compared to the 2010 forecast of 316,133, and the natural coho forecast for 2011 of 600,100 is much higher than the 2010 forecast of 297,797.

Puget Sound hatchery forecasts for 2011 were generally the product of 2008 brood year (BY) smolt releases from each facility, and a predicted marine survival rate for each program. Marine survival rates were typically based on recent year average survival rates derived from CWT recovery information and/or run reconstructions, and review of relationships between jack returns and adult marine survival rates at selected hatcheries. 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 predictions based on a jack return model from the WDFW Big Beef Creek Research Station in Hood Canal, adult recruits/smolt data generated from the WDFW Deschutes River Research Station, and a natural coho CWT tagging program at Baker Lake (Skagit River basin), or other information.

### **Strait of Juan de Fuca**

The 2011 forecasts for Strait of Juan de Fuca (SJF) natural and hatchery coho ocean recruits are 12,317 and 15,244, respectively. As in past years, this forecast includes both Eastern and Western SJF drainages. The natural coho forecast was derived by multiplying the estimated 2008 brood natural smolt production for the region by a predicted ocean marine survival rate developed by two different models. One of the predictive models was based on a relationship between an index of the PDO and observed survival rates, and the other a relationship of Elwha Hatchery jack returns to observed survival rates. The forecasted abundances developed by each model were averaged to produce the final forecast. The hatchery forecasts were based on applying hatchery-specific ocean recruitment rate predictions (1.29 percent for Dungeness, 0.29 percent for Elwha) to the 2008 BY smolt releases for each hatchery. The recruitment rate predictions for the hatchery stocks were based on recent 3-year averages of cohort reconstruction-based recruits/smolt released in each hatchery production unit.

The preliminary preseason forecast of 12,317 age-3 ocean recruits places SJF natural coho in the low abundance based status category, which results in an allowable total exploitation rate of no more than 40 percent under the Council adopted exploitation rate matrix (Appendix A, Table A-4).

### **Nooksack-Samish**

The 2011 forecasts for Nooksack-Samish natural and hatchery coho ocean recruits are 29,507 and 45,745 respectively. The natural coho forecast is the product of projected natural smolt production from each stream basin in the region, multiplied by a marine survival rate expectation of 6.0 percent. The hatchery forecasts are based on the 2004-2006 BY average recruits/smolt rate

### **Skagit**

The 2011 forecasts for Skagit River natural and hatchery coho ocean recruits are 138,117 and 16,176 (14,712 from in-river hatchery production, 1,464 from Oak Harbor net-pens), respectively. The natural coho forecast is the product of measured smolt production from the Skagit basin multiplied by a marine survival rate expectation of 9.5 percent. The natural coho marine survival rate is based on the average of the 1988-2006 BY (even years only) Skagit natural recruits/smolt rate. The hatchery forecasts are based on an average marine survival rate of the 1988-2006 BY (even years only) Cascade Hatchery CWT-based recruits/smolt rate of 4.9 percent.

The preliminary preseason forecast of 138,117 age-3 ocean recruits places Skagit natural coho in the normal abundance based status category, which results in an allowable total exploitation rate of no more than 60 percent under the Council adopted exploitation rate matrix (Appendix A, Table A-4).

### **Stillaguamish**

The 2011 forecast for Stillaguamish River natural coho ocean recruits is 66,600. The natural coho forecast is derived from the estimated smolt production from the basin for brood year 2008, multiplied by a 12.0 percent marine survival rate expectation, which was based on correlations with the PDO, the Vancouver Island boreal copepod anomaly, and September trawl survey coho catch.

The preliminary preseason forecast of 66,600 age-3 ocean recruits places Stillaguamish natural coho in the normal abundance based status category, which results in an allowable total exploitation rate of no more than 50 percent under the Council adopted exploitation rate matrix (Appendix A, Table A-4).

### **Snohomish**

The 2011 forecast for Snohomish River natural coho ocean recruits is 180,000. The Snohomish regional hatchery coho forecast is 54,978; 8,400 for Skykomish River/Wallace River Hatchery facility releases and 46,578 for the Tulalip Bay facility. The natural coho forecast used the estimated smolt production from the basin for brood year 2006, multiplied by a 12.0 percent marine survival rate expectation based, which was based on correlations with the PDO, the Vancouver Island boreal copepod anomaly, and September trawl survey coho catch.

The preliminary preseason forecast of 180,000 age-3 ocean recruits places Snohomish natural coho in the normal abundance based status category, which results in an allowable total exploitation rate of no more than 60 percent under the Council adopted exploitation rate matrix (Appendix A, Table A-4).

### **South Sound**

The 2011 forecasts for South Sound region natural and hatchery coho ocean recruits are 98,947 and 173,348 respectively. The natural coho forecast is the product of projected smolt production from each of the stream basins in the region multiplied by variable marine survival rate expectations of 6.2 to 16.1 percent for natural coho in the region. The marine survival prediction was first derived for Big Beef Creek coho and then extrapolated to other regions of Puget Sound based on assumed differences in survival among regions. The hatchery coho forecasts are typically based on the 2004-2005 BY average CWT-based recruits/smolt rate for each facility, applied to the 2008 BY smolt releases. The expected survival rates range from 0.8 to 6.2 percent



## **Hood Canal**

The 2011 forecasts for Hood Canal region natural and hatchery coho ocean recruits are 74,741 and 74,897 respectively. The natural coho forecast is based on a regression of Big Beef Creek jacks on Hood Canal natural coho run sizes. The hatchery coho forecasts are based on the 1997-2006 BY average cohort reconstruction-based recruits/smolt for each facility, applied to the 2008 BY smolt releases for each facility.

The marine survival rates used for these forecasts were 7.3 percent for George Adams Hatchery, 2.5 percent for Port Gamble Net Pens, 8.2percent for the Quilcene National Fish Hatchery, and 3.2percent for the Quilcene Bay Net Pens.

The preliminary preseason forecast of 74,741 age-3 ocean recruits places Hood Canal natural coho in the normal abundance based status category, which results in an allowable total exploitation rate of no more than 65 percent under the Council adopted exploitation rate matrix (Appendix A, Table A-4).

### ***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. Table III-5 summarizes estimates of mass mark rates for coho stocks from Southern British Columbia, Canada to the Oregon Coast, based on preseason abundance forecasts. Agencies have released coho mass marked with adipose fin clips from the 2008 brood, making these fish available to 2011 fisheries (Table III-6).

TABLE III-1. Preliminary 1996-2011 preseason and postseason coho stock abundance estimates for Oregon production index area stocks in thousands of fish. (Page 1 of 2)

Stock	Year	Preseason	Postseason <sup>a/</sup>	Preseason/Postseason <sup>a</sup>
<b>Oregon Production Index Area Hatchery Total</b>	1996	309.2	182.6	1.69
	1997	376.1	215.3	1.75
	1998	118.4	203.6	0.58
	1999	559.2	319.6	1.75
	2000	671.4	677.1	0.99
	2001	1,707.6	1,395.5	1.22
	2002	361.7	660.1	0.55
	2003	863.1	952.5	0.91
	2004	623.9	634.6	0.98
	2005	389.9	443.1	0.88
	2006	398.8	440.6	0.91
	2007	593.6	476.5	1.25
	2008	216.1	565.4	0.38
	2009	1,073.1	1,066.2	1.01
Columbia River Early	2010	408.0	551.3	0.74
	2011	375.1	-	-
	1996	142.2	98.0	1.45
	1997	206.9	129.8	1.59
	1998	63.8	126.4	0.50
	1999	325.5	174.9	1.86
	2000	326.3	378.0	0.86
	2001	1,036.5	815.9	1.27
	2002	161.6	324.7	0.50
	2003	440.0	645.7	0.68
	2004	313.6	389.0	0.81
	2005	284.6	282.7	1.01
	2006	245.8	251.4	0.98
	2007	424.9	291.0	1.46
Columbia River Late	2008	110.3	333.9	0.33
	2009	672.7	681.4	0.99
	2010	245.3	274.3	0.89
	2011	216.0	-	-
	1996	114.4	30.8	3.71
	1997	86.5	53.7	1.61
	1998	24.9	47.3	0.53
	1999	140.9	120.7	1.17
	2000	278.0	260.1	1.07
	2001	491.8	488.3	1.01
	2002	143.5	271.8	0.53
	2003	377.9	248.0	1.52
	2004	274.7	203.0	1.35
	2005	78.0	111.6	0.70
	2006	113.8	156.3	0.73
	2007	139.5	171.0	0.82
	2008	86.4	207.6	0.42
	2009	369.7	374.1	0.99
	2010	144.2	263.6	0.55
	2011	146.5	-	-

TABLE III-1. Preliminary 1996-2011 preseason and postseason coho stock abundance estimates for Oregon production index area stocks in thousands of fish. (Page 2 of 3)

Stock	Year	Preseason	Postseason <sup>a/</sup>	Preseason/Postseason <sup>a</sup>
Oregon Coastal North of Cape Blanco	1996	38.5	28.0	1.38
	1997	60.4	19.0	3.18
	1998	21.6	19.7	1.10
	1999	59.4	14.4	4.13
	2000	48.5	23.4	2.07
	2001	127.3	46.9	2.71
	2002	36.6	41.6	0.88
	2003	29.3	34.5	0.85
	2004	16.6	21.7	0.77
	2005	11.5	10.7	1.07
	2006	8.6	7.9	1.09
	2007	7.0	1.3	5.38
	2008	1.7	7.1	0.24
	2009	7.3	7.5	0.97
Oregon and California Coastal South of Cape Blanco	2010	4.4	8.6	0.51
	2011	3.6	-	-
	1996	14.2	25.8	0.55
	1997	22.3	12.8	1.74
	1998	8.1	10.2	0.79
	1999	33.4	9.6	3.48
	2000	18.6	15.6	1.19
	2001	52.0	46.0	1.13
	2002	20.0	22.0	0.91
	2003	15.9	24.3	0.65
	2004	19.0	29.9	0.64
	2005	15.8	38.1	0.41
	2006	30.6	25.0	1.22
	2007	22.2	13.2	1.68
Lower Columbia River Natural	2008	17.7	16.8	1.05
	2009	23.4	3.1	7.55
	2010	14.1	4.8	2.94
	2011	9.0	-	-
	2007	21.5	19.4	1.11
Oregon Coastal Natural (Rivers and Lakes)	2008	13.4	27.2	0.49
	2009	32.7	40.4	0.81
	2010	15.1	30.8	0.49
	2011	22.7	-	-
	1996	63.2	86.1	0.73
	1997	86.4	27.8	3.11
	1998	47.2	29.2	1.62
	1999	60.7	51.9	1.17
	2000	55.9	69.0	0.81
	2001	50.1	163.2	0.31
	2002	71.8	304.5	0.24
	2003	117.9	278.8	0.42
	2004	150.9	197.0	0.77
	2005	152.0	150.1	1.01
	2006	60.8	116.4	0.52
	2007	255.4	60.0	4.26
	2008	60.0	170.9	0.35
	2009	211.6	257.0	0.82
	2010	148.0	266.8	0.55
	2011	249.4	-	-

TABLE III-1. Preliminary 1996-2011 preseason and postseason coho stock abundance estimates for Oregon production index area stocks in thousands of fish. (Page 3 of 3)

Stock	Year	Preseason	Postseason <sup>a/</sup>	Preseason/Postseason <sup>a</sup>
<b>Salmon Trout Enhancement Program<sup>b/</sup></b>	1996	0.4	1.2	0.33
	1997	1.3	0.3	4.33
	1998	0.2	0.3	0.67
	1999	0.7	0.4	1.75
	2000	0.6	0.5	1.20
	2001	1.0	1.4	0.71
	2002	0.6	3.0	0.20
	2003	3.6	3.6	1.00
	2004	3.1	1.0	3.10
	2005	1.0	0.4	2.50
	2006	0.6	0.1	6.00
	2007	0.2	0.0	-
	2008	-	-	-
	2009	-	-	-
	2010	-	-	-
	2011	-	-	-

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

b/ 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.<sup>a/</sup>

Year or Avg.	Oregon and California Coastal Returns							Ocean	OCN
	Ocean Fisheries <sup>b/</sup>		Hatcheries and	OCN Spawners	Private Hatcheries	Columbia River Returns	Abundance <sup>d/</sup>	Exploitation Rate	Exploitation Rate
	Troll	Sport	Freshwater Harvest <sup>c/</sup>					Based on OPI	Based on Postseason FRAM
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	0.83	-
1981-1985	451.2	274.0	37.2	56.0	176.8	305.3	1,328.6	0.60	-
1986	638.9	320.6	79.3	70.0	453.7	1,549.1	3,026.7	0.34	-
1987	468.2	296.2	45.1	30.1	119.3	316.5	1,377.9	0.60	-
1988	844.7	297.2	61.1	56.8	116.1	670.9	1,989.2	0.57	-
1989	645.1	425.5	61.1	46.4	46.9	709.0	1,871.2	0.57	-
1990	275.9	357.1	28.7	22.5	35.6	196.7	1,128.5	0.69	-
1991	448.4	469.9	77.8	38.1	35.1	955.1	1,823.2	0.45	-
1992	67.4	256.5	51.0	44.2	-	216.1	610.0	0.51	-
1993	13.1	140.8	38.6	55.7	-	114.2	342.1	0.42	-
1994	2.7	3.0	28.2	48.5	-	169.2	250.5	0.02	0.07
1995	5.4	43.5	37.5	57.3	-	74.8	215.9	0.22	0.12
1996	7.0	31.8	45.8	79.3	-	113.0	297.3	0.14	0.08
1997	5.5	22.4	27.0	31.6	-	148.1	204.6	0.12	0.12
1998	3.5	12.8	29.4	34.3	-	168.4	265.2	0.06	0.08
1999	3.6	36.5	22.6	51.2	-	274.1	414.0	0.10	0.08
2000	25.2	74.6	33.3	81.1	-	547.6	901.0	0.13	0.07
2001	38.1	216.8	75.9	185.2	-	1,108.3	1,438.6	0.16	0.07
2002	15.0	118.7	54.0	269.0	-	499.9	990.5	0.14	0.12
2003	28.8	252.4	45.2	235.3	-	677.3	1,183.6	0.23	0.14
2004	26.2	159.3	38.5	197.2	-	442.5	826.8	0.22	0.15
2005	10.5	58.2	42.9	164.6	-	341.0	592.1	0.12	0.11
2006	4.5	47.5	29.6	132.8	-	386.4	557.1	0.09	0.06
2007	26.2	128.5	11.1	71.5	-	331.1	536.5	0.28	0.11
2008	0.6	26.4	15.6	180.1	-	493.8	736.3	0.04	0.02
2009	27.7	201.2	16.2	265.3	-	729.8	1,323.2	0.19	0.07
2010 <sup>f/</sup>	5.8	48.8	19.4	256.8	-	441.1	818.1	0.07	0.05

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

b/ Includes estimated nonretention mortality: troll fishery--hook-and-release mortality for 1982-2005 and drop-off mortality for all years; sport fishery--hook-and-release mortality for 1994-2005 and drop-off mortality for all years.

c/ Includes returns from Salmon-Trout Enhancement Program (STEP) smolt releases through the 2007 return year, after which the program was terminated.

d/ Not equal to the sum of previous columns due to stock and fishery accounting north and south of Leadbetter Point.

e/ Ocean fishery impacts on private hatchery stock and returns to private hatcheries are excluded in calculating the OPI area stock aggregate ocean exploitation rate index.

f/ Preliminary.

TABLE III-3. Preseason forecasts and postseason estimates of ocean escapements for selected Washington coastal adult natural coho stocks in thousands of fish.

Year	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason
	<b>Quillayute River Fall</b>			<b>Hoh River</b>			<b>Queets River</b>			<b>Grays Harbor<sup>a/</sup></b>		
1984	7.0	11.0	0.64	2.7	7.7	0.35	5.2	9.7	0.54	28.7	103.8	0.28
1985	19.2	15.8	1.22	6.6	5.2	1.27	11.3	6.0	1.88	56.4	25.1	2.25
1986	6.1	17.1	0.36	3.9	6.4	0.61	5.2	5.8	0.90	51.6	33.3	1.55
1987	11.7	23.8	0.49	5.5	7.2	0.76	9.0	8.9	1.01	103.3	55.7	1.85
1988	10.4	9.1	1.14	2.0	2.6	0.77	4.7	4.5	1.04	26.4	58.0	0.46
1989	14.5	11.1	1.31	5.7	5.4	1.06	6.2	5.4	1.15	43.0	60.9	0.71
1990	15.2	9.5	1.60	5.1	4.5	1.13	5.9	7.1	0.83	48.3	57.3	0.84
1991	8.8	10.6	0.83	3.4	5.4	0.63	7.9	8.6	0.92	138.0	108.7	1.27
1992	12.5	13.6	0.92	4.9	5.0	0.98	5.6	7.0	0.80	48.4	40.9	1.18
1993	7.6	4.7	1.62	4.8	1.9	2.53	6.5	5.4	1.20	84.7	37.3	2.27
1994	7.0	6.4	1.09	3.0	1.4	2.14	3.6	1.2	3.00	31.3	11.8	2.65
1995	8.5	14.3	0.59	4.4	5.4	0.81	7.2	7.3	0.99	64.4	58.9	1.09
1996	9.2	14.6	0.63	3.0	5.8	0.52	5.4	10.7	0.50	82.7	87.9	0.94
1997	5.1	5.0	1.02	1.6	1.4	1.14	2.4	2.0	1.20	14.8	19.3	0.77
1998	7.4	17.0	0.44	3.2	5.2	0.62	4.5	4.6	0.98	27.1	40.4	0.67
1999	12.8	19.5	0.66	2.8	6.3	0.44	3.7	5.1	0.73	50.3	38.0	1.32
2000	8.2	17.7	0.46	3.3	8.8	0.38	2.5	8.7	0.29	44.2	43.4	1.02
2001	20.6	36.7	0.56	7.6	14.8	0.51	10.6	28.4	0.37	46.6	76.4	0.61
2002	18.5	34.7	0.53	6.9	11.2	0.62	10.2	16.1	0.63	50.3	111.0	0.45
2003	21.2	25.2	0.84	10.4	8.1	1.28	19.6	13.2	1.48	52.3	94.8	0.55
2004	17.7	25.1	0.71	6.6	6.3	1.05	14.7	10.0	1.47	101.1	64.4	1.57
2005	16.1	22.1	0.73	6.4	8.2	0.78	14.1	9.7	1.45	78.5	43.7	1.80
2006	13.0	12.2	1.07	5.6	2.3	2.43	7.1	6.4	1.11	60.3	20.4	2.96
2007	10.8	10.9	0.99	5.4	5.1	1.06	13.6	6.1	2.23	59.4	32.5	1.83
2008	10.5	12.9	0.81	4.3	4.3	1.00	10.2	6.2	1.65	42.7	47.1	0.91
2009	19.3	24.5	0.79	9.5	10.7	0.89	31.4	17.4	1.80	59.2	88.4	0.67
2010 <sup>b/</sup>	22.0	21.7	1.01	7.6	10.5	0.72	21.8	NA	NA	67.9	NA	NA

a/ The source for postseason return estimates is Washington Department of Fish and Wildlife.

b/ Postseason returns are preliminary.

TABLE III-4. Preseason forecasts and postseason estimates of ocean escapements for selected Puget Sound adult natural coho stocks in thousands of fish.

TABLE 4. Preseason forecasts and postseason estimates of ocean escapements for selected Puget Sound adult natural core stocks in thousands of fish.									
Year	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason	Preseason Forecast	Postseason Return	Pre/Postseason
Skagit River				Stilliguamish River			Hood Canal		
1984	29.6	36.0	0.82	NA	26.9	NA	NA	57.5	NA
1985	26.1	27.4	0.95	NA	34.4	NA	NA	38.5	NA
1986	43.5	69.7	0.62	37.0	49.9	0.74	NA	82.2	NA
1987	33.0	39.4	0.84	29.7	46.3	0.64	NA	71.7	NA
1988	29.6	28.4	1.04	24.5	35.4	0.69	18.2	15.5	1.17
1989	31.2	24.4	1.28	24.5	13.5	1.81	36.8	25.5	1.44
1990	37.6	24.3	1.55	30.8	34.1	0.90	43.9	14.2	3.09
1991	40.8	10.3	3.96	32.9	11.3	2.91	17.6	15.3	1.15
1992	35.7	9.4	3.80	18.7	18.0	1.04	10.1	19.9	0.51
1993	28.1	14.2	1.98	24.5	10.6	2.31	39.5	16.7	2.37
1994	17.9	30.3	0.59	10.2	30.3	0.34	13.5	57.0	0.24
1995	30.0	15.8	1.90	32.7	20.4	1.60	19.3	41.1	0.47
1996	26.7	8.6	3.09	29.8	12.5	2.38	15.4	37.2	0.41
1997	34.2	45.7	0.75	15.7	14.1	1.12	38.1	101.8	0.37
1998	41.1	85.2	0.48	37.7	31.1	1.21	87.3	118.5	0.74
1999	53.4	38.3	1.39	27.3	7.5	3.64	45.2	17.6	2.57
2000	24.7	75.1	0.33	15.0	31.2	0.48	50.4	39.7	1.27
2001	46.9	115.6	0.41	18.1	81.8	0.22	40.5	110.0	0.37
2002	79.9	70.8	1.13	14.5	30.4	0.48	25.6	81.0	0.32
2003	97.4	114.4	0.85	27.7	49.8	0.56	25.7	199.9	0.13
2004	129.4	151.0	0.86	26.6	73.9	0.36	79.8	219.7	0.36
2005	48.6	53.1	0.92	41.9	29.1	1.44	79.8	68.3	1.17
2006	87.8	12.8	6.86	32.7	11.8	2.77	46.4	49.7	0.93
2007 <sup>b/</sup>	21.7	71.2	0.30	52.0	45.2	1.15	30.9	78.6	0.39
2008 <sup>b/</sup>	51.3	32.1	1.60	25.5	15.3	1.67	21.5	25.8	0.83
2009 <sup>b/</sup>	27.2	72.7	0.37	10.2	27.4	0.37	36.1	45.7	0.79
2010	60.3	NA	-	16.3	NA	-	19.0	NA	-

a/ Preseason forecasts are Puget Sound (4B) runsizes which are defined as the spawning escapement plus Puget Sound net fishery catch. Puget Sound runsize does not include Puget Sound troll and recreational catch. Postseason returns are Puget Sound runsizes from 1984-1995 and total terminal runsize thereafter. Total terminal runsize includes spawning and recreational catch within the terminal fisheries.

b/ Preliminary.

TABLE III-5. Mass marked 2008 brood coho available to 2011 Council fisheries. The mark used is an adipose fin clip.

	Ocean Recruits		Percent Mass
Region	Natural	Hatchery	Marked
<b>PUGET SOUND STOCKS:</b>			
Nooksack-Samish and 7/7A Independent	29,507	45,744	59.3%
Skagit	138,117	16,176	9.0%
Stillaguamish	66,600	600	0.9%
Snohomish	180,000	54,977	19.1%
South Puget Sound Normal	98,947	171,001	61.0%
South Puget Sound Delayed	0	2,308	97.9%
Hood Canal	74,741	74,897	42.3%
Strait of Juan de Fuca and Area 9	12,317	15,243	43.9%
Puget Sound Total	600,229	380,946	35.3%
<b>WASHINGTON COASTAL STOCKS:</b>			
North Coast Independent Tributaries	21,590	11,904	29.5%
Quillayute Summer	2,796	5,403	65.6%
Quillayute Fall	28,191	31,042	45.5%
Hoh	11,625	0	0.0%
Queets	13,279	16,331	49.0%
Quinault	21,723	35,544	53.8%
Grays Harbor	89,097	43,957	25.5%
Willapa Bay	47,788	64,658	54.1%
Washington Coastal Total	236,089	208,839	41.0%
<b>COLUMBIA RIVER STOCKS:</b>			
Columbia River Early	10,946	205,294	70.1% <sup>a/</sup>
Columbia River Late	11,793	134,468	77.9% <sup>a/</sup>
Columbia River Total	22,739	339,762	73.2% <sup>a/</sup>
<b>OREGON COASTAL</b>	148,000	18,499	4.7%
<b>SOUTHERN BRITISH COLUMBIA STOCKS<sup>b/</sup>:</b>			
Georgia Strait Mainland	10,674	13,914	23.2%
Georgia Strait Vancouver Island	25,602	7,014	14.4%
Johnstone Strait	13,624	7,138	24.8%
Southwest Vancouver Island	3,242	40,907	31.5%
Northwest Vancouver Island	2,066	3,494	0.0%
Lower Fraser River	1,162	35,513	81.4%
Interior Fraser River	15,625	324	0.5%
Southern British Columbia Total	71,995	108,304	29.5%

a/ Columbia River estimate of percent mass marked includes natural production.

b/ For this assessment, the percent mass marked was assumed to be the same as in 2010.



TABLE III-6. Projected coho mark rates for 2011 fisheries under base period fishing patterns (percent marked).

Area	Fishery	June	July	August	Sept
Canada					
Johnstone Strait	Recreational	-	19%	17%	-
West Coast Vancouver Island	Recreational	31%	28%	27%	31%
North Georgia Strait	Recreational	31%	30%	30%	26%
South Georgia Strait	Recreational	32%	33%	24%	27%
Juan de Fuca Strait	Recreational	33%	35%	37%	36%
Johnstone Strait	Troll	40%	29%	22%	28%
NW Vancouver Island	Troll	35%	32%	33%	31%
SW Vancouver Island	Troll	40%	38%	39%	40%
Georgia Strait	Troll	40%	42%	43%	38%
Puget Sound					
Strait of Juan de Fuca (Area 5)	Recreational	42%	39%	38%	38%
Strait of Juan de Fuca (Area 6)	Recreational	40%	36%	37%	34%
San Juan Island (Area 7)	Recreational	30%	34%	35%	28%
North Puget Sound (Areas 6 & 7A)	Net	-	32%	30%	34%
Council Area					
Neah Bay (Area 4/4B)	Recreational	28%	42%	40%	45%
LaPush (Area 3)	Recreational	50%	45%	50%	44%
Westport (Area 2)	Recreational	57%	55%	54%	48%
Columbia River (Area 1)	Recreational	68%	65%	62%	65%
Tillamook	Recreational	56%	51%	44%	28%
Newport	Recreational	51%	45%	41%	26%
Coos Bay	Recreational	38%	34%	23%	12%
Brookings	Recreational	31%	21%	18%	7%
Neah Bay (Area 4/4B)	Troll	42%	41%	41%	41%
LaPush (Area 3)	Troll	45%	48%	43%	44%
Westport (Area 2)	Troll	43%	46%	51%	51%
Columbia River (Area 1)	Troll	57%	56%	54%	59%
Tillamook	Troll	52%	49%	49%	45%
Newport	Troll	49%	46%	42%	39%
Coos Bay	Troll	38%	35%	29%	17%
Brookings	Troll	25%	28%	30%	48%
Columbia River					
Buoy 10	Recreational	-	-	-	68%



## CHAPTER IV - FRASER RIVER AND PUGET SOUND PINK SALMON ASSESSMENTS

Two major runs comprise the pink salmon population available to Council fisheries during odd-numbered years: the Fraser River (British Columbia) run, which is more abundant, and the Puget Sound run. The 2009 run size forecast for Fraser pinks was 17.54 million fish; actual run size was estimated at 19.5 million. The 2009 Puget Sound pink salmon run size forecast was 5.47 million, with 5.14 million natural and 3,300 hatchery fish. The actual run size was estimated at 9,837, 251.

Table IV-1 provides a summary of recent run sizes and forecasts.

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

Year	Puget Sound		Fraser River <sup>a/</sup>	
	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	19.10
1987	NA	1.57	NA	7.17
1989	NA	1.93	NA	16.63
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	3.59
2001	2.92	3.56	5.47	21.17
2003	2.32	2.90	17.30	26.00
2005	1.98	1.23	16.30	10.00
2007	3.34	2.45	19.60	11.00
2009	5.47	9.84	17.54	19.50
2011 <sup>b/</sup>	5.98	-	17.50	-

a/ Total run size.

b/ Preliminary forecast.



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

### ***DESCRIPTION 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 2010 ocean salmon management 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 2010 preseason management measures and analyses of their projected effects on the biological and socioeconomic environment are presented in Preseason Report III (PFMC 2010). A description of the 2010 management measures as implemented, including inseason modifications, and an analysis of their effects on the environment, including an historical perspective, is presented in the Review of 2010 Ocean Salmon Fisheries (PFMC 2011).

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

#### **Overview**

Table V-4 provides a summary of Salmon FMP stock spawning escapement and exploitation rate projections for 2011 under the No-Action Alternative (2010 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 2010 Ocean Salmon Fisheries was published. A preliminary determination of stock status under the FMP Overfishing Criteria was available for some of these stocks in time for this report; however, some estimates are still unavailable. The STT will report to the Council on stocks not meeting conservation objectives at the March 2011 Council meeting, and may further update the status of stocks present in Table V-4 at that time.

Chinook escapements and fishery impacts were estimated using the Sacramento Harvest Model or Klamath Ocean Harvest Model for SRFC and KRFC, respectively. Assessment of effects under the No-Action Alternative for Oregon Coast are not available, and for Columbia River Chinook stocks were based on qualitative assessment of the magnitude of forecasts, if available, in relation to escapement goals.

Coho escapements and fishery impacts were estimated using coho FRAM. Abundance forecasts for 2011 were updated for Washington and Oregon stocks, but forecasts for Canadian stocks are unchanged from those employed for 2010 planning. Updated forecasts for Canadian stocks are expected to become available in March 2011. To provide information on the effect of changes in abundance forecasts, the final 2010 pre-season regulatory package for ocean and inside fisheries was applied to 2011 projections of abundance.

A number of stocks are not subject to the FMP Overfishing Criteria, including ESA listed stocks and stocks minimally impacted (exploitation rate less than 5 percent) by Council-area ocean fisheries. However, the status of several stocks listed in Table V-4 that are subject to the FMP Overfishing Criteria should be noted at this stage of the management process. In particular:

- Western SJF natural coho failed to meet its FMP conservation objective for four consecutive years (2005-2008). In 2009 its escapement remained below the goal of 11.9 thousand spawners. However, escapement for the aggregate SJF stock, which is the current FMP management unit, was above the aggregate escapement goal.

- SRFC failed to meet the FMP conservation objective in 2007, 2008, and 2009, triggering an Overfishing Concern under the terms of the Salmon FMP. Escapement in 2010 was above the lower end of the conservation objective escapement goal range.
- KRFC spawning escapement exceeded the floor of 35,000 natural area adults in three of the last four years, which satisfies the criteria for ending the overfishing concern triggered in 2006.

### **Sacramento River Fall Chinook**

A repeat of 2010 regulations, which included a Sacramento River Basin recreational quota of 8,200 SRFC, would be expected to result in an escapement of 572,600 natural and hatchery SRFC adults, which is well above the 122,000 to 180,000 natural and hatchery adult escapement goal range.

### **Klamath River Fall Chinook**

A repeat of 2010 fishery regulations, which included a river recreational harvest quota of 12,000 adults and a tribal allocation of 50 percent (of the overall adult harvest), would be expected to result in 39,700 natural area adult spawners. This projection exceeds the spawner floor of 35,000 natural area adults. If the ocean fisheries were closed from January through August 2011 between Cape Falcon and Point Sur, and the Klamath River fisheries (tribal and recreational) were closed in 2011, the expected number of natural area adult spawners would be 75,800.

### **Other California Coastal Chinook Stocks**

The NMFS ESA consultation standard restricts the Klamath River fall Chinook age-4 ocean harvest rate to no more than 16.0 percent to limit impacts on these stocks. As indicated in the Chapter II, the postseason estimate of this rate for 2010 is 3.9 percent. Applying 2010 regulations to the 2011 abundance results in an age-4 ocean harvest rate forecast of 10.3 percent. If the ocean fisheries were closed from January through August 2011 between Cape Falcon and Point Sur, the expected age-4 ocean harvest rate for 2011 would be zero (zero age-4 KRFC were harvested during the September through November 2010 period).

### **Oregon Coast Chinook Stocks**

The FMP conservation objective for Oregon coast Chinook is 150,000 to 200,000 natural adult spawners; and attainment of this goal is assessed using peak spawner counts of 60 to 90 fish per mile in nine standard index reaches. The aggregate stock had been meeting or exceeding this goal since 1984 and had been generally increasing until 2003. Beginning in 2004 the escapement declined until 2009. In 2007 and 2008, the stock failed to meet its goal for the first time since 1983. In 2009 and 2010 the goal was achieved with 62 and 79 fish per mile, respectively. No forecast is available for this stock, but given recent trends, it seems likely that it would meet its goal again in 2011 under 2010 fishing seasons.

### **Columbia River Chinook Stocks**

Applying 2010 regulations to the forecasted 2011 abundance of Columbia River fall Chinook would result in ocean escapements meeting spawning escapement goals for all major stocks. Compared to both 2010 forecast ocean escapement and actual returns, the 2011 forecasts are higher for all major stocks except SCH.

### **Washington Coastal and Puget Sound Chinook Stocks**

Council fisheries north of Cape Falcon have only a minor impact on most stocks that originate in Washington coastal and Puget Sound rivers. These stocks have northerly marine distribution patterns and are therefore impacted primarily by Canadian and Alaskan fisheries. An evaluation of 2010 Council area

management measures on projected 2011 abundance would not provide a useful comparison of fishery impacts in relation to conservation objectives.

### **Oregon Production Index Area Coho Stocks**

Ocean fisheries were modeled with 2010 Council regulations and 2010 expectations for non-Council area fisheries. Under this scenario, expected exploitation rates are 9.8 percent on OCN coho and 8.4 percent on Rogue/Klamath hatchery coho. Expected spawner escapement is 230,800 for OCN coho (Tables V-5 and V-6). For Columbia River hatchery coho stocks, the predicted ocean exploitation rate (excluding Buoy 10) is 23.9 percent on the Columbia River early stock and 31.5 percent on the Columbia River late stock. Predicted ocean escapements (after Buoy 10) into the Columbia River in 2011 under this exercise show that under 2010 ocean regulations, Columbia River early and late coho would be expected to meet egg take goals.

Based on parent escapement levels and observed OPI smolt-to-jack survival for 2008 brood OPI smolts, the total allowable OCN coho exploitation rate for 2011 fisheries is no greater than 20 percent under FMP Amendment 13 and no greater than 15 percent under the matrix developed by the OCN work group (Table V-7; Appendix A, Tables A-2 and A-3). The total allowable R/K hatchery coho marine exploitation rate is 13.0 percent (NMFS ESA consultation standard).

Lower Columbia River natural (LCN) coho were listed as Endangered under the Oregon state ESA in 1999 and have been managed under a state Recovery Plan harvest rate matrix since 2001. LCN coho were listed as threatened under the Federal ESA in 2005. From 2001 through 2005, Oregon coast hatchery stocks were used as a surrogate in FRAM; beginning in 2006 unmarked Columbia River hatchery stocks were used as a surrogate in FRAM. In 2010, NMFS allowed a 15.0 percent exploitation rate in marine area and mainstem Columbia River fisheries combined; the 2011 consultation standard is again 15.0 percent. Under 2010 fishery regulations and 2011 abundance forecasts, the exploitation rate is predicted to be 11.2 percent for marine fisheries (excluding the Buoy 10 fishery) using combined unmarked Columbia River hatchery stocks as the proxy. Given the 2010 inriver sharing arrangement, the total exploitation rate on LCN coho would be 15.5 percent.

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

Exploitation rate and ocean escapement expectations in relation to management goals for selected naturally-spawning coho stocks, given 2011 preseason abundance forecasts and 2010 preseason projections for fishing patterns, are presented in Table V-5. The 2011 forecasts for Canadian coho stocks are not available, but are assumed to be at 2010 levels for this analysis. More detailed fishery management goals for Council area coho stocks are listed in Appendix A.

Under 2010 regulations, 2011 exploitation rates are expected to meet the allowable 2011 FMP conservation objectives for Puget Sound coho stocks. Ocean escapements for Washington Coast natural coho stocks are expected to be at levels that would permit attainment of FMP spawning escapement conservation objectives. In addition, all annual management objectives for stocks subject to the PSC agreement would be met. The exploitation rate by U.S. fisheries south of the Canadian border on Interior Fraser coho is projected to be 8.2 percent, which is under the anticipated 10.0 percent allowable exploitation rate under the 2002 PST Coho Agreement. The Council area fisheries portion would be 4.2 percent.

Coho bycatch during Puget Sound fisheries directed at chum and sockeye salmon will also be a consideration for preseason planning.

## **Conclusion**

The No-Action Alternative would not meet the Purpose and Need for the proposed action because the 2011 ESA consultation standard of no more than 15.0 percent exploitation rate on LCN coho in marine and Columbia River mainstem fisheries would not be satisfied. In addition, recreational opportunity and commercial value would not be optimized because surplus production of KRFC and SRFC would be forgone as a result of unnecessarily conservative management measures south of Cape Falcon. Thus, the No-Action Alternative will not be considered further as a viable alternative for 2011 ocean salmon fishery management measures.



TABLE V-1. Commercial troll management measures adopted by the Council for non-Indian ocean salmon fisheries, 2010.  
(Page 1 of 5)

<b>A. SEASON DESCRIPTIONS</b>	
<b>North of Cape Falcon</b>	
<b>Supplemental Management Information</b>	
<p>1. Overall non-Indian TAC: 117,000 (non-mark-selective equivalent of 110,000) Chinook and 80,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Non-Indian commercial troll TAC: 56,000 Chinook and 12,800 marked coho (including 1,000 incidental contact mortalities).</p> <p>3. No preseason trade with recreational fishery.</p>	
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through earlier of June 30 or 42,000 Chinook quota.</li> </ul> <p>Seven days per week (C.1). All salmon except coho (C.7). Cape Flattery, Mandatory Yelloweye Rockfish Conservation Area, and Columbia Control Zones closed (C.5). See gear restrictions and definitions (C.2, C.3).</p> <p>An inseason conference call will occur when it is projected that 35,000 Chinook have been landed to consider modifying the open period and adding landing and possession limits to extend the fishery through the end of June.</p>	
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1 through earlier of September 14 or 14,000 Chinook preseason quota (C.8) or a landed catch quota of 11,800 marked coho (C.8.d).</li> </ul> <p>Open July 1-6, then Friday through Tuesday through July 27, then Saturday through Tuesday thereafter. Landing and possession limit of 150 Chinook and 50 coho per vessel per open period north of Leadbetter Point or 150 Chinook and 50 coho south of Leadbetter Point (C.1). All Salmon except no chum retention north of Cape Alava, Washington in August and September (C.7). All coho must be marked (C.8.d). See gear restrictions and definitions (C.2, C.3). Cape Flattery, Mandatory Yelloweye Rockfish Conservation Area, and Columbia Control Zones closed (C.5).</p>	
<p>Oregon State regulations require that fishers south of Cape Falcon, OR intending to fish within this area notify Oregon Department of Fish and Wildlife before transiting the Cape Falcon, OR line (45°46'00" N. lat.) at the following number: 541-867-0300 Ext. 271. Vessels must land and deliver their fish within 24 hours of any closure of this fishery. Under state law, vessels must report their catch on a state fish receiving ticket. Vessels fishing or in possession of salmon while fishing north of Leadbetter Point must land and deliver their fish within the area and north of Leadbetter Point. Vessels fishing or in possession of salmon while fishing south of Leadbetter Point must land and deliver their fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land their fish in Garibaldi, Oregon. Oregon State regulations require all fishers landing salmon into Oregon from any fishery between Leadbetter Point, Washington and Cape Falcon, Oregon must notify ODFW within one hour of delivery or prior to transport away from the port of landing by calling 541-867-0300 Ext. 271. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.8).</p>	

TABLE V-1. Commercial troll management measures adopted by the Council for non-Indian ocean salmon fisheries, 2010 (Page 2 of 5)

A. SEASON DESCRIPTIONS
South of Cape Falcon
Supplemental Management Information
<ol style="list-style-type: none"> <li>1. Sacramento River Basin recreational fishery catch assumption: quota of 8,200 adult Sacramento River fall Chinook (12.6% of the total allowable harvest).</li> <li>2. Sacramento River fall Chinook spawning escapement of 180,000 adults.</li> <li>3. Klamath River recreational fishery allocation: 12,000 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 34,600 adult Klamath River fall Chinook.</li> <li>5. Klamath River fall Chinook spawning escapement of 40,700 adults.</li> </ol>
<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• May 1-July 6, July 9-13, 16-20, 23-27, August 1-25 (C.9).</li> </ul> <p>All salmon except coho (C.7). All vessels fishing in the area must land their fish in the State of Oregon. See gear restrictions and definitions (C.2, C.3) and Oregon State regulations for a description of special regulations at the mouth of Tillamook Bay.</p> <ul style="list-style-type: none"> <li>• September 1-30</li> </ul> <p>Sufficient impacts to conduct an experimental genetic stock identification study. All salmon must be released after collection of biological samples.</p> <p>In 2011, the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its March 2011 meeting.</p>
<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• May 1-31;</li> <li>• July 1 through earlier of July 31, or a 1,500 Chinook quota;</li> <li>• Aug. 1 through earlier of Aug. 31, or a 1,500 Chinook quota (C.9).</li> </ul> <p>All salmon except coho (C.7). Chinook 28 inch total length minimum size limit (B). Prior to June 1, landing and possession limit of 100 Chinook per vessel per calendar week; all vessels fishing in the area must land their fish in the area or Port Orford. July 1 through August 31, landing and possession limit of 30 Chinook per vessel per day and 90 Chinook per vessel per calendar week; all vessels fishing in this area must land and deliver all fish within this area or Port Orford, within 24 hours of any closure in this fishery, and prior to fishing outside of this area. Oregon State regulations require all fishers landing salmon from any quota managed season within this area to notify Oregon Dept. of Fish and Wildlife (ODFW) within 1 hour of delivery or prior to transport away from the port of landing by calling (541) 867-0300 ext. 252. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. See gear restrictions and definitions (C.2, C.3).</p> <ul style="list-style-type: none"> <li>• June 1-30; September 1-30</li> </ul> <p>Sufficient impacts to conduct an experimental genetic stock identification study. All salmon must be released after collection of biological samples.</p> <p>In 2011, the season will open March 15 for all salmon except coho, with a 28 inch Chinook minimum size limit. This opening could be modified following Council review at its March 2011 meeting.</p>
<p><b>OR/CA Border to Humboldt South Jetty (California KMZ)</b></p> <p>Closed except for sufficient impacts to conduct an experimental genetic stock identification study May 1 through September 30. All salmon must be released after collection of biological samples.</p>
<p><b>Humboldt South Jetty to Horse Mt.</b></p> <p>Closed.</p>

TABLE V-1. Commercial troll management measures adopted by the Council for non-Indian ocean salmon fisheries, 2010 (Page 3 of 5)

A. SEASON DESCRIPTIONS					
South of Cape Falcon					
<b>Horse Mt. to Point Arena (Fort Bragg)</b>					
<ul style="list-style-type: none"> <li>July 1-4, 8-11,</li> <li>July 15 through the earlier of July 29 or an 18,000 Chinook quota.</li> <li>August 1 through the earlier of August 31 or a 9,375 Chinook preseason quota (C.8, C.9).</li> </ul> <p>All salmon except coho (C.7). Chinook minimum size limit of 27 inches total length (B). All vessels fishing in the area must land their fish in the area when the fishery is managed under a quota; all fish must be offloaded within 24 hours of any closure of the fishery (C1). See gear restrictions and definitions (C.2, C.3).</p> <ul style="list-style-type: none"> <li>May 1 through June 30; September 1-30</li> </ul> <p>Sufficient impacts to conduct an experimental genetic stock identification study. All salmon must be released after collection of biological samples.</p>					
<b>Pt. Arena to U.S./Mexico Border</b>					
<ul style="list-style-type: none"> <li>July 1-4, 8-11 (C.9).</li> </ul> <p>All salmon except coho (C.7). Chinook minimum size limit of 27 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <ul style="list-style-type: none"> <li>May 1 through June 30; July 13 through September 30</li> </ul> <p>Sufficient impacts to conduct an experimental genetic stock identification study. All salmon must be released after collection of biological samples.</p>					
B. MINIMUM SIZE (Inches) (See C.1)					

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28.0	21.5	16.0	12.0	None
Cape Falcon to Horse Mt.	28.0	21.5	-	-	None
Horse Mt. to U.S./Mexico Border	27.0	20.5	-	-	None

### C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size, landing/possession limit, or other special requirements for the area being fished and the area in which they are landed if the area is open. Salmon may be landed in an area that has been closed more than 96 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 be landed in an area that has been closed less than 96 hours only if they meet the minimum size, landing/possession limit, or other special requirements for the areas in which they were caught and landed.

States may require fish landing/receiving tickets be kept on board the vessel for 90 days after landing to account for all previous salmon landings.

C.2. Gear Restrictions:

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

TABLE V-1. Commercial troll management measures adopted by the Council for non-Indian ocean salmon fisheries, 2010 (Page 4 of 5)

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

**C.3. Gear Definitions:**

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

*Troll fishing gear defined:* One or more lines that drag hooks behind a moving fishing vessel. In that portion of the fishery management area (FMA) 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 or bait.

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

**C.4. Transit Through Closed Areas with Salmon on Board:** It is unlawful for a vessel to have troll or recreational gear in the water while transiting any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species, and no salmon are in possession.

**C.5. Control Zone Definitions:**

- a. *Cape Flattery Control Zone* - The area from Cape Flattery (48°23'00" N. lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava (48°10'00" N. lat.) and east of 125°05'00" W. long.
- b. *Mandatory Yelloweye Rockfish Conservation Area* - The area in Washington Marine Catch Area 3 from 48°00.00' N. lat.; 125°14.00' W. long. to 48°02.00' N. lat.; 125°14.00' W. long. to 48°02.00' N. lat.; 125°16.50' W. long. to 48°00.00' N. lat.; 125°16.50' W. long. and connecting back to 48°00.00' N. lat.; 125°14.00' W. long.
- c. *Columbia Control Zone* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat., 124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.), and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.
- d. *Bandon High Spot Control Zone* - The area west of a line between 43°07'00" N. lat.; 124°37'00" W. long. and 42°40'30" N. lat.; 124° 52'0" W. long. extending to the western edge of the exclusive economic zone (EEZ).
- e. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately six nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and on the south, by 41°26'48" N. lat. (approximately six nautical miles south of the Klamath River mouth).

**C.6. Notification When Unsafe Conditions Prevent Compliance with Regulations:** If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board, and the estimated time of arrival.

**C.7. Incidental Halibut Harvest:** During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length, measured from the tip of the lower jaw with the mouth closed to the extreme end of the middle of the tail, and must be landed with the head on. License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone: 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during May and June troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone: 800-662-9825). ODFW and Washington Department of Fish and Wildlife (WDFW) will monitor landings. If the landings are projected to exceed the 25,035 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to prohibit retention of halibut in the non-Indian salmon troll fishery.

Beginning May 1, license holders may land no more than one Pacific halibut per each three Chinook, except one Pacific halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip. Pacific halibut retained must be no less than 32 inches in total length (with head on).

TABLE V-1. Commercial troll management measures adopted by the Council for non-Indian ocean salmon fisheries, 2010 (Page 5 of 5)

**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 on a fishery impact equivalent basis.
- b. NMFS may transfer fish between the recreational and commercial fisheries north of Cape Falcon on a fishery impact equivalent basis if there is agreement among the areas' representatives on the Salmon Advisory Subpanel (SAS).
- c. At the March 2011 meeting, the Council will consider inseason recommendations for special regulations for any experimental fisheries (proposals must meet Council protocol and be received in November 2010).
- d. If retention of unmarked coho is permitted by inseason action, the allowable coho quota will be adjusted to ensure preseason projected mortality of critical stocks is not exceeded.
- e. Landing limits may be modified inseason to sustain season length and keep harvest within overall quotas.
- f. Chinook remaining from the Horse Mt. to Point Arena commercial troll quota in July may be transferred to the August preseason quota on a fishery impact equivalent basis.

C.9. State Waters Fisheries: Consistent with Council management objectives:

- a. The State of Oregon may establish additional late-season fisheries in state waters.
  - b. The State of California may establish limited fisheries in selected state waters.
- Check state regulations for details.

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

TABLE V-2. Recreational management measures adopted by the Council for non-Indian ocean salmon fisheries, 2010. (Page 1 of 4)

<b>A. SEASON DESCRIPTIONS</b>	
<b>North of Cape Falcon</b>	
<b>Supplemental Management Information</b>	
<p>1. Overall non-Indian TAC: 117,000 (non-mark-selective equivalent of 110,000) Chinook and 80,000 coho marked with a healed adipose fin clip (marked).</p> <p>2. Recreational TAC: 61,000 (non-mark selective equivalent of 54,000) Chinook and 67,200 marked coho; all retained coho must be marked.</p> <p>3. No preseason trade with recreational fishery.</p> <p>4. No Area 4B add-on fishery.</p> <p>5. Buoy 10 fishery opens Aug. 1 with an expected landed catch of 12,000 marked coho.</p>	
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>June 12 through earlier of June 30 or a <b>marked Chinook quota of 12,000</b> (C.5).</li> </ul> <p>Seven days per week. Two fish per day, all salmon except coho, <b>all Chinook must be marked with a healed adipose fin clip (C.1)</b>. There will be a conference call no later than June 23 to consider changing bag limits. Chinook 24-inch total length minimum size limit (B). See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).</p>	
<p><b>U.S./Canada Border to Cape Alava (Neah Bay)</b></p> <ul style="list-style-type: none"> <li>July 1 through earlier of September 19 or 6,990 marked coho subarea quota with a subarea guideline of 5,400 Chinook (C.5).</li> </ul> <p>Tuesday through Saturday. All salmon except no chum beginning August 1. Two fish per day, only one of which can be a Chinook; there will be a conference call no later than July 14 to consider removing the one Chinook bag limit restriction. All retained coho must be marked (C.1). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).</p>	
<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>July 1 through earlier of September 19 or 1,700 marked coho subarea quota with a subarea guideline of 2,450 Chinook (C.5).</li> <li>September 25 through earlier of October 10 or 50 marked coho quota or 50 Chinook quota (C.5) in the area north of 47°50'00" N. lat. and south of 48°00'00" N. lat.</li> </ul> <p>Tuesday through Saturday through September 19, seven days per week beginning September 25. All salmon, two fish per day, only one of which can be a Chinook; there will be a conference call no later than July 14 to consider removing the one Chinook bag limit restriction. All retained coho must be marked (C.1). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).</p>	
<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>July 4 through earlier of September 19 or 24,860 marked coho subarea quota with a subarea guideline of 28,000 Chinook (C.5).</li> </ul> <p>Sunday through Thursday. All salmon, two fish per day, only one of which can be a Chinook; there will be a conference call no later than July 14 to consider removing the one Chinook bag limit restriction. All retained coho must be marked (C.1). See gear restrictions and definitions (C.2, C.3). Grays Harbor Zone closed beginning August 1 (C.4.b). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).</p>	
<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>July 1 through earlier of September 30 or 33,600 marked coho subarea quota with a subarea guideline of 13,100 Chinook (C.5).</li> </ul> <p>Seven days per week. All salmon, two fish per day, only one of which can be a Chinook; there will be a conference call no later than July 14 to consider removing the one Chinook bag limit restriction. All retained coho must be marked (C.1). See gear restrictions and definitions (C.2, C.3). Columbia Control Zone closed (C.4.c). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).</p>	

TABLE V-2. Recreational management measures adopted by the Council for non-Indian ocean salmon fisheries, 2010. (Page 2 of 4)

A. SEASON DESCRIPTIONS
South of Cape Falcon
Supplemental Management Information
<p>Sacramento River Basin recreational fishery catch assumption: quota of 8,200 adult Sacramento River fall Chinook (12.6% of the total allowable harvest).</p> <p>2. Sacramento River fall Chinook spawning escapement of 180,000 adults.</p> <p>3. Klamath River recreational fishery allocation: 12,000 adult Klamath River fall Chinook.</p> <p>4. Klamath tribal allocation: 34,600 adult Klamath River fall Chinook.</p> <p>5. Klamath River fall Chinook spawning escapement of 40,700 adults.</p> <p>6. Overall recreational TAC: 26,000 marked coho.</p>
<p><b>Cape Falcon to OR/CA Border</b></p> <ul style="list-style-type: none"> <li>Except as provided below during the all-salmon mark-selective coho fishery, the season will be May 29 through September 6 (C.6).</li> </ul> <p>Seven days per week. All salmon except coho; two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <ul style="list-style-type: none"> <li>All-salmon mark-selective coho fishery: June 26 through earlier of Sept. 6 or a landed catch of 26,000 marked coho. The all salmon except coho season may reopen upon attainment of the coho quota.</li> </ul> <p>Seven days per week, all salmon, two fish per day. All retained coho must be marked (C.1). Fishing in the Stonewall Bank groundfish conservation area restricted to trolling only on days the all depth recreational halibut fishery is open (call the halibut fishing hotline 1-800-662-9825 for specific dates) (C.3.b, C.4.d). Open days may be adjusted inseason to utilize the available quota (C.5).</p> <p>In 2011, the season between Cape Falcon and Humbug Mt. will open March 15 for all salmon except coho, two fish per day (B, C.1, C.2, C.3).</p>
<p><b>OR/CA Border to Horse Mt. (California KMZ)</b></p> <ul style="list-style-type: none"> <li>May 29 through September 6 (C.6).</li> </ul> <p>Seven days per week. All salmon except coho; two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3). Klamath Control Zone closed in August (C.4.e). See California State regulations for additional closures adjacent to the Smith, Eel, and Klamath rivers.</p>
<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>April 3-30</li> </ul> <p>Seven days per week. All salmon except coho; two fish per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <ul style="list-style-type: none"> <li>May 1 through September 6.</li> </ul> <p>Seven days per week. All salmon except coho; two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>Inseason action may be taken to open the fishery in April 2011 pending review at the March 2011 Council meeting of information on 2010 spawning escapements, 2011 abundance forecasts, annual management objectives, or other relevant issues.</p>
<p><b>Point Arena to U.S./Mexico Border</b></p> <ul style="list-style-type: none"> <li>April 3-30</li> </ul> <p>Seven days per week. All salmon except coho; two fish per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <ul style="list-style-type: none"> <li>May 1 through September 6.</li> </ul> <p>Thursday through Monday. All salmon except coho; two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>Inseason action may be taken to open the fishery in April 2011 pending review at the March 2011 Council meeting of information on 2010 spawning escapements, 2011 abundance forecasts, annual management objectives, or other relevant issues.</p>

TABLE V-2. Recreational management measures adopted by the Council for non-Indian ocean salmon fisheries, 2010. (Page 3 of 4)

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS			
B. MINIMUM SIZE (Inches) (See C.1)			
Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24.0	16.0	None
Cape Falcon to OR/CA Border	24.0	16.0	None
OR/CA Border to Horse Mountain	24.0	-	24.0
Horse Mt. to U.S./Mexico Border: Apr. 3-30	20.0	-	20.0
May 1-Sep. 6	24.0	-	24.0

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.

*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 salmon for all licensed and juvenile anglers aboard has 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 Point Conception, California:* No more than one rod may be used per angler; and no more than two single point, single shank barbless hooks are required for all fishing gear. [Note: ODFW regulations in the state-water fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.]
- b. *Horse Mt., California, to Point 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:* Angling tackle consisting of a line with no more than one artificial lure or natural bait attached. Off Oregon and Washington, the line 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 Point 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.



TABLE V-2. Recreational management measures adopted by the Council for non-Indian ocean salmon fisheries, 2010. (Page 4 of 4)

**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS**

**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°28'00" N. lat., 124°45'00" W. long.), then in a straight line to Bonilla Point (48°35'30" N. lat., 124°43'00" W. long.) on Vancouver Island, British Columbia.
- b. *Grays Harbor Control Zone* - The area defined by a line drawn from the Westport Lighthouse (46° 53'18" N. lat., 124° 07'01" W. long.) to Buoy #2 (46° 52'42" N. lat., 124°12'42" W. long.) to Buoy #3 (46° 55'00" N. lat., 124°14'48" W. long.) to the Grays Harbor north jetty (46° 36'00" N. lat., 124°10'51" W. long.).
- c. *Columbia Control Zone:* An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09" N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat., 124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long. and then along the north jetty to the point of intersection with the Buoy #10 line; and on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.
- d. *Stonewall Bank Groundfish Conservation Area:* The area defined by the following coordinates in the order listed:  
44°37.46' N. lat.; 124°24.92' W. long.;  
44°37.46' N. lat.; 124°23.63' W. long.;  
44°28.71' N. lat.; 124°21.80' W. long.;  
44°28.71' N. lat.; 124°24.10' W. long.;  
44°31.42' N. lat.; 124°25.47' W. long.;  
and connecting back to 44°37.46' N. lat.; 124°24.92' W. long.
- e. *Klamath Control Zone:* The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately six nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

**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 on an fishery impact equivalent basis to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Council's SAS recreational representatives north of Cape Falcon.
- c. Chinook and coho may be transferred between the recreational and commercial fisheries north of Cape Falcon on a fishery impact equivalent basis if there is agreement among the representatives of the Salmon Advisory Subpanel (SAS).
- d. If retention of unmarked coho is permitted in the area from the U.S./Canada border to Cape Falcon, Oregon, by inseason action, the allowable coho quota will be adjusted to ensure preseason projected mortality of critical stocks is not exceeded.

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

TABLE V-3. Treaty Indian ocean troll management measures adopted by the Council for ocean salmon fisheries, 2010.  
(Page 1 of 1)

A. SEASON DESCRIPTIONS					
Supplemental Management Information					
1. Overall Treaty-Indian TAC: 55,000 Chinook and 41,500 coho.					
<ul style="list-style-type: none"> <li>May 1 through the earlier of June 30 or 27,500 Chinook quota.</li> </ul> <p>All salmon except coho. If the Chinook quota for the May-June fishery is not fully utilized, the excess fish cannot be transferred into the later all-salmon season. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season. See size limit (B) and other restrictions (C).</p> <ul style="list-style-type: none"> <li>July 1 through the earlier of September 15, or 27,500 preseason Chinook quota, or 41,500 coho quota.</li> </ul> <p>All Salmon. See size limit (B) and other restrictions (C).</p>					

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

### C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Tribe and Area Boundaries. All boundaries may be changed to include such other areas as may hereafter be authorized by a Federal court for that tribe's treaty fishery.

S'KLALLAM - Washington State Statistical Area 4B (All).

MAKAH - Washington State Statistical Area 4B and that portion of the FMA north of 48°02'15" N. lat. (Norwegian Memorial) and east of 125°44'00" W. long.

QUILEUTE - That portion of the FMA between 48°07'36" N. lat. (Sand Pt.) and 47°31'42" N. lat. (Queets River) and east of 125°44'00" W. long.

HOH - That portion of the FMA between 47°54'18" N. lat. (Quillayute River) and 47°21'00" N. lat. (Quinault River) and east of 125°44'00" W. long.

QUINAULT - That portion of the FMA between 47°40'06" N. lat. (Destruction Island) and 46°53'18"N. lat. (Point Chehalis) and east of 125°44'00" W. long.

C.2. Gear restrictions

- Single point, single shank, barbless hooks are required in all fisheries.
- No more than eight fixed lines per boat.
- 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

- The quotas include troll catches by the S'Klallam and Makah tribes in Washington State Statistical Area 4B from May 1 through September 15.
- The Quileute Tribe will continue a ceremonial and subsistence fishery during the time frame of September 15 through October 15 in the same manner as in 2004-2009. Fish taken during this fishery are to be counted against treaty troll quotas established for the 2010 season (estimated harvest during the October ceremonial and subsistence fishery: 100 Chinook; 200 coho).

C.4. Area Closures

- 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.
- 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.

TABLE V-4. Achievement of conservation objectives for key stocks listed in Table 3-1 of the Pacific Coast Salmon Plan. Bolded numbers indicate a failure to meet the conservation objective. Stocks listed under the Endangered Species Act are not included. (Page 1 of 3)

<b>Stock and FMP Conservation Objective</b>												
(thousands of spawners; spawners per mile; impact or replacement rate)												
	<b>Year</b>										<b>Overfishing Criteria</b>	
<b>CHINOOK</b>	2003	2004	2005	2006	2007	2008	2009	2010 <sup>a/</sup>	2011 <sup>b/</sup>	Alert <sup>c/</sup>	Concern <sup>d/</sup>	Exception <sup>e/</sup>
<b>Sacramento River Fall</b>	523.0	286.9	396.0	275.0	<b>91.4</b>	<b>65.4</b>	<b>40.9</b>	125.4	572.6	No	<b>Yes</b>	No
122.0 - 180.0 adult spawners												
<b>Klamath River Fall</b> - < 67% avg. spawner reduction rate but no less than 35.0 natural area adult spawners annually	87.6	<b>24.1</b>	<b>26.8</b>	<b>30.2</b>	60.7	<b>30.9</b>	44.4	37.2	39.7	No	No	No
<b>Southern, Central and Northern Oregon Coast Spring and Fall</b>	230.6	171.7	89.1	63.8	<b>39.2</b>	<b>34.1</b>	62.0	78.8	NA	No	No	No
No less than 60 adult spawners/mile <sup>f/</sup>												
<b>Upper Columbia River Bright Fall</b>	180.0	170.6	134.8	91.0	58.7	101.9	104.5	146.9	>43.5	No	No	Exp. Rate
43.5 adults over McNary Dam (60.0 U.S. v. Oregon goal)												
Council area base period impacts <4%	114.8	NA	NA	NA	NA	NA	NA	NA	NA	-	-	-
<b>Columbia River Summer Chinook</b>												
80.0 to 90.0 adults over Bonneville Dam												
Council area base period impacts <2%	83.1	65.5	60.4	77.9	37.0	55.5	53.9	72.3	>29.0	No	No	Exp. Rate
In 2004 state and tribal co-managers changed the stock definition from Chinook passing Bonneville Dam after May 31 to Chinook passing Bonneville Dam after June 14, with a goal of 29,000 at the river mouth												
<b>Grays Harbor Fall</b> - 14.6 adult spawners (MSP)	17.8	29.5	17.0	16.0	<b>11.3</b>	13.6	7.2	NA <sup>g/</sup>	NA <sup>g/</sup>	No	No	Exp. Rate
<b>Grays Harbor Spring</b> - 1.4 adult spawners	1.9	5.0	2.1	2.5	<b>0.7</b>	<b>1.0</b>	1.1	NA <sup>g/</sup>	NA <sup>g/</sup>	No	No	Exp. Rate
<b>Queets Fall</b> - no less than 2.5 adult spawners (MSY)	5.0	5.1	4.6	3.1	<b>0.9</b>	3.1	NA <sup>g/</sup>	NA <sup>g/</sup>	NA <sup>g/</sup>	No	No	Exp. Rate
<b>Queets Spring/Summer</b> - no less than 0.7 adult spawners	<b>0.2</b>	<b>0.6</b>	<b>0.3</b>	<b>0.3</b>	<b>0.4</b>	<b>0.3</b>	<b>0.5</b>	NA <sup>g/</sup>	NA <sup>g/</sup>	Limited <sup>e/</sup>	No	Exp. Rate
<b>Hoh Fall</b> - no less than 1.2 adult spawners (MSY)	1.6	3.2	4.2	1.5	1.6	2.8	2.1	2.3	NA <sup>g/</sup>	No	No	Exp. Rate
<b>Hoh Spring/Summer</b> - no less than 0.9 adult spawners	1.2	1.8	1.2	0.9	<b>0.8</b>	<b>0.7</b>	0.9	<b>0.8</b>	NA <sup>g/</sup>	No	No	Exp. Rate
<b>Quillayute Fall</b> - no less than 3.0 adult spawners (MSY)	7.4	3.8	6.4	5.6	3.1	3.6	3.1	4.4	NA <sup>g/</sup>	No	No	Exp. Rate
<b>Quillayute Spring/Summer</b> - 1.2 adult spawners (MSY)	1.2	<b>1.1</b>	<b>0.9</b>	<b>0.6</b>	<b>0.5</b>	<b>0.9</b>	<b>0.6</b>	<b>0.7</b>	NA <sup>g/</sup>	Limited <sup>e/</sup>	No	Exp. Rate

TABLE V-4. Achievement of conservation objectives for key stocks listed in Table 3-1 of the Pacific Coast Salmon Plan. Bolded numbers indicate a failure to meet the conservation objective. Stocks listed under the Endangered Species Act are not included. (Page 2 of 3)

Stock and FMP Conservation Objective												
(thousands of spawners; spawners per mile; impact or replacement rate)	Year									Overfishing Criteria		
COHO												
Oregon Coast (OCN) - Total exploitation rate set annually;≤15% in 2010, ≤15% in 2011.	14%	15%	11%	6.0%	11.0%	2.0%	7.0%	5.0%	9.7%	No	No	No
Grays Harbor - 35.4 adult spawners (MSP)	85.0	60.7	38.6	17.8	25.1	34.1	69.7	>35.4	>35.4	No	No	No
Queets - 5.8 to 14.5 adult spawners (MSY range)	9.8	7.5	6.5	5.7	4.7	4.6	9.2	>5.8	>5.8	No	No	No
Includes supplemental adults prior to 2006.												
Hoh - 2.0 to 5.0 adult spawners (MSY range)	6.3	4.7	4.7	1.3	3.1	2.5	4.6	7.9	>2.0	No	No	No
Quillayute Fall - 6.3 to 15.8 adult spawners (MSY range)	14.8	13.4	11.5	5.2	6.2	6.9	7.9	9.3	>6.3	No	No	No
Strait of Juan de Fuca <sup>iv</sup>	21.0	21.0	11.1	3.9	8.0	3.3	14.1	NA	i/	No	No	No
Western Strait of Juan de Fuca - 11.9 adult spawners <2010	13.8	12.0	6.8	2.0	4.4	2.4	10.9	-	-	-	-	-
Eastern Strait of Juan de Fuca - 0.95 adult spawners <2010	3.2	7.8	3.4	1.8	3.1	1.2	3.9	-	-	-	-	-
Hood Canal - 21.5 adult spawners (MSP) <2010	171.2	146.9	38.1	13.7	46.7	11.8	26.9	NA	i/	No	No	No
Skagit - 30.0 adult spawners (MSP) <2010	88.7	118.5	34.7	7.7	52.0	24.1	60.8	NA	i/	No	No	No
Stillaguamish - 17.0 adult spawners (MSP) <2010	45.7	59.2	25.8	8.5	38.7	12.9	22.2	NA	i/	No	No	No
Snohomish - 70.0 adult spawners (MSP) <2010	182.7	252.8	109.0	75.8	18.6	35.1	99.0	NA	i/	No	No	No

TABLE V-4. Achievement of conservation objectives for key stocks listed in Table 3-1 of the Pacific Coast Salmon Plan. Bolded numbers indicate a failure to meet the conservation objective. Stocks listed under the Endangered Species Act are not included. (Page 3 of 3)

a/ Preliminary.

b/ Preliminary approximations based on preseason abundance projections and last year's regulations or season structures.

c/ Conservation Alert - triggered during the annual preseason process if a natural stock or stock complex, listed in Table 3-1 of the salmon FMP, is projected to fall short of its conservation objective (MSY, MSY proxy, MSP, or floor in the case of some harvest rate objectives [e.g., 35,000 natural area adult Klamath River fall Chinook spawners]).

**Actions for Stocks that are not Exceptions** - The Council will close salmon fisheries within its jurisdiction which impact the stocks, except in the case of Washington coastal and Puget Sound salmon stocks and fisheries managed under U.S. District Court orders. In these cases, the Council may allow fisheries which meet annual spawner targets developed through relevant U.S. v. Washington, Hoh v. Baldrige, and subsequent U.S. District Court ordered processes and plans, that may vary from the MSY or MSP conservation objectives. For all natural stocks that meet the conservation alert criteria, the Council will notify pertinent fishery and habitat managers, advising that the stock may be temporarily depressed or approaching an overfishing concern (depending on its recent conservation status), and request state and tribal fishery managers to identify the probable causes, if known. If the stock has not met its conservation objective in the previous two years, the Council will request state and tribal managers to do a formal assessment of the primary factors leading to the shortfalls and report to the Council no later than the March meeting prior to the next salmon season.

d/ Overfishing concern - triggered if, in three consecutive years, the postseason estimates indicate a natural stock, listed in Table 3-1 of the salmon FMP, has fallen short of its conservation objective (MSY, MSP, or spawner floor as noted for some harvest rate objectives).

**Actions required for Stocks that are not Exceptions** - Within one year, the STT to recommend and the Council to adopt management measures to end the overfishing concern and recover the stock in as short a time as possible, preferably within ten years or less. The HC to provide recommendations for habitat restoration and enhancement measures within a suitable time frame.

e/ Exception-application of the conservation alert and overfishing criteria and subsequent Council actions do not apply for (1) hatchery stocks, (2) natural stocks with a cumulative adult equivalent exploitation rate of less than 5% in ocean fisheries under Council jurisdiction during the FRAM base periods, and (3) stocks listed under the ESA.

**Conservation Alert and Overfishing Concern Actions for Natural Stocks that are Exceptions** (those with exploitation rates limited to less than 5% in base period Council-area ocean fisheries) - Use the expertise of STT and HC to confirm negligible impacts of proposed Council fisheries, identify factors which have led to the decline or low abundance (e.g., fishery impacts outside Council jurisdiction, or degradation or loss of essential fish habitat) and monitor abundance trends and total harvest impact levels. Council action will focus on advocating measures to improve stock productivity, such as reduced interceptions in non-Council managed fisheries, and improvements in spawning and rearing habitat, fish passage, flows, and other factors affecting overall stock survival.

f/ Based on the sum of south/local and north migrating spawners per mile weighted by the total number of miles surveyed for each of the two components (2.2 miles for south/local and 7.5 miles for northern stocks).

g/ Preseason forecasts are not available for some of Washington coastal Chinook stocks.

h/ As a result of Council action in 2009, the Eastern and Western Strait of Juan de Fuca stocks have been combined into a single stock beginning in 2010.

i/ As a result of Council action in 2009, this stock will be managed consistent with the allowable exploitation rates for Puget Sound coho management units beginning in 2010.

Conservation objectives for this stock for the purpose of determining an overfishing concern are under review, and will likely be modified during 2011.

TABLE V-5. Estimated ocean escapements and exploitation rates for critical natural and Columbia River hatchery coho stocks (thousands of fish) based on preliminary 2011 preseason abundance forecasts and 2010 Council management measures.<sup>a/</sup>

Ocean Escapement and ER Estimates Under 2010 Regulations <sup>b/</sup>					
Stock	2011 Preseason		2010 Preseason		2011 FMP Conservation Objective <sup>c/</sup>
	Abundance	Exploitation Rate	Abundance	Exploitation Rate	
<b>Natural Coho Stocks</b>					
Skagit	117.1	35.2%	60.3	37.4%	Exploitation Rate ≤60.0% <sup>d/</sup>
Stillaguamish	54.0	30.9%	16.3	37.4%	Exploitation Rate ≤50.0% <sup>d/</sup>
Snohomish	143.7	27.8%	67.5	32.4%	Exploitation Rate ≤60.0% <sup>d/</sup>
Hood Canal	62.0	35.7%	19.0	43.0%	Exploitation Rate ≤65.0% <sup>d/</sup>
Strait of Juan de Fuca	11.4	8.9%	7.5	11.2%	Exploitation Rate ≤40.0% <sup>d/</sup>
Quillayute Fall	26.5		20.5		6.3 - 15.8 Spawners
Hoh	10.1		6.5		2.0 - 5.0 Spawners
Queets	10.5		17.1		5.8 - 14.5 Spawners
Grays Harbor	82.1		61.9		35.4 Spawners
LCN	19.9	15.5%	13.2	15.0%	Exploitation Rate ≤15.0%
OCN	230.8	9.8%	136.0	11.2%	Exploitation Rate ≤15.0%
R/K	NA	8.4%	NA	10.0%	Exploitation Rate ≤13.0%
<b>Hatchery Coho Stocks</b>					
Columbia Early	154.3		176.7		18.6 Hatchery Escapement
Columbia Late	98.7		96.7		11.9 Hatchery Escapement

a/ Quota levels include harvest and hooking mortality estimates used in planning the Council's 2010 ocean fisheries and a coho catch for the Canadian troll fishery off the West Coast of Vancouver Island (WCVI).

b/ 2010 preseason regulations include the following coho quota fisheries: U.S. Canada Border to Cape Falcon: Treaty Indian troll - 41,500 non-selective; non-Indian troll - 11,800 selective; recreational - 67,200 selective; Cape Falcon to OR/CA border: recreational - 26,000 selective; troll - none. Ocean escapement is generally the estimated number of coho escaping ocean fisheries and entering freshwater. For Puget Sound stocks, ocean escapement is the estimated number of coho entering Puget Sound (Area 4B) which are available for U.S. net fisheries in Puget Sound and spawning escapement after impacts associated with the Canadian and Puget Sound troll and recreational fisheries have been deducted. For the OCN coho stock, this value represents the estimated spawner escapement in SRS accounting. For Columbia River hatchery and LCN stocks, ocean escapement represents the number of coho before the Buoy 10 fishery; the LCN exploitation rate shown is the Council fisheries exploitation rate, which had an ER forecast of 11.2% and an ESA limit of 15% including mainstem Columbia River fisheries.

c/ Goals represent Salmon 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.

TABLE V-6. Comparison of Lower Columbia natural (LCN), Oregon coastal natural (OCN), and Rogue/Klamath (RK) coho projected harvest mortality and exploitation rates by fishery under Council-adopted 2010 management measures and preliminary 2011 preseason abundance estimates.

Fishery	Projected Harvest Mortality and Exploitation Rate					
	LCN		OCN		RK <sup>a/</sup>	
	Number	Percent	Number	Percent	Number	Percent
<b>SOUTHEAST ALASKA</b>	0	0.0%	0	0.0%	0	0.0%
<b>BRITISH COLUMBIA</b>	7	0.0%	287	0.1%	2	0.0%
<b>PUGET SOUND/STRAITS</b>	36	0.2%	201	0.1%	0	0.0%
<b>NORTH OF CAPE FALCON</b>						
Recreational	1,025	4.5%	1,993	0.8%	3	0.0%
Treaty Indian Troll	467	2.1%	1,262	0.5%	0	0.0%
Non-Indian Troll	397	1.8%	1,078	0.4%	1	0.0%
<b>SOUTH OF CAPE FALCON</b>						
Recreational:	414	1.8%				
Cape Falcon to Humbug Mt.			6,513	2.6%	22	0.3%
Humbug Mt. to Horse Mt. (KMZ)			2,694	1.0%	273	4.2%
Fort Bragg			1,220	0.5%	76	1.2%
South of Pt. Arena			741	0.3%	47	0.7%
Troll:	173	0.7%				
Cape Falcon to Humbug Mt.			2,064	0.8%	7	0.1%
Humbug Mt. to Horse Mt. (KMZ)			297	0.1%	22	0.4%
Fort Bragg			1,086	0.4%	71	1.1%
South of Pt. Arena			99	0.0%	3	0.0%
<b>BUOY 10</b>	234	1.0%	181	0.1%	0	0.0%
<b>ESTUARY/FRESHWATER</b>	NA	3.4%	4,949	2.0%	15	0.2%
<b>TOTAL</b>	2,753	15.5%	24,665	9.7%	542	8.2%

a/ Unmarked hatchery production used as a surrogate for Rogue/Klamath natural stock coho.

TABLE V-7 Maximum allowable fishery impact rate for OCN coho under Amendment 13 matrix (Appendix A, Table A-2) and the OCN work group matrix (Appendix A, Table A-3) based on parent escapement levels by stock component and marine survival category.<sup>a/</sup>

Fishery Year (t)	Estimated OCN Coho Spawners by Stock Component					Hatchery Jack Survival Rate (t-1)	Amendment 13 Matrix			OCN Work Group Matrix <sup>b/</sup>		
	Parent Spawner Year (t-3)	Northern	North- Central	South- Central	Southern		Marine Survival Category	Parental Spawner Category	Maximum Allowable Impacts	Marine Survival Category	Parental Spawner Category	Maximum Allowable Impacts
1998	1995	3,900	13,600	36,500	3,400	0.04%	Low	Very Low	≤10-13%	Extremely Low	Very Low	≤8%
1999	1996	3,300	18,100	52,600	5,200	0.10%	Med	Very Low	≤15%	Low	Critical	0-8%
2000	1997	2,100	2,800	18,400	8,200	0.12%	Med	Very Low	≤15%	Low	Critical	0-8%
2001	1998	2,600	3,300	25,900	2,300	0.27%	Med	Very Low	≤15%	Medium	Critical	0-8%
2002	1999	8,900	11,800	29,100	1,400	0.09%	Med	Low	≤15%	Low	Low	≤15%
2003	2000	17,900	14,300	36,500	11,000	0.20%	Med	Low	≤15%	Med	Low	≤15%
2004	2001	33,500	25,200	112,000	12,600	0.14%	Med	Low	≤15%	Med	Low	≤15%
2005	2002	52,500	104,000	104,100	8,400	0.11%	Med	High	≤20%	Low	High	≤15%
2006	2003	59,600	68,900	99,800	6,800	0.12%	Med	High	≤20%	Low	High	≤15%
2007	2004	28,800	42,100	101,900	24,500	0.17%	Med	Med	≤20%	Med	Med	≤20%
2008	2005	16,500	51,400	86,700	10,000	0.07%	Low	High	≤15%	Extremely Low	High	≤8%
2009	2006	24,100	21,200	83,500	3,900	0.27%	Med	Low	≤15%	Med	Low	≤15%
2010	2007	17,500	12,300	36,500	5,200	0.12%	Med	Low	≤15%	Low	Low	≤15%
2011	2008	25,600	68,100	86,000	400	0.12%	Med	High	≤20%	Low	High	≤15%
2012	2009	48,100	86,400	128,200	2,600	-	-	High	-	-	High	-
2013	2010	53,200	53,500	147,100	3,100	-	-	High	-	-	High	-

a/ Under the NMFS ESA consultation standards, the southern stock component is managed for a total allowable Marine Exploitation rate of 13%, as represented by Rogue/Klamath hatchery stocks, which is separate from these OCN coho impact rates.

b/ Developed by the OCN work group as a result of the 2000 Review of Amendment 13.



## CHAPTER VI: REFERENCES

- National Marine Fisheries Service (NMFS). 2003. Final Programmatic environmental impact statement for Pacific salmon fisheries management off the coasts of Southeast Alaska, Washington, Oregon, and California, and in the Columbia River basin. National Marine Fisheries Service Northwest Region, Seattle.
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## **APPENDIX A**

### **SUMMARY OF COUNCIL STOCK MANAGEMENT GOALS**

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TABLE A-1. **Conservation objectives** and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 1 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
<b>--- CHINOOK ---</b>			
<b>CALIFORNIA CENTRAL VALLEY</b> - All fall, late-fall, winter, and spring stocks of the Sacramento and San Joaquin Rivers and their tributaries. Management of this stock complex is based primarily on Sacramento River fall Chinook, which includes a large hatchery component and natural Sacramento River winter Chinook, which are listed as endangered. The San Joaquin system has been severely degraded by water development projects and pollution. Natural populations of spring Chinook there have been extirpated, and remaining spawning areas are utilized primarily by fall Chinook, which have comprised <10% of the total Central Valley fall run.			
<b>Sacramento River Fall</b>	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).	Yes. A conservation alert or overfishing concern will be based on a failure to meet 122,000 adult spawners.	Below conservation objective in 2007-2009; above the lower bound of the conservation objective in 2010; near average abundance in 2011. Contributes to ocean fisheries off California, southern and central Oregon, Washington, and British Columbia. Council management actions on this stock are directed at fisheries south of Cape Falcon.
<b>Sacramento River Spring</b> Threatened (1999)	Listed as threatened under ESA. NMFS ESA consultation standard/recovery plan. Present level of ocean fishery impacts limited by measures constraining harvest on Sacramento River winter and Klamath River fall Chinook.	No. NMFS ESA consultation standard provides interim rebuilding program MSY criteria undefined.	Contributes to ocean fisheries off California, but also known to occur off Oregon. Ocean fishery impacts primarily incidental to harvest of Sacramento River fall Chinook and may be lower due to differences in run timing. Stock has been affected by man-caused loss and deterioration of freshwater habitat.
<b>Sacramento River Winter</b> Endangered (1994)	Listed as endangered under ESA. NMFS ESA consultation standard specifies duration and timing of commercial and recreational fisheries south of Pt. Arena.	No. NMFS ESA consultation standard provides interim rebuilding program.	Believed to contribute predominantly to ocean fisheries south of Pt. Arena. Ocean fishery impacts incidental to harvest of Sacramento River fall Chinook.
<b>NORTHERN CALIFORNIA COAST</b> - All fall and spring stocks of California streams north of the entrance to San Francisco Bay. Management of this stock complex is based primarily on meeting spawning escapements for natural fall Chinook. Limited data is available except for the Klamath River. An assessment and monitoring program is under consideration by CDFG for stocks originating from the Smith, Eel, Mattole, and Mad Rivers, which might provide a more thorough management basis for the future. There are significant water diversion problems in several drainages. In the Klamath River Basin, there is significant hatchery production of fall Chinook, and less so of spring Chinook, resulting primarily from mitigation programs for dams constructed in both Upper Klamath and Trinity Rivers.			
<b>Eel, Mattole, Mad, and Smith Rivers</b> (Fall and Spring) Eel, Mattole, and Mad River stocks - Threatened (1999)	Eel, Mattole, and Mad River stocks listed as threatened under ESA. Data insufficient to define MSY criteria. Indices of spawning abundance limited to one tributary of the Mad River and two tributaries of the Eel River. NMFS ESA consultation standard/recovery plan for Eel, Mattole, and Mad River stocks requires that the projected ocean harvest rates on age-4 Klamath River fall Chinook not exceed 16.0%.	Eel, Mattole, and Mad - No. NMFS ESA consultation standard provides interim rebuilding program. MSY criteria undefined. Smith - Indirectly. Data insufficient to define MSY criteria. CDFG developing an assessment and monitoring program.	Very limited management data available. Believed to occur in ocean fisheries off northern California and southern Oregon. Ocean fishery impacts incidental to fisheries for Sacramento and Klamath Rivers fall Chinook. No preseason or postseason abundance estimates available.

TABLE A-1. **Conservation objectives** and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 2 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
<b>--- CHINOOK ---</b>			
<b>Klamath River Fall</b> (Klamath and Trinity Rivers)	33% to 34% of potential adult natural spawners, but no fewer than 35,000 naturally spawning adults in any one year. Brood escapement rate must average 33% to 34% over the long-term, but an individual brood may vary from this range to achieve the required tribal/nontribal annual allocation. Objective designed to allow a wide range of spawner escapements from which to develop an MSY objective or proxy while protecting the stock during prolonged periods of reduced productivity. Adopted 1988 based on Hubbell and Boydstun (1985); KRTT (1986); PPMC (1988); minor technical modifications in 1989 and 1996 (Table I-1). Natural spawners to maximize recruitment are estimated at 41,000 to 106,000 adults (Hubbell and Boydstun 1985), and 40,700 (STT 2005).	Yes. A conservation alert or overfishing concern will be based on a failure to meet the 35,000 floor. The response to a conservation alert was modified by Amendment 15 (2007) to allow <i>de minimis</i> fishing impacts under certain circumstances.	Above conservation objective in 2010; near average abundance in 2011. Contributes primarily to ocean fisheries from Humbug Mt., Oregon to Horse Mt., California (the KMZ) and to Klamath River tribal and recreational fisheries. Coastwide impacts are considered in meeting allocation requirements for Indian tribes with federally recognized fishing rights and the inland fishery. Specific management measures for this stock generally are implemented from Pt. Sur, California to Cape Falcon, Oregon. Rebuilding plan raised annual natural area spawning escapement objective to 40,700 adults beginning in 2008 until overfishing concern is ended (two consecutive years $\geq 40,700$ or 3 of 4 consecutive years $\geq 35,000$ ).
<b>Klamath River Spring</b> (Klamath and Trinity Rivers)	Undefined. Productive potential believed to be protected by fishery management objective for Klamath River fall Chinook, which includes an inside allocation to tribal and sport fisheries.	Indirectly. MSY criteria undefined.	Little information available on ocean distribution. Believed to occur in ocean fisheries off northern California and southern Oregon (based on Trinity River Hatchery fish).
<b>OREGON COAST</b> - All fall and spring stocks from Oregon streams south of the Columbia River. No preseason abundance estimates available. Management based primarily on an aggregate objective of 150,000 to 200,000 natural adult spawners (attainment of objective based on a postseason estimate of 60 to 90 natural adult spawners per mile in nine standard index streams). This objective is based on optimal escapement estimates for individual coastal rivers at habitat capacity (Thompson 1977). Lower end of the objective range is nearly twice the estimated MSY spawning escapement of 79,000 fall Chinook adults based on stock recruit analysis (McGie 1982). Significant hatchery production also exists within the coastal streams. Far-north migrating, naturally spawning stocks are also subject to the 1999 Chinook agreement of the Pacific Salmon Commission and may be subject to exploitation rate constraints in U.S. fisheries south of the Canada/Washington border.			
<b>Southern Oregon</b> (Aggregate of fall and spring stocks in all streams south of Elk River; Rogue River fall stock is used to indicate relative abundance and ocean contribution rates)	Unspecified portion of an aggregate 150,000 to 200,000 natural adult spawners for Oregon coast (Thompson 1977 and McGie 1982). ODFW developing specific conservation objectives for spring and fall stocks that may be implemented without plan amendment upon approval by the Council.	Yes, based on postseason estimates of <60 natural adult spawners per mile. Conservation promoted by the objective for Klamath River fall Chinook, which includes a large inside allocation component that reduces ocean fishery exploitation rate in areas inhabited by these fish, and by ESA consultation standard for California coastal Chinook, which limits projected ocean harvest rates on age-4 Klamath River fall Chinook to $\leq 16.0\%$ .	Medium abundance. Data limited except for Rogue River fall stock. Stocks migrate southerly or remain local, and fall Chinook contribute to ocean fisheries off northern California and Oregon, less so for spring stocks.
<b>Central and Northern Oregon</b> (Aggregate of fall and spring stocks in all streams from the Elk River to just south of the Columbia River)	Unspecified portion of an aggregate 150,000 to 200,000 natural adult spawners for Oregon coast (Thompson 1977 and McGie 1982). ODFW developing specific conservation objectives for spring and fall stocks that may be implemented without plan amendment upon approval by the Council.	Yes, based on postseason estimates of <60 natural adult spawners per mile.	Below conservation objective in 2007-2008. Stocks migrate northward and contribute to ocean fisheries off British Columbia and southeast Alaska, and to a lesser degree, off Washington and Oregon. Nehalem, Siletz, and Siuslaw stocks are subject to the PSC ISBM harvest limitations.

TABLE A-1. Conservation objectives and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 3 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
<b>--- CHINOOK ---</b>			
<b>COLUMBIA RIVER BASIN</b> - All pertinent fall, summer, and spring stocks of the Columbia River and its tributaries. Stocks within this complex are noted by area of origin: lower river (below Bonneville Dam), mid-river (Bonneville to McNary Dams), and upper river (above McNary Dam). Spawner escapement goals for these stocks are set through procedures of the U.S. District Court in <i>U.S. v. Oregon</i> and subsequent court orders. These goals are set forth in the Columbia River Fishery Management Plan and are recognized in the Council's conservation objectives. Annual inside fishery management planning activities are conducted within the Columbia River Compact and other state and tribal management forums. The Columbia River Compact, initially established by Oregon and Washington to jointly administer commercial fisheries within the Columbia River, takes into account the impacts from other state and tribal fisheries (e.g., recreational, ceremonial, subsistence, etc.) authorized under <i>U.S. v. Oregon</i> . The majority of ocean Chinook harvest north of Cape Falcon is provided by Columbia River salmon stocks, primarily hatchery production of tule fall Chinook from the Bonneville Pool (Spring Creek) and lower river hatcheries, smaller numbers of upper river bright hatchery and natural fall Chinook, and some lower river hatchery spring Chinook (Cowlitz). Hatchery objectives are based on long-range production programs and/or mitigation requirements associated with displaced natural stocks. Threatened Snake River fall Chinook, which suffer from severe dam passage mortalities and extreme loss of freshwater habitat, are of prime concern in limiting ocean exploitation rates in all ocean fisheries north of Pigeon Pt., California. These limits act to provide considerable protection to other weak natural stocks subject to ocean fishery impacts. Naturally spawning stocks are also subject to the 1999 Chinook agreement of the Pacific Salmon Commission and may be subject to exploitation rate constraints in U.S. fisheries south of the Canada/Washington border.			
<b>North Lewis River Fall</b> Threatened (1999)	NMFS ESA consultation standard/recovery plan (not established at time of printing). McIsaac (1990) stock-recruit analysis supports MSY objective of 5,700 natural adult spawners.	No. Listed stock. NMFS ESA consultation standard provides interim rebuilding program. Base period Council-area ocean fishery impacts around 7%.	Below conservation objective in 2007-2009; below average abundance in 2011. Present in ocean fisheries north of Cape Falcon to SE Alaska. Subject to the PSC ISBM harvest limitations.
<b>Lower River Hatchery Fall</b>	12,600 adults to meet egg-take goal or as determined by management entities. Total RER for ESA listed lower Columbia River natural tule fall Chinook estimated from Cowlitz, Washougal, Kalama and Big Creek hatchery fall Chinook, as determined by NMFS analysis.	No (hatchery exception or listed stock). NMFS ESA consultation standard provides interim rebuilding program.	Greater than 10 year average in 2011. Major contributor to ocean fisheries north of Cape Falcon to central British Columbia.
<b>Lower River Hatchery (Spring)</b>	2,700 adults to meet Cowlitz, Kalama, and Lewis Rivers broodstock needs.	No (hatchery exception).	2011 is forecasted to be less than 2010. Present in ocean fisheries north of Cape Falcon to southeast Alaska.
<b>Upper Willamette (Spring)</b> Threatened (1999)	NMFS ESA consultation standard/recovery plan (ODFW FMEP). Willamette River Management Plan provides an MSY proxy of 30,000 to 45,000 hatchery and natural adults over Willamette River falls, depending on run size.	No. Listed stock. NMFS ESA consultation standard provides interim rebuilding program. Base period Council-area ocean fishery exploitation rate of <5% prevents effective Council fishery management and rebuilding.	2011 forecast to be slightly less than 2010.. Present in fisheries north of Cape Falcon to southeast Alaska.
<b>Mid-Columbia Bright Hatchery (Fall)</b>	None for ocean fishery management.	No (hatchery exception).	Greater than 10 year average abundance in 2011. Contributor to ocean fisheries off Washington, British Columbia, and southeast Alaska.
<b>Spring Creek Hatchery (Fall)</b>	7,000 adults to meet hatchery egg-take goal.	No (hatchery exception).	Greater than 10 year average abundance in 2011. Major contributor to ocean fisheries north of Cape Falcon to southern British Columbia.

TABLE A-1. Conservation objectives and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 4 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
--- CHINOOK ---			
<b>COLUMBIA RIVER BASIN (continued)</b>			
<b>Klickitat, Deschutes, John Day, and Yakima Rivers (Spring)</b>	Hold ocean fishery impacts at or below base period (<1%) and recognize CRFMP objective - MSY proxy of 115,000 adults above Bonneville Dam, including upper and mid-Columbia and Snake River stocks (state and tribal management entities considering separate conservation objectives for these stocks).	Limited. Base period Council-area ocean fishery exploitation rate of <1% prevents effective Council fishery management and rebuilding. Major habitat restoration addressing water withdrawals and dam passage and blockages is necessary for rebuilding.	No significance to ocean fisheries, infrequent occurrence in fisheries north of Cape Falcon to Alaska.
<b>Snake River Fall Threatened (1992)</b>	NMFS ESA consultation/recovery standard. Since 1995, Council has met a standard of limiting its fisheries so that the total exploitation rate on age-3 and age-4 Lyons Ferry Hatchery fall Chinook (representing Snake River fall Chinook) for all ocean fisheries (including Canada) has been #70.0% of the 1988-1993 average adult equivalent exploitation rate. Prior to listing, managed within objectives for upper Columbia River bright fall Chinook.	No. Listed stock, MSY criteria undefined. NMFS ESA consultation standard provides interim rebuilding program. Recovering historic abundance unlikely, as dams block former primary spawning area.	Depressed. Large return of wild age 3 in 2010 may lead to large return of wild age 4 in 2011. Present in ocean fisheries from central California to southeast Alaska with greatest contribution to Canadian fisheries. Primary impacts in Council fisheries north of Cape Falcon, but also extending to Pigeon Pt., California.
<b>Snake River Spring/Summer Threatened (1992)</b>	Not applicable for ocean fisheries.	No. Listed stock. Base period Council-area ocean fishery impacts rare (unmeasurable). Dam passage mortality must be reduced to allow stock recovery.	Depressed, recent upward trend. Rare occurrence in ocean fisheries from Washington to southeast Alaska.
<b>Upper River Bright (Fall)</b>	40,000 natural bright adults above McNary Dam (MSY proxy) adopted in 1984 based on CRFMP. The management goal was increased to 45,000 by Columbia River managers between 1986 and 1993. Since 1994, inriver fisheries management based on <i>U.S. v. Oregon</i> annual management agreements, including a McNary Dam count goal of 60,000 since 2008.	Limited. Base period Council-area ocean fishery exploitation rate <4% prevents effective Council fishery management and rebuilding.	2011 forecast may be second largest return since 1964. Major contributor to ocean fisheries off Canada, and to a lesser extent, Washington and Oregon. Primary impact area north of Cape Falcon. Subject to the PSC ISBM harvest limitations.
<b>Upper River Summer</b>	Hold ocean fishery impacts at or below base period (<2%); recognize <i>U.S. v. Oregon</i> objective - MSY proxy of 29,300 adults to river mouth destined to for areas above Priest Rapids Dam (excludes Snake River stocks).	Limited. Base period Council-area ocean fishery exploitation rate <2% prevents effective Council fishery management and rebuilding. Dam passage mortalities must be reduced to allow rebuilding.	Improved abundance since 2002. 2011 forecast is slightly more than 2010. Present in ocean fisheries north of Cape Falcon to southeast Alaska. Subject to the PSC ISBM harvest limitations.
<b>Upper Columbia River Spring Endangered (1999)</b>	None applicable to ocean fisheries. Ensure ocean fishery impacts remain rare and recognize CRFMP objective - MSY proxy of 115,000 adults above Bonneville Dam, including upper and mid-Columbia and Snake River stocks (state/tribal management entities considering separate objectives for these stocks).	No. Listed stock. Base period Council-area ocean fishery impacts rare (not measurable), making Council management and rebuilding ineffective. Reduce dam passage mortalities to allow rebuilding.	Improved abundance since 2000. However, . 2011 is forecast to be about half of 2010 return. Captive broodstock programs started in 1997. No significance to ocean fisheries. Rare occurrence in ocean fisheries north of Cape Falcon to Canada.



TABLE A-1. Conservation objectives and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 5 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
--- CHINOOK ---			
<b>WASHINGTON COAST</b> - All pertinent fall, summer and spring stocks from coastal streams north of the Columbia River through the western Strait of Juan de Fuca (west of the Elwha River). This stock complex consists of several natural stocks, generally of small to medium sized populations, and some hatchery production (Willapa Bay and the Quinalt River). Stocks in this complex tend to range further north than most Columbia River stocks and, while present in fisheries from Cape Falcon to southeast Alaska, are not significantly impacted by Council-area ocean fisheries. These stocks qualify as exceptions to the Council's overfishing criteria, due to very low fishery impacts. Spawning escapement goals for stocks managed within this complex, established in U.S. District Court by WDFW and the treaty tribes, are recognized in the Council's conservation objectives below. Objectives for Grays Harbor and the north coast river systems have been established pursuant to the U.S. District Court order in <i>Hoh v. Baldrige</i> . However, annual natural spawning escapement targets may vary from the conservation objectives below if agreed to by WDFW and the treaty tribes under the provisions of <i>Hoh v. Baldrige</i> and subsequent U.S. District Court orders. After agreement is reached on the annual targets, ocean fishery escapement objectives are established for each river, or region of origin, which include provisions for treaty allocation and inside, non-Indian fishery needs. Naturally spawning stocks are also subject to the 1999 Chinook agreement of the Pacific Salmon Commission and may be subject to exploitation rate constraints in U.S. fisheries south of the Canada/Washington border.			
<b>Willapa Bay Fall</b> (Natural)	No FMP objective. WDFW goal of 4,400 natural spawners.	Limited (exploitation rate exception).	
<b>Willapa Bay Fall</b> (Hatchery)	9,800 adult return to hatchery.	No (hatchery exception).	
<b>Grays Harbor Fall</b>	14,600 natural adult spawners--MSP based on full seeding of spawning and rearing habitat (WDF 1979).	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.
<b>Grays Harbor Spring</b>	1,400 natural adult spawners.	Limited (exploitation rate exception).	
<b>Quinalt Fall</b>	Hatchery production.	No (hatchery exception).	
<b>Queets Fall</b>	Manage terminal fisheries for 40% harvest rate, but no less than 2,500 natural adult spawners, the MSY level estimated by Cooney (1984).	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.
<b>Queets Spring/Summer</b>	Manage terminal fisheries for 30% harvest rate, but no less than 700 natural adult spawners.	Limited (exploitation rate exception).	
<b>Hoh Fall</b>	Manage terminal fisheries for 40% harvest rate, but no less than 1,200 natural adult spawners, the MSY level estimated by Cooney (1984).	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.
<b>Hoh Spring/Summer</b>	Manage terminal fisheries for 31% harvest rate, but no less than 900 natural adult spawners.	Limited (exploitation rate exception).	
<b>Quillayute Fall</b>	Manage terminal fisheries for 40% harvest rate, but no less than 3,000 natural adult spawners, the MSY level estimated by Cooney (1984).	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.
<b>Quillayute Spring/Summer</b>	1,200 natural adult spawners for summer component (MSY).	Limited (exploitation rate exception).	
<b>Hoko Summer/Fall</b> (Western Strait of Juan de Fuca)	850 natural adult spawners, the MSP level estimated by Ames and Phinney (1977). May include adults used for supplementation program.	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.

TABLE A-1. **Conservation objectives** and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 6 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
--- CHINOOK ---			
<b>PUGET SOUND</b> - All fall, summer, and spring stocks originating from U.S. tributaries to Puget Sound and the eastern Strait of Juan de Fuca (east of Salt Creek). This stock complex consists of numerous natural Chinook stocks of small to medium sized populations and significant hatchery production. Puget Sound stocks contribute to fisheries off British Columbia and are present into southeast Alaska, but are impacted to a minor degree by Council-area ocean fisheries. Base period, Council-area ocean fishery exploitation rates (adult equivalent) of 2% or less are below a management threshold which allows effective Council management of these stocks and they qualify as <b>exceptions</b> to the Council's overfishing criteria. The naturally spawning stocks within this complex are listed as threatened under the ESA. Naturally spawning stocks are also subject to the 1999 Chinook agreement of the Pacific Salmon Commission and may be subject to exploitation rate constraints in U.S. fisheries south of the Canada/Washington border. Management objectives for hatchery stocks are based on hatchery escapement needs. Fisheries in Puget Sound conducted under a Resource Management Plan (RMP) are exempted from ESA Section 9 take prohibitions under Limit 6 of the 4(d) rule. This RMP will expire on May 1 of this year. A new RMP is currently under review by NOAA Fisheries but this review will not be completed prior to the March Council meeting.			
<b>Eastern Strait of Juan de Fuca Summer/Fall</b> Threatened (1999)	NMFS ESA consultation standard is expressed in terms of Recovery Exploitation Rate (RER). Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	
<b>Skokomish Summer/Fall</b> (Hood Canal) Threatened (1999)	NMFS ESA consultation standard. Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	
<b>Nooksack Spring (early)</b> Threatened (1999)	NMFS ESA consultation standard is expressed in terms of Recovery Exploitation Rate (RER). Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.
<b>Skagit Summer/Fall</b> Threatened (1999)	NMFS ESA consultation standard is expressed in terms of Recovery Exploitation Rate (RER). Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.
<b>Skagit Spring</b> Threatened (1999)	NMFS ESA consultation standard is expressed in terms of Recovery Exploitation Rate (RER). Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.
<b>Stillaguamish Summer/Fall</b> Threatened (1999)	NMFS ESA consultation standard is expressed in terms of Recovery Exploitation Rate (RER). Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.
<b>Snohomish Summer/Fall</b> Threatened (1999)	NMFS ESA consultation standard is expressed in terms of Recovery Exploitation Rate (RER). Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.
<b>Cedar River Summer/Fall</b> (Lake Washington) Threatened (1999)	NMFS ESA consultation standard is expressed in terms of Recovery Exploitation Rate (RER). The preliminary 2004 consultation standard is an RER constraint total mortality in all fisheries not to exceed 31%.	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.

TABLE A-1. **Conservation objectives** and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 7 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
<b>PUGET SOUND</b> (continued)			
<b>White River Spring</b> Threatened (1999)	NMFS ESA consultation standard is expressed in terms of Recovery Exploitation Rate (RER). Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	
<b>Puyallup Summer/Fall</b> Threatened (1999)	NMFS ESA consultation standard is expressed in terms of Recovery Exploitation Rate (RER). Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	
<b>Green River Summer/Fall</b> Threatened (1999)	NMFS ESA consultation standard. Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	Subject to the PSC ISBM harvest limitations.
<b>Nisqually River Summer/Fall</b> (South Puget Sound) Threatened (1999)	NMFS ESA consultation standard. Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	
<b>Mid Hood Canal Fall</b> Threatened (1999)	NMFS ESA consultation standard is expressed in terms of Recovery Exploitation Rate (RER). Guidance will be provided prior to the March Council meeting.	Limited (exploitation rate exception).	
<b>SOUTHERN BRITISH COLUMBIA</b> - Fall and spring stocks of British Columbia coastal streams and the Fraser River. Management based primarily on natural and hatchery fall Chinook. Base period, Council-area ocean fishery exploitation rates (adult equivalent) on the coastal stocks of 1% or less are below a management threshold which allows effective Council management of these stocks, and they qualify as <b>exceptions</b> to the Council's overfishing criteria.			
<b>Coastal Stocks</b>	Undefined for Council fisheries. Manage consistent with the Pacific Salmon Treaty.	No. Under Canadian authority and would also be an exploitation rate exception.	Medium abundance. Major contributors to ocean fisheries off British Columbia; significant contributors north into southeast Alaska and present off northern Washington.
<b>Fraser River</b>	Undefined for Council fisheries. Manage consistent with the Pacific Salmon Treaty.	No. Under Canadian authority.	Medium abundance. Major contributors to ocean fisheries off British Columbia; contributors off northern Washington; and present north into southeast Alaska. Harrison River stock subject to the PSC ISBM harvest limitations.

TABLE A-1. Conservation objectives and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 8 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
--- COHO ---			
<b>OREGON PRODUCTION INDEX AREA</b> - All Washington, Oregon, and California natural and hatchery coho stocks from streams south of Leadbetter Pt. Significant production from Columbia River and Oregon coastal hatcheries provide harvest in ocean fisheries throughout the Council management area. Ocean fisheries are usually limited primarily to meet natural escapement objectives. Treaty Indian obligations, non-Indian harvest opportunity, and hatchery requirements must also be factored in for the Columbia River stocks. Natural components have been severely depressed for several years due to a combination of previously high fishery impacts, major losses or degradation of freshwater habitat, and long-term marine conditions unfavorable to coho survival.			
<b>Central California Coast</b> Endangered (1996)	NMFS ESA consultation standard/recovery plan. Since 1998, no retention of coho in commercial and recreational fisheries off California in conjunction with total marine fishery impacts of no more than 13% on Rogue/Klamath hatchery coho (surrogate stock). Objective undefined prior to listing.	No. Listed stock, MSY criteria undefined. NMFS ESA consultation standard provides interim protection of productive capacity. Recovery limited by deterioration of significant portions of freshwater habitat, distribution at southern edge of coho range, and ongoing unfavorable marine conditions.	Very minor component of OPI area fisheries, limited potential for significant contribution to ocean and inland fisheries. Current impacts incidental in ocean fisheries off California. Development of monitoring and assessment program considered for Ten Mile River, Noyo River, Gualala River, Lagunitas Creek, and Scott Creek. Rogue/Klamath coho are believed to have a similar, but more northerly distribution.
<b>Northern California</b> Threatened (1997)	NMFS ESA consultation standard/recovery plan. Since 1998, total marine fishery impacts limited to no more than 13.0% on Rogue/Klamath hatchery coho (surrogate stock) and no retention of coho in California ocean fisheries. Objective undefined prior to listing.	No. Listed stock, MSY criteria undefined. NMFS ESA consultation standard provides interim protection of productive capacity. Recovery may last more than 10 years even with no fishery impacts, due to loss or deterioration of significant portions of freshwater habitat and ongoing unfavorable marine conditions.	Depressed and listed. Very minor natural component of OPI area fisheries, potential for minor contribution to ocean fisheries off California and southern Oregon, and inland California fisheries. Current impacts incidental in ocean and inland fisheries (total non-retention south of Cape Falcon since 1994). CDFG considering monitoring to provide data for the Smith, Trinity, Eel, Mattole, and Klamath Rivers.
<b>Oregon Coastal Natural</b> Comprised of Southern, South-Central, North-Central, and Northern Oregon stocks.	An allowable marine and freshwater exploitation rate of no more than 13% to 35%, depending on parent escapement and ocean survival trends, based on Amendment 13 of the Salmon FMP, or no more than 8% to 45% based on the OCN workgroup review of Amendment 13. Standard is ≤15.0% in 2010	No. Listed stock, rebuilding program initiated in 1998. The annual conservation objective should allow component stocks to rebuild when environmental conditions are favorable. Recovery for some components may last more than 10 years even with no fishery impacts, due to loss or deterioration of significant portions of freshwater habitat and ongoing unfavorable marine conditions.	General increase in abundance since 2000 after long term decline. Major natural component of OPI area and freshwater fisheries in Oregon coastal streams. Current impacts are primarily incidental in ocean fisheries under nonretention regulations south of Cape Falcon since 1994 (except 2007 and 2009).

TABLE A-1. Conservation objectives and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 9 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
--- COHO ---			
<b>OREGON PRODUCTION INDEX</b> (continued)			
<b>Columbia River Late</b> (Hatchery)	Hatchery rack return goal of 17,200 adults.	No (hatchery exception).	Major component of ocean fisheries north of Cape Falcon. When abundant, significant contributors to ocean fisheries off Oregon north into Canada and Columbia River fisheries.
<b>Columbia River Early</b> (Hatchery)	Hatchery rack return goal of 18,800 adults.	No (hatchery exception).	Major component of OPI area fisheries. When abundant, significant contributors to ocean fisheries off California and north to Leadbetter Pt., Washington and to Columbia River fisheries. Current ocean fishery impacts from very limited retention fisheries north of Cape Falcon and incidental hook-and-release mortality in fisheries south of Cape Falcon.
<b>Columbia River</b> (Natural) Threatened, 2005	NMFS ESA consultation standard. Guidance will be provided at the March Council meeting..	No. Listed stock. NMFS ESA consultation standard provides interim rebuilding program.	Extinct above the Dalles Dam, small populations in Clackamas, and Sandy rivers in Oregon, and Cedar Creek (Lewis River) Washington. Lower river coho are also listed under the Oregon State ESA.
<b>WASHINGTON COASTAL</b> - All pertinent natural and hatchery stocks originating in Washington coastal streams north of the Columbia River and west of the Sekiu River. Management goals for Grays Harbor and Olympic Peninsula coho stocks include achieving natural spawning escapement objectives and treaty allocation requirements, although Grays Harbor also contains a significant amount of hatchery production. The conservation objectives for these stocks are based on MSY spawner escapements established pursuant to the U.S. District Court order in <u>Hoh v. Baldrige</u> . Annual natural spawning escapement targets and total escapement objectives are established by the Washington Department of Fish and Wildlife and treaty tribes under the provisions of <u>U.S. v. Washington</u> and subsequent U.S. District Court orders. After agreement to annual targets is reached by the parties in this litigation, ocean fishery escapement objectives are established for each river, or region of origin, which include provisions for providing treaty allocation requirements and inside, non-Indian fishery needs. The conservation objectives for the Queets, Hoh, and Quillayute rivers were developed as ranges intended to bracket the current best estimates of MSY escapement. The range of each objective reflects the degree of uncertainty inherent by using the high estimate of recruits-per-spawner and low estimate of carrying capacity for the lower bound, and the low estimate of recruits-per-spawner with the high estimate of smolt carrying capacity for the upper end of the range. The ranges were subsequently adjusted upward by 26% to 184% for risk aversion and again for habitat considerations (Lestelle et al 1984).			
<b>Willapa Bay</b> (Hatchery)	Meet WDFW program objectives.	No (hatchery exception).	Contributes to ocean fisheries off northern Oregon north into Canada. Significant contributor to inside non-Indian commercial net and recreational fisheries. WDFW critically reviewing current management to determine if objectives for natural stocks are warranted.
<b>Grays Harbor</b>	35,400 natural adult spawners (MSP based on WDF [1979]) or annual target agreed to by WDFW and the Quinault Indian Nation.	Yes. Conservation alert or overfishing concern based on fewer than 35,400 natural spawners.	Below conservation objective in 2006-2007. Ocean distribution from Oregon to northern British Columbia. Harvested by treaty Indian, non-Indian commercial, and recreational fisheries in Grays Harbor and tributary rivers.

TABLE A-1. **Conservation objectives** and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 10 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
--- COHO ---			
<b>WASHINGTON COAST</b> (continued)			
<b>Queets</b>	MSY range of 5,800 to 14,500 natural adult spawners (Lestelle <i>et al.</i> 1984) or annual target agreed to by WDFW and the Quinault Indian Nation.	Yes. Conservation alert or overfishing concern based on fewer than 5,800 natural spawners.	Below conservation objective in 2006-2008. Ocean distribution from south-central Oregon to northwest Vancouver Island off British Columbia. Harvested by treaty Indian gillnet and non-treaty recreational fisheries inriver. Coho supplementation project conducted since the late 1970s.
<b>Hoh</b>	MSY range of 2,000 to 5,000 natural adult spawners (Lestelle <i>et al.</i> 1984) or annual target agreed to by WDFW and Hoh Tribe.	Yes. Conservation alert or overfishing concern based on fewer than 2,000 natural spawners.	Ocean distribution from south-central Oregon to northwest Vancouver Island off British Columbia. Harvested by treaty Indian gillnet and non-treaty recreational fisheries inriver.
<b>Quillayute Fall</b>	MSY range of 6,300 to 15,800 natural adult spawners (Lestelle <i>et al.</i> 1984) or annual target agreed to by WDFW and the Quillayute Tribe.	Yes. Conservation alert or overfishing concern based on fewer than 6,300 natural spawners.	Ocean distribution from south-central Oregon to northwest Vancouver Island off British Columbia. Harvested by treaty Indian gillnet and non-treaty recreational fisheries inriver.
<b>Quillayute Summer</b> (Hatchery)	Meet hatchery program objectives.	No (hatchery exception).	Early river entry timing. Contributor to ocean fisheries off Washington north into British Columbia; present south to central Oregon.
--- COHO ---			
<p><b>PUGET SOUND</b> - All pertinent natural and hatchery stocks originating from U.S. tributaries to Puget Sound and the Strait of Juan de Fuca (east of Salt Creek through the Seiku River). Conservation objectives for specific stocks are currently based on MSY exploitation rate and abundance matrices for stocks managed primarily for natural production, consistent with the Pacific Salmon Treaty's Southern Coho Management Plan or upon hatchery escapement needs for stocks managed for artificial production. The exploitation rate matrices for natural stocks consist of age-3 ocean abundance (stock status) break points and associated annual total allowable exploitation rates. The normal exploitation rate represents the MSY exploitation rate under average survival. The spawning escapement associated with the low/normal ocean abundance breakpoint and the normal exploitation rate represents MSY spawning under low survival conditions (10<sup>th</sup> percentile). The critical exploitation rate represents <i>de minimis</i> fishing levels that will not appreciably reduce spawning escapement if a stock becomes depressed, while allowing some level of access to harvestable stocks. The low exploitation rate is intermediate between the normal and critical exploitation rates. The spawning escapement associated with the critical/low abundance breakpoint and the low exploitation rate represent an escapement level below which production is expected to decrease. Annual management targets for these coho stocks may be developed through procedures established in U.S. District Court. Puget Sound management procedures are outlined in a Memorandum Adopting Salmon Management Plan (U.S. v. Washington, 626 F. Supp. 1405 [1985]).</p>			
<b>Strait of Juan de Fuca</b> (Streams east of Salt Creek through Sekiu River)	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 or annual target agreed to in fixed procedures set by U.S. District Court.	Yes. Formal language for FMP overfishing criteria to be consistent with Council intent is being reviewed by the co-managers.	Little information on ocean distribution.
Preliminary 2011: 40% (low status) total exploitation rate.			

TABLE A-1. Conservation objectives and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 11 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
--- COHO ---			
<b>PUGET SOUND (continued)</b>			
<b>Hood Canal</b>	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 or annual target agreed to in fixed procedures set by U.S. District Court.	Yes. Formal language for FMP overfishing criteria to be consistent with Council intent is being reviewed by the co-managers.	Ocean distribution from Cape Falcon, Oregon to British Columbia.
<b>Skagit</b>	Preliminary 2011: 65% (normal status) total exploitation rate. 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 or annual target agreed to in fixed procedures set by U.S. District Court.	Yes. Formal language for FMP overfishing criteria to be consistent with Council intent is being reviewed by the co-managers.	Ocean distribution from Cape Falcon, Oregon to British Columbia.
<b>Stillaguamish</b>	Preliminary 2011: 60% (normal status) total exploitation rate. 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 or annual target agreed to in fixed procedures set by U.S. District Court.	Yes. Formal language for FMP overfishing criteria to be consistent with Council intent is being reviewed by the co-managers.	Ocean distribution from Cape Falcon, Oregon to British Columbia.
<b>Snohomish</b>	Preliminary 2011: 50% (normal status) total exploitation rate. 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 or annual target agreed to in fixed procedures set by U.S. District Court.	Yes. Formal language for FMP overfishing criteria to be consistent with Council intent is being reviewed by the co-managers.	Ocean distribution from Cape Falcon, Oregon to British Columbia.
<b>South Puget Sound (Hatchery)</b>	Preliminary 2010: 60% (normal status) total exploitation rate. Hatchery rack return goal of 52,000 adults. Natural production goals under development.	No (hatchery exception).	Ocean distribution from Cape Falcon, Oregon to British Columbia.
<b>SOUTHERN BRITISH COLUMBIA COAST - Stocks of southern British Columbia coastal streams (including Vancouver Island) and the Fraser River.</b>			
<b>Coastal Stocks</b>	Manage Council fisheries that impact Canadian stocks consistent with provisions of the Pacific Salmon Treaty.	No. Not under Council management authority.	Contributes to ocean fisheries off British Columbia, north into southeast Alaska and present off northern Washington.
<b>Fraser River</b>	Manage Council fisheries that impact Canadian stocks consistent with provisions of the Pacific Salmon Treaty. For 2008, southern U.S. fisheries total exploitation rate of ≤10.0%.	No. Not under Council management authority.	Contributes to ocean fisheries off British Columbia and Washington, and to Strait of Juan de Fuca and Puget Sound fisheries.



TABLE A-1. **Conservation objectives** and management information for salmon stocks of significance to ocean salmon fisheries. Abundance information is based on recent year information. (Page 12 of 12).

Stock	Conservation Objective (to be met annually, unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
- - - PINK (odd-numbered years) - - -			
The Fraser River Panel of the PSC manages fisheries for pink salmon in the Fraser River Panel Area (U.S.) north of 48E N latitude to meet Fraser River natural spawning escapement and U.S./Canada allocation requirements. The Council manages pink salmon harvests in that portion of the EEZ, which is not in the Fraser River Panel Area (U.S.) waters consistent with Fraser River Panel management intent. Pink salmon management objectives must address meeting natural spawning escapement objectives, allowing ocean pink harvest within fixed constraints of coho and Chinook harvest ceilings and providing for treaty allocation requirements.			
Puget Sound	900,000 natural spawners or consistent with provisions of the Pacific Salmon Treaty (Fraser River Panel).	No. Minor impacts in Council fisheries and not under Council management authority.	Contributes to ocean fisheries off British Columbia and in Puget Sound. Present south into Oregon. Rare off California.
Fraser River	Manage Council fisheries that impact Canadian stocks consistent with provisions of the Pacific Salmon Treaty (Fraser River Panel).	No. Minor impacts in Council fisheries and not under Council management authority.	Contributes to ocean fisheries off British Columbia; present into southeast Alaska and off Washington and northern Oregon. Rare off California.



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

		MARINE SURVIVAL INDEX			
		(based on return of jacks per hatchery smolt)			
		Low ( $<0.0009$ )	Medium (0.0009 to 0.0034)	High ( $>0.0034$ )	
PARENT SPAWNER STATUS		Allowable Total Fishery Impact Rate			
High:	Parent spawners achieved Level #2 rebuilding criteria; grandparent spawners achieved Level #1	#15%	#30% <sup>a/</sup>	#35% <sup>a/</sup>	
Medium:	Parent spawners achieved Level #1 or greater rebuilding criteria	#15%	#20% <sup>a/</sup>	#25% <sup>a/</sup>	
Low:	Parent spawners less than Level #1 rebuilding criteria	#15%	#15%	#15%	
		#10-13% <sup>b/</sup>			
OCN Coho Spawners by Stock Component					
Rebuilding Criteria	Northern	North-Central	South-Central	Southern	Total
Full Seeding at Low Marine Survival:	21,700	55,000	50,000	5,400	132,100
Level #2 (75% of full seeding):	16,400	41,300	37,500	4,100	99,300
Level #1 (50% of full seeding):	10,900	27,500	25,000	2,700	66,100
38% of Level #1 (19% of full seeding):	4,100	10,500	9,500	1,000	25,100
Stock Component (Boundaries)	Full Seeding of Major Basins at Low Marine Survival (Number of Adult Spawners)				
Northern: (Necanicum River to Neskowin Creek)	Nehalem 17,500	Tillamook 2,000	Nestucca 1,800	Ocean Tribs. 400	
North-Central: (Salmon River to Siuslaw River)	Siletz 4,300	Yaquina 7,100	Alsea 15,100	Siuslaw 22,800	Ocean Tribs. 5,700
South-Central: (Siltcoos River to Sixes River)	Umpqua 29,400	Coos 7,200	Coquille 5,400	Coastal Lakes 8,000	
Southern: (Elk River to Winchuck River)	Rogue 5,400				

a/ When a stock component achieves a medium or high parent spawner status under a medium or high marine survival index, but a major basin within the stock component is less than 10% of full seeding, (1) the parent spawner status will be downgraded one level to establish the allowable fishery impact rate for that component, and (2) no coho-directed harvest impacts will be allowed within that particular basin.

b/ This exploitation rate criteria applies when (1) parent spawners are less than 38% of the Level #1 rebuilding criteria, or (2) marine survival conditions are projected to be at an extreme low as in 1994-1996 (<0.0006 jack per hatchery smolt). If parent spawners decline to lower levels than observed through 1998, rates of less than 10% would be considered, recognizing that there is a limit to further bycatch reduction opportunities.

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.

Parent Spawner Status <sup>a/</sup>	Marine Survival Index (based on return of jacks per hatchery smolt)						
	Extremely Low (<0.0008 )	Low (0.0008 to 0.0014 )	Medium (>0.0014 to 0.0040)	High (>0.0040 )			
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 <sup>b/</sup> Parental 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	450	5,400	NA	648	1,026	2,700	4,050
Coastwide Total	4,197	132,100	15,636		25,099	66,050	99,075

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

b/ "Critical" parental spawner status is defined as 4 fish per mile for the Northern, North-Central, and South-Central subaggregates. Because the ratio of high quality spawning habitat to total spawning habitat in the Rogue River Basin differs significantly from the rest of the basins on the coast, the spawner density of 4 fish per mile does not represent "Critical" status for that basin. Instead, "Critical" status for the Rogue Basin (Southern Sub-aggregate) is estimated as 12% of full seeding of high quality

TABLE A-4. 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	0.20	0.20	0.20	0.20	0.20
Low/normal runsize breakpoint	27,445	41,000	62,500	20,000	125,000
Low exploitation rate	0.40	0.45	0.35	0.35	0.40
Normal exploitation rate	0.60	0.65	0.60	0.50	0.60



**APPENDIX B**  
**SALMON HARVEST ALLOCATION SCHEDULES**

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## HARVEST ALLOCATION -- SECTION 5.3 OF THE PACIFIC COAST SALMON PLAN

### 5.3 ALLOCATION

*“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 treaty Indian fishing opportunity. In allocating the resource between ocean and inside fisheries, the Council considers both inriver harvest and spawner escapement needs. The magnitude of inriver harvest is determined by the states in a variety of ways, depending upon the management area. Some levels of inriver harvests are designed to accommodate federally recognized inriver Indian fishing rights, while others are established to allow for non-Indian harvests of historic 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 Klamath Fishery Management Council fulfills much the same roll with regard to Klamath River salmon stocks. 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 treaty obligations, state fishery needs and spawning escapement requirements, including jeopardy standards for stocks listed under the ESA. The Council shall make every effort to establish seasons and gear requirements which 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 <sup>a/</sup>		Harvest (thousands of fish)	Percentage <sup>a/</sup>	
	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) which 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 which 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 quotas 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 (a) consultation with the pertinent recreational and commercial SAS members and the STT and (b) 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% 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% will be based on a conservation need to protect the 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 in the coho and Chinook distribution sections below. 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. The Council may also deviate from subarea quotas to (1) meet recreational season objectives based on agreement of representatives of the affected ports and (2) in accordance with Section 6.5.3.2 with regard to certain selective fisheries.

### **5.3.1.3 Recreational Subarea Allocations**

#### **Coho**

The north of Cape Falcon preseason recreational TAC of coho will be distributed to provide 50% to the area north of Leadbetter Point and 50% 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% of the total recreational TAC) will be divided to provide 74% to the area between Leadbetter Point and the Queets River (Westport), 5.2% to the area between Queets River and Cape Flattery (La Push), and 20.8% 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% 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.

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

Example distributions of the recreational coho TAC north of Leadbetter Point would be as follows:

Sport TAC North of Cape Falcon	Without Area 4B Add-On				With Area 4B Add-On <sup>a/</sup>					
	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 participant group.

Inseason management actions may be taken by NMFS Regional Director to assure that the primary objective of the Chinook harvest guidelines for each of the three recreational subareas north of Cape Falcon are met. Such actions might include: closure 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 which may be landed; or other actions as prescribed in the annual management measures.

### **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, 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 5-3.

(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 5-3. Allocation of allowable ocean harvest of coho salmon (thousands of fish) south of Cape Falcon.<sup>a/</sup>

Total Allowable Ocean Harvest	Recreational Allocation		Commercial Allocation	
	Number	Percentage	Number	Percentage
≤100	≤100 <sup>b/c/</sup>	100 <sup>b/</sup>	b/ <sup>b/</sup>	b/ <sup>b/</sup>
200	167 <sup>b/c/</sup>	84 <sup>b/</sup>	33 <sup>b/</sup>	17 <sup>b/</sup>
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 significant 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%
  - b. South of Humbug Mountain - 30%

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.

## **SELECTIVE FISHERY GUIDELINES – SECTION 6.5 OF THE PACIFIC COAST SALMON PLAN**

### **6.5 SEASONS AND QUOTAS**

\* \* \* \* \*

#### **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 a fishery, the Council will consider the following guidelines:

Harvestable fish of the target species are available.

Harvest impacts on incidental species will not exceed allowable levels determined in the management plan.

Proven, documented, selective gear exists (if not, only an experimental fishery should be considered).

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.

The species specific or ratio fishery will occur in an acceptable time and area where wastage can be minimized and target stocks are maximally available.

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 Pacific Salmon Treaty (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 fisheries that are selective for marked salmon stocks (e.g., marked hatchery salmon). The benefits of any 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 selective fisheries. The deviations for selective fisheries are subordinate to the allocation priorities in Section 5.3.1.1 and may be allowed under the following management constraints:

Selective fisheries will first be considered during the months of August and/or September. However, the Council may consider selective fisheries at other times, depending on year to year circumstances identified in the preceding paragraph.

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 selective fisheries. Other allocation objectives (i.e., treaty Indian, or ocean and inside allocations) are satisfied during negotiations in the North of Cape Falcon Forum.

The selective fishery is assessed against the guidelines in Section 6.5.3.1.

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 the specified port and/or gear allocations, the process for establishing a selective fishery would be as follows:

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 selective fishery.

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.



## APPENDIX C

### OREGON PRODUCTION INDEX DATA

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

Year or Average	Columbia River						Oregon Coast				
	Oregon	Washington			Federal	Total	ODFW <sup>b/</sup>	Private		California	Total OPI
		Early	Late	Combined				Yearlings	Total		
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	10.4	3.7	15.3	19.0	5.9	35.2	5.3	-	5.3	1.5	42.0
1992	11.5	4.3	14.3	18.6	2.7	32.8	6.2	-	6.2	0.7	39.7
1993	11.1	4.3	14.8	19.1	4.1	34.3	4.3	-	4.3	0.8	39.4
1994	9.1	2.5	12.0	14.5	3.0	26.6	5.2	-	5.2	0.6	32.4
1995	7.1	3.4	12.9	16.3	1.7	25.1	3.7	-	3.7	0.7	29.5
1996	8.4	3.4	12.9	16.3	3.4	28.1	3.3	-	3.3	0.3	31.7
1997	6.1	3.2	7.8	11.0	3.9	21.0	2.9	-	2.9	0.7	24.6
1998	6.1	5.8	11.4	17.2	3.6	26.8	1.7	-	1.7	0.6	29.1
1999	7.6	4.0	11.5	15.5	4.8	27.9	1.0	-	1.0	0.7	29.6
2000	7.8	6.2	10.8	17.0	5.9	30.7	0.9	-	0.9	0.6	32.2
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 <sup>c/</sup>	5.9	2.0	7.5	9.5	3.1	18.5	0.3	-	0.3	0.5	19.4

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 set used in predicting Oregon production index hatchery (OPIH) adult coho. Adults and jacks shown in thousands of fish and smolts in millions of fish.

Year (t)	Adults (t)		Jacks (t-1)			Columbia River Smolts (t-1)		
	OPIH <sup>a/</sup>	MSM <sup>b/</sup>	Total OPI <sup>c/</sup>	Columbia River <sup>d/</sup>	OR Coast/ CA <sup>e/</sup>	Delayed <sup>f/</sup>	Normal Timed <sup>g/</sup>	Adjustment Proportion <sup>h/</sup>
1970	2,765.1	-						
1971	3,365.0	-	179.4	172.8	6.6	0.0	24.0	0.0000
1972	1,924.8	-	103.7	100.8	2.9	0.0	28.3	0.0000
1973	1,817.0	-	91.4	85.7	5.7	1.8	29.9	5.1592
1974	3,071.1	-	144.1	132.0	12.1	2.9	28.5	13.4316
1975	1,652.8	-	76.2	75.1	1.1	1.8	27.8	4.8626
1976	3,885.3	-	171.5	146.2	25.3	2.0	29.0	10.0828
1977	987.5	-	53.8	46.3	7.5	0.2	28.9	0.3204
1978	1,824.1	-	103.2	99.2	4.0	0.0	31.4	0.0000
1979	1,476.7	-	72.5	64.1	8.4	5.0	32.6	9.8313
1980	1,224.0	-	57.6	51.6	6.0	6.7	28.9	11.9626
1981	1,064.5	-	48.7	40.6	8.1	5.6	28.1	8.0911
1982	1,266.8	-	61.3	55.0	6.3	6.8	32.4	11.5432
1983 <sup>i/</sup>	599.2	-	68.2	61.0	7.2	5.0	27.7	11.0108
1984	691.3	-	31.6	28.0	3.6	5.1	27.0	5.2889
1985	717.5	-	26.0	18.2	7.8	9.1	29.2	5.6719
1986	2,435.8	2,412.0	77.5	64.6	12.9	12.2	28.8	27.3653
1987	887.2	779.4	32.9	24.2	8.7	9.0	32.9	6.6201
1988	1,669.3	1,467.8	82.6	69.7	12.9	7.7	28.8	18.6351
1989	1,720.2	1,922.0	60.8	55.0	5.8	7.2	29.5	13.4237
1990	718.4	713.6	46.7	37.1	9.6	8.5	29.6	10.6537
1991	1,874.8	1,816.5	68.7	60.8	7.9	7.1	30.3	14.2469
1992	543.6	512.6	25.6	19.9	5.7	6.0	35.3	3.3824
1993	261.7	223.3	27.1	19.6	7.5	5.5	32.8	3.2866
1994	202.3	214.3	5.2	3.9	1.3	6.0	34.4	0.6802
1995	147.2	139.4	11.5	8.8	2.7	3.1	26.6	1.0256
1996	185.2	176.5	17.3	14.1	3.2	4.2	25.2	2.3500
1997	200.7	195.6	20.4	15.8	4.6	3.4	28.0	1.9186
1998	207.5	228.1	9.8	6.8	3.0	2.5	21.0	0.8095
1999	334.5	372.7	29.2	23.3	5.9	3.0	26.8	2.6082
2000	673.2	703.6	34.7	31.2	3.5	4.1	27.9	4.5849
2001	1,417.1	1,478.7	86.8	71.1	15.7	2.0	30.6	4.6471
2002	649.8	708.1	25.2	18.9	6.3	1.4	23.5	1.1260
2003	936.6	1,029.8	50.4	42.2	8.2	0.3	23.7	0.5342
2004	622.1	693.6	35.4	29.4	6.0	2.0	23.2	2.5345
2005	443.2	604.4	25.9	21.2	4.7	0.8	22.0	0.7709
2006	440.6	519.9	26.3	20.9	5.4	0.4	20.6	0.4058
2007	476.6	546.2	36.7	34.2	2.5	0.1	20.4	0.1676
2008	565.3	565.3	15.4	14.0	1.4	0.6	21.4	0.3925
2009	.	917.2	61.0	58.4	2.6	1.1	21.9	2.9333
2010	.	551.3	25.3	23.8	1.5	0.2	21.3	0.2235
2011	.	375.1 <sup>j/</sup>	23.3	22.2	1.1	0.3	18.5	0.3600

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. (Page 2 of 2)

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- 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 MSM = Harvest impacts plus escapement for public hatchery stocks originating in the Columbia River, Oregon coastal rivers, and the Klamath River. Estimates derived from the MSM 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 D = Columbia River delayed smolt releases from the previous year expected to return as adults in the year listed.
- g/ Sm CR = Columbia River smolt release from the previous year expected to return as adults in the year listed.
- h/ Correction term for delayed smolts released from Columbia River hatcheries (proportion).
- i/ Data not used in subsequent predictions due to El Niño impacts.
- j/ Preseason predicted adults.

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

Component and Basin <sup>a/</sup>	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	1995-2010 Avg.
<b>NORTHERN</b>																	
Necanicum	211	768	253	946	728	474	5,247	2,896	3,068	2,198	1,218	750	431	1,055	3,827	3,183	1,703
Nehalem	1,463	1,057	1,173	1,190	3,713	14,285	22,310	20,903	33,059	18,736	10,451	11,614	14,033	17,205	21,753	29,375	13,895
Tillamook	289	661	388	271	2,175	1,983	1,883	15,715	14,584	2,532	1,995	8,774	2,295	4,828	16,251	14,243	5,554
Nestucca	1,811	519	271	169	2,201	1,171	3,940	13,003	8,929	4,695	686	1,876	394	1,844	4,252	5,103	3,179
Ind. Tribs.	108	275	61	0	47	0	71	16	0	661	2,116	1,121	376	639	2,052	1,256	550
<b>TOTAL</b>	<b>3,882</b>	<b>3,280</b>	<b>2,146</b>	<b>2,576</b>	<b>8,864</b>	<b>17,913</b>	<b>33,451</b>	<b>52,533</b>	<b>59,640</b>	<b>28,822</b>	<b>16,466</b>	<b>24,135</b>	<b>17,529</b>	<b>25,571</b>	<b>48,135</b>	<b>53,160</b>	<b>24,881</b>
<b>NORTH CENTRAL</b>																	
Salmon	212	271	237	8	175	0	310	372	0	1,642	79	513	59	652	753	1,346	414
Siletz	607	763	336	394	706	3,553	1,437	2,252	9,736	8,179	14,567	5,205	2,197	20,634	24,070	5,814	6,278
Yaquina	5,668	5,127	384	365	2,588	647	3,039	23,981	13,254	5,539	3,441	4,247	3,158	10,913	11,182	8,727	6,391
Beaver Ck.	-	1,340	425	1,041	3,366	738	5,274	8,754	5,812	4,569	2,264	1,950	611	1,218	3,575	2,442	2,892
Alsea	681	1,637	680	213	2,050	2,465	3,339	6,170	8,957	5,233	13,907	1,972	2,146	13,320	14,638	8,218	5,352
Siuslaw	6,089	7,625	668	1,089	2,724	6,767	11,024	57,129	29,257	8,729	16,907	5,869	3,552	17,491	30,607	24,594	14,383
Ind. Tribs.	348	1,364	112	173	150	91	816	5,308	1,852	8,179	242	1,468	547	3,910	1,610	2,370	1,784
<b>TOTAL</b>	<b>13,605</b>	<b>18,127</b>	<b>2,842</b>	<b>3,283</b>	<b>11,759</b>	<b>14,261</b>	<b>25,239</b>	<b>103,966</b>	<b>68,868</b>	<b>42,070</b>	<b>51,407</b>	<b>21,224</b>	<b>12,270</b>	<b>68,138</b>	<b>86,435</b>	<b>53,511</b>	<b>37,313</b>
<b>SOUTH CENTRAL</b>																	
Umpqua	12,809	10,824	2,960	9,153	7,685	12,233	35,702	37,591	29,607	29,900	42,532	18,092	11,783	37,868	57,984	58,627	25,959
Coos	10,351	12,128	1,127	3,167	4,945	5,386	43,301	35,688	29,559	23,337	17,048	11,266	1,329	14,881	26,979	27,034	16,720
Coquille	2,116	16,169	5,720	2,466	3,001	6,130	13,310	8,610	23,909	22,138	11,806	28,577	13,968	8,791	22,286	16,374	12,836
Floras Ck.	-	-	-	252	164	1,440	1,945	20	310	7,446	506	1,104	340	786	3,203	5,629	1,780
Sixes R.	-	-	-	-	-	-	-	-	-	403	105	294	97	43	176	104	175
Coastal Lakes	11,216	13,493	8,603	11,107	12,710	12,747	19,669	22,162	16,688	18,642	14,725	24,127	8,955	23,608	17,349	38,859	17,166
Ind. Tribs.	-	-	-	-	-	-	-	-	-	-	-	-	-	0	188	474	221
<b>TOTAL</b>	<b>36,492</b>	<b>52,614</b>	<b>18,410</b>	<b>26,145</b>	<b>28,505</b>	<b>37,936</b>	<b>113,927</b>	<b>104,071</b>	<b>100,073</b>	<b>101,866</b>	<b>86,722</b>	<b>83,460</b>	<b>36,472</b>	<b>85,977</b>	<b>128,165</b>	<b>147,101</b>	<b>74,246</b>
<b>SOUTH</b>																	
Rogue <sup>b/</sup>	3,359	5,241	8,213	2,257	1,389	10,978	12,579	8,403	6,754	24,486	9,957	3,937	5,242	414	2,566	3,073	6,803
<b>COASTWIDE</b>	<b>57,338</b>	<b>79,262</b>	<b>31,611</b>	<b>34,261</b>	<b>50,517</b>	<b>81,088</b>	<b>185,196</b>	<b>268,973</b>	<b>235,335</b>	<b>197,244</b>	<b>158,532</b>	<b>134,061</b>	<b>66,685</b>	<b>182,252</b>	<b>269,579</b>	<b>256,338</b>	<b>143,017</b>

a/ The sum of the individual basins may not equal the aggregate totals due to the use of independent estimates at different geographic scales.

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

TABLE C-4. Data set used in predicting 2011 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.

Year (t)	Recruits		Environmental Index-Month(s) <sup>a/</sup>							
	Adults	Spawners	PDO-MJJ	UWI-JAS	UWI-SON	SSH-AMJ	SST-AMJ	SST-J	MEI-ON	SPR.TRN
1970	183.1	204.7	-0.37	51.67	-16.67	-144.37	10.91	-	-1.09	78
1971	416.3	198.9	-1.77	32.33	-10.33	-63.70	11.69	8.67	-1.31	106
1972	185.5	129.2	-1.42	42.33	-3.67	-57.13	11.85	8.44	1.73	107
1973	235.0	51.2	-0.77	60.67	-15.33	-150.47	12.23	9.46	-1.52	80
1974	196.4	65.6	-0.22	41.33	-8.00	-71.40	10.96	9.30	-1.25	102
1975	208.4	24.1	-0.86	48.67	-29.67	-148.50	10.86	9.49	-1.78	83
1976	451.7	37.8	-0.25	18.00	-5.67	-110.63	10.72	9.07	0.47	103
1977	161.2	28.1	0.31	40.33	-22.33	-134.93	11.22	9.78	0.98	74
1978	111.6	34.8	-0.06	33.33	-1.33	-86.07	11.58	11.24	0.19	97
1979	188.8	39.2	0.70	20.33	-45.00	-91.17	11.24	8.74	0.74	73
1980	108.3	13.7	0.40	69.33	-43.67	-63.87	12.05	10.50	0.24	78
1981	174.5	18.2	1.43	48.67	-36.33	-81.37	12.14	11.72	-0.05	88
1982	185.7	38.4	-0.26	33.67	-26.67	-68.67	11.01	9.86	2.45	109
1983	96.0	25.6	2.56	26.00	-47.33	-4.97	12.12	11.10	-0.16	126
1984	94.7	30.1	0.43	53.67	-52.00	-63.27	11.44	10.65	-0.35	112
1985	124.9	68.3	0.42	47.00	0.00	-80.43	10.98	9.99	-0.06	48
1986	114.3	19.4	1.14	53.33	-4.33	-82.03	11.52	10.04	0.86	89
1987	77.8	59.7	1.53	50.33	-23.00	-80.23	11.43	10.58	1.26	81
1988	152.5	66.3	0.86	51.33	-25.00	-62.70	11.49	9.89	-1.47	68
1989	114.9	57.2	0.55	46.00	5.00	-65.23	11.62	9.43	-0.05	97
1990	63.3	25.3	0.38	54.00	-3.00	-63.93	12.00	9.97	0.38	81
1991	84.1	45.7	-0.69	54.67	7.33	-110.40	10.95	8.96	1.20	99
1992	107.6	40.7	1.57	53.33	-11.00	-30.20	12.69	10.11	0.59	123
1993	74.9	16.9	2.27	57.00	13.00	59.37	13.19	9.38	0.84	161
1994	41.0	30.4	0.58	57.33	-6.00	-64.10	11.45	11.04	1.23	87
1995	47.8	40.2	1.48	33.33	-24.33	-64.50	11.19	10.57	-0.51	95
1996	64.5	45.2	1.35	83.67	4.67	-47.30	11.44	11.66	-0.11	120
1997	16.3	38.3	2.31	20.00	-38.00	-14.50	12.10	10.76	2.30	146
1998	22.4	42.8	0.35	73.67	-37.33	-41.17	11.37	12.26	-1.12	105
1999	38.3	60.5	-0.88	70.33	-17.33	-110.77	10.67	9.54	-1.08	91
2000	58.7	14.8	-0.38	45.00	-11.00	-54.67	11.35	10.00	-0.74	72
2001	156.5	20.9	-0.69	60.67	-29.67	-124.50	10.68	10.17	-0.25	61
2002	246.1	36.4	-0.43	72.67	-26.00	-146.90	10.11	10.07	0.97	80
2003	227.3	57.4	0.84	65.33	-7.33	-61.67	11.15	11.01	0.53	112
2004	164.0	152.9	0.45	30.33	6.33	-60.73	11.86	10.30	0.80	110
2005	129.6	238.4	1.23	73.33	6.00	-23.67	12.54	10.21	-0.42	145
2006	100.4	211.9	0.62	84.00	-14.00	-34.30	11.15	11.46	1.26	112
2007	64.3	156.7	0.26	23.67	5.00	-121.53	10.62	9.85	-1.17	74
2008	144.7	139.4	-1.46	33.33	-2.33	-110.93	9.62	8.92	-0.60	89
2009	262.9	-	-0.57	36.33	-39.67	-93.63	10.45	9.37	1.03	82
2010	225.9	-	-0.22	57.00	-15.33	-46.03	11.67	10.76	-1.61	100
2011 <sup>b/</sup>	221.6	-	-	-	-	-	-	10.14	-	-

a/ Environmental Index descriptions:

PDO - Pacific Decadal Oscillation

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

SSH - Sea surface height (South Beach, OR at 44° 37.5' N, 124 ° 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/ Forecast

# **REVIEW OF 2010 OCEAN SALMON FISHERIES**



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## LIST OF ACRONYMS AND ABBREVIATIONS

AABM	aggregate abundance-based management
ADFG	Alaska Department of Fish and Game
AEQ	adult equivalents
CCC	central California coast (coho)
CDFG	California Department of Fish and Game
Council	Pacific Fishery Management Council
CVI	Central Valley Index
CWT	coded-wire tag
EEZ	exclusive economic zone (from 3-200 miles from shore)
EMAP	Environmental Monitoring and Assessment Program
ESA	Endangered Species Act
ESU	evolutionarily significant unit
FEAM	Fishery Economic Assessment Model
FMP	fishery management plan
FRAM	Fisheries Regulatory Assessment Model
ISBM	individual stock-based management
KMZ	Klamath management zone (ocean zone between Humbug Mountain and Horse Mountain where management emphasis is on KRFC)
KRFC	Klamath River Fall Chinook
LCN	Lower Columbia Natural (coho)
LCR	Lower Columbia River (natural tule 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 brights (bright hatchery fall Chinook released below McNary Dam)
MOC	mid-Oregon coast
MSY	maximum sustainable yield
NA	not available
NMFS	National Marine Fisheries Service
NOC	north Oregon coast
ODFW	Oregon Department of Fish and Wildlife
OCN	Oregon coastal natural (coho)
OPI	Oregon Production Index (coho salmon stock index south of Leadbetter Point)
PacFIN	Pacific Coast Fisheries Information Network
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
RER	rebuilding exploitation rate
RK	Rogue/Klamath (coho)
SCH	Spring Creek Hatchery (tule fall Chinook returning to Spring Creek Hatchery)
SEAK	Southeast Alaska
SONCC	southern Oregon/northern California coastal (coho)
SRFC	Sacramento River fall Chinook
SRFI	Snake River Fall Index
SRS	Stratified Random Sampling
STEP	Salmon Trout Enhancement Program
STT	Salmon Technical Team (formerly the Salmon Plan Development Team)
SUS	Southern United States
TAC	total allowable catch
URB	upper river brights (naturally spawning fall Chinook normally migrating past McNary Dam)
USFWS	U.S. Fish and Wildlife Service
WCVI	West Coast Vancouver Island
WDFW	Washington Department of Fish and Wildlife



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## INTRODUCTION

The Salmon Technical Team (STT) and staff of the Pacific Fishery Management Council (Council) have prepared this postseason review of the 2010 ocean salmon fisheries off the coasts of Washington, Oregon, and California to help assess Council salmon fishery management performance, the status of Council area salmon stocks, and the socioeconomic impacts of salmon fisheries. This postseason report will also provide a detailed description of the salmon fishery portions of the affected environment to be incorporated by reference into an Environmental Assessment (EA) to comply with National Environmental Policy Act (NEPA) requirements for the 2011 ocean salmon management measures. The STT and Council staff will provide three additional reports prior to the beginning of the ocean salmon season to help guide the Council's selection of annual fishery management measures: Preseason Report I, Preseason Report II, and Preseason Report III. These reports will provide forecasts of stock abundance, and will analyze the impacts of the Council's proposed alternatives and adopted fishery management recommendations. Preseason Report I will also constitute the first part of the EA for 2011 ocean salmon fishery management measures, and include a statement of the purpose and need, a description of the affected environment, and a description and analysis of the status quo (no action) alternative. Preseason Report II will constitute the second and final part of the EA, and will include a description and analysis of the alternative management measures considered for 2011 ocean salmon fisheries. The alternatives analyzed in Preseason Report II will provide a reasonable range of environmental effects, which will bound those of the final fishery management measures included in Preseason Report III. Together, these two parts of the EA will provide the necessary components to determine if a finding of no significant impact (FONSI) is warranted.

West Coast fisheries in Council-managed waters (ocean fisheries between the U.S./Canada border and the U.S./Mexico border from 3 to 200 nautical miles offshore) are directed toward and harvest primarily Chinook or king salmon, *Oncorhynchus tshawytscha*, and coho or silver salmon, *Oncorhynchus kisutch*. Small numbers of pink salmon, *Oncorhynchus gorbuscha*, also are harvested, especially in odd numbered years. There are no directed fisheries for other Pacific salmon species, which are rarely caught in Council-managed fisheries.

The Council's annual review of ocean salmon fisheries provides a summary of important biological and socioeconomic data from which to assess the impacts of past management actions, determine how well management objectives are being met, and improve regulations for the future. The Council will formally review this report at its March meeting prior to the development of management alternatives for the approaching fishing season.

Chapter I summarizes ocean salmon fishery regulations and landings within the Council management area and management actions and landings under the jurisdiction of the Pacific Salmon Commission (PSC). Appendix A tables detail historical harvest data by state and by management area. Appendix C summarizes historical ocean fishery regulations.

For Chinook and coho salmon, respectively, Chapters II and III assess, where possible, the achievement of pertinent management objectives by salmon stock (including those listed under the Endangered Species Act [ESA]), outline regulations to achieve the objectives, and summarize inside fisheries catch and spawner escapement data. Appendix B tables detail historical spawning escapement and inside fisheries catch information. Detailed information for other salmon species is not included since Council fisheries have minor impacts on pink salmon escapements and no measurable impacts on sockeye or chum salmon or steelhead trout; however, catch and escapement data and objectives for Puget Sound pink salmon are summarized in Appendix B, Table B-42.

Socioeconomic impacts of the fisheries are discussed in Chapter IV. Appendix D provides historical fishery-related socioeconomic data.

The annual review of ocean salmon fisheries is drafted as early as analyses of landings and escapement data are available. The most recent entries are noted as preliminary and later updated when the data become final. If updated information or error corrections that could substantially affect the development of management measures for the upcoming season are available, an errata sheet will be included as an appendix in one of the subsequent STT preseason planning documents.

### *COMMON TABLE CONVENTIONS*

All 2010 data provided in this report are preliminary. The following conventions apply to all tables in this report:

1. Due to rounding, the total values may not equal the sum of individual values.
2. A single dash indicates there are no data appropriate for a particular table cell, or in the case of fishing effort or landings, that the season was closed.
3. A double dash indicates no records are available, for example, a fishery may not have been sampled due to low and sporadic effort.
4. “NA” indicates data are not available at the time of publication, but are likely to be available at a future date.

# CHAPTER I

## *COASTWIDE OCEAN FISHING SUMMARY*

Chapter I contains or references tables summarizing the current and historical ocean salmon fishing regulations and harvest data. In addition, this chapter provides a brief summary of the Council's regulatory objectives, by management area, for the most recent fishing year, reports on the results of the Council's selective fisheries for marked hatchery Chinook and coho, and bycatch mortality of Chinook and coho salmon. The final section in the chapter provides a brief summary of management information and harvests under the authority of the PSC.

## *COUNCIL-AREA REGULATIONS AND LANDINGS*

Summaries of the 2010 regulations for non-Indian commercial troll, treaty Indian commercial troll, and recreational ocean salmon fishing in both the exclusive economic zone (EEZ) (3 to 200 nautical miles from shore) and state territorial waters (0 to 3 nautical miles from shore) are provided in Tables I-1, I-2, and I-3, respectively. Historical summaries of regulations for each of the three West Coast states and for treaty Indian troll fisheries are provided in Appendix C, Tables C-1 through C-7. Table C-9 provides a summary of inseason regulatory actions and events during the 2010 season.

Catch, quota, and fishing effort statistics are presented in the following series of tables:

Table I-4: Council area commercial and recreational ocean salmon fishing effort and landings of Chinook, coho, and pink salmon by state of landing.

Table I-5: Council area commercial and recreational ocean salmon fishing effort and landings of Chinook, coho, and pink salmon by management area.

Table I-6: The 2010 coho and Chinook quotas for each fishery compared with actual harvests.

Appendix A Tables A-1 through A-19: Historical monthly ocean salmon harvest data by state and port area.

Tables A-20 through A-28: Historical monthly ocean salmon harvest data by management area.

Appendix B Tables B-1 through B-43: Historical inside harvest and escapement data.

Appendix C Table C-8: Historical record of annual preseason catch quotas for the area north of Cape Falcon, as well as the stocks that were critical for ocean salmon management actions.

## *REGULATORY OBJECTIVES BY MANAGEMENT AREA*

The sections below provide a brief outline of the regulatory objectives that shaped the 2010 ocean salmon fisheries by management area and species. Further details of the conservation and allocation objectives by salmon stock and an assessment of performance are provided in Chapters II and III for Chinook and coho, respectively.

### **Horse Mountain to U.S./Mexico Border**

#### *Chinook Fisheries*

Chinook fisheries management in this area is guided by conservation objectives for Sacramento River fall Chinook (SRFC), Klamath River fall Chinook (KRFC), and by NMFS ESA consultation standards for

Sacramento River winter Chinook, California Coastal Chinook, Oregon Coastal Natural (OCN) coho, and Southern Oregon/Northern California Coastal (SONCC) coho. The Council structured 2010 Chinook salmon fisheries south of Horse Mountain (near Shelter Cove, California) to meet the following objectives:

1. The SRFC spawner escapement goal of 122,000 to 180,000 hatchery and natural area adults (FMP conservation objective). NMFS also provided guidance that management measures for 2010 should target a spawner escapement around the upper end of the FMP conservation objective in response to the stock falling below the lower end of the conservation objective for three consecutive years and to account for scientific uncertainty in the abundance forecast. The Council specified that for 2010, the spawning escapement objective was 180,000 hatchery and natural area adults.
2. A Klamath basin natural area spawning escapement of no less than 40,700 fall Chinook adults and a spawner reduction rate of no more than 67 percent, along with the allocation objective of 50 percent of the allowable adult harvest for federally-recognized tribal subsistence and commercial fisheries. The Council again implemented the 40,700 natural area adult escapement objective for 2010 as a rebuilding strategy after KRFC triggered an Overfishing Concern by failing to meet the FMP conservation objective of 35,000 natural area adult spawners in 2004, 2005, and 2006.
3. The Sacramento River winter Chinook ESA consultation standard requiring:
  - a. Commercial seasons 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 a permissible October season 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.
  - b. The recreational season 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 season 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.

Additional NMFS guidance for 2010 specified that recreational fisheries south of Point Arena must have either a minimum size limit of at least 24 inches total length, or be closed for 61 consecutive days, between the dates of May 1 and August 31.

4. The California Coastal Chinook ESA consultation standard requiring a forecast KRFC age-4 ocean harvest rate of no greater than 16.0 percent.
5. The OCN coho allowable exploitation rate (marine and freshwater combined) of no greater than 15.0 percent as required by the exploitation rate matrix recommended by the OCN coho work group that was adopted by the Council as expert biological advice in November 2000.
6. The SONCC coho ESA consultation standard requirement of no greater than a 13.0 percent marine exploitation rate on Rogue/Klamath (RK) hatchery coho.

Objectives 1, 2, and 3 above were the constraining factors on 2010 Chinook fisheries management in this area. The adopted regulations (Table I-1 and I-3) resulted in the following projections: a SRFC spawner escapement of 180,000 adults, a KRFC spawning escapement of 40,700 natural area adults, and a coastwide ocean fishery harvest rate of 12.3 percent on age-4 KRFC.

### *Coho Fisheries*

Coho fishery management for 2010 in this area was guided by the ESA consultation standard for central California coastal (CCC) coho, which prohibits retention of coho in this area. No projection of non-retention fishery impacts on CCC coho was available; projected non-retention exploitation rates on LCN, OCN and RK coho were 0.1, 1.7, and 4.1 percent, respectively, in this area. Retention of coho has been prohibited south of Horse Mountain since 1996. Coho are managed as a unit south of Cape Falcon, and details of the Council's management objectives shaping the 2010 fisheries are presented more fully in the Cape Falcon to Humbug Mountain section.

## **Humbug Mountain to Horse Mountain**

### *Chinook Fisheries*

The area between Humbug Mountain (near Port Orford, Oregon) and Horse Mountain (near Shelter Cove, California) is referred to as the Klamath Management Zone (KMZ). Chinook fisheries management in this area is guided by conservation objectives for SRFC, KRFC, and by NMFS ESA consultation standards for California Coastal Chinook, LCN coho, OCN coho, and SONCC coho. The Council structured 2010 Chinook salmon fisheries in the KMZ to meet the following objectives:

1. The SRFC spawner escapement goal of 122,000 to 180,000 hatchery and natural area adults (FMP conservation objective). NMFS also provided guidance that management measures for 2010 should target a spawner escapement around the upper end of the FMP conservation objective in response to the stock falling below the lower end of the conservation objective for three consecutive years and to account for scientific uncertainty in the abundance forecast. The Council specified that for 2010, the spawning escapement objective was 180,000 hatchery and natural area adults.
2. A Klamath basin natural area spawning escapement of no less than 40,700 fall Chinook adults and a spawner reduction rate of no more than 67 percent, along with the allocation objective of 50 percent of the allowable adult harvest for federally-recognized tribal subsistence and commercial fisheries. The Council again implemented the 40,700 natural area adult escapement objective for 2010 as a rebuilding strategy after KRFC triggered an Overfishing Concern by failing to meet the FMP conservation objective of 35,000 natural area adult spawners in 2004, 2005, and 2006.
3. The California Coastal Chinook ESA consultation standard requiring a forecast KRFC age-4 ocean harvest rate of no greater than 16.0 percent.
4. The LCN coho ESA consultation standard requirement of no greater than a 15.0 percent exploitation rate (marine and mainstem Columbia River combined).
5. The OCN coho allowable exploitation rate (marine and freshwater combined) of no greater than 15.0 percent as required by the exploitation rate matrix recommended by the OCN coho work group that was adopted by the Council as expert biological advice in November 2000.
6. The SONCC coho ESA consultation standard requirement of no greater than a 13.0 percent marine exploitation rate on RK hatchery coho.

Objectives 1 and 2 above were the constraining factors for 2010 Chinook fisheries management in the KMZ. The adopted regulations (Table I-1 and I-3) resulted in the following projections: a SRFC spawner escapement of 180,000 hatchery and natural area adults, a KRFC spawning escapement of 40,700 natural area adults, and a coastwide ocean fishery harvest rate of 12.3 percent on age-4 KRFC.

## *Coho Fisheries*

Coho fisheries management in this area is guided by the ESA consultation standards for LCN, OCN, SONCC and CCC coho, which prohibits retention of coho south of the Oregon/California border. No projection of non-retention fishery impacts on CCC coho was available; projected exploitation rates on LCN, OCN and RK coho in this area were 0.2 percent, 1.3 percent and 5.2 percent, respectively. Coho are managed as a unit south of Cape Falcon, and details of the Council's management objectives shaping the 2010 fisheries are presented more fully in the Cape Falcon to Humbug Mountain section.

## **Cape Falcon to Humbug Mountain**

### *Chinook Fisheries*

Chinook fisheries management in this area is guided by conservation objectives for SRFC, KRFC, and by NMFS ESA consultation standards for California Coastal Chinook, LCR natural tule Chinook, SRW Chinook, LCN coho, OCN coho, and SONCC coho. The Council structured 2010 Chinook salmon fisheries in this area to meet the following objectives:

1. The SRFC spawner escapement goal of 122,000 to 180,000 hatchery and natural area adults (FMP conservation objective). NMFS also provided guidance that management measures for 2010 should target a spawner escapement around the upper end of the FMP conservation objective in response to the stock falling below the lower end of the conservation objective for three consecutive years and to account for scientific uncertainty in the abundance forecast. The Council specified that for 2010, the spawning escapement objective was 180,000 hatchery and natural area adults.
2. A Klamath basin natural area spawning escapement of no less than 40,700 fall Chinook adults and a spawner reduction rate of no more than 67 percent, along with the allocation objective of 50 percent of the allowable adult harvest for federally-recognized tribal subsistence and commercial fisheries. The Council again implemented the 40,700 natural area adult escapement objective for 2010 as a rebuilding strategy after KRFC triggered an Overfishing Concern by failing to meet the FMP conservation objective of 35,000 natural area adult spawners in 2004, 2005, and 2006.
3. The California Coastal Chinook ESA consultation standard requiring a forecast KRFC age-4 ocean harvest rate of no greater than 16.0 percent.
4. NMFS consultation standards and annual guidance for ESA listed LCR natural tule Chinook, which required a total exploitation rate not to exceed 38 percent in marine and freshwater fisheries combined.
5. The LCN coho ESA consultation standard requirement of no greater than a 15.0 percent exploitation rate (marine and mainstem Columbia River combined).
6. The OCN coho allowable exploitation rate (marine and freshwater combined) of no greater than 15.0 percent as required by the exploitation rate matrix recommended by the OCN Coho Work Group that was adopted by the Council as expert biological advice in November 2000.
7. The SONCC coho ESA consultation standard requirement of no greater than a 13.0 percent marine exploitation rate on RK hatchery coho.

Objectives 1, 2, 3, and 4 above were the constraining factors on 2010 Chinook fisheries management in this area. The adopted regulations (Table I-1 and I-3) resulted in the following projections: a SRFC spawner escapement of 180,000 hatchery and natural area adults, a KRFC spawning escapement of

40,700 natural area adults, a coastwide ocean fishery harvest rate of 12.3 percent on age-4 KRFC, and a 37.5 percent total exploitation rate on LCR natural tules.

### *Coho Fisheries*

Coho fisheries management in this area is guided by NMFS ESA consultation standards for LCN coho, OCN coho, and SONCC coho. The Council structured 2010 coho salmon fisheries in this area to meet the following objectives:

1. The LCN coho ESA consultation standard requirement of no greater than a 15.0 percent exploitation rate (marine and mainstem Columbia River combined).
2. The OCN coho allowable exploitation rate (marine and freshwater combined) of no greater than 15.0 percent as required by the exploitation rate matrix recommended by the OCN Coho Work Group which was accepted by the Council as expert biological advice in November 2000.
3. The SONCC coho ESA consultation standard requirement of no greater than a 13.0 percent marine exploitation rate on Rogue/Klamath (RK) hatchery coho.

Objective 1 above was the constraining factor on 2010 coho fisheries management in this area. The Council adopted seasons in this area with projected impacts of 2.5 percent, 3.4 percent, and 0.4 percent on LCN natural coho OCN coho and RK coho, respectively. In all relevant fisheries, projected impact rates were 15.0 percent, 11.2 percent, and 10.0 percent, respectively.

The 2010 Oregon recreational coho selective fishery consisted of a June 26 through September 6 fishery from Cape Falcon to the Oregon/California border with a preseason quota of 26,000 marked coho (Table I-3). Under the adopted regulations, the projected harvest impacts and non-retention mortality resulting from these fisheries to be equivalent to exploitation rates of 2.4 percent for OCN coho stocks, 1.6 percent for LCN coho, and 0.3 percent for RK coho.

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

### *Chinook Fisheries*

Management objectives for Chinook fisheries in this area were to comply with NMFS ESA consultation standards for LCR natural tule, Lower Columbia River Wild (LRW), and Snake River wild (SRW) fall Chinook, meet treaty Indian sharing obligations and the allocation provisions in the Salmon FMP, provisions of the Pacific Salmon Treaty (PST) and, to the extent possible, provide for viable ocean and inriver fisheries while meeting natural stock escapement objectives and hatchery fall Chinook broodstock needs. Columbia lower river hatchery (LRH) and Spring Creek Hatchery (SCH) fall Chinook have historically been the major contributors to ocean fishery catches in the Council area north of Cape Falcon. The Council structured Chinook salmon fisheries between Cape Falcon, Oregon and the U.S./Canada Border to meet the following objectives:

1. The LCR natural tule Chinook ESA consultation standard requirement for a combined marine and freshwater exploitation rate of no greater than 38.0 percent.
2. The Snake River fall Chinook ESA consultation standard of at least a 30.0 percent reduction in the total ocean age-3 and age-4 AEQ exploitation rate from the 1988-1993 average.
3. For select Chinook stocks of concern to the Pacific Salmon Commission, keep the Individual Stock Based Management (ISBM) index at or below 60.0 percent of the 1979-1982 average.



Objective 1 above was the primary constraint for 2010 ocean fisheries in this area. Under the adopted regulations (Tables I-1, I-2, and I-3), fisheries were projected to have a 37.5 percent total AEQ exploitation rate on LCR natural tules (15.2 percent in Council area fisheries), and a 44.0 percent reduction from the base period AEQ exploitation rate for SRW.

### *Coho Fisheries*

Management objectives for coho fisheries in this area were to comply with NMFS ESA consultation standards for LCN and OCN coho, meet treaty Indian sharing obligations and the allocation provisions in the Salmon FMP, provisions of the PST and, to the extent possible, provide for viable ocean and inriver fisheries while meeting natural stock escapement objectives and hatchery coho brood stock needs. Columbia River early and late hatchery coho have historically been the major contributors to ocean fishery catches in the Council area north of Cape Falcon.

The Council structured coho salmon fisheries to meet the following objectives:

1. The LCN coho ESA consultation standard requirement for a combined marine and mainstem Columbia River exploitation rate of no greater than 15.0 percent.
2. An exploitation rate on Interior Fraser coho of no more than 10.0 percent in southern U.S. fisheries in accordance with the provisions of the southern coho management plan adopted by the PSC in February, 2002.
3. The OCN coho ESA consultation standard requirement for a combined marine and mainstem Columbia River exploitation rate of no greater than 15.0 percent.
4. Meet inside/outside and treaty Indian/non-Indian allocation objectives.
5. Meet FMP objectives for allocation of impacts between commercial and recreational ocean fisheries, and among port areas for the recreational fishery.

Objective 1 above was the primary constraint for 2010 ocean fisheries in this area. The adopted regulations (Tables I-1, I-2, and I-3) were projected to have a 15.0 percent total exploitation rate on LCN coho (10.8 percent in Council area fisheries), an exploitation rate in southern U.S. fisheries of 9.8 percent on Interior Fraser (Thompson River) coho (5.3 percent in Council area fisheries), and a total exploitation rate of 11.2 percent on OCN coho (8.3 percent in Council area fisheries).

### ***SELECTIVE FISHERIES AND SALMON BYCATCH***

Estimated incidental Chinook and coho mortalities are reported in Tables I-7, I-8, and I-9. Unless otherwise noted, Chinook mortality estimates from north of Cape Falcon and coho mortality estimates coastwide were based on preliminary postseason model runs incorporating final ocean catch numbers and updated Columbia River run-sizes; Chinook mortality estimates south of Humbug Mountain, Oregon are based on expansion of dockside sampling data. Under the Sustainable Fisheries Act, incidental mortality in commercial fisheries constitutes bycatch mortality, but incidental mortality resulting from the non-retention recreational fisheries does not.

The Council assumed a hook-and-release mortality rate of 26 percent in commercial troll fisheries coastwide and 14 percent in recreational fisheries north of Point Arena. In recreational fisheries south of Point Arena, the Council assumed 18 percent based on the proportion of fish caught using mooching versus trolling gear, and the estimated rates of 42.2 and 14 percent for these gear types, respectively. In

addition, the Council assumes drop-off mortality for both Chinook and coho equal to 5 percent of total encounters.

### **Selective Chinook Fisheries**

Recreational fisheries selective for marked Chinook were planned for the four ocean subareas between Cape Falcon, Oregon, and the U.S.-Canada border from June 12 through June 30, 2010. Preseason and inseason assessments of mark rates, catches, numbers of Chinook released, and incidental (bycatch) mortality for Council-area and some mixed-stock inside fisheries are summarized in Table I-8. Fisheries were sampled by a combination of on-water observers and dockside interviews. The observed mark rates were generally slightly lower than predicted preseason. Two Oregon state waters terminal area recreational fisheries also had mark-selective requirements (Table I-3).

In 2010, recreational fisheries in the Strait of Juan de Fuca operated under mark-selective retention restrictions for both Chinook and coho in Area 5 and the portion of Area 6 west of Port Angeles, from July 1 through August 15. As in 2009, the Areas 5 and 6 mark-selective fisheries were managed on season rather than quota-based criteria. After August 15, the fisheries in Areas 5 and 6 remained open for marked coho only (no Chinook retention) through September 15; Area 5 operated under non-mark-selective fishing regulations for coho from September 16 through September 30 while Area 6 remained mark-selective for coho through September 30. Catch and release estimates, derived from creel census programs conducted during the mark-selective fishery in Area 5 from July 1 through September 15 are presented in Table I-8. No inseason estimate was made for Area 6, which was open from July 1 through August 15 for mark-selective Chinook fishing.

Mark-selective Chinook fisheries were also held in Puget Sound Area 9 from July 16 through August 31, in Area 10 from July 16 through August 31, in Area 11 June 1 through September 30, and in Area 13 May 1 through September 30. Winter mark-selective fisheries were held in Area 7 from December 1, 2010 through April 30, 2011. Winter mark-selective Chinook fisheries were held in Areas 8-1 and 8-2 November 1, 2010 through April 30, 2011. Area 9 had mark-selective Chinook opportunity from all of November 2010 and January 16 through April 15, 2011. Area 10 had mark-selective Chinook fisheries from October 1, 2010 through January 31, 2011. Areas 11 and 12 had mark selective Chinook opportunity from February 1 through April 30, 2011.

### **Selective Coho Fisheries**

Recreational fisheries selective for marked coho were planned for the area between Cape Falcon and the Oregon/California border, the four ocean subareas north of Cape Falcon, and the inside fisheries at Buoy 10 and the Strait of Juan de Fuca (Areas 5 and 6). Numerous other Puget Sound, inside, and freshwater recreational fisheries in Washington and Oregon had mark-selective restrictions for coho. Non-Indian commercial mark-selective fisheries for coho were planned for the area between the U.S./Canada border and Cape Falcon. Preseason and inseason assessments of mark rates, catches, numbers of coho released, and incidental (bycatch) mortality for Council-area and some mixed stock inside fisheries are summarized in Table I-9. Fisheries were sampled by a combination of on-water observers and dockside interviews. The observed mark rates both north and south of Cape Falcon were lower than predicted preseason.

### ***PACIFIC SALMON COMMISSION***

The PSC was established to implement the 1985 Pacific Salmon Treaty (PST) between the United States and Canada. Because many of the stocks under the jurisdiction of the Council are significantly affected by management actions taken in Canadian and Alaskan waters, considerable interaction between the Council and the PSC occurs at both the policy and technical levels. Actual catches for PSC fisheries of the most relevance to the Council are summarized in Tables I-10 and I-11. Note that these catch statistics do not correspond to provisions of the PST for compliance with aggregate abundance-based management

(AABM; see below); nor do they reflect incidental mortality losses associated with the regulation of these fisheries, except as noted.

## **Chinook Fisheries**

Northern British Columbia (B.C.) and Southeast Alaska (SEAK) fisheries affect far-north migrating Chinook stocks from Washington, Oregon, and Idaho. These include Washington coastal stocks; Columbia and Snake River bright fall and summer stocks; and far-north migrating Oregon coastal Chinook stocks.

The West Coast Vancouver Island (WCVI) troll and Georgia Strait troll and recreational fisheries affect far-north migrating stocks (including LRW) to a lesser degree, but have a major impact on more southerly distributed Columbia River tule and Puget Sound stocks.

In June 1999, the United States and Canada reached agreement on a framework for Chinook fishing regimes for 1999 through 2008. Under this agreement, SEAK (all gear), Northern B.C. (troll and recreational), and WCVI (troll and outside recreational) fisheries were regulated under aggregate AABM regimes. These fishery regimes had catch ceilings derived from indices for total aggregate abundance of stocks contributing to specific components of the fisheries and target fishery harvest rates. For example, the allowable catch for WCVI troll and outside sport fisheries were determined by the abundance index estimated for the WCVI troll fishery. The allowable catch for the WCVI AABM fisheries was designed to reduce harvest rates for the combined troll and outside sport fisheries by approximately 35 percent from levels observed during 1985 through 1996. Provisions of a new agreement, ratified in 2008, took effect January 1, 2009. The 2008 agreement reduces catch ceilings in SEAK and WCVI AABM fisheries by 15 percent and 30 percent respectively, from those in the 1999 agreement. The United States and Canada are developing management regimes for AABM fisheries based on total mortality rather than landed catch.

For fisheries not driven by AABM regimes, including Council area fisheries, the 1999 agreement established conservation obligations to reduce harvest rates on depressed Chinook stocks (those not meeting escapement goals) by 36.5 percent for Canadian fisheries and 40 percent for United States fisheries, relative to levels observed during 1979 through 1982. This individual stock-based management (ISBM) obligation was taken into account during Council and inside fisheries preseason management planning processes.

In 2010, AABM fisheries were conducted in accordance with the obligations set forth in the 2008 PST agreement. SEAK fisheries were constrained by an all-gear catch ceiling of 221,800 "treaty" Chinook in 2010, a small increase from the ceiling of 218,700 in 2009, but 15 percent less than it would have been under the 1999 agreement. "Treaty" Chinook are those fish that are counted against the AABM catch ceiling; they represent total catch minus terminal exclusions (fish taken in terminal net fisheries where escapement goals are achieved) and hatchery add-ons (fish attributed to production from Alaskan hatchery facilities in excess of levels observed prior to the 1985 PST). The preliminary estimate of 2010 total catch of Chinook by SEAK fisheries was 280,600, while the catch of "treaty" Chinook was 227,720 (Table I-10).

The catch ceiling for the Northern B.C. AABM fisheries (Northern B.C. troll plus Queen Charlotte Islands sport) in 2010 was 152,100, compared to a ceiling in 2009 of 143,000 Chinook. The actual catch was estimated at 136,613 (90,213 troll plus 46,400 sport). The entire Northern B.C. troll fishery in 2010 was conducted under a system of individual transferable quotas.

In addition to the overall catch ceiling determined by the PST, Canada's principal management objectives for the 2010 WCVI Chinook fisheries were to meet domestic allocation objectives as well as address

concerns for Lower Strait of Georgia Chinook, WCVI Chinook stocks, spring run upper Fraser River Chinook, and Interior Fraser (Upper Fraser and Thompson) coho. The total allowable catch in 2010 by WCVI AABM fisheries under the 2008 PST Agreement was 143,700 Chinook, while the reported catch was 137,660; 79,123 troll, 5,839 First Nations, and 52,698 recreational (Table I-11).

Since 1999, the WCVI troll fishery has been managed to distribute the catch throughout the year with fisheries in the summer shaped to reduce impacts on coho and WCVI origin Chinook stocks. In accounting year 2010 (October 2009 through September 2010) troll fisheries were open for retention of Chinook in April, May, June, August, and September (Table I-12). During August, gear was restricted to large plugs to reduce coho contacts and the nearshore waters were closed to protect local WCVI Chinook stocks. To protect Interior Fraser coho, coho retention was mark-selective and revival tanks were required for released coho.

The WCVI outside sport fishery (the area where non-local stocks predominate) operated under a 45 cm (17.7 inches) total length minimum size limit, but with the additional restriction that Chinook over 77 cm (30.3 inches) could not be retained in the surf zone corridor (within 1 mile of shore) to protect local-origin stocks. The fishery harvested 52,698 fish, a decrease of about 23 percent from the 2009 catch.

Catch estimates for all Canadian ISBM fisheries in Northern B.C. were incomplete; the reported Chinook catch in 2010 was approximately 2,200 by commercial gillnets. Approximately 4,000 Chinook were caught by anglers from lodges in Rivers Inlet, Hakai Pass, and Bella Bella. Surveys of private angler catch were not conducted, but were believed to be less than the lodge catch. Tidal area sport catch estimates near the mainland coast of Northern B.C. in 2010 were not available. Catches by First Nations were 13,700 Chinook for the North Coast and approximately 100 for the Central Coast.

Southern B.C. ISBM fisheries in 2010 harvested a total of 94,867 Chinook (72,260 sport, 20,872 First Nations, and 1,735 commercial).

No direct management measures for Chinook salmon within the Council management area were specified under the 2008 PST agreement, except for the ISBM commitment. The Council's ocean fisheries and inside fisheries conducted by the state and tribal managers were designed to minimize impacts on spawning escapements of depressed stocks and preseason estimates of impacts were in compliance with terms of the PST agreement. Information necessary to evaluate the postseason impacts of Council area fisheries was not available.

## **Coho Fisheries**

In 2002 the PSC adopted a management plan for coho salmon originating in Washington and Southern B.C. river systems. The plan is directed at the conservation of key management units, four from Southern B.C. (Interior Fraser, Lower Fraser, Strait of Georgia Mainland, Strait of Georgia Vancouver Island) and nine from Washington (Skagit, Stillaguamish, Snohomish, Hood Canal, Strait of Juan de Fuca, Quillayute, Hoh, Queets, and Grays Harbor). Under the plan, the United States and Canada were required to constrain total fishery exploitation rates to levels associated with the categorical status (low, moderate, and abundant) and target exploitation rates of the key management units as determined by domestic managers. Ceilings on exploitation rates by intercepting fisheries were established through formulas specified in the plan.

The forecast of 2010 abundance indicated that the status of interior Fraser River coho remained critically low. The lower Fraser, Georgia Basin, and the Johnstone Strait coho management units were all forecast to be at low or moderate status. The PSC coho status categories of low, moderate, and abundant are analogous to the FMP categories of critical, low, and normal.

In 2010, Canada's coho management objective was to constrain the exploitation rate by its fisheries on Thompson coho (a component of the Interior Fraser management unit) to a ceiling of 3 percent. Unmarked coho were released in many Southern B.C. commercial and sport fisheries where Thompson coho were known to be prevalent. Estimated release mortality rates for legal size coho by gear type were: Seine 25 percent; Northern Gillnet 70 percent; Southern Gillnet 60 percent; Troll 26 percent; and Sport 10 percent (Canadian Stock Assessment Secretariat, Research Document 99/128). Only terminal area fisheries along the WCVI and small portions of upper Johnstone Strait and the Queen Charlotte Islands were permitted for a short period to retain unmarked coho. Selective fishing techniques, such as barbless hooks for trollers, seine bunt restrictions, and use of revival tanks, were required. In 2010 a total of 138,757 coho (138,295 troll, 462 net) were retained by commercial fisheries in Northern B.C. and 1,806 coho (1,220 troll, and 586 net) in Southern B.C. fisheries. Coho kept and released by marine commercial fisheries are summarized in Table I-13.

For recreational fisheries, mark-selective coho retention was permitted in mixed stock areas, and barbless hooks were required. Mark-selective fisheries were implemented in most of Southern B.C. (Johnstone Strait, Strait of Georgia, Juan de Fuca Strait, and WCVI). The estimated total retained catch of coho in Southern B.C. marine recreational fisheries in 2010 was 21,531. Coho kept and released by marine recreational fisheries in Southern B.C. are summarized in Table I-14.

First Nations fisheries in Southern B.C. were estimated to have harvested 43,400 coho.

TABLE I-1. Summary of actual ocean non-Indian commercial troll salmon fishing regulations for 2010. (Page 1 of 4)

Area and Season	Salmon Species	Actual Quota (Guideline*)		Special Restrictions <sup>a/</sup>
		Chinook	Coho	
U.S./Canada border to Cape Falcon, OR May 1-June 12; June 18-22; June 25-29 (53 days)	All except coho	42,000*	-	Open seven days per week May 1-June 12, no landing and possession limit; open Friday through Tuesday June 18-22 with per vessel per open period landing and possession limit of 75 Chinook; open Friday through Tuesday June 25-29 with per vessel per open period landing and possession limit of 25 Chinook. Cape Flattery, Mandatory Yelloweye Rockfish Conservation Area, and Columbia Control Zones closed. Oregon State regulations require that fishers south of Cape Falcon, OR intending to fish within this area notify Oregon Department of Fish and Wildlife (ODFW) before transiting the Cape Falcon, OR line (45°46'00" N. lat.) at the following number: 541-867-0300 Ext. 271. Vessels must land and deliver their fish within 24 hours of any closure of this fishery. Under state law, vessels must report their catch on a state fish receiving ticket. Vessels fishing or in possession of salmon while fishing north of Leadbetter Point must land and deliver their fish within the area and north of Leadbetter Point. Vessels fishing or in possession of salmon while fishing south of Leadbetter Point must land and deliver their fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land their fish in Garibaldi, Oregon. Oregon State regulations require all fishers landing salmon into Oregon from any fishery between Leadbetter Point, Washington and Cape Falcon, Oregon must notify ODFW within one hour of delivery or prior to transport away from the port of landing by calling 541-867-0300 Ext. 271. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery.

TABLE I-1. Summary of actual ocean non-Indian commercial troll salmon fishing regulations for 2010. (Page 2 of 4)

Area and Season	Salmon Species	Actual Quota (Guideline*)		Special Restrictions <sup>a/</sup>
		Chinook	Coho	
U.S./Canada border to Cape Falcon, OR July 1-6, 9-13, 16-20, 23-27, July 30-Aug. 3, Aug. 6-10, 13-17, 20-24, 27-31, Sept. 3-7 (51 days)	All salmon except no chum retention north of Cape Alava, WA in August and September	18,350 <sup>b/</sup>	6,100 <sup>c/</sup>	Open July 1-6 then Friday through Tuesday through September 7. Per vessel per open period landing and possession limit of 40 Chinook and 30 marked coho north of Leadbetter Point or 40 Chinook and 30 marked coho south of Leadbetter Point through July 13; 60 Chinook and 50 marked coho north of Leadbetter Point or 60 Chinook and 50 marked coho south of Leadbetter Point July 16-27; 75 Chinook and 50 marked coho north of Leadbetter Point or 75 Chinook and 50 marked coho south of Leadbetter Point July 30 through August 3; 30 Chinook and 50 marked coho north of Leadbetter Point or 30 Chinook and 50 marked coho south of Leadbetter Point thereafter. Mandatory Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones closed. Oregon State regulations require that fishers south of Cape Falcon, OR intending to fish within this area notify Oregon Department of Fish and Wildlife (ODFW) before transiting the Cape Falcon, OR line (45°46'00" N. lat.) at the following number: 541-867-0300 Ext. 271. Vessels must land and deliver their fish within 24 hours of any closure of this fishery. Under state law, vessels must report their catch on a state fish receiving ticket. Vessels fishing or in possession of salmon while fishing north of Leadbetter Point must land and deliver their fish within the area and north of Leadbetter Point. Vessels fishing or in possession of salmon while fishing south of Leadbetter Point must land and deliver their fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land their fish in Garibaldi, Oregon. Oregon State regulations require all fishers landing salmon into Oregon from any fishery between Leadbetter Point, Washington and Cape Falcon, Oregon must notify ODFW within one hour of delivery or prior to transport away from the port of landing by calling 541-867-0300 Ext. 271. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery.

TABLE I-1. Summary of actual ocean non-Indian commercial troll salmon fishing regulations for 2010. (Page 3 of 4)

Area and Season	Salmon Species	Actual Quota (Guideline*)		Special Restrictions <sup>a/</sup>
		Chinook	Coho	
Cape Falcon to Humbug Mt., OR				
May 1-July 6; July 9-13, 16-20, 23-27; Aug. 1-25 (107 days)	All except coho	None	-	All vessels fishing in the area must land their fish in the State of Oregon.
Sept. 1-30 (30 days)	Non-Retention	-	-	All salmon must be released after collection of biological samples.
Tillamook Ocean Terminal Area Twin Rocks to Pyramid Rock inside 3 nm				
Sept. 1-Oct. 31 (61 days)	Chinook only	600	-	25 Chinook per calendar week per vessel landing limit. Mandatory phone or email trip reports.
Elk River Ocean Terminal Area Inside of a line from Cape Blanco to Black Rock to Best Rock to 42°40'30" N. Lat. 124°29'00" W. Long to Humbug Mt.				
Oct. 15-29 (15 days)	Chinook only	1,250	-	20 Chinook per day per vessel landing limit. Mandatory phone or email trip reports.
Humbug Mt. to OR/CA border				
May 1-31 (31 days)	All except coho	None	-	100 fish per calendar week vessel limit. Landings restricted to Gold Beach, Port Orford, or Brookings.
July 1-31 (31 days)	All except coho	1,500	-	July 1-August 31: 30 Chinook per day and 90 per calendar week vessel limit;
Aug. 1-31 (31 days)	All except coho	1,500	-	Mandatory phone or email trip reports. Landings restricted to Gold Beach, Port Orford, or Brookings, and within 24 hours of any closure.
June 1-30; Sept. 1-30 (60 days)	Non-Retention	-	-	All salmon must be released after collection of biological samples.
Chetco River Terminal Area Twin Rocks to OR/CA border Inside 3 nm				
Oct. 13-15, 20 (4 days)	Chinook only	500	-	Oct. 13-15: 20 Chinook per day per vessel landing limit; Oct. 20: 10 Chinook per day. Mandatory phone or email trip reports. Landings restricted to Brookings.
OR/CA border to Humboldt South Jetty				
May 1 - Sept. 30 (153 days)	Non-Retention	-	-	All salmon must be released after collection of biological samples.
Humboldt South Jetty to Horse Mt. Closed	-	-	-	



TABLE I-1. Summary of actual ocean non-Indian commercial troll salmon fishing regulations for 2010. (Page 4 of 4)

Area and Season	Salmon Species	Actual Quota (Guideline*)		Special Restrictions <sup>a/</sup>
		Chinook	Coho	
Horse Mt to Pt. Arena				
July 1-4, 8-11 (8 days)	All except coho	None	-	27 inch minimum size limit.
July 15-29 (15 days)	All except coho	18,000	-	July 15-29 and Aug. 1-31: all vessels fishing in the area must land their fish in the area, all fish must be offloaded within 24 hours of closure. 27 inch minimum size limit.
Aug. 1-31 (31 days)	All except coho	9,375	-	
May 1 - June 30, Sept. 1-30 (91 days)	Non-Retention	-	-	All salmon must be released after collection of biological samples.
Pt. Arena to U.S./Mexico Border				
July 1-4, 8-11 (8 days)	All except coho	None	-	27 inch minimum size limit.
May 1 - June 30, July 13- Sept. 30 (141 days)	Non-Retention	-	-	All salmon must be released after collection of biological samples.

a/ Single-point, single-shank barbless hooks required in all open areas coastwide. Unless otherwise noted, minimum size limits (total length): Chinook 28 inches, coho 16 inches.

b/ 14,000 preseason Chinook guideline plus impact neutral transfer of 2,700 Chinook remaining from the May-June U.S./Canada border Cape Falcon non-Indian commercial troll fishery quota plus transfers of 1,650 in August and 1,000 in September from the recreational fishery in exchange for 7,000 coho in August.

c/ 11,800 preseason quota minus 5,700 impact neutral transfer to the recreational fishery quota in exchange for 1,650 Chinook in August.

TABLE I-2. Summary of actual treaty Indian commercial ocean and Area 4B troll salmon seasons for 2010.

TABLE 1-2. Summary of actual treaty Indian commercial ocean and Area 4B troll salmon seasons for 2019.						
Tribe and Area	Salmon Species	Seasons <sup>a/</sup>		Minimum Size Limit (Inches)		Special Restrictions
		Dates	Days	Chinook	Coho	
<b>Quinault</b>						
Areas 2-3	All except coho	May 1-June 30	61	24	-	
	All	July 1- Sept. 15	77	24	16	
<b>Hoh</b>						
Areas 2-3	All except coho	May 1-June 30	61	24	-	
	All	July 1- Sept. 15	77	24	16	
<b>Quileute</b>						
Area 3	All except coho	May 1-June 30	61	24	-	
	All	July 1-Sept. 15; Sept. 16-Oct. 15	107	24	16	
<b>Makah</b>						
Areas 3N, 4, and 4A	All except coho	May 1-June 30	61	24	-	
	All	July 1- Sept. 15	77	24	16	
Area 4B	All except coho	May 1-June 30	61	24	-	
	All	Jan. 1-April 15; July 1-Sept. 15	182	22 <sup>b/</sup>	16	
	All	Nov. 1-Dec. 31	61	22	16	
<b>S'Klallam</b>						
Area 4B	All except coho	May 1-June 30	61	24	-	
	All <sup>c/</sup>	Jan. 1-Apr. 15; July 1-Dec. 31	290	22 <sup>b/</sup>	16	

the S'Klallam and Makah tribes in Washington State Statistical Area 4B from May 1-Sept. 15. The overall Chinook quota was divided preseason to provide 27,500 Chinook for the May 1-June 30 Chinook-directed season and 27,500 Chinook for the July 1-Sept. 15 all-salmon season. Single point, single shank barbless hooks were required in all ocean fisheries.

b/ Minimum size limit 24 inches after May 1.

c/ Retention of steelhead prohibited; retention of chum prohibited prior to September 30.

TABLE I-3. Summary of actual ocean recreational salmon fishing regulations for 2010. (Page 1 of 2)

Area and Season	Salmon Species	Actual Quota		Daily Limit and Special Restrictions <sup>b/</sup>
		Chinook	Coho <sup>a/</sup>	
U.S./Canada Border to Cape Falcon, OR June 12-30 (19 days)	All except coho	12,000	-	Two fish per day. All Chinook must be marked with a healed adipose fin clip.
U.S./Canada Border to Cape Alava, WA (Neah Bay subarea) Tues.-Sat. July 1-22; seven days per week July 23-Sept. 19 (75 days)	All Salmon		6,990	Two salmon daily; no more than one Chinook prior to July 8. No chum retention beginning August 1.
Cape Alava to Queets River, WA (La Push subarea) Tues.-Sat. July 1-22; seven days per week July 23-Sept. 19 (75 days)	All Salmon	The Chinook quota for all subareas between the	1,700	Two salmon daily; no more than one Chinook prior to July 8.
North of 47°50'00" N. lat. and south of 48°00'00" N. Lat. seven days per week Sept. 25-Oct.10 (16 days)	All Salmon	U.S./Canada border and Cape Falcon, OR combined was 45,000 <sup>c/</sup> .	50	Two salmon daily.
Queets River to Leadbetter Pt., WA (Westport subarea) Sun.-Thurs. July 4-22; seven days per week July 23-Sept. 19 (74 days)	All Salmon		24,860	Two salmon daily; no more than one Chinook prior to July 8. Grays Harbor Control Zone closed beginning August 1.
Leadbetter Point, WA to Cape Falcon, OR (Columbia River subarea) Seven days per week July 1-Sept. 30 (92 days)	All salmon		40,600 <sup>d/</sup>	Two salmon daily; no more than one Chinook prior to July 8.
Cape Falcon to OR/CA Border May 29-June 25 (28 days)	All except coho	None	-	Two salmon daily. Fishing in the Stonewall Bank groundfish conservation area restricted to trolling only on days the all depth recreational halibut fishery is open. <sup>e/</sup>
June 26-Sept. 6 (73 days)	All salmon	None	26,000	Two salmon daily. Fishing in the Stonewall Bank groundfish conservation area restricted to trolling only on days the all depth recreational halibut fishery is open. <sup>e/</sup>

TABLE I-3. Summary of actual ocean recreational salmon fishing regulations for 2010. (Page 2 of 2)

Area and Season	Salmon Species	Actual Quota		Daily Limit and Special Restrictions <sup>b/</sup>
		Chinook	Coho <sup>a/</sup>	
Cape Falcon OR to OR/CA Border (con't.)				
Tillamook Ocean Terminal Area				
Twin Rocks to Pyramid Rock inside 15 fm				
May 29-June 25 (28 days)	Chinook Only	None	-	Chinook must be marked.
June 26-July 31 (36 days)	All Salmon	None	f/	Chinook must be marked.
Twin Rocks to Pyramid Rock inside 3 nm				
Sept. 1-6 (6 days)	All Salmon	None	f/	Barbless hooks required through Sept. 6. Two salmon daily, one of which can be an unmarked Chinook; no more than 10 unmarked Chinook per season.
Sept. 7-Oct. 31 (55 days)	Chinook Only	None	-	
Elk River Ocean Terminal Area				
Inside of a line from Cape Blanco to Black Rock to Best Rock to 42°40'30" N. Lat. 124°29'00" W. Long. to Humbug Mt.				
Oct. 15 - Nov. 30 (47 days)	Chinook only	None	-	Two Chinook daily.
Chetco River Terminal Area				
Twin Rocks to OR/CA border Inside 3 nm				
Oct. 1-12 (12 days)	Chinook only	None	-	One Chinook daily, no more than five per season.
OR/CA Border to Horse Mt., CA				
May 29-Sept. 6 (101 days)	All except coho	None	-	Two salmon daily. 24 inch minimum size limit.
Horse Mt. to Pt. Arena				
Apr. 3-Sept. 6 (157 days)	All except coho	None	-	Two salmon daily. 20 inch minimum size limit prior to May 1; 24 inches thereafter.
Pt. Arena to U.S./Mexico Border				
Apr. 3-Sept. 6 (121 days)	All except coho	None	-	Two salmon daily. Seven days per week and 20 inch minimum size limit prior to May 1; Thurs.-Mon. and 24 inches thereafter.

a/ All coho fisheries and quotas are mark-selective for fish with a healed adipose fin clip.

b/ No more than one rod and single-point, single-shank barbless hooks required north of Pt. Conception, CA. No more than two single-point, single-shank barbless hooks when fishing for salmon or fishing from a boat with salmon on board between Pt. Conception and Cape Falcon, OR. If angling by any means other than trolling between Pt. Conception and Horse Mt., CA, no more than two single-point, single-shank, barbless circle hooks shall be used. The distance between the two hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Unless otherwise noted: minimum size limits are (1) 24 inches for Chinook and 16 inches for coho north of Cape Falcon, and (2) 20 inches for Chinook and 16 inches for coho south of Cape Falcon.

c/ 49,000 preseason quota minus impact neutral transfers of 2,500 in August and 1,500 in September to the non-Indian commercial troll fishery in exchange for 7,000 coho in August.

d/ 33,600 preseason quota plus impact neutral transfer of 7,000 from the non-Indian commercial troll fishery in exchange for 2,500 Chinook in August.

e/ The all depth halibut season was open on May 13-15, 20-22, June 17-19, July 1-2, and August 6-7.

f/ Included in the Cape Falcon to OR/CA border recreational mark selective coho quota of 26,000 open June 26 - September 6.

TABLE I-4. Council area commercial and recreational ocean salmon fishing effort and landings by state. Data are provisional, pending further review of data compilation methods. A double dash ("--") indicates no records are available. Fewer than 50 pounds may be shown as zero. (Page 1 of 4)

COMMERCIAL TROLL								RECREATIONAL					
Year or Average	Effort (boat days fished)	Catch						Effort (salmon angler trips)	Catch (numbers of fish)				Salmon Per Angler Trip
		Numbers of Fish			Thousands of Pounds (Dressed Weight)				Chinook	Coho	Pink	Total	
		Chinook	Coho	Pink	Chinook	Coho	Pink						
WASHINGTON <sup>a/</sup>													
1966-70	--	172,500	717,200	96,200	1,810	4,557	432	401,900	152,600	427,700	14,600	594,900	1.5
1971-75	56,200	275,400	870,300	31,600	2,926	4,801	147	482,900	210,400	567,400	6,100	783,900	1.6
1976-80	43,787	188,610	717,302	412,880	2,364	3,675	789	429,809	114,092	511,827	23,544	649,463	1.5
1981-85 <sup>b/</sup>	12,782	71,326	217,754	140,486	776	1,059	358	163,344	54,662	172,399	5,915	232,976	1.4
1986-90	6,078	71,534	137,942	20,552	719	610	49	119,412	26,075	165,058	1,919	193,051	1.6
1991-95	5,158	42,477	76,334	27,971	372	390	63	104,949	11,156	131,364	2,484	145,003	1.4
1996-2000	660	25,267	28,492	1,307	372	390	63	38,459	4,940	41,445	2,216	48,600	1.3
2001	1,280	50,072	66,707	885	515	377	9	126,402	22,974	168,062	3,918	194,954	1.5
2002	1,564	93,665	17,602	0	1,128	102	0	95,167	57,821	74,134	0	131,955	1.4
2003	1,914	91,374	19,899	251	1,261	117	2	124,867	34,183	139,096	13,407	186,686	1.5
2004	1,812	85,107	75,390	0	1,090	476	0	112,704	24,907	112,936	0	137,843	1.2
2005	2,035	77,041	25,439	250	969	160	1	90,595	36,369	51,770	3,260	91,398	1.0
2006	2,243	47,314	33,203	0	534	203	0	65,263	10,667	36,087	8	46,762	0.7
2007	1,864	37,211	45,924	370	389	252	2	72,683	8,944	83,788	4,670	97,402	1.3
2008 <sup>c/</sup>	1,802	29,538	15,972	0	287	92	0	37,610	14,635	18,870	0	33,505	0.9
2009 <sup>c/</sup>	2,794	24,570	80,718	358	192	535	2	101,560	12,351	138,493	7,627	158,471	1.6
2010 <sup>c/</sup>	3,388	78,480	13,589	0	812	95	0	80,955	36,874	36,278	0	73,152	0.9

TABLE I-4. Council area commercial and recreational ocean salmon fishing effort and landings by state. Data are provisional, pending further review of data compilation methods. A double dash (" - ") indicates no records are available. Fewer than 50 pounds may be shown as zero. (Page 2 of 4)

Year or Average	COMMERCIAL TROLL							RECREATIONAL						
	Effort (boat days fished)	Catch			Thousands of Pounds (Dressed Weight)				Effort (salmon angler trips)	Catch (numbers of fish)				Salmon Per Angler Trip
		Numbers of Fish												
		Chinook	Coho	Pink	Chinook	Coho	Pink	Chinook		Coho	Pink	Total		
OREGON <sup>d/</sup>														
1966-70	--	122,000	804,500	--	1,159	5,358	--	--	--	--	--	--	--	
1971-75	47,400	208,500	979,000	--	2,128	6,015	--	--	--	--	--	--	--	
1976-80	55,885	232,632	741,694	--	2,427	4,252	139	387,743	39,974	289,189	--	329,163	0.8	
1981-85	25,496	145,503	301,499	2,100	1,432	1,537	117	233,544	33,085	165,393	2,700	201,178	0.9	
1986-90	38,154	394,927	397,243	4,300	3,731	1,957	21	241,161	35,713	218,637	500	254,849	1.1	
1991-95	9,016	100,945	119,367	380	940	325	2	99,547	9,234	103,001	60	112,296	1.1	
1996-2000	7,187	129,523	6,133	380	1,414	14	2	45,609	11,231	12,459	60	23,750	0.5	
2001	11,148	274,963	9,333	344	2,897	52	1	120,461	27,200	94,346	0	121,546	1.0	
2002	11,701	304,189	1,515	0	3,488	11	0	107,641	47,480	36,537	0	84,017	0.8	
2003	12,418	329,678	6,441	25	3,639	43	0	144,423	40,654	113,659	0	154,313	1.1	
2004	13,204	252,709	8,839	0	2,850	70	0	145,702	56,433	71,835	0	128,268	0.9	
2005	11,623	251,295	2,618	3	2,671	20	0	75,999	27,945	13,706	0	41,651	0.5	
2006	4,528	34,965	1,414	0	486	13	0	62,319	11,588	15,577	0	27,165	0.4	
2007	5,233	35,487	17,095	80	464	101	0	88,264	6,941	60,653	0	67,594	0.8	
2008	809	5,954	435	0	66	4	0	30,418	1,578	12,085	2	13,665	0.4	
2009	1,219	1,149	21,968	18	15	131	0	84,518	1,585	89,606	0	91,191	1.1	
2010 <sup>c/</sup>	4,289	39,430	1,038	0	506	7	0	53,319	4,964	18,298	0	23,262	0.4	

TABLE I-4. Council area commercial and recreational ocean salmon fishing effort and landings by state. Data are provisional, pending further review of data compilation methods. A double dash ("-") indicates no records are available. Fewer than 50 pounds may be shown as zero. (Page 3 of 4)

Year or Average	COMMERCIAL TROLL							RECREATIONAL					
	Effort (boat days fished)	Catch						Effort (salmon angler trips)	Catch (numbers of fish)				Salmon Per Angler Trip
		Numbers of Fish			Thousands of Pounds (Dressed Weight)								
		Chinook	Coho	Pink	Chinook	Coho	Pink		Chinook	Coho	Pink	Total	
CALIFORNIA <sup>e/</sup>													
1966-70	- -	486,300	319,700	7,400	4,925	2,352	37	189,800	120,800	33,200	0	154,000	0.8
1971-75	45,200	562,700	361,800	4,700	5,743	2,211	22	247,400	169,600	48,300	0	217,900	0.9
1976-80	81,300	618,637	210,303	500	5,867	1,184	3	163,469	92,422	31,158	0	123,580	0.8
1981-85	58,950	462,652	58,726	2,400	4,454	345	14	146,950	109,097	19,866	0	128,963	0.9
1986-90	58,549	794,703	46,780	300	8,097	262	2	240,667	166,395	40,388	0	206,783	0.9
1991-95	25,780	341,928	42,475	0	3,429	94	0	215,996	170,296	22,399	0	192,695	0.9
1996-2000	18,154	368,001	-	0	4,037	0	0	194,586	157,742	452	0	158,194	0.8
2001	13,841	193,086	-	0	2,409	-	0	165,135	98,783	1,329	0	100,112	0.6
2002	17,403	391,655	-	0	5,008	-	0	210,052	182,044	828	0	182,872	0.9
2003	15,941	491,894	-	0	6,392	-	0	134,627	94,674	613	0	95,287	0.7
2004	21,733	502,110	-	0	6,230	-	0	218,743	221,114	1,424	0	222,538	1.0
2005	17,018	340,862	-	0	4,347	-	0	172,080	143,257	699	0	143,956	0.8
2006	8,259	69,728	-	0	1,043	-	0	126,506	96,292	1,626	0	97,918	0.8
2007	10,671	114,141	-	0	1,525	-	0	105,889	47,704	746	0	48,450	0.5
2008	-	-	-	-	-	-	-	391	6	-	0	6	0.0
2009	-	-	-	-	-	-	-	5,359	672	8	0	680	0.1
2010 <sup>c/</sup>	1,979	15,098	-	-	228	-	-	48,757	14,697	171	0	14,868	0.3

TABLE I-4. Council area commercial and recreational ocean salmon fishing effort and landings by state. Data are provisional, pending further review of data compilation methods. A double dash (" - ") indicates no records are available. Fewer than 50 pounds may be shown as zero. (Page 4 of 4)

Year or Average	COMMERCIAL TROLL							RECREATIONAL					Salmon Per Angler Trip
	Effort (boat days fished)	Catch						Effort (salmon angler trips)	Catch (numbers of fish)				
		Numbers of Fish			Thousands of Pounds (Dressed Weight)				Chinook	Coho	Pink	Total	
		Chinook	Coho	Pink	Chinook	Coho	Pink						
		COUNCIL AREA <sup>a/d/e/</sup>											
1966-70	--	780,800	1,841,400	103,600	7,893	12,267	468	591,700	273,400	460,900	14,600	748,900	1.3
1971-75	148,800	1,046,600	2,211,100	36,300	10,796	13,028	170	730,300	380,000	615,700	6,100	1,001,800	1.4
1976-80	180,972	1,039,879	1,669,299	413,380	10,658	9,111	930	981,020	246,488	832,173	23,544	1,102,206	1.1
1981-85 <sup>b/</sup>	97,228	679,481	577,980	144,986	6,662	2,941	489	543,838	196,845	357,658	8,615	563,117	1.0
1986-90	40,874	514,406	299,783	20,932	5,087	1,029	50	434,955	205,605	290,457	1,979	498,041	1.1
1991-95	26,001	522,792	34,625	1,687	5,823	404	65	278,654	173,912	54,356	2,276	230,544	0.8
1996-2000	26,269	518,121	76,040	1,229	5,821	429	10	411,998	148,957	263,737	3,918	416,612	1.0
2001	26,269	518,121	76,040	1,229	5,821	429	10	411,998	148,957	263,737	3,918	416,612	1.0
2002	30,668	789,509	19,117	0	9,624	113	0	412,860	287,345	111,499	0	398,844	1.0
2003	30,273	912,946	26,340	276	11,291	159	2	403,917	169,511	253,368	13,407	436,286	1.1
2004	36,749	839,926	84,229	0	10,170	546	0	477,149	302,454	186,195	0	488,649	1.0
2005	30,676	669,198	28,057	253	7,987	180	1	338,674	207,571	66,175	3,260	277,005	0.8
2006	15,030	152,007	34,617	0	2,064	216	0	254,088	118,547	53,290	8	171,845	0.7
2007	17,768	186,839	63,019	450	2,379	353	2	266,836	63,589	145,187	4,670	213,446	0.8
2008 <sup>c/</sup>	2,611	35,492	16,407	0	353	96	0	68,419	16,219	30,955	2	47,176	0.7
2009 <sup>c/</sup>	4,013	25,719	102,686	376	208	666	2	191,437	14,608	228,107	7,627	250,342	1.3
2010 <sup>c/</sup>	9,656	133,008	14,627	0	1,546	102	0	183,031	56,535	54,747	0	111,282	0.6

a/ For Washington, commercial effort and landings include: (1) treaty Indian fisheries (ocean and Area 4B only from May 1-Sept. 30) beginning in 1972; (2) prior to 1978, catch off British Columbia landed in Washington; (3) catch off Alaska landed in Washington; and (4) catch off Oregon and California beginning in 1976. Treaty Indian effort is in deliveries. Beginning in 1989, recreational angler trips and catch include state-managed, late-season Area 4B fishery when open (see Table IV-15).

b/ Recreational effort and catch includes Washington-based effort and catch from Oregon state waters (July 26-Aug. 1) and Strait of Juan de Fuca after WDFW and NMFS ocean closures in 1982.

c/ Preliminary.

d/ Oregon commercial troll landings include small numbers of salmon caught in Alaska (prior to 1990), Washington, and California. Oregon recreational effort data are total angler trips prior to 1979 and salmon trips beginning in 1979. Significantly reduced salmon per angler trip in 1994-1998 reflects regulations requiring nonretention of coho in the recreational fishery south of Cape Falcon.

e/ California commercial effort and landings include salmon caught off Oregon and landed in California, which were minor and infrequent until 2004, when 200 days fished and 25,300 Chinook were included.



TABLE I-5. Council area commercial and recreational ocean salmon fishing effort and landings by management area.

TABLE 10: Council area commercial and recreational ocean salmon fishing effort and catches by management area.										
COMMERCIAL TROLL					RECREATIONAL					
	Effort <sup>a/</sup> (days fished)	Catch (numbers of fish)			Effort (salmon angler trips)	Catch (numbers of fish)			Salmon Per	
Year		Chinook	Coho	Pink		Chinook	Coho	Pink	Total	Angler Trip
----- U.S./CANADA BORDER TO CAPE FALCON -----										
Treaty Indian (U.S./Canada Border to Leadbetter Point) <sup>b/</sup> :										
2001	516	28,843	58,595	2,451	-	-	-	-	-	-
2002	226	39,846	17,422	0	-	-	-	-	-	-
2003	216	35,172	10,942	236	-	-	-	-	-	-
2004	431	49,735	62,097	0	-	-	-	-	-	-
2005	597	41,975	23,997	387	-	-	-	-	-	-
2006	805	30,545	31,938	0	-	-	-	-	-	-
2007	590	22,943	40,038	584	-	-	-	-	-	-
2008 <sup>c/</sup>	579	20,902	14,266	0	-	-	-	-	-	-
2009 <sup>c/</sup>	803	12,254	60,663	795	-	-	-	-	-	-
2010 <sup>c/</sup>	952	33,381	11,485	0	-	-	-	-	-	-
Non-Indian:										
2003	2,111	66,586	15,398	276	144,093	36,513	168,867	13,407	218,787	1.5
2004	1,728	38,490	22,132	24	131,297	27,090	135,434	32	162,556	1.2
2005	1,954	45,151	4,060	11	103,857	40,004	61,736	3,260	104,999	1.0
2006	2,419	27,258	2,679	0	73,505	11,176	41,498	8	52,682	0.7
2007	1,599	15,711	17,439	227	85,069	9,538	102,185	4,670	116,393	1.4
2008	1,884	14,070	2,141	0	41,264	15,452	21,061	0	36,513	0.9
2009	2,519	13,028	32,743	153	113,810	13,331	157,912	7,627	178,870	1.6
2010 <sup>c/</sup>	3,071	56,220	3,142	0	91,209	38,686	42,386	0	81,072	0.9
----- CAPE FALCON TO HUMBURG MOUNTAIN -----										
2003	11,477	314,222	-	23	110,450	32,876	83,837	0	116,713	1.1
2004	12,339	241,107	-	0	108,800	47,413	48,062	0	95,475	0.9
2005	10,858	238,944	-	1	50,159	18,603	3,630	0	22,233	0.4
2006	3,364	23,738	-	0	43,447	9,287	9,485	0	18,772	0.4
2007	4,444	29,947	5,542	73	64,766	3,297	40,687	0	43,984	0.7
2008	97	284	-	0	21,969	481	7,760	2	8,243	0.4
2009	691	437	9,280	0	66,337	410	68,990	0	69,400	1.0
2010 <sup>c/</sup>	3,473	27,440	-	0	37,115	2,328	12,130	0	14,458	0.4
----- HUMBURG MOUNTAIN TO HORSE MOUNTAIN (KMZ) -----										
2003	659	9,116	-	0	30,524	14,200	188	0	14,388	0.5
2004	1,042	40,399	-	0	43,906	29,681	1,835	0	31,516	0.7
2005	573	9,320	-	0	29,907	23,251	261	0	23,512	0.8
2006	183	738	-	0	27,081	18,195	922	0	19,117	0.7
2007	821	12,859	-	0	31,555	21,946	1,970	0	23,916	0.8
2008	51	236	-	-	4,795	280	2,134	0	2,414	0.5
2009	-	-	-	-	11,290	867	1,205	0	2,072	0.2
2010 <sup>c/</sup>	181	869	-	-	10,188	1,544	114	0	1,658	0.2
----- HORSE MOUNTAIN TO U.S./MEXICO BORDER -----										
2003	15,810	487,850	-	0	118,850	85,922	476	0	86,398	0.7
2004	21,209	470,195	-	0	193,146	198,270	864	0	199,134	1.0
2005	16,694	333,808	-	0	154,751	125,713	548	0	126,261	0.8
2006	8,259	69,728	-	0	110,055	79,889	1,385	0	81,274	0.7
2007	10,314	105,379	-	0	85,446	28,808	345	0	29,153	0.3
2008	-	-	-	-	391	6	-	0	6	0.0
2009	-	-	-	-	-	-	-	-	-	-
2010 <sup>c/</sup>	1,979	15,098	-	-	44,519	13,977	117	-	14,094	0.3

a/ Treaty Indian troll effort in number of deliveries.

b/ May through September only.

c/ Preliminary.

TABLE I-6. Coho and Chinook harvest quotas and guidelines (\*) for 2010 Council managed fisheries compared with actual harvest by management area and fishery.

Fishery Governed by Quota or Guideline	Chinook			Coho		
	Quota or Guideline <sup>a/</sup>	Catch	Catch/Quota	Quota	Catch	Catch/Quota
<b>NORTH OF CAPE FALCON</b>						
TREATY INDIAN COMMERCIAL TROLL						
U.S./Canada Border to Cape Falcon (May-June)	27,500	15,227	0.55	-	-	-
U.S./Canada Border to Cape Falcon (July-Sept.)	27,500	18,154	0.66	41,500	11,420	0.28
Subtotal Treaty Indian Commercial Troll	55,000	33,381	0.61	41,500	11,420	0.28
NON-INDIAN COMMERCIAL TROLL						
U.S./Canada Border to Cape Falcon (May-June)	38,000 *	38,223	1.01	-	-	-
U.S./Canada Border to Cape Falcon (July-Sept.)	19,350 *	17,997	0.93	6,100 <sup>b/</sup>	3,142	0.52
Subtotal Non-Indian Commercial Troll	57,350 <sup>b/</sup>	56,220	0.98	6,100 <sup>b/</sup>	3,142	0.52
RECREATIONAL (selective coho and Chinook fisheries)						
U.S./Canada Border to Cape Falcon (June-Chinook)	12,000 *	5,037	0.42	-	-	-
U.S./Canada Border to Cape Alava (July-Sept.)	5,400 *	3,299	0.61	6,990	3,687	0.53
Cape Alava to Queets River (July-Oct.)	2,500 *	1,177	0.47	1,750	1,180	0.67
Queets River to Leadbetter Pt. (July-Sept.)	28,000 *	26,989	0.96	24,860	12,607	0.51
Leadbetter Pt. to Cape Falcon (July-Sept.)	9,100 *	7,221	0.79	40,600 <sup>b/</sup>	24,913	0.61
Subtotal Recreational	45,000 <sup>b/</sup>	38,686	0.86	74,200 <sup>b/</sup>	42,386	0.57
TOTAL NORTH OF CAPE FALCON	157,350	128,287	0.82	121,800	56,948	0.47
<b>SOUTH OF CAPE FALCON</b>						
COMMERCIAL TROLL (all except coho)						
Humbog Mt. to OR/CA Border (July)	1,500	51	0.03	-	-	-
Humbog Mt. to OR/CA Border (August)	1,500	125	0.08	-	-	-
Horse Mt. to Pt. Arena (July)	18,000	4,516	0.25	-	-	-
Horse Mt. to Pt. Arena (August)	9,375	6,180	0.66	-	-	-
Subtotal Troll	30,375	10,872	0.36	-	-	-
RECREATIONAL						
Cape Falcon to OR/CA Border (June-Aug.)	-	-	-	26,000	10,932	0.42
TOTAL SOUTH OF CAPE FALCON	30,375	10,872	0.36	26,000	10,932	0.42
GRAND TOTAL COUNCIL AREA	187,725	139,159	0.74	147,800	67,880	0.46

a/ Guidelines for Chinook fisheries are marked with an asterisk (\*).

b/ Quotas do not match preseason quota/guidelines because inseason actions (i.e., trades and transferring quotas on an impact neutral basis) resulted in increases or decreases to the overall quota.

TABLE I-7. Estimated incidental mortality of Chinook and coho in 2010 ocean salmon fisheries. Observed incidental mortality was calculated by scaling preseason projections of incidental mortality by the ratio of observed to projected catch.

Area and Fishery	2010 Catch Projection	2010 Bycatch Mortality <sup>a/</sup> Projection	2010 Bycatch Projection <sup>b/</sup>	Observed in 2010	
				Catch	Bycatch Mortality
<b>CHINOOK (thousands of fish)</b>					
<u>OCEAN FISHERIES:</u>					
NORTH OF CAPE FALCON					
Treaty Indian Ocean Troll	55.0	7.1	19.4	35.3	4.5
Non-Indian Commercial Troll	56.0	10.3	31.6	46.9	8.6
Recreational	61.0	7.2	32.5	38.7	4.6
CAPE FALCON TO HUMBUGH MT. <sup>c/</sup>					
Commercial Troll	55.8	10.8	29.8	27.4	5.3
Recreational	6.4	0.7	1.4	2.3	0.3
HUMBUGH MT. TO HORSE MT. <sup>c/</sup>					
Commercial Troll (OR only)	3.8	2.1	6.5	0.9	0.5 <sup>d/</sup>
Recreational	18.9	2.0	6.7	1.5	0.1 <sup>e/</sup>
SOUTH OF HORSE MT.					
Commercial	33.5	9.9	28.9	15.1	2.7 <sup>e/</sup>
Recreational	29.1	3.1	9.6	14.0	1.4 <sup>e/</sup>
TOTAL OCEAN FISHERIES					
Commercial Troll	204.1	40.1	116.1	125.6	21.6
Recreational	115.4	13.0	50.2	56.5	6.3
<u>INSIDE FISHERIES:</u>					
Area 4B	-	-	-	-	-
Buoy 10	10.7	NA	NA	6.8	NA
<b>COHO (thousands of fish)</b>					
<u>OCEAN FISHERIES:</u>					
NORTH OF CAPE FALCON					
Treaty Indian Ocean Troll <sup>f/</sup>	41.5	3.1	6.1	11.5	0.9
Non-Indian Commercial Troll	11.8	11.0	38.9	8.2	7.7
Recreational	67.2	13.5	58.9	42.4	10.6 <sup>g/</sup>
SOUTH OF CAPE FALCON <sup>c/</sup>					
Commercial Troll	0.0	8.2	31.6	0.0	8.2
Recreational	26.0	13.4	61.2	12.2	6.3
TOTAL OCEAN FISHERIES					
Commercial Troll	53.3	22.4	76.6	19.7	16.7
Recreational	93.2	26.9	120.0	54.6	16.9
<u>INSIDE FISHERIES:</u>					
Area 4B	-	-	-	-	-
Buoy 10	12.0	2.1	7.6	8.0	1.4

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

Commercial: 26%.

Recreational, north of Pt. Arena: 14%.

Recreational, south of Pt. Arena: 18% (based on the proportion of fish caught using mooching versus trolling gear, and the HRM rates of 42.2% and 14% for these gear types, respectively).

b/ Bycatch calculated as dropoff mortality plus fish released; commercial troll includes GSI non-retention bycatch and mortality.

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

d/ Based on reported released Chinook and estimated mortality from non-retention fisheries.

e/ Based on reported released Chinook.

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

g/ Calculated from observed mark rates where available; where unavailable, anticipated mark rates were used.

TABLE I-8. Summary of 2010 recreational fisheries selective for marked hatchery Chinook (preliminary data).

TABLE 10: Summary of 2016 Recreational Fisheries Selective for marked hatchery Chinook (preliminary data).											
Area	Anticipated Mark Rate	Observed Mark Rate	Preseason Quota	Anticipated Nonretention Mortality <sup>a/</sup>	Landed Chinook Catch			Legal sized Chinook Released <sup>b/</sup>	Sub-legal Sized Chinook Released <sup>b/</sup>	Estimated Nonretention Mortality <sup>a/</sup>	Effort <sup>c/</sup>
					Total	Marked	Unmarked				
Recreational											
Ocean Fisheries											
Neah Bay/La Push	85%	89%	-	158	182	182	0	140	274	13	1,629
Westport	71%	69%	-	1,407	4,711	4,694	17	2,511	1,645	635	7,822
Columbia River	87%	58%	-	159	143	141	2	56	118	26	900
North of Cape Falcon Total	-	-	12,000	1,724	5,036	5,017	19	2,707	2,037	675	10,351
Inside Fisheries											
Strait of Juan de Fuca <sup>d/</sup>	58%	55%	3,900 <sup>e/</sup>	915	5,824	5,811	13	6,362	8,314	2,617	17,283
Grand Total	-	-	15,900	2,639	10,860	10,828	32	9,069	10,351	3,292	27,634

a/ Hook-and-release plus drop-off mortality of marked plus unmarked fish.

b/ Calculated from dockside sampling.

c/ Recreational effort measured in angler trips.

d/ Includes Area 5 (July 1 - August 15, 2010) selective fishery only. Data are preliminary.

e/ Expected catch, not a quota.

TABLE I-9. Summary of 2010 recreational and commercial fisheries selective for marked hatchery coho (preliminary data).

TABLE 1-3. Summary of 2010 recreational and commercial fisheries selective for marked hatchery coho (preliminary data).

Area	Anticipated Mark Rate	Observed Mark Rate	Preseason Quota	Anticipated Nonretention Mortality <sup>a/</sup>	Landed Coho Catch			Unmarked Coho Released <sup>b/</sup>	Estimated Nonretention Mortality <sup>a/</sup>	Effort <sup>c/</sup>
					Total	Marked	Unmarked			
Recreational										
Ocean Fisheries										
Neah Bay	51%	36%	6,990	1,886	3,687	3,582	105	6,965	1,389	10,310
La Push	54%	42%	1,750	419	1,180	1,169	11	1,781	365	3,445
Westport	59%	51%	24,860	5,583	12,607	12,511	96	13,492	2,909	30,607
Columbia River	67%	50%	33,600	5,651	24,913	24,806	107	27,783	5,953	36,490
North of Cape Falcon Total	-	-	67,200	13,539	42,387	42,068	319	50,021	10,617	80,852
Cape Falcon to OR/CA Border	46%	46%	26,000	8,043	12,166	12,077	89	14,206	3,298	34,100
Ocean Fisheries Total	-	-	93,200	21,582	54,553	54,145	408	64,227	13,915	114,952
Inside Fisheries										
4B Add-on	-	-	-	-	-	-	-	-	-	-
Strait of Juan de Fuca <sup>d/</sup>	47%	39%	18,702 <sup>e/</sup>	16,658	2,536	2,492	44	4,944	598	26,726
Buoy 10	66%	69%	12,000 <sup>e/</sup>	2,076	7,980	7,957	23	2,810	1,135	52,300
Inside Fisheries Total	-	-	30,702	18,734	10,516	10,449	67	7,754	1,733	79,026
Commercial										
Neah Bay	49%	-	-	316	87	87	0	101	32	62
La Push	52%	-	-	2,581	209	209	0	217	70	179
Westport	56%	-	-	3,352	1,657	1,638	19	1,462	481	854
Columbia River	62%	-	-	4,795	1,189	1,136	53	806	273	682
Commercial Total	-	-	11,800	11,044	3,142	3,070	72	2,587	856	1,777
Grand Total	-	-	135,702	51,360	68,211	67,664	547	74,568	16,504	-

a/ Hook-and-release plus drop-off mortality of marked plus unmarked fish.

b/ Calculated from observed mark rates where available; where unavailable, anticipated mark rates are used. Cape Falcon-OR/CA border and Buoy 10 recreational fishery observed mark rates based on dockside sampling.

c/ Recreational effort measured in angler trips, commercial effort measured in days fished; includes effort from coho mark-selective fisheries only.

d/ Includes Area 5 (July 1 - September 15, 2010) selective fishery only. Data are preliminary.

e/ Expected catch, not a quota.

TABLE I-10. Chinook catch by Southeast Alaska marine fisheries in thousands of fish.

Year	Total Catches			Treaty Chinook			Additional Catch	
	Troll	Net	Sport	Troll	Net	Sport	Terminal Exclusion <sup>a/</sup>	Hatchery Add-On <sup>b/</sup>
1985	215.8	33.9	24.9	211.9	33.3	23.0	0.0	6.2
1986	237.7	22.1	22.6	231.6	20.6	19.0	0.0	11.1
1987	242.6	15.5	24.3	231.1	14.0	20.3	0.0	17.1
1988	231.4	21.8	26.2	217.1	17.4	22.3	0.0	22.5
1989	235.7	24.2	31.1	224.2	18.5	26.8	0.0	21.5
1990	287.9	27.7	51.2	263.5	16.1	41.4	0.0	45.9
1991	264.1	34.9	60.5	231.8	21.0	45.1	0.0	61.5
1992	183.8	32.1	42.9	162.6	24.0	35.3	0.0	36.8
1993	226.9	28.0	49.2	212.3	16.2	42.7	0.0	32.9
1994	186.3	35.7	42.4	177.1	22.6	35.5	0.0	29.2
1995	138.1	48.0	49.7	115.1	26.4	35.5	0.0	58.8
1996	141.5	37.3	57.5	107.6	8.4	39.0	8.7	72.6
1997	246.4	25.1	71.5	221.9	11.4	53.3	9.8	46.5
1998	192.1	23.5	55.0	183.5	13.4	46.3	2.4	25.0
1999	146.2	32.7	72.1	132.7	12.9	53.2	4.5	47.7
2000	158.7	41.4	63.2	134.0	11.1	41.4	2.5	74.3
2001	153.3	40.2	72.3	128.7	13.5	44.7	1.5	77.3
2002	325.3	31.7	69.5	298.1	13.5	45.5	1.2	68.2
2003	330.7	39.4	69.4	307.4	23.5	49.2	2.1	57.2
2004	354.7	64.0	80.6	321.9	39.7	55.4	6.3	76.0
2005	338.4	71.6	86.6	305.0	19.4	63.4	43.6	65.3
2006	282.3	70.4	85.8	264.0	24.7	69.8	30.8	49.1
2007	268.1	55.9	82.8	241.0	25.6	61.9	8.8	69.6
2008	151.9	46.1	49.3	126.5	13.2	32.7	6.9	68.2
2009	175.6	54.1	69.6	159.0	22.4	48.1	4.7	65.2
2010 <sup>c/</sup>	195.5	33.8	51.3	177.7	9.1	40.9	0.6	52.3

a/ Catch in terminal net fisheries. These catches are not subject to PST limitations.

b/ Catch of increased production of Alaska hatchery fish. These catches are not subject to PST limitations.

c/ Preliminary.

TABLE I-11. Chinook and coho catches by Canadian marine fisheries in thousands of fish.

Year or Avg.	Northern B.C.		Central B.C.		North-Central B.C.	WCVI			Strait of Georgia			Juan de Fuca				
	Troll	Net	Troll	Net	Sport	Outside		Sport	Troll	Net <sup>a/</sup>	Sport		Juan de Fuca			
						NW Troll	SW Troll				North	South	Troll	Net	Sport	
CHINOOK																
1986-1990	168.9	28.1	41.6	14.1	17.8	110.3	215.9	17.8	28.6	39.1	35.8	68.1	34.7	0.1	11.5	30.6
1991-1995	143.9	30.1	25.2	14.0	30.9	111.8	98.5	20.4	45.7	25.3	22.2	62.5	17.7	0.0	6.2	16.6
1996	0.0	28.9	0.0	6.8	7.0	0.0	0.0	0.0	10.0	0.0	10.0	55.2	15.3	0.0	0.4	19.0
1997	83.5	20.4	12.4	3.6	36.3	25.9	26.6	0.5	11.0	2.3	29.2	35.3	7.5	0.0	0.3	17.1
1998	107.8	7.1	2.2	5.4	44.4	7.2	3.1	1.6	4.2	1.1	6.8	10.1	4.3	0.0	0.1	9.7
1999	56.5	10.1	2.1	4.3	52.2	21.3	34.7	1.0	31.1	0.2	4.1	26.4	12.1	0.0	0.1	14.8
2000	9.8	22.3	0.0	3.2	38.1	28.7	34.7	0.1	38.0	0.5	5.8	17.3	4.6	1.0	0.1	11.0
2001	13.1	25.4	0.0	6.5	49.1	23.9	53.6	0.0	40.2	0.5	4.5	21.5	9.6	0.0	0.0	23.5
2002	103.0	14.9	0.5	4.7	62.4	43.0	90.8	0.5	32.1	0.6	9.6	43.7	9.1	0.0	0.0	24.1
2003	137.4	14.7	0.0	2.8	70.6	58.0	93.8	9.1	24.0	0.7	12.6	14.0	6.4	0.0	0.3	26.6
2004	167.5	16.2	0.0	6.3	92.7	85.4	88.7	12.5	42.5	0.6	12.5	10.2	3.8	0.0	0.0	40.9
2005	174.8	8.2	0.0	6.3	85.8	110.0	38.8	23.6	53.9	0.0	5.6	10.4	1.9	0.0	0.2	30.5
2006	151.5	13.7	0.0	5.2	81.9	53.9	55.3	20.3	37.9	0.0	3.6	9.8	2.4	0.0	0.2	26.4
2007	83.2	11.4	0.0	5.5	75.1	28.4	58.8	26.9	46.2	0.0	2.7	12.4	2.1	0.0	0.1	26.5
2008	52.1	7.4	0.0	1.1	58.4	15.3	74.4	8.3	50.6	0.0	4.2	6.5	2.5	0.0	0.2	22.3
2009	75.5	4.3	0.0	3.1	46.4	17.2	31.8	9.8	68.9	0.0	4.8	12.4	5.5	0.0	0.4	25.6
2010 <sup>b/</sup>	90.2	3.1	-	1.5	55.0	34.7	44.5	1.7	52.7	0.0	8.6	11.5	4.0	-	0.2	13.6
COHO																
1986-1990	716.3	139.9	275.2	132.2	28.0	600.0	1,277.9	14.2	19.1	178.4	109.2	512.9	106.0	0.7	194.4	66.2
1991-1995	574.2	147.7	98.5	55.0	42.2	501.3	921.2	4.9	31.7	95.1	56.2	221.0	67.6	0.0	92.1	105.9
1996	424.9	122.2	12.2	29.5	59.1	235.9	552.7	1.0	25.1	0.0	5.5	26.7	7.1	0.7	4.2	94.0
1997	158.6	28.6	8.2	12.0	37.1	0.0	0.0	0.0	29.1	0.0	5.9	2.6	2.8	0.0	0.4	99.5
1998	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.5	0.0	0.0	0.1
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0	0.0	0.1
2000	0.0	1.7	0.0	0.1	NA	0.0	0.0	0.0	1.3	0.0	0.0	1.1	3.0	0.0	0.0	0.6
2001	1.1	9.9	0.0	2.7	NA	0.0	0.0	0.0	6.1	0.0	0.0	9.3	1.7	0.0	0.0	0.2
2002	118.9	1.2	8.5	0.0	49.3	0.0	0.0	1.0	4.9	0.0	0.0	3.1	1.5	0.0	0.0	3.8
2003	195.0	6.9	18.9	3.5	NA	0.0	0.1	5.4	13.4	0.0	0.0	1.1	7.5	0.0	0.0	11.8
2004	225.5	24.2	31.7	47.3	27.0	0.1	0.0	2.9	20.3	0.0	0.2	1.4	1.6	0.0	0.0	11.1
2005	260.3	48.5	49.5	52.5	NA	0.6	1.4	4.0	12.4	0.0	0.0	0.7	0.7	0.0	0.0	8.8
2006	125.7	1.1	12.7	5.0	62.0	1.2	1.2	2.2	33.7	0.0	0.0	2.7	0.9	0.0	0.0	2.9
2007	153.1	61.7	28.9	18.9	53.2	1.4	0.0	4.8	25.3	0.0	0.0	6.5	2.0	0.0	0.0	6.7
2008 <sup>b/</sup>	62.8	0.0	13.9	0.0	NA	0.0	0.3	5.0	27.7	0.0	0.0	1.2	0.3	0.0	0.0	1.2
2009 <sup>b/</sup>	61.0	0.1	0.0	15.9	48.0	0.0	0.0	0.9	50.0	0.0	0.0	2.6	0.6	0.0	0.0	9.5
2010 <sup>b/</sup>	138.3	0.1	-	0.4	78.7 <sup>c/</sup>	0.1	0.4	0.8	15.1	0.2	0.6	1.2	1.1	-	0.0	0.7

a/ Includes Johnstone strait nets, net fisheries in Strait of Georgia, and Fraser seine.

b/ Preliminary.

c/ Does not include catch from Areas 5, 6, and 10.

TABLE I-12. West Coast Vancouver Island aggregate abundance based management troll Chinook salmon catch by month.

Season	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. <sup>b/</sup>	Sept.	Total
2005-2006	12,198	2,156	1,689	1,468	5,154	7,883	20,561	7,078	20,807	-	886	24,098	103,978
2006-2007	16,000	1,200	800	5,500	2,600	2,300	5,200	23,500	25,000	-	-	6,000	88,100
2007-2008	3,137	-	-	1,634	1,911	-	1,717	11,105	15,944	-	9,099	45,157	89,704
2008-2009	1,882	1,209	1,107	3,394	1,540	586	3,616	18,062	12,165	-	9,630	-	53,191
2009-2010 <sup>a/</sup>	-	-	-	-	-	-	8,553	31,296	23,652	-	11,642	3,980	79,123

a/ Preliminary.

b/ Fishery restricted to plugs only.

TABLE I-13. Summary of 2010 coho catch and release in British Columbia commercial fisheries.

Gear/Area	Coho Kept	Coho Released
Northern Troll	138,295	21,995
Northern Net	100	4,979
North Central Troll	-	-
South Central Troll	-	-
Central Net	362	1,198
Johnstone Strait Net	535	17,910
Strait of Georgia Net	0	0
Strait of Georgia Troll	0	3
Fraser Gill Net	51	793
Northwest Vancouver Island Troll	79	941
Southwest Vancouver Island Troll	379	1,906
Northwest Vancouver Island Net	568	0
Southwest Vancouver Island Net	194	40

TABLE I-14. Summary of 2010 coho catch and release in British Columbia recreational fisheries.

Area	Kept	Released
Juan de Fuca Strait	1,157	2,014
Strait of Georgia	1,465	3,900
Johnstone Strait	4,047	8,925
WCVI <sup>a/</sup>	14,862	16,397
Total	21,531	31,236

a/ Includes impacts of mark-selective fisheries and inside fisheries.



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## CHAPTER II

### CHINOOK SALMON MANAGEMENT

#### CENTRAL VALLEY CHINOOK STOCKS

Central Valley Chinook stocks include fall, late-fall, winter, and spring stocks of the Sacramento and San Joaquin rivers and their tributaries. Two of these stocks are listed under the ESA: (1) Sacramento River winter Chinook, listed as endangered in January 1994; and (2) Central Valley spring Chinook, listed as threatened in September 1999.

#### *Management Objectives*

The following conservation objectives guided Council management of Central Valley Chinook salmon stocks in the 2010 fisheries: (1) for SRFC, an escapement goal of 122,000 to 180,000 hatchery and natural area adults, including additional NMFS guidance to target the upper end of the escapement goal range; and (2) for Sacramento River winter and Central Valley spring Chinook, the ESA consultation standard concerning the duration and timing of the commercial and recreational ocean salmon fisheries south of Point Arena, as well as additional NMFS guidance on recreational size limits directed at reducing mortality of Sacramento River winter Chinook. Harvest impacts on Central Valley Chinook were a primary management concern in fisheries south of Cape Falcon, Oregon

#### **Regulations to Achieve Objectives**

Season and size limit details are presented in Tables I-1 and I-3.

#### *Commercial*

California commercial fisheries were heavily constrained in 2010, primarily to allow for the projected attainment of the SRFC conservation objective. There were only eight days open to commercial fishing south of Point Arena in 2010. Those eight days and quota fisheries of 18,000 and 9,375 were allowed in the Fort Bragg area, and the California portion of the KMZ was closed. Fisheries between Cape Falcon and the OR/CA border delayed opening until May 1, and the Oregon portion of the KMZ was closed in June.

#### *Recreational*

Recreational seasons and size limits were structured to meet the Sacramento River winter and Central Valley spring Chinook ESA consultation standard. In addition to the consultation standard, the minimum size limit for recreational fisheries south Point Arena was 24 inches total length for the period from May 1 through September 6 to comply with 2010 NMFS guidance pertaining to Sacramento River winter Chinook (Chapter I, Regulatory Objectives by Management Area, Horse Mountain to U.S./Mexico Border). The minimum size limit between Point Arena and Horse Mountain was also increased to 24 inches to provide statewide consistency.

Recreational fisheries opened on April 3<sup>rd</sup> south of Horse Mountain, May 29<sup>th</sup> (Memorial Day weekend) in the KMZ, and May 1 between Cape Falcon and Humbug Mt. All recreational fisheries south of Cape Falcon continued through September 6 (Labor Day); however, fisheries south of Point Arena were closed Tuesdays and Wednesdays beginning in May to help achieve the 2010 SRFC spawning escapement objective of 180,000 hatchery and natural area adults.

### *Inside Harvest*

Recreational angling for salmon in Central Valley rivers was structured, in part, to result in a harvest of 8,200 adult SRFC; a mosaic of closures in Central Valley rivers were implemented to achieve this catch expectation. An estimate of SRFC harvest in 2010 Central Valley river fisheries was not available at the time of publication.

Since 1990, regulations have closed the mainstem Sacramento River to retention of salmon from January 15 to July 15, a period when winter Chinook adults are thought to be most abundant. Beginning in 2004, the retention closure was enacted earlier, on January 1 from the Carquinez Bridge to Red Bluff, in response to recovery of winter Chinook coded-wire-tags (CWTs) in the sport fishery. Owing to low Chinook escapement to the Stanislaus, Tuolumne, and Merced rivers during the last decade, the majority of the San Joaquin River has been closed to recreational salmon fishing.

### *Escapement and Management Performance*

Chinook catch in all commercial and recreational fisheries south of Cape Falcon were below preseason expectations. Overall, commercial Chinook fisheries caught about 47 percent of preseason expectations and recreational Chinook fisheries caught about 33 percent of preseason expectations (Table I-7).

### **Sacramento River Fall Chinook**

Under the 2010 regulations, the projected spawning escapement in the Sacramento River Basin was 180,000 hatchery and natural area fall Chinook adults. A total of 125,353 hatchery and natural area SRFC adults were estimated to have returned to the Sacramento River basin for spawning in 2010 (Table II-1, Figure II-1). The 2010 adult escapement estimate is slightly higher than the lower bound of the FMP conservation objective of 122,000 to 180,000 hatchery and natural area adults, and comes one year after the lowest escapement estimate on record. In 2009, SRFC failed to meet the lower bound of the conservation objective for the third consecutive year, thereby triggering an Overfishing Concern under the terms of the FMP.

Fall Chinook returns to Sacramento River hatcheries in 2010 totaled 39,702 adults, and escapement to natural areas was 85,651 adults. Available data indicate hatchery-produced fish constitute a large portion of the Sacramento River naturally spawning fall Chinook population. Table II-1 and Figure II-1 display historical natural and hatchery fall spawner escapement estimates. For a more detailed breakdown of the historical escapement see Appendix B, Tables B-1 and B-2.

### **Sacramento River Winter and Spring Chinook**

Spawner escapement of endangered winter Chinook salmon in 2010 was estimated to be 1,555 adults and 41 jacks. This estimate is derived from a carcass survey conducted on the upper Sacramento River and includes winter Chinook captured in the Keswick trap, which provides broodstock to Livingston Stone National Fish Hatchery. Spawner escapement estimates derived from Red Bluff Diversion Dam counts have been made since 1967, and from 1987 to 2008 the estimates were derived by expanding counts made during the period of dam operation (which overlaps with approximately 15 percent of the winter run migration period). In 2009 and 2010 the period of dam operation was delayed by one month which did not allow for a winter run escapement estimate to be made based on Red Bluff Diversion Dam passage (the gates at Red Bluff Diversion Dam were down beginning on June 15, whereas the gates are down typically on May 15). However, even during years with typical Red Bluff Diversion Dam operation timing, the estimates from the carcass survey are considered to better represent winter run spawner escapement owing to the small proportion of the winter run migration sampled during the Red Bluff Diversion Dam operation period.

Escapement of spring Chinook to the Sacramento River system in 2010 totaled 4,612 fish (jacks and adults), most of which (an estimated 2,951 fish) returned to upper Sacramento River tributaries; the remaining 1,661 fish returned to the Feather River Hatchery. No estimate of spring Chinook escapement to the upper mainstem Sacramento River could be made in 2010 due to the changes in Red Bluff Diversion Dam operation described above. The method used to estimate the spring Chinook return to the Feather River Hatchery was modified in 2005. In previous years, the estimate was equal to the number of Chinook that entered the hatchery during the early period of Chinook spawning. From 2005 through 2010, prior to the spring run spawning period, fish that entered the hatchery were tagged and returned to the river; the number of tagged fish that re-entered the hatchery during the spring run spawning period was used as the estimate of spring Chinook escapement in the Feather River. The fish that were tagged at the hatchery and returned to the river but did not re-enter the hatchery during the spawning period were counted in the natural fall run survey and reported as Feather River fall Chinook. The natural area spawner surveys in the Feather River are not currently capable of separating the spring and fall runs.

Historical spawner escapements for Sacramento River winter and spring Chinook salmon are presented in Appendix B, Table B-3.

### **San Joaquin River Fall Chinook**

San Joaquin River spawning areas are used primarily by fall Chinook. The estimated San Joaquin River fall Chinook spawning escapement in 2010 totaled 4,937 jacks and adults in natural areas and 5,422 jacks and adults to hatcheries (Appendix B, Tables B-1 and B-2 provide historical spawner escapements). Salmon production in the San Joaquin River is determined largely by spring outflows three years earlier. Since 1986, spawner returns to the San Joaquin River have constituted less than 10 percent of the total Central Valley escapement for fall run Chinook.

## **NORTHERN CALIFORNIA COAST CHINOOK STOCKS**

Northern California stocks include fall and spring stocks north of the entrance to San Francisco Bay. Primary river systems in this area are (from north to south) the Smith, Klamath, Mad, Eel, Mattole, and Russian rivers. Coastal Chinook stocks south of the Klamath River were listed as threatened under the ESA in September 1999.

### ***Management Objectives***

The KRFC conservation objective, and Council guidance for this stock, primarily influenced management of northern California Chinook salmon stocks in the 2010 fisheries. KRFC were managed in accordance with Council guidance calling for a maximum adult natural spawner reduction rate of 67 percent, with a minimum spawner escapement of 40,700 adults in natural areas. The minimum spawner escapement was raised from 35,000 to 40,700 for 2008, 2009, and 2010 in response to the triggering of an Overfishing Concern after failing to meet the 35,000 spawner escapement floor for three consecutive years (2004, 2005, and 2006). The available harvest of KRFC was shared equally between non-tribal and tribal fisheries (tribes with Federally-recognized fishing rights). KRFC also provided the basis for the NMFS ESA consultation standard for California coastal Chinook, which limits the ocean harvest rate on age-4 KRFC to no more than 16.0 percent.

### **Regulations to Achieve Objectives**

To achieve the management objectives for KRFC, the adopted regulations were designed to result in: (1) a Klamath River run of 110,700 fall Chinook adults, resulting in a spawner escapement of 40,700 adults to natural areas, taking into account projected river fishery impacts of 49,800 adults and returns to basin hatcheries; (2) 50 percent (34,600) of the allowable adult harvest for tribal subsistence and commercial fisheries; (3) 34.6 percent (12,000) of the non-tribal harvest to the Klamath River recreational fishery; and (4) 15.2 percent (approximately 3,400 fish) of the ocean harvest to the KMZ recreational

fishery. The age-4 ocean harvest rate resulting from the above configuration was forecast to be 12.3 percent. Season and size limit details are presented in Tables I-1 and I-3.

### *Commercial*

Commercial fisheries south of Cape Falcon were constrained during the spring and summer months primarily to meet the 2010 management objective for SRFC of 180,000 adult spawners and the ESA consultation standard for LCR natural tule Chinook of a total exploitation rate of no more than 38 percent. Limited opportunities in the Oregon KMZ and Fort Bragg were intended to harvest available KRFC when SRFC abundance was relatively low. Fisheries with quotas of 1,500 in July and 1,500 in August occurred in the Oregon KMZ. Fisheries with quotas of 18,000 July (15-29) and 9,375 in August occurred in Fort Bragg.

No fall commercial fisheries (September-December) were established in Council area waters south of Cape Falcon in 2010 due to concern over the status of SRFC and because KRFC remains in a rebuilding plan, which requires restricting fall fisheries opportunity. State waters only terminal commercial fisheries were allowed in three areas in Oregon (Table I-1).

### *Recreational*

Recreational fisheries south of Cape Falcon were permitted in the KMZ from Memorial Day weekend through Labor Day weekend. Fall fisheries were not permitted in Council area waters south of Cape Falcon after September 6 due to concern over the status of SRFC and because KRFC remains in a rebuilding plan. State waters only terminal commercial fisheries were allowed in three areas in Oregon (Table I-3).

### *Inside Harvest*

Yurok and Hoopa tribes shared a federally reserved right of 50 percent (34,600) of the available harvest surplus of adult Klamath fall Chinook. The State of California managed the river recreational fishery under a 12,000 adult fall Chinook quota. Tribal adult harvest was 29,966, which was 87 percent of the quota (Appendix B, Table B-5). The estimated recreational fishery harvest was 3,035 adult fish, which was 25 percent of the quota. Harvest estimates from streams outside the Klamath River Basin were not available.

### *Escapement and Management Performance*

The commercial quota fisheries in the Oregon portion of the KMZ attained only 3 percent and 8 percent of their July and August quotas, respectively, and the Fort Bragg commercial quota fisheries achieved 25 and 66 percent of their July and August quotas, respectively (Table I-6).

### **Threatened California North Coast Chinook**

Historical indices of spawner abundance, or actual spawning escapement estimates, for Chinook salmon in California coastal streams outside of the Klamath River Basin are limited. cursory, nonsystematic surveys are conducted on one tributary of the Mad River and two tributaries of the Eel River. Video counts of Chinook passage at Mirabel Dam on the Russian River have been conducted since 2000 (Appendix B, Table B-7).

The 2010 preseason forecast of the KRFC age-4 ocean harvest rate was 12.3 percent (the ESA consultation standard for California Coastal Chinook is no more than 16.0 percent). The postseason evaluation of the 2010 KRFC age-4 ocean harvest rate was not available in time for this report.

## **Klamath River Fall Chinook**

The 2010 preliminary postseason river run size estimate for KRFC was 90,972 adults compared to the preseason predicted ocean escapement (river run size) of 110,700 adults. The escapement to natural spawning areas was 37,221 adults, which was 91 percent of the preseason prediction of 40,700 adults. The estimated number of hatchery returns was 18,050 adults. Table II-2, Figure II-2, and Appendix B, Table B-4 present historical harvest and escapement data for KRFC.

Spawning escapement to the upper Klamath River tributaries (Salmon, Scott, and Shasta Rivers), where spawning was only minimally affected by hatchery strays, totaled 5,850 adults. The Shasta River has historically been the most important Chinook salmon spawning stream in the upper Klamath River, supporting a spawning escapement of 30,700 adults as recently as 1964, and 63,700 in 1935. The escapement in 2010 to the Shasta River was 1,259 adults, while escapement to the Salmon and Scott Rivers was 2,113 and 2,478 adults, respectively (Appendix B, Table B-6).

## **OREGON COAST CHINOOK STOCKS**

Oregon coast Chinook stocks include all fall and spring stocks from Oregon streams south of the Columbia River. These stocks are categorized into two major subgroups based on ocean migration patterns. Although ocean harvest distributions overlap somewhat, they are categorized as either north or south/local migrating. North migrating Chinook stocks include stocks north of and including the Elk River, with the exception of Umpqua River spring Chinook. South/local migrating Chinook stocks include Rogue River spring and fall Chinook, Umpqua River spring Chinook, and fall Chinook from smaller rivers south of the Elk River.

Based on CWT analysis, the populations from 10 major north Oregon coast (NOC) river systems from the Nehalem through the Siuslaw Rivers are harvested primarily in PSC ocean fisheries off B.C., SEAK and Oregon terminal area fisheries. NOC stocks are harvested to a much lesser degree, in Council area fisheries off Washington and Oregon. Analysis of CWTs indicates the populations from five major mid-Oregon coast (MOC) systems between the Coos and the Elk Rivers are harvested primarily in ocean fisheries off B.C., Washington, Oregon and terminally. Minor catches occur in California fisheries and variable catches in SEAK troll fisheries. South/local stocks are important contributors to ocean fisheries off Oregon and northern California. Another central Oregon stock, Umpqua River spring Chinook, contributes primarily to ocean fisheries off Oregon and California, and to a lesser degree, off Washington, B.C., and SEAK.

### ***Management Objectives***

The conservation objective for Oregon coast Chinook was an aggregate of 150,000 to 200,000 natural adult spawners, as indicated by peak spawner counts of 60 to 90 fish per mile in standard index surveys. This stock has been an abundant stock historically, therefore preseason abundance estimates were not developed for this stock, and it has not been of critical management concern. ESA consultation standards for OCN coho, LCN coho, and California Coastal Chinook, and KRFC management objectives generally result in reduced Council-area ocean fishery impacts on Oregon south/local migrating Chinook stocks. Council area Chinook fisheries have minor impacts on most of the stocks originating from the NOC, which have a northerly marine distribution pattern.

### **Regulations to Achieve Objectives**

The areas of primary management concern for ocean fisheries impacting Oregon coast Chinook vary between the north and south/local migrating stocks, although there is some overlap. Preseason abundance estimates were not available for Oregon coast Chinook; however, based on postseason abundance indicators, Council area fisheries impacts on this stock have not significantly affected objective achievement in recent years.

For the 2010 Oregon State-waters terminal area fisheries, conservative regulations were adopted with the intention of reducing impacts on these stocks. These regulations included season quotas, daily and weekly landing limits in commercial fisheries, and reduced daily and season bag limits and partial mark-selective restrictions in recreational fisheries (Tables I-1 and I-3).

### *Inside Harvest*

Inside recreational harvest of fall and spring Chinook occurred in most Oregon coastal estuaries and rivers. For the 2010 fisheries, conservative regulations were adopted with the intention of reducing impacts on many of these stocks. Complete estimates of the 2010 recreational Chinook harvest in freshwater areas were not available. Historical estimates of the recreational harvest of fall and spring Chinook, derived from Oregon Department of Fish and Wildlife (ODFW) salmon and steelhead angler catch record cards are reported in Table II-3.

### *Escapement and Management Performance*

The overall quota for the three fall terminal area commercial fisheries was 2,350 Chinook. The catch estimate for those fisheries was 1,912 Chinook.

Under the 2010 regulations, the STT expected the aggregate conservation objective for this stock would be met with the constraints required for SRFC and LCN coho. Actual escapement was not estimated for the Oregon Coast Chinook stock aggregate; achievement of the aggregate 150,000 to 200,000 naturally spawning adults was assessed through peak spawner index counts of 60 to 90 adults per mile in nine index streams and included both spring and fall Chinook. Peak spawner index counts were based on traditional non-random surveys (e.g., stream surveys, dam counts, etc.). ODFW is developing alternate methodologies for establishing escapement goals for Oregon coastal Chinook stocks, including fall Chinook PSC indicator stocks. Upon completion of this process, the escapement goals and assessments for these stocks will likely change.

### **North Migrating Chinook**

An index of adult spawners (peak count per index mile) in nine standard streams was used to measure natural spawner escapement trends for north migrating fall Chinook. Data have been collected since about 1950 for most systems. Overall peak Chinook adult index spawner counts in 2010 were preliminarily estimated at 87 adults per mile, within the goal range of 60 to 90 adults per mile (Table II-4, Figure II-3).

### **South/Local Migrating Chinook**

Standard fall Chinook spawning index escapement data for the smaller southern Oregon coastal rivers (south of the Elk River) were available for the Winchuck, Chetco, and Pistol Rivers (Appendix B, Table B-8). Rogue River carcass counts were used as an indicator of trends in escapement for naturally produced fall Chinook, but these surveys have not been conducted since 2004 (Table II-4). Therefore, two trend indicators of escapement for naturally produced spring Chinook were utilized: (1) Rogue River counts at Gold Ray Dam, and (2) Umpqua River counts at Winchester Dam (Table II-4). Escapements based on these indicators were an increase for the 2010 returns over recent years' returns (Figures II-3 and II-4). The aggregate Oregon coast goal of 150,000 to 200,000 naturally spawning Chinook adults was probably met in 2010.

## **COLUMBIA RIVER BASIN CHINOOK STOCKS**

Columbia River Basin Chinook salmon stocks include fall, summer, and spring stocks. NMFS has listed five Chinook ESUs within the Columbia Basin under the ESA, (1) Snake River wild (SRW) fall Chinook

listed as threatened April 1992; (2) Snake River spring/summer listed as threatened April 1992; (3) upper Columbia River spring listed as endangered March 1999; (4) lower Columbia River listed as threatened March 1999; and (5) upper Willamette River spring listed as threatened March 1999.

The assessment below covers five major stock groups of Columbia River Basin fall Chinook: lower river hatchery (LRH) tule stock and lower river wild (LRW) bright stock, both of which are part of the ESA-listed lower Columbia River Chinook ESU; Spring Creek Hatchery (SCH) tule stock; upriver bright (URB) stock, which includes the ESA-listed Snake River fall Chinook ESU; and mid-Columbia bright (MCB) hatchery stock. Management details for Columbia River spring and summer Chinook stocks are not discussed, since Council-managed ocean salmon fisheries have very limited impacts on these stocks (less than a 2 percent exploitation rate in base-period fisheries). Appendix B, Tables B-12 through B-19, contain historical harvest and escapement data for fall, summer, and spring stocks. Appendix B, Table B-20 summarizes catch information for all three Chinook runs in the Columbia Basin. Additional information on these stocks can be found in the *Joint Staff Report: stock status and fisheries for spring Chinook, summer Chinook, sockeye, steelhead, and other species and miscellaneous regulations* and the *Joint Staff Report concerning the fall in-river commercial harvest of Columbia River fall Chinook, summer steelhead, coho salmon, chum salmon, and sturgeon* published annually by the joint staffs of ODFW and WDFW.

### ***Management Objectives***

Council-area fisheries north of Cape Falcon in 2010 were managed to access SCH and LRH stocks while meeting the NMFS ESA consultation standards for the ESA-listed lower Columbia River Chinook ESU (both LCR natural tules and LRW) and SRW fall Chinook ESU. The standard for ESA-listed lower Columbia River natural tules was a total (ocean plus inriver) AEQ exploitation rate of no more than 38.0 percent. For preseason modeling, the estimated total exploitation rate on a composite of Washougal, Kalama, Cowlitz, and Big Creek hatchery tules was used as a surrogate for natural tules. The NMFS ESA consultation standard for LRW is a North Lewis River fall Chinook spawning escapement of 5,700; the preseason forecast was for an escapement of 10,000. The standard for the SRW ESU was no less than a 30.0 percent reduction in the Snake River Fall Index (SRFI) from the 1988 through 1993 base period exploitation rate for all ocean fisheries combined.

In 2010, allowable catch of Chinook was substantially increased due to the strong abundance of tule Chinook from Spring Creek Hatchery. The NMFS ESA consultation standard for the threatened LCR tule Chinook was the primary constraint on Council-area Chinook fisheries north of Cape Falcon, and to a lesser extent, south of Cape Falcon.

### **Regulations to Achieve Objective**

Fisheries north of Cape Falcon are managed with quotas to help ensure impacts to stocks do not exceed allowable limits and to ensure allocation objectives are met. The overall non-Indian Chinook total allowable catch (TAC) was 117,000, including a 12,000 mark selective Chinook quota for a portion of the recreational fishery; the equivalent non-mark-selective TAC was 110,000. These compare to a 2009 non-Indian TAC of 41,000 Chinook. The 2010 overall TAC was divided into 56,000 commercial and 61,000 recreational. The treaty Indian ocean troll TAC was 55,000 Chinook, and is applicable to the May-September period. This compares to a 2009 treaty Indian TAC of 39,000.

### ***Commercial***

Non-Indian commercial fisheries north of Cape Falcon included a Chinook directed fishery in May and June initially open seven days per week with no landing limit. Three-fourths of the overall non-Indian commercial Chinook quota north of Cape Falcon was allotted to the May-June time period to increase opportunity when Chinook were more available to the fishery. The typical allotment is two-thirds of the



total troll quota to the May-June time period. Inseason action was taken to limit the days per week and institute landing and possession limits toward the end of the season to ensure the quota of 42,000 Chinook was not exceeded.

The non-Indian commercial all salmon fishery was scheduled for July 1 through September 14 with preseason quotas of 14,000 Chinook and 11,800 marked coho. Inseason action was taken to transfer 2,700 Chinook remaining from the May-June commercial fishery quota and to transfer 1,650 and 1,000 Chinook from the north of Cape Falcon recreational fishery after adjusting for stock specific impact differences associated with different time periods and incidental mortality rates.(impact neutral basis). The fishery was closed September 7 prior to the scheduled closure of September 14 to ensure the Chinook final quota of 19,350 was not exceeded. The fishery was open Friday through Tuesday most weeks with various landing and possession limits for each open period. In addition, vessels were restricted to fishing and landing catch either north or south of Leadbetter Point during any one open period.

### *Recreational*

The recreational fisheries north of Cape Falcon included a June mark-selective Chinook fishery, the first mark-selective Chinook fishery in Council managed waters. The quota for that fishery was 12,000 marked Chinook, equivalent to a 5,000 non-mark-selective quota.

The summer all-salmon fisheries north of Cape Falcon started with a one Chinook bag limit, but inseason action was taken in July to allow two Chinook to be retained. Inseason action was also taken in July to allow the Westport, La Push, and Neah Bay subareas to open seven days per week; the Columbia River subarea was initially open seven days per week. All four subareas were able to close as scheduled, before exceeding their quotas for Chinook or coho. Inseason action was taken to transfer 2,500 and 1,500 Chinook to the non-Indian commercial fishery on an impact neutral basis in exchange for 7,000 marked coho for the Columbia River subarea recreational fishery.

### *Treaty Indian*

Treaty Indian ocean fisheries were similar in structure to recent years, with a May-June Chinook directed fishery and a July 1 to September 15 all salmon fishery. Chinook quotas were 27,500 in each fishery, and the coho quota in the all-salmon fishery was 41,500. Both fisheries closed as scheduled without exceeding any of their quotas.

### *Inside Harvest*

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. versus Oregon* parties. In 2008, a new 10 year management agreement was negotiated through the *U.S. versus Oregon* process, which included revisions to some inriver objectives. In particular, the "*2008-2017 U.S. v Oregon Management Agreement*" (2008-2017 MA) specified that with run sizes of at least 200,000 URB, including at least 6,000 SRW fall Chinook, the allowable URB impact rate would be 38 percent. NMFS used the URB impact rate as a proxy in the SRW consultation standard.

In 2010, the fall fisheries were managed to achieve the NMFS ESA consultation standards for threatened LCR natural tule and SRW Chinook.

Harvestable surplus was projected for all major fall stocks in 2010. The postseason fall Chinook run reconstruction, however, was not completed in time for this report. The preliminary catch estimate for the non-Indian commercial gillnet fisheries were 39,949 spring, 4,740 summer, and 45,393 fall Chinook, which included 26,142 spring, 20 summer, and 12,712 fall Chinook in Select Area (terminal) fisheries.

The preliminary catch estimates for the treaty Indian fisheries were 37,815 spring, 15,569 summer, and 131,503 fall Chinook. The preliminary catch estimate for the recreational fisheries included 6,393 fall Chinook in the Buoy 10 fishery, and 29,735 spring, 2,738 summer, and 16,600 fall Chinook in mainstem fisheries below Bonneville Dam, 3,512 spring Chinook in mainstem fisheries above Bonneville Dam, and 11,209 fall Chinook in the Hanford Reach fishery above McNary Dam (Appendix B, Table B-20).

### *Escapement and Management Performance*

All Columbia River fall stocks met their escapement objectives (Table II-5). Preliminary estimates of river mouth returns based on inseason run updates were: 86,245 LRH; 9,971 LRW; 123,037 SCH; 255,492 URB; and 68,765 MCB. Estimates for SRW were unavailable. The total ocean escapement of the five stocks was 556,191 fall Chinook (Figure II-5).

The 2010 URB and SRW run sizes were both large enough to allow a 38 percent harvest rate per the 2008-2017 MA. The preliminary URB harvest rate estimate was 36.02 percent. No specific escapement goal was established for the ESA-threatened Snake River wild fall Chinook stock. Because nearly all spawning of this stock occurs upstream from Lower Granite Dam, establishing a spawning escapement goal at Lower Granite Dam would be appropriate. In the *Proposed Recovery Plan for Snake River Salmon*, NMFS has proposed a delisting goal for Snake River fall Chinook that provides for an eight-year (approximately two generation) geometric mean of at least 2,500 natural origin spawners in the mainstem Snake River annually; the eight-year mean through 2009 was 2,494. The total adult fall Chinook count at Lower Granite Dam in 2010 was 41,815 up from 15,167 in 2009. A significant portion of recent year years returns were from supplementation programs. An estimate of SRW fall Chinook spawning escapement in 2010 was not available for this report.

All Council area fisheries north of Cape Falcon were closed before exceeding their final quotas. Postseason estimates of exploitation rate on Columbia River natural tule or SRW for ocean fisheries were unavailable.

## **WASHINGTON COASTAL CHINOOK STOCKS**

Washington coastal Chinook stocks include all fall, summer, and spring stocks from coastal streams north of the Columbia River through the western Strait of Juan de Fuca (west of the Elwha River, inclusive). This complex consists of several natural stocks, generally of small to medium-sized populations, and some hatchery production (primarily Willapa Bay and Quinault River). Coastal stocks are not impacted significantly by Council-area ocean fisheries.

### *Management Objectives*

Willapa Bay natural fall Chinook do not have a conservation objective defined in the Salmon FMP, although WDFW has a spawning escapement objective of 4,350 natural Chinook, which is based on peak density estimates and watershed area.

Spawning escapement goals for natural stocks managed within this complex north of Willapa Bay, established in U.S. District Court by WDFW and the treaty Indian tribes, were recognized in the Council's FMP conservation objectives. Objectives for Grays Harbor and the North Coast river systems were established pursuant to the U.S. District Court order in *Hoh versus Baldrige*. However, annual natural spawning escapement targets may vary from the FMP conservation objectives if agreed to by WDFW and the treaty Indian tribes under the provisions of *Hoh versus Baldrige* and subsequent U.S. District Court orders. After agreement is reached on the annual targets, ocean fishery escapement objectives are established for each river, or region of origin, which include provisions for treaty Indian allocation and inside non-Indian fishery needs. No agreements on annual spawning targets for Washington coastal Chinook other than those in the FMP were made in 2010.

## **Regulations to Achieve Objectives**

Preseason abundance forecasts for some Washington coastal Chinook stocks were available for the first time in 2008 for the Council preseason management process. However, base period Council area ocean fishery AEQ exploitation rates of 5 percent or less for these stocks were below a management threshold that allows effective Council management of these stocks, and therefore they qualified as exceptions to the Council's overfishing criteria. Because Council area fishery impacts to Washington coastal Chinook stocks are negligible, ocean regulations are not generally used to manage these stocks. The only Council area regulation affecting any of these stocks was closing the Grays Harbor Control Zone in August and September for the recreational fishery.

### ***Willapa Bay Chinook***

#### **Inside Harvest**

Run size, harvest, and escapement data for Willapa Bay fall Chinook are presented in Appendix B, Table B-23.

No Chinook-directed non-Indian gillnet fishery was conducted during July 2010. This fishery is commonly referred to as the "summer dip-in" fishery; it occurs irregularly because historically it was dependent on Columbia River tule abundance, which now include the ESA-listed LCR natural tule stock. This fishery was generally assumed to harvest Columbia River tule stocks in a mix similar to adjacent ocean area catches; however, in light of recent catch composition information (>70 percent local Willapa Bay and Grays Harbor origin stock) this assumption has been questioned.

The 2010 pre-season forecast of Chinook returning to Willapa Bay was 33,157 fish (2,023 natural and 31,134 hatchery). There were two 24 hour Chinook-directed fisheries in August 2010. However, retention of unmarked Chinook was prohibited in August and September. Chinook harvest in coho-targeted gillnet fisheries during 2010 totaled 6,903 fish, based on preliminary data.

Recreational fisheries in the marine waters of Willapa Bay were open from July 4 through July 31, 2010 concurrent with the Ocean Marine Area 2 (ocean rules applied). From August 1, 2010 through January 31, 2011, Willapa Bay was open to recreational fishing with no more than three adults allowed to be harvested daily. Barbed hooks were not allowed when fishing for salmon. Retention of chum and unmarked Chinook was prohibited.

Recreational salmon fisheries in tributaries to Willapa Bay varied in duration but were generally open August 1, 2010 through January 31, 2011. Retention of unmarked Chinook was prohibited except in the Naselle River, where two unmarked adult Chinook could be retained. Single-point, barbless hooks were required in all areas except for the Naselle River. Recreational harvest estimates were not available for 2010.

#### **Escapement and Management Performance**

During 2009, Chinook returning to hatcheries in the Willapa Bay watershed totaled 20,333 fish. Based on current hatchery production, this return was sufficient to achieve the goal of 9,800 total Chinook escapement to Willapa Bay hatchery facilities. An escapement estimate was unavailable for 2010.

The WDFW escapement goal for naturally spawning Chinook in Willapa Bay was 4,350 adults. An estimate of the 2010 natural spawning escapement was not available (the 2009 natural escapement was 2,251 Chinook). An estimated 1,486 natural Chinook were harvested in commercial and recreational fisheries in 2010, above the preseason expectation of 850.

## *Grays Harbor Chinook*

### **Inside Harvest**

Run size, harvest, and escapement data for Grays Harbor Chinook are presented in Appendix B, Table B-25.

Spring Chinook sales were prohibited in the Chehalis Tribe commercial gillnet fishery. On the Chehalis River and the Humptulips commercial fishing Area 2C, the Quinault Indian Nation conducted a spring/summer commercial gillnet fishery with mesh restrictions to reduce impacts on spring Chinook while targeting white sturgeon. The recreational season was also closed to spring Chinook retention in Grays Harbor. No summer non-Indian gillnet fishery directed at non-local Chinook stocks occurred in 2010.

The non-Indian gillnet fishery in Humptulips commercial Area 2-C had six open periods in September for a total of 15 fishing days. Retention of fall Chinook and marked coho was allowed. Live boxes were required and unmarked coho could not be retained. Catches totaled 1,217 Chinook and 672 coho. The non-Indian gillnet fishery in the Chehalis River commercial Areas 2A and 2D was open for 2 days in October; live boxes were required, and Chinook could not be retained.

The recreational fishery in Marine Area 2-2 was open from September 16 through November 30, with Chinook and chum retention prohibited. The recreational fishery in the Chehalis River was closed to Chinook retention. In the recreational Humptulips River fishery from the mouth to Hwy 101 Bridge, retention of Chinook was allowed from September 16 through January 31. Recreational harvest estimates were not available.

The Quinault Indian Nation fall gillnet fishery harvested a total of 3,403 fall Chinook in two separately scheduled areas: the first in the lower Humptulips River and adjacent Area 2C of Grays Harbor and the second in the lower Chehalis River and adjacent areas of Grays Harbor, Areas 2D, 2A, and 2A-1. Fishing was restricted to east of Stearns Bluff in the Chehalis River, and Areas 2D, 2A, and 2A-1 to limit catches of Chinook, which tend to concentrate in deep areas off the mouths of the Johns and Elk Rivers. The Humptulips area treaty Indian gillnet fishery caught 1,951 fall Chinook, which was 83.9 percent of the preseason expected catch level. The Quinault Tribal gillnet fishery in the Chehalis River caught 1,452 fall Chinook, which was 70.6 percent greater than the preseason expected catch level. The Quinault treaty Indian gillnet fishery in the Chehalis River caught 1,452 fall Chinook which was 70.6 percent over the preseason expected catch level.

### **Escapement and Management Performance**

Chehalis River spring Chinook are of natural origin and managed for an escapement goal of 1,400 adults. The 2010 terminal run forecast for spring Chinook was 909 adult fish; an escapement estimate was not available for the 2010 return. The 2009 final escapement estimate was 1,132.

Grays Harbor fall Chinook were managed for a natural spawning escapement goal of 14,600 adults. The 2010 Grays Harbor fall Chinook forecast was 19,167 natural and 2,404 hatchery adults. Natural and hatchery escapement estimates for 2010 were unavailable. The total spawning ground escapement estimate for 2009 was 7,215, which included some hatchery origin fish. The established hatchery escapement goals for Grays Harbor are 578 for the Chehalis River, which was not achieved in 2009, and 369 for the Humptulips River, which was achieved in 2009.

## *Quinault River Chinook*

### **Inside Harvest**

Historical terminal gillnet harvest data for Quinault River Chinook stocks are presented in Appendix B, Table B-27.

A run of natural spawning spring/summer Chinook enters the river from April through July. The spring/summer Chinook run is typically small and any harvest is taken incidentally during fisheries directed at sockeye and steelhead. Less than 20 spring/summer Chinook were harvested in 2010.

The 2010 harvest of Quinault River fall Chinook was mostly hatchery origin fish taken in September and October. The treaty Indian net catch totaled 4,521 fall Chinook.

### **Escapement and Management Performance**

Quinault fall Chinook were managed for hatchery production. The 2010 fall Chinook spawning escapement estimate was not available. Hatchery fall Chinook egg-take goals for the Quinault River were attained at the Lake Quinault tribal hatchery.

## *Queets River Chinook*

### **Inside Harvest**

Historical terminal run size, catch, and escapement data for Queets River spring/summer and fall Chinook are presented in Appendix B, Tables B-29 and B-30, respectively.

The treaty Indian gillnet harvest of spring/summer Chinook remained closed during the spring/summer period through the last week of August. The non-Indian in-river recreational fishery was closed to retention of Chinook.

Fall Chinook were harvested from August 29 through November 4 by the treaty Indian fall gillnet fishery. The treaty Indian fishery was structured to target hatchery and natural coho while also harvesting Chinook at a total tribal plus non-tribal harvest rate of 40 percent. The treaty Indian gillnet fishery harvested 1,723 fall Chinook in the commercial fishery compared to a preseason expected catch of 1,635. Recreational fisheries targeted coho and Chinook during standard schedules in the Queets and Clearwater Rivers. The on-reservation Salmon River recreational harvest was limited to retention of coho. Only mark-selective Chinook retention was allowed for recreational fisheries within Olympic National Park waters. Catch estimates for recreational fisheries were not available.

### **Escapement and Management Performance**

The 2009 spawning escapement estimate for Queets River spring/summer Chinook was 495 adults, about 70 percent of the minimum escapement goal of 700. The 2010 escapement was not available.

The 2010 fall Chinook spawner survey escapement estimate was not available; however, total fall Chinook escapement is expected to be above the minimum escapement goal of 2,500. High flow conditions during Chinook spawning may adversely affect the quality of escapement estimates based on spawning ground surveys. Catch sampling suggests the proportion of natural and “indicator” Chinook (reared and released from the Salmon River hatchery) may have been close to the preseason prediction. The indicator Chinook originate from wild broodstock taken each year in the river.

## *Hoh River Chinook*

### **Inside Harvest**

Historical terminal run size, catch, and escapement data for Hoh River spring/summer and fall Chinook are presented in Appendix B, Tables B-32 and B-33, respectively.

The 2010 Hoh River spring/summer Chinook terminal abundance forecast was 814 fish, 86 fish below the escapement goal of 900. The treaty Indian gillnet fishery occurred between the weeks of May 3 and the week of July 5, and was scheduled for two days per week in weeks 19-23 and one day per week in weeks 24-27, targeting 7.9 percent (including ceremonial and subsistence catch) of the forecasted run. Tribal regulation in 2010 required a minimum of 8 inch stretch mesh during the first four weeks in order to minimize incidental take of steelhead kelts. The treaty Indian gillnet fishery harvested 107 Chinook. Results of mark sampling and scales indicated that 83 of these were of hatchery origin (24 natural). The non-Indian recreational fishery operated from May 16 through August 31, Wednesdays through Sundays, with a bag limit of one marked adult per day from the mouth to Willoughby Creek. A preliminary estimate of Chinook taken in the sport fishery was not available. Retention of un-marked fish was not allowed this year.

Hoh River fisheries for fall Chinook were based on an expected terminal run size of 3,250 adults, allowing for a terminal harvest rate of 40 percent. The spawning escapement was expected to be 1,950 adults.

The treaty Indian fishery targeted 25.5 percent of the terminal run. The treaty Indian gillnet fishery was scheduled for two days per week during weeks 36, 37, and 44-50, and three days per week in weeks 38-43, 51, and 52. The treaty Indian fishery caught approximately 342 Chinook out of an expected catch of 799. Results of mark sampling indicated that 308 of these were of natural origin. Coded-wire tag data were not available.

The non-Indian recreational fishery extended from September 1 through November 30, with the river below Willoughby Creek open and a daily-bag-limit of six salmon, two of which could be adults. The portion of the river between Willoughby Creek and Morgan's Crossing was open October 16 through November 30. The delayed opening was to reduce impacts on spawning spring/summer Chinook in that reach. The river above Morgan's Crossing was closed to recreational salmon fishing. A catch estimate was not available for the recreational fishery.

### **Escapement and Management Performance**

The 2010 spawning escapement for Hoh River spring/summer Chinook was estimated at 828 adults, approximately 72 fish lower than the 900 fish escapement floor established for this stock. However, this escapement was 78 fish higher than expected preseason.

The preliminary 2010 spawning escapement estimate for Hoh River fall Chinook was 2,347. The escapement goal is the greater of 60 percent of the terminal run or 1,200; for 2010 the goal was 1,950. Tribal catch was below expected harvest rates.

## *Quillayute River Chinook*

### **Inside Harvest**

Historical terminal run size, catch, and escapement data for Quillayute River spring, summer, and fall Chinook are presented in Appendix B, Tables B-35 and B-36 respectively. Spring and summer Chinook are currently managed separately, but data for both are combined in Table B-35. All hatchery origin fish are considered to be spring Chinook, and all natural spawners and tribal broodstock collections are considered to be summer Chinook. The management of these stocks is currently under review by the WDFW and Quileute Tribal co-managers.

The recreational and tribal fisheries for spring and summer Chinook were established by a preseason management agreement between WDFW and the Quileute Tribe. The total tribal catch for 2010 was 438 spring and 126 summer Chinook and included ceremonial and subsistence use. Estimates of 2010 recreational spring and summer Chinook harvest were unavailable.

The total 2010 Quileute Tribal harvest of fall Chinook was 1,814, and included ceremonial and subsistence use. An estimate of the 2010 recreational catch was unavailable.

As in past years, WDFW required release of unmarked Chinook during July and August to reduce impacts of the recreational fishery on the natural summer Chinook stock. The fall recreational fishery from September through November proceeded with normal bag limits and schedule. The Quileute Tribe did not have a closure in their fishery this year, but as in past years, reduced their fishery to 29 hours per week during July and August to reduce impacts to summer Chinook.

### **Escapement and Management Performance**

The management agreement called for an escapement goal of 200 hatchery spring Chinook. The actual rack return was 880, which exceeded hatchery requirements.

The summer Chinook run was managed to achieve an escapement of 1,200 adults, jacks, and broodstock collection combined. The preliminary estimated natural spawning summer Chinook escapement of 702 was under the escapement goal.

Terminal area fisheries on fall Chinook were managed for a target 40 percent harvest rate, with a minimum escapement level of 3,000 adults. The preliminary escapement estimate of 4,386 fall Chinook was above the escapement goal.

## **PUGET SOUND CHINOOK STOCKS**

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). This stock complex consists of numerous natural Chinook stocks of small to medium sized populations and significant hatchery production. The Puget Sound ESU was listed under the ESA as threatened in March 1999.

### *Management Objectives*

The stocks within this complex and their respective FMP conservation objectives were established in U.S. District Court by WDFW and the treaty Indian tribes. The conservation objectives for stocks managed primarily for natural production were developed by a State/Tribal Management Plan Development Team following the Boldt Decision, and were based on "the adult spawning population that will, on the average, maximize biomass of juvenile outmigrants subsequent to incubation and freshwater rearing under average environmental conditions." The objectives were estimated for the average spawning escapement during periods thought to represent spawner abundances that provided maximum production. The objectives for

stocks managed for artificial production are based on hatchery escapement needs. Annual management targets (expected hatchery returns plus natural escapement) for specific rivers or regions of origin may vary from the FMP conservation objectives by following fixed procedures established in U.S. District Court as outlined in "Memorandum Adopting Salmon Management Plan" (*U.S. versus Washington*, 626 F. Supp. 1405 [1985]).

In 2010, Puget Sound stocks were managed pursuant to the provisions of a WDFW/Tribal management plan approved under an ESA Section 4(d) rule promulgated by NMFS. This plan contains exploitation rate ceilings for ESA-listed Puget Sound stocks that were compared to predicted exploitation rates to assess compliance with ESA consultation standards (Table II-5).

### **Regulations to Achieve Objectives**

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. Puget Sound stocks have base period Council-area ocean fishery AEQ exploitation rates of 5 percent or less which are below a management threshold for effective Council management of these stocks, and therefore qualify as exceptions to the Council's overfishing criteria. Because Council area fishery impacts to Puget Sound Chinook stocks are negligible, ocean regulations are not generally used to manage these stocks. The only Council area regulation affecting any of these stocks was closing the Cape Flattery Control Zone for the commercial fishery.

### ***Inside Harvest***

Commercial inside fishery harvest of Puget Sound Chinook was managed on the basis of six regional stock management units or, in some cases, component stocks within management units: Strait of Juan de Fuca, Nooksack-Samish, Skagit, Stillaguamish-Snohomish, South Puget Sound, and Hood Canal. Harvest was regulated according to the natural spawning escapement goal or hatchery program escapement goal for that unit. Commercial net and troll harvest (treaty Indian and non-Indian) is presented in Appendix B, Table B-38. These catches included some fish of non-Puget Sound origin. The total commercial harvest in Puget Sound in 2010 was 937,200 Chinook, compared to 77,052 Chinook caught in 2009. The 2010 non-Indian net catch was 7,922 Chinook, compared to 2,749 Chinook caught in 2009. The 2010 treaty Indian net and troll harvest was 85,278 Chinook, compared to 74,303 Chinook caught in 2009.

Chinook catches in the Puget Sound recreational fishery for years 1971 through 2009 are presented in Appendix B, Table B-39. Catch estimates for the 2010 Puget Sound recreational fishery were unavailable.

### ***Escapement and Management Performance***

Puget Sound Chinook management goals for fishery planning processes in 2010 were expressed in terms of constraints on total fishery rebuilding exploitation rates (RER) or on exploitation rates on fisheries south of the Canadian border for those stocks without RERs. Information to evaluate performance against these constraints was unavailable.

Historical hatchery and natural run component escapements and net catches for summer/fall Chinook for each Puget Sound region of origin are presented in Appendix B, Table B-40. Historical spring Chinook escapement data are presented in Appendix B, Table B-43.

Preliminary data suggest most Puget Sound hatcheries met their summer/fall Chinook goals.



Naturally spawning Puget Sound spring and summer/fall Chinook remained depressed in 2010. Preliminary data suggest no Puget Sound spring Chinook natural stocks met their escapement goals. Preliminary information on 2010 natural spawning escapements for summer/fall Chinook stocks indicate escapement goals were met in some areas, but not in many others. Escapement estimates for 2010 were not available for most runs. In many natural spawning areas, hatchery origin Chinook comprise a large component of the natural spawning population.

### **COASTWIDE GOAL ASSESSMENT SUMMARY**

Information to assess conservation objectives was unavailable for LCR natural tule Chinook, SRW fall Chinook, Grays Harbor natural fall Chinook, and all Puget Sound natural Chinook stocks. Conservation objectives for all other Council managed Chinook stocks were met except for Hoh spring/summer, Queets spring/summer, and Quillayute summer Chinook.

A summary of 2010 performance for Chinook salmon stocks in relation to Council conservation objectives is presented in Table II-5.

TABLE II-1. Sacramento River natural and hatchery adult fall Chinook escapement in numbers of fish.

Year	Upper River <sup>a/</sup>			Lower River			Total		Grand Total
	Hatchery	Natural <sup>b/</sup>	Subtotal	Hatchery	Natural <sup>b/</sup>	Subtotal	Hatchery	Natural <sup>b/</sup>	
1970	3,010	61,160	64,170	10,266	82,230	92,496	13,275	143,390	156,666
1971	1,728	67,586	69,314	11,011	74,556	85,567	12,739	142,143	154,882
1972	1,259	36,485	37,744	6,766	47,647	54,413	8,025	84,132	92,157
1973	1,679	48,948	50,627	18,010	151,422	169,433	19,689	200,371	220,060
1974	1,984	66,304	68,288	11,799	121,930	133,729	13,783	188,234	202,017
1975	3,289	72,986	76,275	10,781	68,564	79,346	14,071	141,550	155,621
1976	3,017	80,263	83,280	8,612	75,975	84,586	11,628	156,238	167,866
1977	6,083	60,967	67,050	14,896	82,065	96,961	20,978	143,032	164,011
1978	2,717	66,991	69,708	9,937	47,303	57,240	12,654	114,295	126,948
1979	6,407	81,332	87,739	12,359	72,299	84,658	18,766	153,632	172,398
1980	10,271	45,504	55,775	14,725	71,608	86,333	24,996	117,113	142,108
1981	5,883	51,831	57,714	25,115	92,129	117,245	30,998	143,960	174,958
1982	17,117	39,694	56,811	15,229	92,600	107,829	32,347	132,293	164,640
1983	6,112	42,570	48,682	12,735	48,831	61,566	18,847	91,401	110,248
1984	19,594	51,772	71,366	19,873	67,733	87,607	39,467	119,505	158,972
1985	15,869	103,698	119,566	13,987	105,753	119,740	29,856	209,450	239,306
1986	11,283	113,875	125,158	12,511	102,434	114,945	23,793	216,310	240,103
1987	9,981	76,861	86,842	10,291	97,930	108,222	20,273	174,791	195,063
1988	12,594	128,725	141,319	16,921	69,228	86,149	29,515	197,953	227,468
1989	10,212	67,296	77,508	15,668	59,387	75,055	25,880	126,683	152,563
1990	13,464	50,225	63,689	8,428	32,973	41,401	21,892	83,198	105,090
1991	10,031	35,259	45,290	17,435	56,144	73,579	27,466	91,403	118,869
1992	6,257	31,734	37,991	15,831	27,723	43,554	22,088	59,457	81,545
1993	7,056	55,144	62,200	19,778	55,412	75,190	26,834	110,556	137,390
1994	11,585	66,383	77,968	20,972	66,647	87,619	32,556	133,030	165,586
1995	24,810	112,235	137,045	17,017	141,252	158,269	41,827	253,487	295,314
1996	18,848	131,268	150,116	15,712	135,803	151,516	34,561	267,071	301,632
1997	44,590	167,353	211,943	20,651	112,246	132,897	65,241	279,599	344,840
1998	42,400	60,713	103,113	35,364	107,431	142,795	77,763	168,144	245,908
1999	23,194	256,629	279,823	22,917	97,089	120,006	46,112	353,718	399,830
2000	20,793	152,923	173,716	27,530	216,291	243,821	48,323	369,214	417,537
2001	23,710	179,198	202,908	35,650	358,217	393,867	59,360	537,415	596,775
2002	61,895	474,812 <sup>c/</sup>	536,707	25,278	207,883	233,161	87,173	682,695	769,868
2003	82,882	164,802	247,684	26,696	248,636	275,332	109,578	413,438	523,016
2004	52,145	70,548	122,693	31,262	132,930	164,192	83,407	203,478	286,885
2005	139,979	96,716	236,695	45,320	113,990	159,310	185,299	210,706	396,005
2006	56,819	89,933	146,752	23,087	105,191	128,278	79,906	195,124	275,030
2007	11,543	36,079	47,622	9,833	33,919	43,752	21,376	69,998	91,374
2008	10,181	36,274	46,455	8,331	10,578	18,909	18,512	46,852	65,364
2009	5,433	12,277	17,710	12,103	11,060	23,163	17,536	23,337	40,873
2010 <sup>d/</sup>	8,666	25,682	34,348	31,036	59,969	91,005	39,702	85,651	125,353
Goal									122,000-180,000

a/ Above the Feather River; 1971-1985 estimates include Tehama-Colusa Spawning Channel.

b/ Fish spawning in natural areas are the result of hatchery and natural production; estimates generally based on carcass surveys.

c/ Estimation methodology was changed due to an extremely high Battle Creek escapement in 2002.

d/ Preliminary.

TABLE II-2. Klamath River adult inriver fall Chinook run size, spawning escapement, recreational catch, Indian gillnet harvest, and non-landed fishing mortalities in numbers of fish and percent of the total inriver run size.

Year	Spawning Escapement				Inriver Recreational Catch		Indian Net Catch		Non-landed Fishing Mortality		Inriver Run Size
	Hatchery	Natural	Total	Percent	Numbers	Percent	Numbers	Percent	Numbers	Percent	Numbers
1978	12,979	58,492	71,471	77%	1,694	2%	18,200	20%	1,618	2%	92,983
1979	3,636	30,637	34,273	67%	2,141	4%	13,650	27%	1,231	2%	51,295
1980	6,511	21,483	27,994	61%	4,496	10%	12,013	26%	1,137	2%	45,640
1981	4,425	33,857	38,282	48%	5,983	7%	33,033	41%	2,994	4%	80,292
1982	10,411	31,951	42,362	64%	8,339	13%	14,482	22%	1,429	2%	66,612
1983	13,865	30,784	44,649	78%	4,235	7%	7,890	14%	772	1%	57,546
1984	7,496	16,064	23,560	50%	3,340	7%	18,670	40%	1,691	4%	47,261
1985	22,534	25,677	48,211	75%	3,582	6%	11,566	18%	1,079	2%	64,438
1986	32,891	113,360	146,251	75%	21,027	11%	25,127	13%	2,614	1%	195,019
1987	29,123	101,717	130,840	63%	20,169	10%	53,096	25%	5,029	2%	209,134
1988	33,458	79,386	112,844	59%	22,203	12%	51,651	27%	4,944	3%	191,642
1989	21,991	43,868	65,859	53%	8,775	7%	45,565	37%	4,141	3%	124,340
1990	8,067	15,596	23,663	66%	3,553	10%	7,906	22%	760	2%	35,882
1991	6,484	11,649	18,133	56%	3,383	10%	10,198	31%	956	3%	32,670
1992	7,360	12,028	19,388	73%	1,002	4%	5,785	22%	523	2%	26,698
1993	21,643	21,858	43,501	76%	3,172	6%	9,636	17%	903	2%	57,212
1994	17,072	32,333	49,405	77%	1,832	3%	11,692	18%	1,054	2%	63,983
1995	37,859	161,794	199,653	90%	6,081	3%	15,557	7%	1,477	1%	222,768
1996	20,033	81,326	101,359	58%	12,766	7%	56,476	32%	5,172	3%	175,773
1997	18,662	46,144	64,806	77%	5,676	7%	12,087	14%	1,167	1%	83,736
1998	29,219	42,488	71,707	79%	7,710	9%	10,187	11%	1,043	1%	90,647
1999	14,327	18,457	32,784	64%	2,282	4%	14,660	29%	1,322	3%	51,048
2000	97,611	82,728	180,339	83%	5,650	3%	29,415	13%	2,673	1%	218,077
2001	55,112	77,834	132,946	71%	12,134	6%	38,645	21%	3,608	2%	187,333
2002	27,183	65,635	92,818	58%	10,495	7%	24,574	15%	2,351	1%	160,788 <sup>a/</sup>
2003	61,782	87,642	149,424	78%	9,680	5%	30,034	16%	2,810	1%	191,948
2004	22,982	23,831	46,813	59%	4,003	5%	25,803	33%	2,325	3%	78,944
2005	27,699	26,789	54,488	84%	1,985	3%	8,016	12%	738	1%	65,227
2006	19,522	30,163	49,685	81%	62	0%	10,283	17%	1,344	2%	61,374
2007	35,050	60,670	95,720	72%	6,312	5%	27,573	21%	2,526	2%	132,131
2008	13,552	30,850	44,402	48%	1,919	2%	22,259	24%	24,178	26%	92,758
2009	19,614	44,409	64,023	64%	5,651	6%	28,387	28%	2,583	3%	100,644
2010 <sup>b/</sup>	18,050	37,221	55,271	61%	3,035	3%	29,996	33%	2,670	3%	90,972
Goal	≥35,000 <sup>c/</sup>										

a/ Inriver run size includes a USFWS estimate of 30,550 fish (19% of the run) that died prior to spawning in September 2002.

b/ Preliminary.

c/ In 2008-2010, fisheries were managed for a natural area spawning escapement of 40,700 adults.

TABLE II-3. Oregon coastal spring and fall Chinook hatchery return and harvest in estuary and freshwater fisheries.

Year	Return to Facilities			Estuary and Freshwater Harvest <sup>b/</sup>	
	Public Hatchery <sup>a/</sup>		Private	Spring	Fall
	Spring	Fall	All		
THOUSANDS OF CHINOOK					
1976	2.9	0.5	-	13.5	24.3
1977	2.4	4.2	-	13.8	35.6
1978	4.4	1.6	-	13.1	42.7
1979	7.0	2.0	0.4	16.4	30.8
1980	7.9	1.8	3.4	11.9	22.1
1981	2.5	1.8	5.1	11.2	29.6
1982	4.1	2.3	12.1	11.6	24.7
1983	3.9	4.0	6.1	4.9	21.1
1984	5.6	3.3	6.3	4.1	29.0
1985	8.7	3.5	34.6	9.0	29.5
1986	30.6	5.8	70.8	17.3	36.5
1987	22.8	7.1	38.7	20.2	54.8
1988	22.0	6.4	25.0	28.9	61.4
1989	32.7	4.3	14.7	23.7	53.9
1990	6.3	3.4	7.8	15.5	39.9
1991	5.4	3.1	4.1	11.1	47.7
1992	2.7	4.4	-	8.0	44.7
1993	10.6	2.8	-	16.4	54.7
1994	4.8	3.0	-	9.2	46.7
1995	55.0	3.3	-	31.1	54.3
1996	26.7	3.6	-	25.6	51.0
1997	29.1	2.0	-	14.7	37.0
1998	11.0	2.6	-	8.2	31.5
1999	18.1	3.3	-	8.2	29.3
2000	24.5	3.1	-	11.4	37.4
2001	26.8	5.7	-	18.6	53.3
2002	24.7	2.9	-	30.9	58.8
2003	17.2	3.9	-	33.1	72.3
2004	20.1	2.9	-	19.4	78.4
2005	11.7	2.6	-	14.6	51.6
2006	7.5	2.7	-	7.1	47.7
2007	6.3	2.1	-	5.7	28.9
2008	6.1	2.7	-	7.2	21.9
2009	7.2	4.2	-	10.6	28.8
2010 <sup>c/</sup>	10.3	4.6	-	NA	NA

a/ Adults only.

b/ Freshwater harvests are derived from ODFW salmon/steelhead angler catch record card information and represent fish larger than 24 inches (i.e., adults). Includes both hatchery and natural fish.

c/ Preliminary.

TABLE II-4. Spawner indices for naturally produced Oregon coastal fall Chinook and south migrating/localized spring Chinook.<sup>a/</sup>

Year	Fall Chinook Spawner Indices		South/local Migrating Spring Chinook Spawner Indices		
	North Migrating Peak Count Adults Per Mile	Rogue River (South/local migrating) Adult Carcass Counts	Rogue River Gold Ray Dam Counts		Umpqua River Winchester Dam Counts
1976	45	-	20	6	
1977	71	1,356	15	7	
1978	73	9,174	40	5	
1979	81	8,272	29	6	
1980	89	2,221	24	6	
1981	82	5,228	13	5	
1982	90	2,812	23	7	
1983	42	2,737	10	3	
1984	98	3,267	8	5	
1985	132	5,486	28	8	
1986	109	17,177	40	8	
1987	121	25,918	37	8	
1988	214	31,613	39	8	
1989	138	7,408	8	8	
1990	121	1,868	18	6	
1991	150	2,799	9	2	
1992	138	2,366	2	3	
1993	63	5,447	13	4	
1994	125	7,366	4	3	
1995	103	3,958	21	6	
1996	147	2,448	10	4	
1997	105	1,643	10	3	
1998	99	3,601	4	4	
1999	124	2,493	6	3	
2000	85	3,366	3	3	
2001	203	6,380	9	6	
2002	269	11,836	7	7	
2003	279	14,620	19	8	
2004	198	5,326 <sup>b/</sup>	13	5	
2005	118	d/	6	4	
2006	100	d/	5	3	
2007	42	d/	3	2	
2008 <sup>c/</sup>	40	d/	4	3	
2009 <sup>c/</sup>	61	d/	5	5	
2010 <sup>c/</sup>	87	d/	10	6	
Goal	60-90				

a/ North migrating peak counts are taken on nine miles of standard index surveys over nine river systems (see Appendix B, Table B-11 for individual system counts). Complete carcass counts are listed in Appendix B, Table B-10. Complete counts for Gold Ray and Winchester dams are listed in Appendix B, Table B-9.

b/ In 2004 one of the standard survey sections was not sampled. In the previous two years this section accounted for 33% of the total adult carcass counts.

c/ Preliminary.

d/ Surveys were not conducted.

TABLE II-5. Performance of Chinook salmon stocks in relation to 2010 conservation objectives (preliminary data). (Page 1 of 2)

System and Stock	2010 Conservation Objective(s)	Achievement
<b>Sacramento River Chinook</b>		
Fall	122,000-180,000 hatchery and natural area adult spawners. 180,000 target for 2010.	125,353 hatchery and natural area adult spawners; 3% above the lower end of the escapement goal range.
Winter (Endangered)	NMFS ESA consultation standard defines specific limits on management measures to protect Sacramento River winter and spring Chinook.	Commercial and recreational seasons south of Point Arena conformed with the consultation standard.
Spring (Threatened)	Same objective as for winter Chinook.	Objective met-see winter Chinook achievement.
<b>California North Coast Chinook</b>		
Klamath River Fall	Minimum escapement of 40,700 natural adult spawners.	37,221 natural area spawners, 106% of FMP conservation objective; 91% of 2010 management objective.
California Coastal (Threatened)	No greater than 16.0% ocean harvest rate on age-4 Klamath River fall Chinook.	Preseason projection of 12.3%; no postseason estimate is currently available.
<b>Oregon Coast Chinook</b>		
North and South/Local Migrating Stocks	150,000-200,000 natural adult spawners (equivalent to peak spawner index counts of 60-90 adults per mile).	79 natural adult spawners per mile, above the lower bound of the aggregate stock index range.
<b>Columbia River Basin Fall Chinook</b>		
LRW (Component of threatened lower Columbia River Chinook ESU)	MSY objective of 5,700 natural North Lewis River adult spawners (no specific NMFS ESA guidance for 2010).	Preliminary estimate of 8,674 is 152% of the conservation objective.
Lower Columbia natural tules (Component of threatened lower Columbia River Chinook ESU)	Total (ocean plus inriver) AEQ exploitation rate on ESA-listed natural tules of no more than 38.0%.	Preseason projection of 37.5%. No postseason estimate is currently available.
LRH	14,100 adult hatchery spawners.	Preliminary projection of 39,943 adult hatchery spawners, 283% of goal.
SCH	7,000 adult hatchery spawners.	30,740 adult hatchery spawners, 439% of target.
MCB	No FMP objective; target of 7,750 hatchery adults.	35,084 adult hatchery spawners, 453% of target.
URB	40-45,000 natural and hatchery adults above McNary Dam, plus meet treaty Indian obligations. <i>U.S. v. Oregon</i> parties agreed to 60,000 in 2010.	138,256 natural and hatchery adults over McNary Dam, 307% of MSY target in FMP.

TABLE II-5. Performance of Chinook salmon stocks in relation to 2010 conservation objectives (preliminary data).  
(Page 2 of 2)

System and Stock	2010 Conservation Objective(s)	Achievement																																																																																										
<b>Columbia River Basin Fall Chinook (continued)</b>																																																																																												
Snake River Fall Chinook (Threatened; component of URB)	SRFI $\leq 0.700$ for all ocean fisheries combined (i.e., no less than a 30.0% reduction from the 1988-1993 base period exploitation rate).	Preseason SRFI projection of 0.440. No postseason estimate is currently available.																																																																																										
<b>Washington Coastal Chinook</b>																																																																																												
Fall	Natural spawner escapement objectives as provided in state-tribal agreements; meet hatchery egg-take goals and meet treaty Indian obligations.	Based on preliminary estimates, Quillayute natural, and Hoh River natural objectives were met. Other estimates are not yet available.																																																																																										
Spring/Summer	Natural spawner escapement objectives as provided in state-tribal agreements; meet hatchery egg-take goals and meet treaty Indian obligations.	<b>Based on preliminary estimates, objectives were not met for Hoh and Queets spring/summer natural, and Quillayute summer natural. An estimate is not available for Grays Harbor spring Chinook.</b>																																																																																										
<b>Puget Sound Chinook</b>																																																																																												
(Threatened)	Minor part of Washington ocean harvest; Council ocean management not directed at these stocks. Adult equivalent exploitation rate standard developed for some stocks:	Postseason estimates not available. Preseason predictions of adult equivalent exploitation rates and spawner objectives were:																																																																																										
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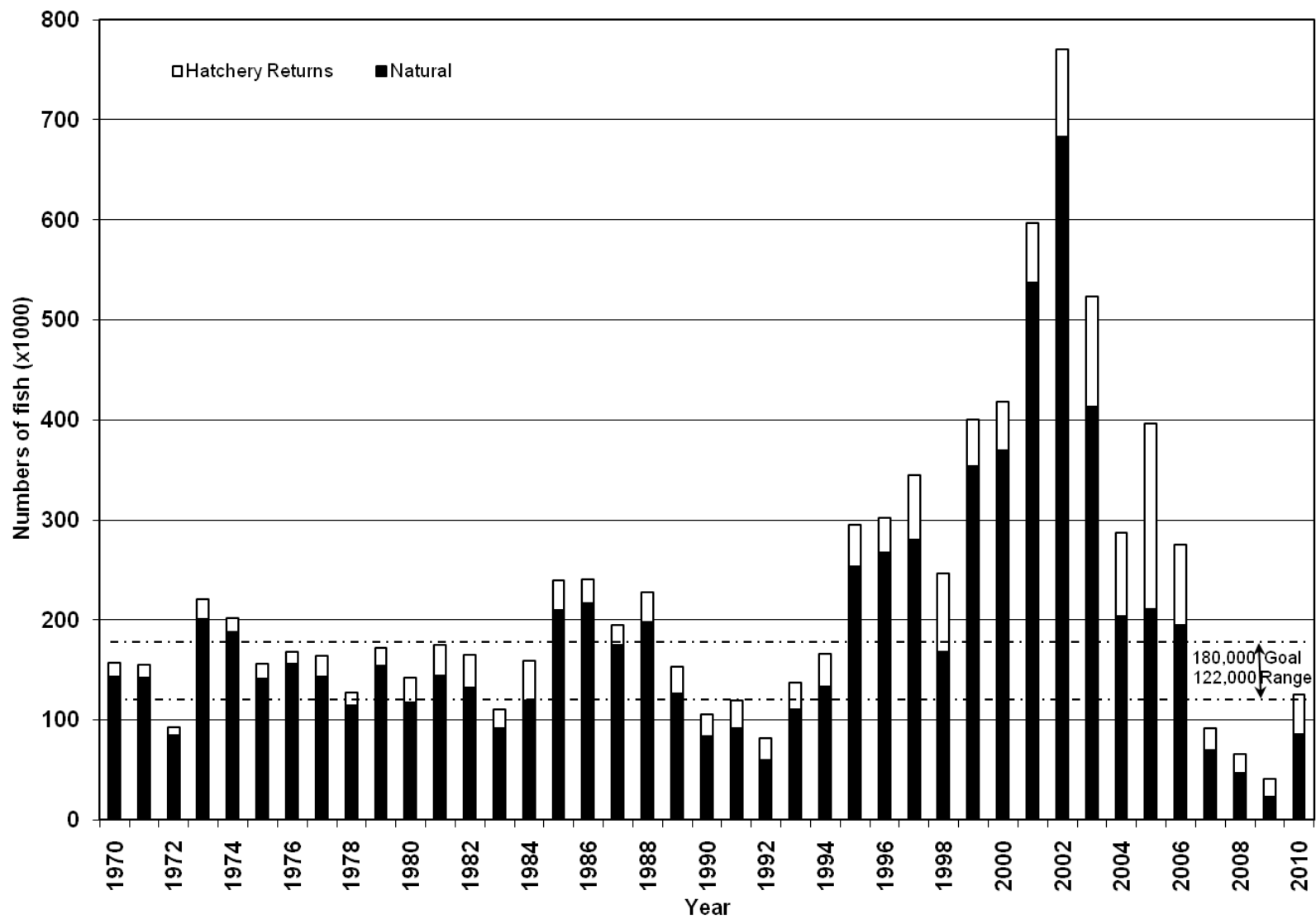


Figure II-1. Sacramento River adult fall Chinook spawning escapement, 1970-2010.



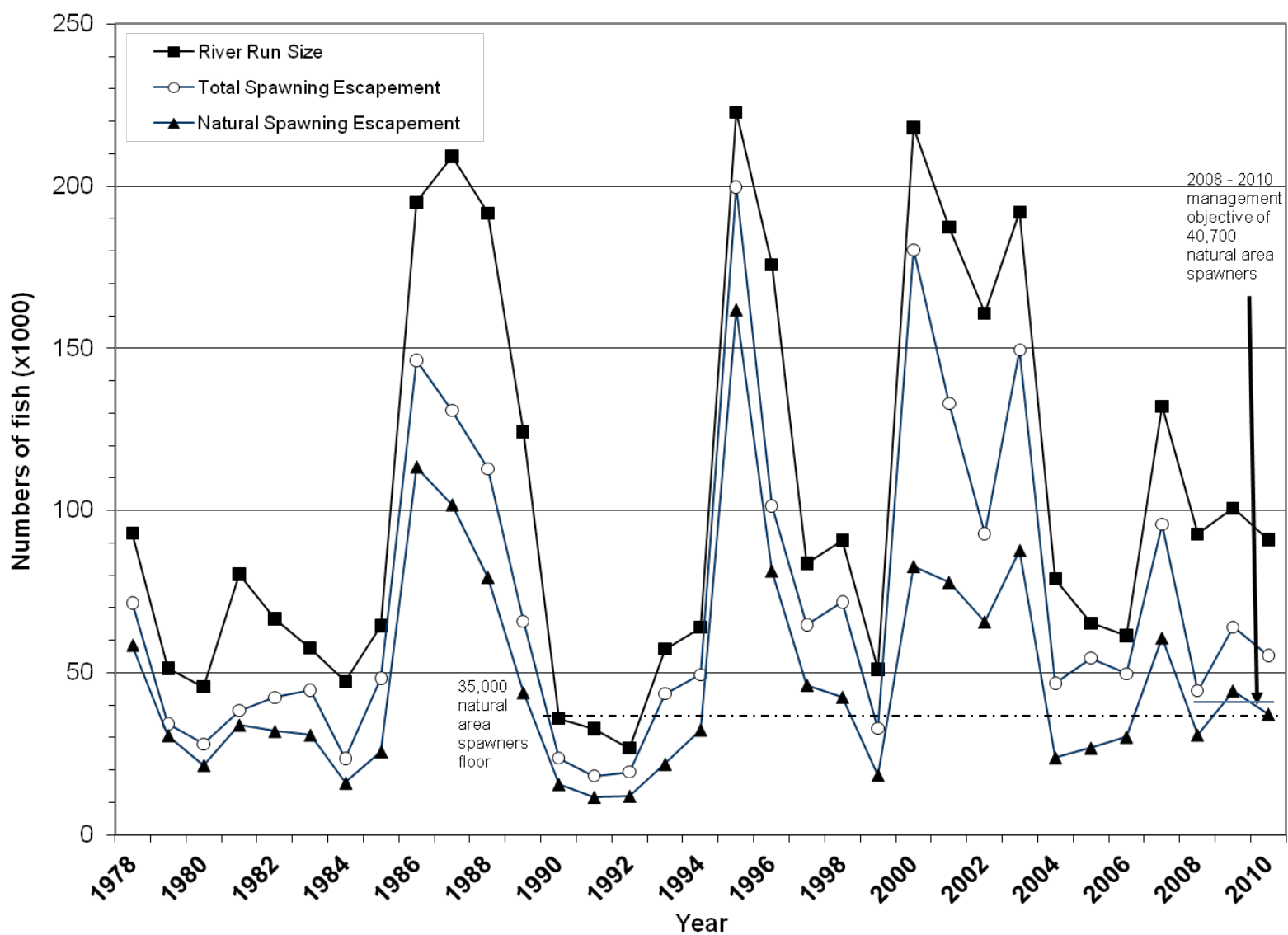


Figure II-2. Klamath River adult fall Chinook returns and spawning escapement, 1978-2010.

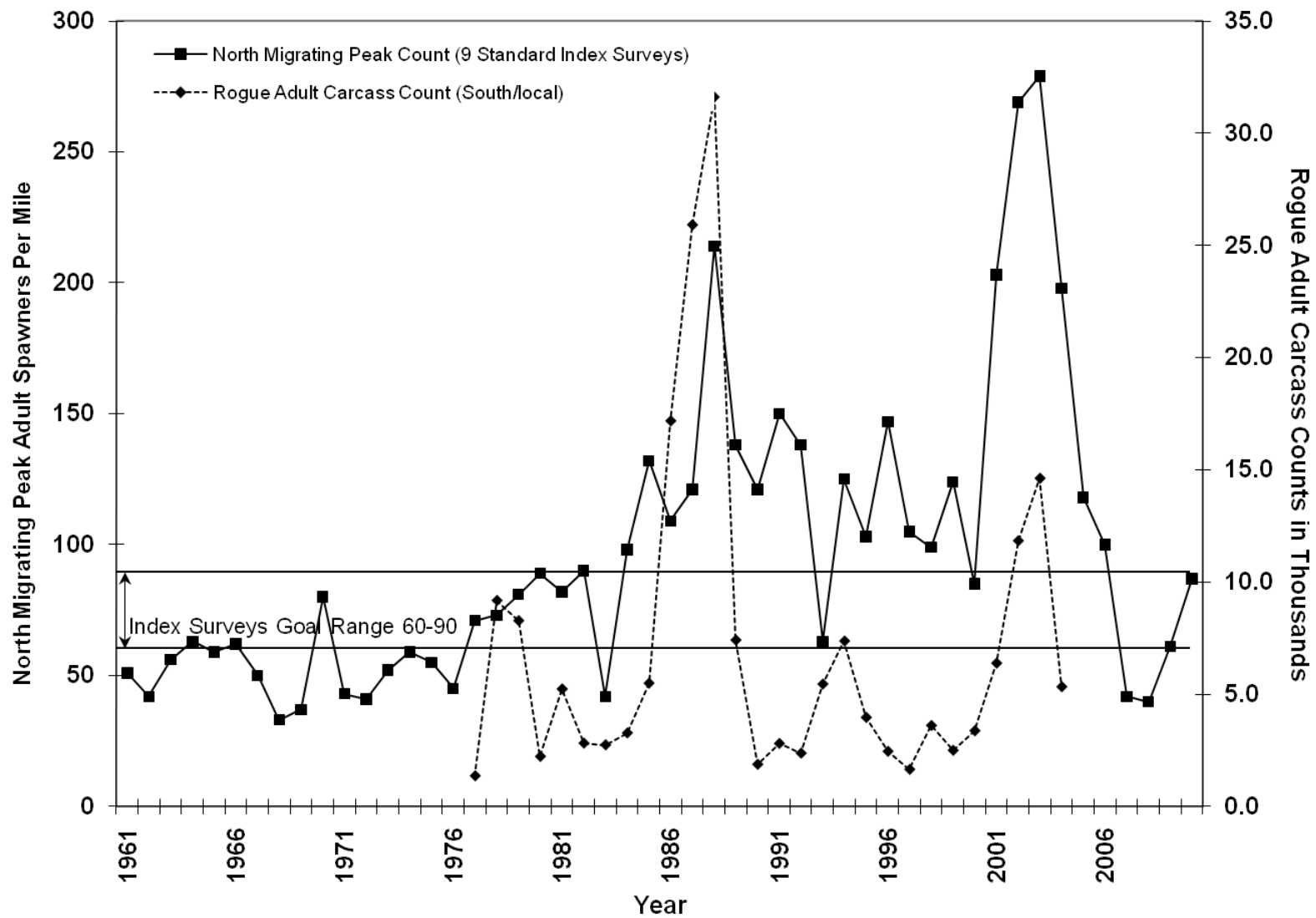


Figure II-3. Spawner indices for naturally produced Oregon coastal fall Chinook, 1961-2010.

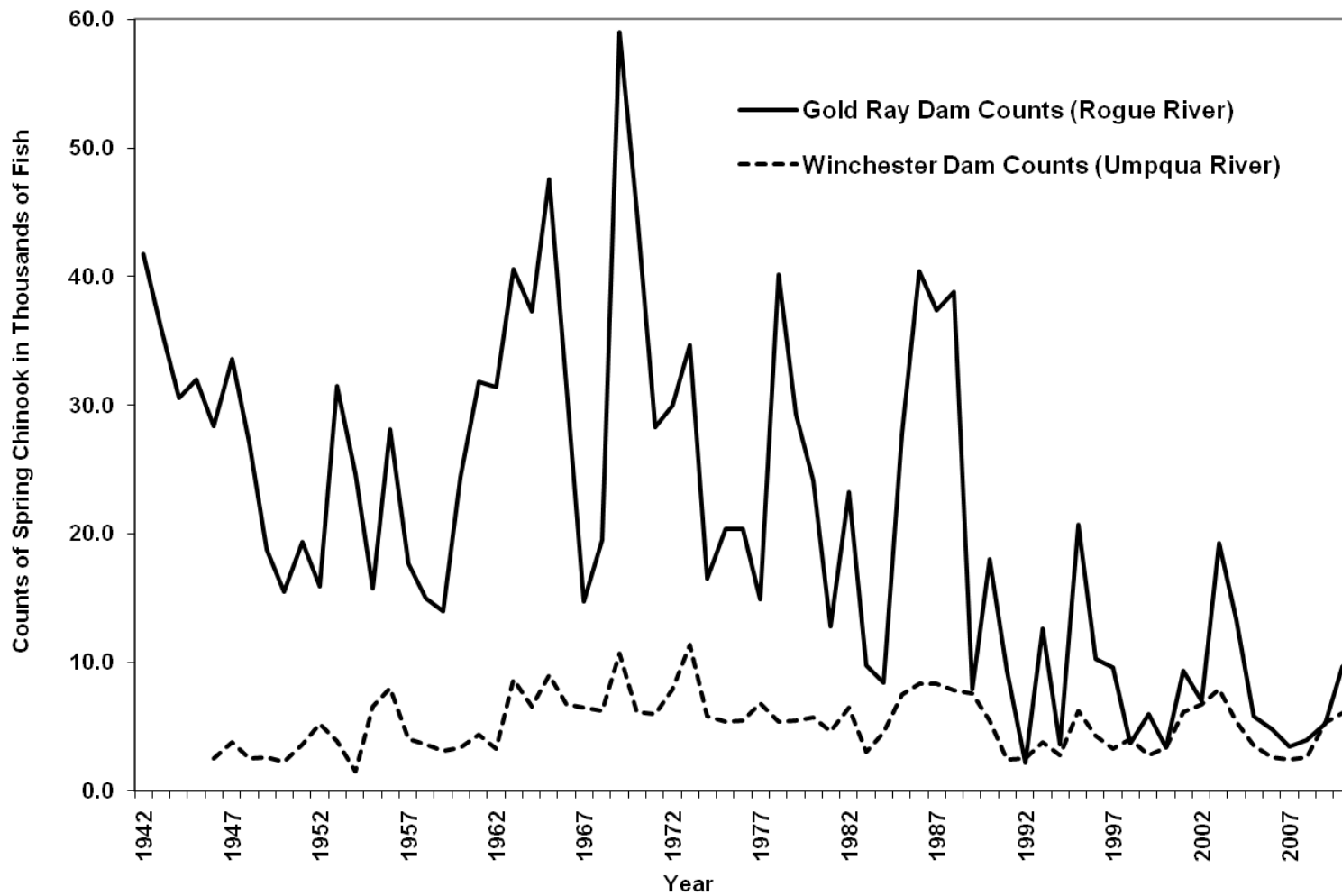


Figure II-4. Escapement indices for naturally produced Oregon coastal south/local migrating spring Chinook, 1942-2010.

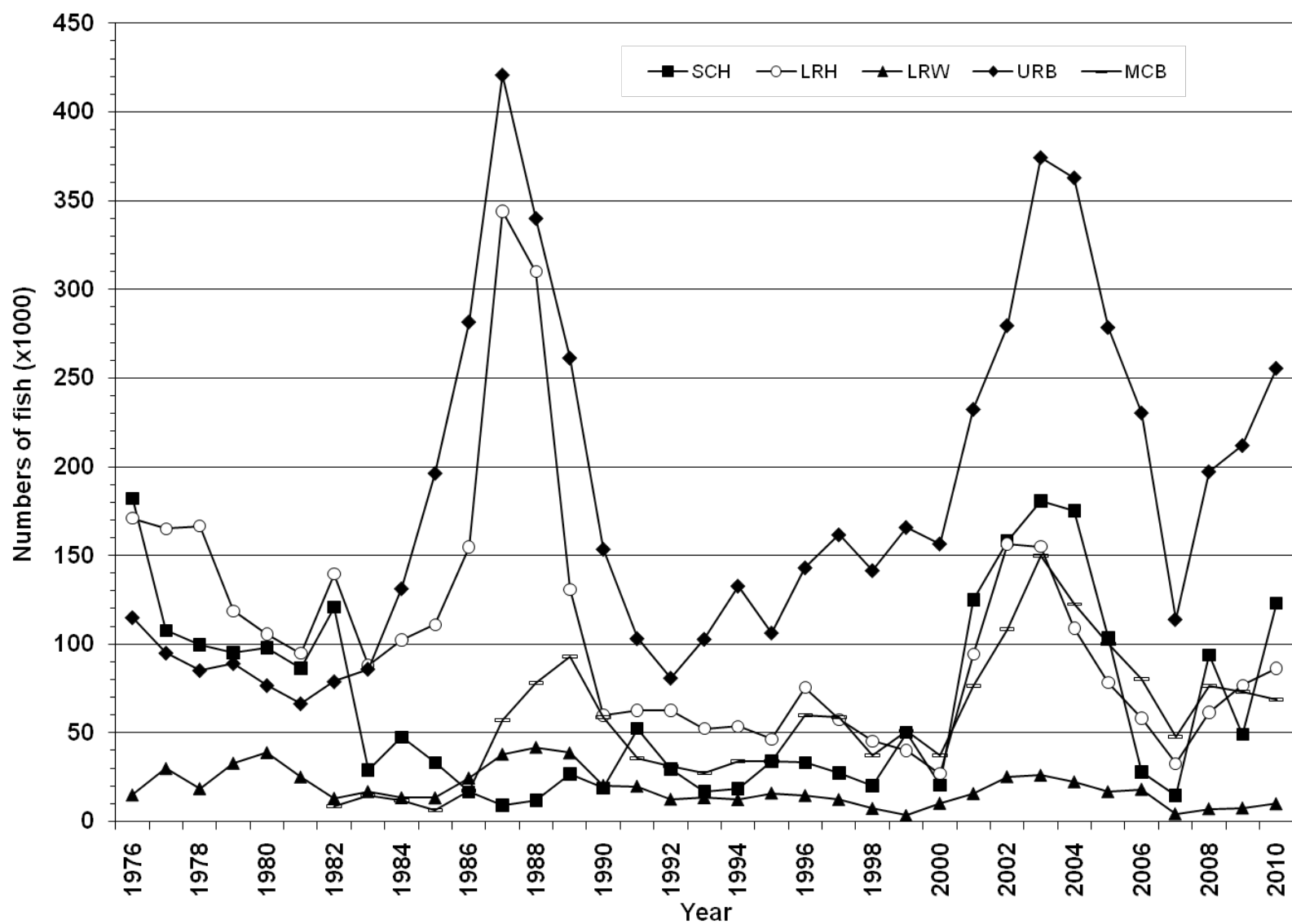


Figure II-5. Columbia River mouth adult returns of the five major fall Chinook stock groups, 1976-2010.

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## CHAPTER III

### COHO SALMON MANAGEMENT

#### OREGON PRODUCTION INDEX AREA COHO STOCKS

Oregon Production Index (OPI) area coho stocks include all Washington, Oregon, and California natural and hatchery stocks from streams south of Leadbetter Point, Washington, although stocks produced north of Leadbetter Point are also intercepted in the OPI area. The largest naturally produced coho stock is OCN coho, which includes coho produced from Oregon river and lake systems south of the Columbia River. OCN coho are managed as a stock aggregate with four identified components. NMFS listed three coho ESUs within the OPI area as threatened: CCC coho listed October 1996, SONCC coho listed May 1997, and OCN coho listed August 1998. In 2002, NMFS began an update of all its listing determinations and in January of 2006 concluded that the OCN ESU did not warrant listing under the ESA. That determination was overruled by a U.S. Court decision in 2007, and subsequently relisted by NMFS as threatened in February 2008. Columbia River natural coho were listed as endangered under the Oregon State ESA in 2002, and as threatened under the Federal ESA on June 28, 2005. The primary OPI hatchery stocks include a south migrating Columbia River (early) stock, a north migrating Columbia River (late) stock, public hatchery coho from the Oregon and northern California Coast, and formerly a small cooperative program along the southern Oregon Coast known as the Salmon Trout Enhancement Program (STEP), which was discontinued after the 2004 brood releases.

#### *Management Objectives*

In establishing ocean salmon fisheries that impact OPI area coho stocks, the Council was guided by the reasonable and prudent alternatives of NMFS 1999 Supplemental Biological Opinion and Incidental Take Statement for CCC and SONCC coho and the March 2010 NMFS ESA guidance letter for LCN natural and OCN coho, which required:

1. No directed coho fisheries or retention of coho in all commercial and recreational fisheries off California to protect endangered CCC coho.
2. Marine fishery impacts on endangered CCC and threatened SONCC coho must be no more than 13.0 percent as indicated by projected impacts on RK hatchery coho.
3. Fishery impacts on threatened LCN coho must not exceed a coastwide marine and mainstem Columbia River exploitation rate of 15.0 percent.
4. Fishery impacts on threatened OCN coho must not exceed a coastwide marine and freshwater exploitation rate of 15.0 percent.

Based on parent escapement levels and observed OPI smolt-to-jack survival for 2007 brood OPI smolts, the total allowable OCN coho exploitation rate for 2010 fisheries was no greater than 15.0 percent under the Salmon FMP (Amendment 13) and no greater than 15.0 percent under the matrix developed by the OCN work group during their review of Amendment 13. The work group recommendation was accepted by the Council as expert biological advice in November 2000.

The Council was also guided by a treaty Indian/non-Indian sharing agreement for Columbia upriver coho stocks, which required passage of 50 percent of the run destined for areas above Bonneville Dam.

## **Regulations to Achieve Objectives**

Historically, OPI area coho stocks contributed primarily to ocean fisheries off Oregon and northern California and, to a lesser degree, Washington and B.C. The Council prohibited retention of coho in all fisheries south of the Oregon/California border. For the adopted seasons the STT projected exploitation rates of 9.8 percent for RK coho in marine fisheries, 11.2 percent for OCN coho in marine and freshwater fisheries combined, and 11.2 percent for LCN coho in marine fisheries.

The Council adopted a mark-selective recreational fishery quota north of Cape Falcon of 67,200 coho (Table I-3). The Council adopted preseason commercial harvest quotas of 11,800 marked coho for the non-Indian commercial troll mark-selective fishery (Table I-1) and 41,500 coho for the treaty Indian troll fishery (Table I-2), which was not mark-selective. Total allowable harvest set preseason for the non-Indian commercial and recreational fisheries for coho in 2010 was 80,000, compared to 210,000 in 2009. For the treaty Indian fishery, the overall quota of 41,500 coho was a reduction from the 60,000 coho quota in 2009.

### ***Commercial Troll***

Commercial troll fisheries had been closed to coho retention south of Cape Falcon since 1993 with the exception of limited fisheries in 2007 and 2009.

Non-Indian commercial troll fisheries from Cape Falcon to the U.S./Canada border in 2010 had an overall quota of 6,100 coho (11,800 preseason minus 5,700 impact neutral transfer to the recreational fishery quota in exchange for 2,500 Chinook in August), (Table I-1). The fisheries were restricted to mark-selective coho retention.

All species treaty Indian fisheries north of Cape Falcon were not restricted to mark-selective retention of coho, and operated on an overall quota of 41,500 coho (Table I-2).

### ***Recreational***

Retention of coho has been limited in the recreational fisheries south of Cape Falcon since 1993. Retention of coho has been prohibited off California since 1996 to protect ESA listed CCC coho. All coho directed ocean recreational fisheries in the OPI area have been mark-selective since 1998. Adequate abundance of marked coho in the OPI area has resulted in allowable harvests of marked coho in Oregon and Washington within constraints for OCN and LCN coho.

In 2010, after inseason adjustments, the recreational coho fisheries north of Cape Falcon operated with quotas of 6,990 in the Neah Bay area, 1,750 in the La Push area, 24,860 in the Westport area, and 40,600 in the Columbia River area (Table I-3). The recreational fishery between Cape Falcon and the OR/CA border operated with an overall quota of 26,000 June 26 through September 6 (Table I-3).

### ***Inside Harvest***

Coho retention in all California fisheries was prohibited.

The 2010 inside recreational harvest of coho in Oregon coastal streams, as in recent years, was very restricted and generally limited to areas where surplus hatchery coho returns were expected. Estimates of the 2010 inriver recreational coho harvest for most areas were not available. Historical estimates of the recreational harvest of adult coho in Oregon coastal estuaries and rivers, derived from ODFW salmon and steelhead angler catch record cards, are reported in Table III-1.

Limited recreational fisheries for naturally-produced coho were approved in the Siletz and Coquille estuaries in 2010. The catch estimates were 238, and 1,021 respectively.

Limited fisheries for naturally-produced coho were approved in Siltcoos, Tahkenitch, and Tenmile Lakes in 2010. Catch estimates were 400, 287, and 27 respectively.

The 2010 Columbia River non-Indian commercial gillnet fishery harvested 76,300 adult coho, compared to 124,300 coho in 2009. Select Area fisheries in both Oregon and Washington accounted for 57,400 of the total 2010 Columbia River commercial coho catch. The Columbia River treaty Indian mainstem commercial gillnet coho catch was approximately 7,100 fish, compared to the 2009 catch of 8,900 coho. All Columbia River coho commercial fisheries were non-mark-selective. Coho harvest information for Columbia River commercial and recreational fisheries are presented in Appendix B, Table B-21.

The Buoy 10 and mainstem recreational fisheries below Bonneville Dam harvested 7,980 adult coho compared to 48,100 adult coho in 2009. All Columbia River recreational fisheries in 2010 were mark-selective for coho. In 2010, Columbia River managers opened the Buoy 10 fishery August 1 with a daily bag limit allowing two adult salmon in August, no more than one Chinook, and beginning September 1 two salmon with no Chinook retention. The fishery ran through December 31 with the upriver boundary at the Tongue Point, Oregon to Rocky Point, Washington line. The 2010 Buoy 10 harvest and effort totaled 7,980 coho and 52,300 angler trips (Table III-2). Historical Buoy 10 catch and effort data are provided in Appendix B, Table B-22. Recreational coho harvest estimates for Columbia River tributaries were not available.

### *Escapement and Management Performance*

The overall abundance estimate for OPI area stocks in 2010 was 818,100 compared to 1,323,200 in 2009 and to the recent ten-year average of 908,600 (Table III-3; Figure III-1).

### **Central California Coast and Northern California Coho**

For CCC coho, redd counts have been made for the Lagunitas Creek basin since 1995 and are reported in Table B-7. As of January 13, 2011, 78 redds were counted. However, the spawning season for this watershed may not be complete and the final redd count may change. Estimates were available for escapement to Klamath River Basin hatcheries, but not for coho spawning in natural areas. In 2010, a total of 3,868 adult coho returned to Trinity River Hatchery and 428 adult coho returned to Iron Gate Hatchery. These values compare to a combined goal of 2,000 adults.

### **Oregon Coast Natural Coho**

The preliminary estimate of natural spawner escapement in 2010 to Oregon coastal river and lake systems from the Sixes River north (Oregon coast ESU) was 253,800 adult coho. This compares to 262,700 adults in 2009. Historical spawner escapement estimates of naturally produced coho are reported in Table III-1.

Preliminary information, based on random sampling surveys, indicate the second highest total natural spawning population on the Oregon coast since 2002. The estimate of the natural spawning population in 2010 was 256,800, including estimates from the Rogue River, which is part of the SONCC ESU (Table III-4, Figure III-2).

Preliminary postseason estimates of combined marine and freshwater exploitation on OCN coho was 4.8 percent, less than the preseason projection of 11.2 percent, and below the 15.0 percent maximum allowed under the FMP and the OCN work group matrix. Preliminary postseason estimates of marine exploitation on RK coho was 2.2 percent, lower than the preseason projection of 9.8 percent, and below the 13.0 percent maximum ESA consultation standard.



## **Oregon Coastal Hatchery Coho**

The preliminary estimate of total coho returns to Oregon coastal public hatcheries was 7,800 adults (Table III-1). Hatchery egg-take goals were expected to be met at all public hatchery stations.

## **Columbia River Coho**

The 2010 ocean escapement of adult early and late Columbia River coho stocks was 441,000 fish, compared to 729,800 adults in 2009 (Appendix B, Table B-21). The 2010 Columbia River coho abundance was sufficient to meet all hatchery brood stock escapement needs.

Preliminary postseason estimates of marine exploitation on LCN coho was 4.8 percent, less than the preseason projected 11.2 percent.

## **WASHINGTON COASTAL COHO STOCKS**

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 were Willapa Bay (hatchery), Grays Harbor, Quinault (hatchery), Queets, Hoh, and Quillayute coho. Those stocks contribute primarily to ocean fisheries off Washington and B.C.

### ***Management Objectives***

Management goals for Grays Harbor and Olympic Peninsula coho stocks included achieving natural spawning escapement objectives and treaty Indian allocation requirements. The Council's conservation objectives for stocks managed for natural production were based on maximum sustainable yield (MSY) spawner escapements established pursuant to the U.S. District Court order in *Hoh* versus *Baldrige*. The conservation objectives for the Queets, Hoh, and Quillayute rivers were developed as ranges intended to bracket estimates of MSY escapement. The range reflects the degree of uncertainty inherent by using the high estimate of recruits-per-spawner and the low estimate of carrying capacity for the lower bound, and the low estimate of recruits-per-spawner and the high estimate of smolt carrying capacity for the upper end of the range. The ranges were further adjusted upward by 26 to 184 percent for risk aversion and habitat considerations. Annual targets for natural spawning escapement and total escapement were established by WDFW and treaty Indian tribes under the provisions of *U.S. versus Washington* and subsequent U.S. District Court orders. After an annual agreement is reached, ocean fishery escapement objectives are established for each river, or region of origin. Agreements include provisions for treaty Indian allocation requirements and inside non-Indian fishery needs. No agreements on annual spawning targets for Washington coastal coho other than those in the FMP were made in 2010.

### **Regulations to Achieve Objectives**

Washington coastal coho stocks did not play a primary role in 2010 Council area ocean fishery management because of impact constraints on Interior Fraser (Thompson River, B.C.) and LCN coho stocks, and treaty Indian/non-Indian in-river sharing of Columbia upriver coho. Overall harvest quotas were limited to levels well below those of the late 1980s and early 1990s. All non-Indian ocean coho fisheries were mark-selective. Treaty Indian fisheries were not mark-selective.

### ***Willapa Bay Coho***

#### **Inside Harvest**

Historical terminal run size, harvest and escapement data for Willapa Bay coho are presented in Appendix B, Table B-24. The 2010 gillnet coho harvest in Willapa Bay totaled 28,568 fish. Based on the preseason forecast for a terminal run of 78,050 fish, the scheduled commercial fisheries were expected to

harvest approximately 25,678 total coho. Retention of unmarked coho in the fall 2010 commercial fishery was prohibited.

From July 4, 2010 through July 31, 2010, Willapa Bay (Marine Area 2-1) was open for recreational fishing concurrent with the Ocean Marine Area 2 (ocean rules applied). From August 1, 2010 through January 31, 2011, Willapa Bay was open to recreational fishing with a daily-bag-limit of six salmon, no more than three adults. Chum and unmarked coho retention was prohibited. Barbed hooks were prohibited when fishing for salmon. Expected harvest in recreational fisheries based on preseason forecast abundance was 1,805 coho. Marine and freshwater recreational harvest estimates were unavailable for 2010, but for 2009, Marine Area 2-1 and freshwater recreational harvest estimates totaled 6,257 fish.

Freshwater recreational fisheries in the Willapa Bay watersheds varied in duration but were generally open for salmon fishing from August 1, 2010 through January 31, 2011 with a daily-bag-limit of six salmon, and no more than two or three adults. Chum and unmarked coho retention was prohibited. Single-point barbless hooks were required in all areas except for the Naselle River.

### **Escapement and Management Performance**

Willapa Bay coho were managed primarily for natural production. Estimates of natural spawning escapement for 2010 were unavailable. The most recent but still preliminary natural escapement estimate available was 48,774 in 2009, which met the WDFW escapement objective of 13,090 natural spawners. Escapement to Willapa Bay hatcheries in 2009 was estimated at 20,306 coho, which met the WDFW escapement objective of 6,100 spawners.

### ***Grays Harbor Coho***

#### **Inside Harvest**

Historical terminal run size, harvest and escapement data for Grays Harbor coho are presented in Appendix B, Table B-26. The run size forecast for Grays Harbor coho, after accounting for ocean fishery impacts, was 87,198 fish (60,026 natural and 27,172 hatchery). Treaty Indian and non-Indian gillnet fisheries harvested 31,823 coho (natural, hatchery, and net-pen origin) in 2010. This included 25,314 coho in the Quinault Indian Nation fisheries, 3,990 in the non-Indian gillnet fishery, and an estimated 2,519 in the Chehalis tribal fishery. Recreational harvest estimates for 2010 were not available.

The Quinault Indian Nation operated two separately scheduled gillnet fisheries for Chinook, coho, and chum in the area of the Lower Humptulips and in the area of the Lower Chehalis, as described in Chapter II under the section labeled Grays Harbor Chinook. The expected coho fishery impacts were limited by the expected abundance and harvest of Chinook in the Lower Chehalis side of the fishery and by the expected abundance and harvest of natural coho in the Lower Humptulips side of the fishery. The Humptulips area fishery harvested 8,786 coho, while the Chehalis area fishery harvested 16,528 coho in 2010. Harvest levels on the Humptulips fishery were 74.4 percent over pre-season expected levels while the Chehalis fishery harvest was 88.4 percent over pre-season expected levels.

The non-Indian gillnet fishery in Humptulips commercial Area 2-C had six open periods in September for a total of 15 fishing days. Retention of fall Chinook and marked coho was allowed. Live boxes were required and unmarked coho could not be retained. Catches totaled 1,217 Chinook and 672 coho. The non-Indian gillnet fishery in the Chehalis River commercial Areas 2A and 2D was open for 2 days in October; live boxes were required, and Chinook could not be retained. Catches totaled 3,318 coho.

Estimates of catch in recreational fisheries for 2010 were unavailable. However fisheries were conducted in three general areas: Marine Area 2.2, the Chehalis River and its tributaries, and the Humptulips River.

The recreational fishery in Marine Area 2.2 was open from September 16 through November 30 for two adult salmon daily, with Chinook chum retention prohibited.

The Chehalis River and its tributaries were open for coho fishing on the following dates and areas:

- Downstream of Fuller Bridge: September 16 through October 31, 2010. with a daily limit of 6 salmon, up to 2 adults, and no Chinook or chum retention. November 1, 2010 through January 31, 2011 with a daily limit of 6 salmon, up to 2 adults, with no Chinook, chum, or unmarked coho retention.
- Fuller Bridge to the bridge crossing at the town of Porter: September 16 through November 30, 2010 with a daily limit of 6 salmon, up to 2 adults, and no Chinook or chum retention. December 1 through January 31, 2011 with a daily limit of 6 salmon, up to 2 adults, with no Chinook, chum, or unmarked coho retention.
- From the bridge crossing at the town of Porter to the high bridge on Weyerhaeuser 1000 line approximately 400 yards downstream of Roger Creek: September 16 through November 30, 2010. With a daily limit of 6 salmon, up to 2 adults, with no Chinook or chum retention. December 1 through January 31, 2011 with a daily limit 6 salmon, up to 2 adults, with no Chinook, chum, or unmarked coho retention.

The Humptulips River recreational fishery and its tributaries were open for coho fishing on the following dates and areas, with a bag limit of two adult salmon daily.

- Ocean Beach Road to September 16 -30, 2010 with a daily limit of 6 salmon, up to 2 adults, with no retention of chum or unmarked coho; bait was prohibited.
- From the mouth to the confluence of the East and West forks: October 1, 2010 through January 31, 2011 with a daily limit of 6 salmon, up to 2 adults, no more than one of which could be a Chinook, and no retention of chum or unmarked coho.

### **Escapement and Management Performance**

Grays Harbor coho were managed for natural production with a spawning escapement goal of 35,400. Natural spawning escapement estimates for 2007, 2008, and 2009 were 25,121, 34,054 and 69,733, respectively. An escapement estimate for 2010 Grays Harbor coho was not available.

### ***Quinault River Coho***

#### **Inside Harvest**

Historical terminal run size, harvest, and escapement for Quinault River coho are presented in Appendix B, Table B-28. The treaty Indian gillnet fishery targeted hatchery Chinook and coho from early September through mid-November. A total of 41,806 coho were harvested by the gillnet fishery during the 2010 season.

### **Escapement and Management Performance**

Quinault River coho were managed for hatchery production. Escapement estimates for Quinault River coho in 2010 were unavailable. The Quinault National Fish Hatchery egg take objectives for 2010 were achieved.

## *Queets River Coho*

### **Inside Harvest**

Historical terminal run size, harvest, and escapement for Queets River coho are presented in Appendix B, Table B-31. Queets River fisheries were managed according to preseason agreement with WDFW based on preseason abundance estimates and planned Council ocean fisheries. The fishery was structured to target returning hatchery and natural coho while also harvesting Chinook at a total tribal and non-tribal harvest rate of 40 percent. The total harvest of coho in the Treaty Indian gillnet fishery was 21,107 commercially landed fish, which was above the expected preseason catch of 8,795. The gillnet harvest was comprised of a mix of early-timed hatchery fish and normal/late-timed natural fish, with the larger than expected catch attributed to a greater hatchery return than expected. A final estimate of the hatchery/natural mix in the catch was unavailable. Recreational fisheries operated with standard bag limits for coho (no mark-selective restriction) and a standard schedule in the Queets, Clearwater, and Salmon Rivers. Recreational fisheries for Chinook operated in a similar manner as coho, except within Olympic National Park waters where only mark-selective Chinook retention was allowed.

### **Escapement and Management Performance**

The 2010 natural escapement estimate was unavailable, but the tribal catch through the season suggested the natural escapement exceeded the escapement floor. The expected natural coho escapement for 2010 based on the preseason effort model was 11,333, with an escapement objective range of 5,800 to 14,500 natural coho. Spawning escapements in 2006, 2007, and 2008 were less than the objective; and therefore triggered an Overfishing Concern, which was addressed during the summer of 2009. That Overfishing Concern was ended because the 2009 escapement exceeded the escapement floor.

## *Hoh River Coho*

### **Inside Harvest**

Historical terminal run size, catch, and escapement data for Hoh River coho are presented in Appendix B, Table B-34. The terminal run size of Hoh River natural coho was projected to be 7,608. The tribal fishery targeted 37.4 percent of the terminal run. The treaty Indian gillnet fishery occurred from the week of September 1 to the week of December 31 (which included weeks 49-52 of steelhead management), as described in Chapter II under the section labeled Hoh River Chinook. The tribal fishery harvested approximately 2,638 coho, with 2,170 estimated to be natural origin, including dip-in natural fish. The non-Indian recreational fishery extended from September 1 through November 30, with the area below Willoughby Creek open and a daily-bag-limit of six salmon, two of which could be adults and no mark-selective coho restriction. The portion of the river between Willoughby Creek and Morgan's Crossing opened October 16 to reduce impacts on spawning spring/summer Chinook in that reach. The river above Morgan's Crossing did not open for recreational salmon fishing. A catch estimate for the 2010 recreational fishery was not available.

### **Escapement and Management Performance**

The preliminary 2010 spawning escapement estimate for coho in the Hoh River was unavailable. Tribal catch and expected harvest rates indicate the fall coho terminal run size may be near the level anticipated preseason. The escapement goal range established for this stock is 2,000 to 5,000.

## *Quillayute River Coho*

### **Inside Harvest**

Historical terminal run size, catch, and escapement data for Quillayute River summer and fall coho are presented in Appendix B, Table B-37. The recreational and tribal fisheries for coho were established by

preseason agreement between WDFW and the Quileute Tribe. A total of 1,378 (461 natural) summer coho were harvested in the Quileute Tribe's commercial, ceremonial and subsistence fisheries. An estimate of the 2010 recreational catch was unavailable.

The Quileute Tribal harvest of fall coho in 2010 was 26,649 (including ceremonial and subsistence catch). Tribal net fisheries harvested 12,374 natural fall coho out of a total fall coho harvest of 26,649. An estimate of the 2010 recreational catch was unavailable.

WDFW reduced the impacts of the recreational fishery on natural summer and fall coho by requiring mark-selective fisheries for coho through October. The Quileute Tribe did not have a closure in their fishery this year, but as in past years, limited their fishery to 29 hours per week during July and August.

### **Escapement and Management Performance**

The summer coho run in the Quillayute is managed primarily for its hatchery component, which returns in August and September. The summer coho hatchery rack return was 1,644, well above the goal of 300. An additional three natural summer coho were collected as brood stock. The preliminary estimate for natural summer coho escapement was 273. No natural broodstock was collected from the Sol Duc hatchery.

The preliminary 2010 escapement estimate for natural fall coho was 9,322. No natural brood stock was collected from the Sol Duc hatchery. This was above the escapement goal of 6,300 to 15,800.

### **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 were Strait of Juan de Fuca, Hood Canal, Skagit, Stillaguamish, Snohomish, and South Puget Sound (hatchery) coho. Those stocks contribute primarily to ocean fisheries off Washington and B.C.

#### ***Management Objectives***

The Council's previous conservation objectives were based on the Puget Sound Salmon Management Plan, which defined management objectives and long-term goals for these stocks as developed by representatives from Federal, state, and tribal agencies. Conservation objectives for specific stocks were based on either maximum sustainable production for stocks managed primarily for natural production or on hatchery escapement needs for stocks managed for artificial production. The original conservation objectives were developed by a State/Tribal Management Plan Development Team following the Boldt Decision with the goal for natural spawning stocks defined as "the adult spawning population that will, on the average, maximize biomass of juvenile outmigrants subsequent to incubation and freshwater rearing under average environmental conditions." The methodology used to develop the objectives was based on assessment of the quantity and quality of rearing habitat and the number of adult spawners required to fully seed the habitat. Some objectives were subsequently modified by the U.S. District Court Fisheries Advisory Board and later determinations of the WDFW/Tribal Technical Committee. However, annual natural management objectives may vary from the FMP conservation objectives if agreed to by WDFW and the treaty Indian tribes under the provisions of *U.S. versus Washington* and subsequent U.S. District Court orders. (see "Memorandum Adopting Salmon Management Plan"; *U.S. versus Washington*, 626 F. Supp. 1405 [1985]).

The PSC adopted a management plan for coho salmon originating in Washington and southern B.C. river systems in 2002. The plan was directed at the conservation of key management units, four from Southern B.C. (Interior Fraser, Lower Fraser, Strait of Georgia Mainland, Strait of Georgia Vancouver Island) and

nine from Washington (Skagit, Stillaguamish, Snohomish, Hood Canal, Strait of Juan de Fuca, Quillayute, Hoh, Queets, and Grays Harbor). Under the plan, the United States and Canada were required to constrain total fishery exploitation rates to levels associated with the categorical status and target exploitation rates of the key management units as determined by domestic managers. Ceilings on exploitation rates by intercepting fisheries were established through formulas specified in the plan. Categorical status was employed by the PST under the 2002 Coho Agreement to indicate general ranges of allowable total exploitation rates for U.S. and Canadian coho management units in 2010. Three categories were employed: low (total exploitation rate <20 percent), moderate (total exploitation rate 20-40 percent), and abundant (total exploitation rate >40 percent).

In 2010, the Council adopted management objectives for Puget Sound coho as recommended by WDFW and tribal co-managers under provisions of *U.S. versus Washington*. The annual objectives were based on the Comprehensive Coho Agreement categorical status and associated maximum exploitation rate limits. The Council formally adopted exploitation rate management objectives for Puget Sound coho in November 2009, which were generally consistent with PSC objectives, and replaced the longstanding FMP spawning escapement objectives in 2010. For 2010, the objectives were as follows:

- Strait of Juan de Fuca (East and West): Critical status 20 percent maximum exploitation rate
- Hood Canal: Low status 45 percent maximum exploitation rate
- Skagit: Normal status 60 percent maximum exploitation rate
- Stillaguamish: Normal status 50 percent maximum exploitation rate
- Snohomish: Low status 40 percent maximum exploitation rate

### **Regulations to Achieve Objectives**

Puget Sound coho stocks did not play a primary role in 2010 ocean fishery management considerations, since management of impacts to Interior Fraser (Thompson River, B.C. Canada) and LCN coho were more constraining. Inside fisheries, primarily in Puget Sound, were constrained to meet PSC objectives for Interior Fraser and Hood Canal coho. The mark-selective regulations in ocean and Puget Sound recreational fisheries served to increase harvest of marked hatchery fish while minimizing impacts on natural Puget Sound coho, LCN coho, OCN coho, and Interior Fraser coho.

### ***Inside Harvest***

Commercial inside harvest of Puget Sound coho was managed on the basis of six regional management units: Strait of Juan de Fuca, Nooksack-Samish, Skagit, Stillaguamish-Snohomish, South Puget Sound, and Hood Canal. Harvest of coho for each management unit is regulated according to the natural spawning escapement or hatchery program escapement goal for that unit. Commercial net and troll harvest (treaty Indian and non-Indian) for all coho stocks combined is presented in Appendix B, Table B-38. The 2010 total Puget Sound commercial catch of coho was 171,157 fish, compared to a catch of 218,084 coho in 2009. Non-Indian harvest was 18,220 coho, compared to 20,668 coho in 2009. Treaty Indian net and troll fisheries harvested 152,937 coho, compared to 197,416 coho in 2009.

Historical coho catches in the Puget Sound recreational fishery for the years 1971 through 2009 are listed in Appendix B, Table B-39. Catch estimates for the 2010 Puget Sound recreational fishery were unavailable.

### ***Escapement and Management Performance***

No postseason estimates were available for southern U.S. (SUS) inside harvest impacts on coho stocks subject to the PSC coho management plan; therefore the 2010 preseason exploitation rate objectives agreed to by WDFW and tribal co-managers could not be evaluated. Preliminary escapement information indicates natural Puget Sound coho escapements were generally average or below average, but actual escapement numbers were unavailable.

Strait of Juan de Fuca coho (both Eastern and Western stocks) were managed as a unit in 2010 for an exploitation rate provided in the Council-adopted conservation objective described above. However, spawning escapements for the Western stock in 2005, 2006, 2007, and 2008 were less than the FMP conservation objective in place at the time, and therefore triggered an Overfishing Concern, which was addressed under the terms of the Salmon FMP.

## **BRITISH COLUMBIA COHO STOCKS**

### *Management Objectives*

B.C. coho stocks were managed under the PSC management plan as described in the previous section on Puget Sound coho.

### **Regulations to Achieve Objectives**

In 2010, Interior Fraser coho were in the “low” status category, which required the total exploitation rate in SUS fisheries not to exceed 10.0 percent. This requirement constrained both Council area and inside fisheries. The preseason expectation was that the total SUS fishery exploitation rate on Interior Fraser coho would be 9.8 percent (5.3 percent in Council area fisheries). The mark-selective regulations in ocean and Puget Sound recreational fisheries served to increase harvest of marked hatchery fish while minimizing impacts on natural Interior Fraser coho.

### *Inside Harvest*

Harvest of coho in inside waters affecting B.C. coho stocks occurred in Puget Sound fisheries, which were described in the previous section of this chapter.

### *Escapement and Management Performance*

Postseason estimates of SUS inside harvest impacts on coho stocks subject to the PSC coho management plan were unavailable. Preseason expectations were for an exploitation rate of 1.0 percent for inside fisheries on Interior Fraser coho.

## **COASTWIDE GOAL ASSESSMENT SUMMARY**

Conservation objective achievement assessments were unavailable for many coho stocks; however, those that were available all met their objectives. Puget Sound FMP conservation objectives have been updated to reflect exploitation rate management objectives adopted by the Council in 2009.

A summary of 2010 performance of coho salmon stocks in relation to the Council’s conservation objectives is presented in Table III-5.

TABLE III-1. Estimated returns to Oregon coastal streams and lakes in thousands of adult coho.

Year	Returns to Hatcheries			Winchester Dam Count <sup>c/</sup> (North Umpqua)	Number of OCN Spawners <sup>a/</sup>			Inside Harvest Impacts <sup>d/</sup>	Ocean Escapement to Oregon Coast <sup>a/</sup>
	Private	Public	STEP <sup>b/</sup>		Lakes	Rivers	Total		
1970	-	36.2	-	0.1	20.5	51.2	71.7	39.8	147.8
1971	-	29.1	-	0.4	29.2	65.6	94.8	24.1	148.4
1972	-	12.9	-	0.3	10.0	24.1	34.1	16.6	63.9
1973	-	18.4	-	0.4	17.6	37.8	55.4	15.4	89.6
1974	-	35.1	-	0.4	6.4	28.1	34.5	13.5	83.5
1975	-	4.9	-	0.5	5.6	34.8	40.4	13.5	59.3
1976	-	38.7	-	0.3	1.5	39.2	40.7	19.6	99.3
1977	4.2	6.5	-	0.4	5.8	13.7	19.5	13.5	44.1
1978	12.3	5.6	-	0.5	1.6	18.2	19.8	4.5	42.7
1979	49.2	22.2	-	0.4	6.6	38.4	45.0	1.5	118.3
1980	38.7	21.9	-	0.2	4.7	25.6	30.3	6.3	97.4
1981	117.8	21.2	-	0.1	2.5	30.1	32.6	9.9	181.6
1982	184.7	14.8	-	2.7	7.9	68.3	76.2	14.7	293.1
1983	133.9	9.5	-	1.2	3.4	19.4	22.7	6.8	174.2
1984	115.4	28.6	-	3.2	14.8	59.7	74.4	17.4	239.1
1985	332.0	15.8	-	4.0	7.6	66.3	73.9	15.7	441.4
1986	453.7	35.8	2.5	9.6	11.8	58.2	70.0	30.3	601.8
1987	119.3	12.3	0.2	2.1	4.2	25.9	30.1	7.7	171.7
1988	116.1	33.7	1.2	1.2	5.8	51.0	56.8	13.3	222.3
1989	46.9	37.3	1.2	3.0	4.8	41.6	46.4	15.1	149.9
1990	35.6	15.5	1.6	1.9	4.4	16.9	20.9	9.5	85.4
1991	35.1	39.6	4.9	3.9	7.2	30.4	37.6	31.5	152.6
1992	-	23.3	0.6	5.0	2.0	40.2	42.2	18.7	89.9
1993	-	20.2	2.0	2.3	10.1	45.2	55.3	13.3	93.2
1994	-	23.4	1.8	2.0	5.8	38.3	44.2	2.4	73.8
1995	-	25.2	0.4	2.7	11.2	42.8	54.0	3.6	85.8
1996	-	23.4	1.0	5.1	13.5	60.5	74.0	4.0	107.6
1997	-	17.7	0.2	2.2	8.6	14.8	23.4	4.3	47.8
1998	-	15.3	0.2	4.6	11.1	20.9	32.0	5.2	57.2
1999	-	13.3	0.4	3.3	13.4	36.4	49.9	2.8	69.7
2000	-	15.0	0.5	9.7	12.7	57.4	70.1	4.5	99.7
2001	-	37.4	1.4	16.0	19.7	152.9	172.6	10.1	237.5
2002	-	30.9	2.6	7.4	22.2	238.4	260.6	8.1	309.5
2003	-	15.9	3.6	10.7	16.7	211.9	228.6	6.9	265.7
2004	-	13.2	0.8	7.2	18.6	154.1	172.8	6.6	200.5
2005	-	10.0	0.3	8.9	14.7	139.9	154.6	6.2	180.0
2006	-	9.8	0.1	7.0	24.1	104.7	128.8	2.6	148.4
2007	-	3.6	0.0	2.7	9.0	57.3	66.3	1.5	74.1
2008	-	7.0	0.0	0.2	23.6	156.1	179.7	2.6	189.5
2009	-	6.1	0.0	0.7	17.3	245.4	262.7	6.9	276.4
2010 <sup>e/</sup>	-	7.8	0.0	1.7	38.9	214.9	253.8	5.7	268.9

a/ Does not include estimates for the southern OCN component (Rogue River). Spawner escapements to rivers prior to 1990 were estimated by a nonrandom standard index of streams north of the Rogue River. A total coastwide spawner escapement methodology based on stratified random sampling (SRS) was initiated in 1990 and used through 1997 and was implemented concurrently with the standard index methodology. The SRS methodology indicated that actual escapements were less than estimated by the standard rivers index. The spawner index data for years prior to 1990 have been recalibrated in this table to be comparable with the SRS estimates. Since 1998 a random site selection procedure based on the EPA's Environmental Monitoring and Assessment Program (EMAP) has been used.

b/ Oregon coastal Salmon Trout Enhancement Program (STEP) production from hatchery smolt rearing sites only.

c/ Natural and hatchery fish prior to 1990, unmarked fish only thereafter.

d/ Freshwater sport catch from ODFW salmon/steelhead angler tag information and represents only those fish greater than 24 inches. Includes estimated mortality from hook-and-release.

e/ Preliminary.



TABLE III-2. Estimated weekly effort (in angler trips) and catches of Chinook and coho in the 2010 Buoy 10 recreational fisheries (all data are preliminary).<sup>a/</sup>

Week Number	Ending Date of Period	Angler Trips	Catch		Catch Per Trip
			Chinook	Coho	
31	Aug. 1	464	13	0	0.03
32	Aug. 8	2,699	75	7	0.03
33	Aug. 15	5,501	386	99	0.09
34	Aug. 22	16,556	3,117	2,476	0.34
35	Aug. 29	16,784	2,809	3,619	0.38
36	Sept. 5	7,567	407	1,673	0.27
37	Sept. 12	1,941	0	30	0.02
38	Sept. 19	403	0	57	0.14
39	Sept. 26	298	0	13	0.04
40	Oct. 3	87	0	6	0.07
Total		52,300	6,807	7,980	0.28

a/ Includes boat-based and shore-based fisheries from the upstream boundary at the Tongue Point/Rocky Point line (2000), downstream to the Buoy 10 line including Clatsop Spit, the South Jetty of the Columbia River, and the North Jetty of the Columbia River after the ocean fishery closed. The fishery was open August 1-31 for Chinook and marked coho, with the daily-bag-limit of two adult salmon, only one of which may be a Chinook. From September 1-December 31 the fishery was open for marked coho with the daily-bag-limit of two adult salmon; Chinook retention was prohibited.

TABLE III-3. Oregon production index (OPI) area coho harvest impacts, spawning, abundance, and exploitation rate estimates in thousands of fish.<sup>a/</sup>

Oregon and California Coastal Returns									
	Ocean Fisheries <sup>b/</sup>		Hatcheries and Freshwater		Private	Columbia River		Ocean Exploitation Rate Based on OPI	OCN Exploitation Rate Based on Postseason
Year or Avg.	Troll	Sport	Harvest <sup>c/</sup>	OCN Spawners	Hatcheries	Returns	Abundance <sup>d/</sup>	Abundance <sup>e/</sup>	FRAM
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	0.83	-
1981-1985	451.2	274.0	37.2	56.0	176.8	305.3	1,328.6	0.60	-
1986	638.9	320.6	79.3	70.0	453.7	1,549.1	3,026.7	0.34	-
1987	468.2	296.2	45.1	30.1	119.3	316.5	1,377.9	0.60	-
1988	844.7	297.2	61.1	56.8	116.1	670.9	1,989.2	0.57	-
1989	645.1	425.5	61.1	46.4	46.9	709.0	1,871.2	0.57	-
1990	275.9	357.1	28.7	22.5	35.6	196.7	1,128.5	0.69	-
1991	448.4	469.9	77.8	38.1	35.1	955.1	1,823.2	0.45	-
1992	67.4	256.5	51.0	44.2	-	216.1	610.0	0.51	-
1993	13.1	140.8	38.6	55.7	-	114.2	342.1	0.42	-
1994	2.7	3.0	28.2	48.5	-	169.2	250.5	0.02	0.07
1995	5.4	43.5	37.5	57.3	-	74.8	215.9	0.22	0.12
1996	7.0	31.8	45.8	79.3	-	113.0	297.3	0.14	0.08
1997	5.5	22.4	27.0	31.6	-	148.1	204.6	0.12	0.12
1998	3.5	12.8	29.4	34.3	-	168.4	265.2	0.06	0.08
1999	3.6	36.5	22.6	51.2	-	274.1	414.0	0.10	0.08
2000	25.2	74.6	33.3	81.1	-	547.6	901.0	0.13	0.07
2001	38.1	216.8	75.9	185.2	-	1,108.3	1,438.6	0.16	0.07
2002	15.0	118.7	54.0	269.0	-	499.9	990.5	0.14	0.12
2003	28.8	252.4	45.2	235.3	-	677.3	1,183.6	0.23	0.14
2004	26.2	159.3	38.5	197.2	-	442.5	826.8	0.22	0.15
2005	10.5	58.2	42.9	164.6	-	341.0	592.1	0.12	0.11
2006	4.5	47.5	29.6	132.8	-	386.4	557.1	0.09	0.06
2007	26.2	128.5	11.1	71.5	-	331.1	536.5	0.28	0.11
2008	0.6	26.4	15.6	180.1	-	493.8	736.3	0.04	0.02
2009	27.7	201.2	16.2	265.3	-	729.8	1,323.2	0.19	0.07
2010 <sup>f/</sup>	5.8	48.8	19.4	256.8	-	441.1	818.1	0.07	0.05

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

b/ Includes estimated nonretention mortality: troll fishery--hook-and-release mortality for 1982-2005 and drop-off mortality for all years; sport fishery--hook-and-release mortality for 1994-2005 and drop-off mortality for all years.

c/ Includes returns from Salmon-Trout Enhancement Program (STEP) smolt releases through the 2007 return year, after which the program was terminated.

d/ Not equal to the sum of previous columns due to stock and fishery accounting north and south of Leadbetter Point.

e/ Ocean fishery impacts on private hatchery stock and returns to private hatcheries are excluded in calculating the OPI area stock aggregate ocean exploitation rate index.

f/ Preliminary.

TABLE III-4. OCN adult coho salmon conservation objective, fishery impacts, and spawner escapement.

Year	Fishery Impact (Total Marine and Freshwater Exploitation Rate)			Adjusted SRS Adult Coho Spawner Population Estimates in Thousands of Spawners by Stock Component <sup>a/</sup>					Adult Coho Spawners Per Spawner Habitat Mile				
	Conservation Objective <sup>b/</sup>	Preseason Projection	Postseason Estimate <sup>c/</sup>	Northern <sup>d/</sup>	North Central <sup>e/</sup>	South Central <sup>f/</sup>	Southern <sup>g/</sup>	Coastwide	Northern <sup>d/</sup>	North Central <sup>e/</sup>	South Central <sup>f/</sup>	Southern <sup>g/</sup>	Coastwide Average
1990	-	-	-	2.2	5.6	13.5	1.2	22.5	2	5	8	3	6
1991	-	0.460	0.454	9.3	6.7	21.6	0.5	38.1	10	6	13	1	9
1992	-	0.420	0.511	2.4	15.4	24.4	2.0	44.2	3	13	15	5	11
1993	-	0.260	0.423	4.5	7.8	43.1	0.8 <sup>h/</sup>	55.7	5	7	27	1 <sup>h/</sup>	14
1994	≤0.20	0.111	0.068	3.5	9.8	30.9	4.3	48.5	4	8	19	11	12
1995	≤0.20	0.118	0.124	3.9	13.6	36.5	3.4	57.3	4	12	22	8	14
1996	≤0.20	0.125	0.083	3.3	18.1	52.6	5.2	79.3	4	16	32	13	19
1997	≤0.20	0.110	0.124	2.1	2.8	18.4	8.2	31.6	2	2	11	20	8
1998	≤0.13	0.119	0.078	2.6	3.3	26.1	2.3	34.3	3	3	16	6	8
1999	≤0.15	0.087	0.076	8.9	11.8	29.2	1.4	51.2	10	10	18	3	13
2000	≤0.15	0.082	0.073	17.9	14.3	37.9	11.0	81.1	20	12	23	27	20
2001	≤0.08	0.074	0.074	33.5	25.2	113.9	12.6	185.2	37	22	70	31	45
2002	≤0.15	0.123	0.123	52.5	104.0	104.1	8.4	269.0	58	89	64	20	66
2003	≤0.15	0.144	0.144	59.6	68.9	100.1	6.8	235.3	66	59	62	16	57
2004	≤0.15	0.147	0.147	28.8	42.1	101.9	24.5	197.2	32	36	63	60	48
2005	≤0.15 <sup>i/</sup>	0.111	0.111	16.5	51.4	86.7	10.0	164.6	18	44	53	24	40
2006	≤0.15 <sup>i/</sup>	0.096	0.059	24.1	21.2	83.5	3.9	132.8	27	18	51	10	32
2007	≤0.20	0.113	0.109	17.5	12.3	36.5	5.2	71.5	19	11	22	13	17
2008	≤0.08	0.069	0.020	25.6	68.1	86.0	0.4	180.1	28	59	53	1	44
2009	≤0.15	0.130	0.109	48.1	86.4	128.2	2.6	265.3	54	74	79	6	65
2010 <sup>j/</sup>	≤0.15	0.112	0.048	53.2	53.5	147.1	3.1	256.8	59	46	91	7	63

a/ A spawner escapement methodology study based on SRS had been in effect from 1990 to 1997 in which coho salmon population estimates have been made for Oregon coastal river systems from the Sixes River and north. Since 1998 a random site selection procedure based on the EPA's Environmental Monitoring and Assessment Program (EMAP) has been used. Spawner population estimates include an adjustment for observation error.

b/ Prior to 1994, the conservation objective was expressed in terms of the total escapement of OCN spawners in index numbers rather than as an exploitation rate. The index escapement objectives from 1981 through 1993 are provided in Table III-2 of the Review of 1998 Ocean Salmon Fisheries and Table 1 of Amendment 11. From 1994 through 1997, Amendment 11 specified that at low stock sizes, only incidental harvest of OCN coho could occur and that impacts could not exceed 20%. Beginning in 1998, the OCN conservation objective has been as specified in Amendment 13 which is also the basis for the NMFS jeopardy standards under the Endangered Species Act listing.

c/ From the coho FRAM, except the estimates prior to 1994 represent the OPI composite exploitation rate for hatchery and natural stocks.

d/ Estimate based on 899 miles of spawner habitat within Nehalem, Tillamook, and Nestucca Rivers and other direct ocean tributaries from Necanicum River through Neskowin Creek.

e/ Estimate based on 1,163 miles of spawner habitat within Siletz, Yaquina, Alsea, and Siuslaw Rivers and other direct ocean tributaries from the Salmon through Siuslaw Rivers.

f/ Estimate based on 1,622 miles of spawner habitat within Umpqua, Coos, and Coquille Rivers. Also includes spawners using tributaries to Siltcoos, Tahkenitch, and Tenmile Lakes.

g/ Estimate based on a mark-recapture methodology and 410 miles of spawner habitat within the Rogue River.

h/ Unreliable estimate.

i/ The Salmon FMP specified an allowable marine and freshwater exploitation rate of 20%, however, the OCN workgroup matrix specified 15% and the Council chose to manage at the more conservative level for 2005 and 2006.

j/ Preliminary.

TABLE III-5. Performance of coho salmon stocks in relation to 2010 conservation objectives (preliminary data). (Page 1 of 2)

System and Stock	2010 FMP Conservation Objective	Achievement
<b>OPI Area Coho</b>		
(Columbia River and coastal stocks south of Leadbetter Point)	Natural spawner escapement objectives as provided below; meet hatchery egg-take goals; meet treaty Indian obligations.	Hatchery egg-take goals achieved. No information available on catch allocation.
Northern California (Threatened) and CCC (Endangered)	No directed coho fisheries or retention of coho south of Humbug Mt. Marine exploitation rate $\leq 13.0\%$ as indicated by R/K hatchery stocks. Council adopted a projected exploitation rate on R/K hatchery coho of $10.0\%$ .	No fisheries south of the California/Oregon border. Preliminary postseason marine exploitation rate of $2.2\%$
OCN	Combined marine and freshwater exploitation rate $\leq 15.0\%$ . Council adopted a projected exploitation rate on OCN of $11.2\%$ .	Preliminary postseason total exploitation rate estimate was $4.8\%$ .
Columbia River Natural (Threatened)	Combined marine and mainstem Columbia River exploitation rate $\leq 15.0\%$ . Council adopted management measures resulted in a projected marine exploitation rate of $11.24\%$ .	A postseason estimate of mainstem Columbia River fishery exploitation was unavailable; preliminary postseason marine exploitation rate estimate was $4.8\%$ .
<b>Washington Coast Coho</b>		
	Natural spawner escapement objectives as provided below and in state/tribal agreements; meet hatchery egg-take goals; meet treaty Indian obligations.	Hatchery egg-take goals achieved. No information available on catch allocation.
Grays Harbor	35,400 natural adult spawners.	Escapement estimate was unavailable; pre-season projection was 61,900 ocean escapement.
Queets	5,800 to 14,500 natural adult spawners.	Escapement estimate was unavailable; pre-season projection was 11,300 ocean escapement
Hoh	2,000 to 5,000 natural adult spawners.	Escapement estimate was unavailable; pre-season projection was 6,500 ocean escapement
Quillayute Fall	6,300 to 15,800 natural adult spawners.	Preliminary postseason escapement estimates was 9,322.

TABLE III-5. Performance of coho salmon stocks in relation to 2010 conservation objectives (preliminary data).  
(Page 2 of 2)

System and Stock	2010 FMP Conservation Objective	Achievement
<b>Puget Sound Coho</b>	Stepped exploitation rate objectives; meet hatchery egg-take goals; meet treaty Indian obligations and inside non-Indian fishery needs for six management units.	Data not available for 2010 natural spawner escapements. Hatchery egg-take goals likely will be met.
Strait of Juan de Fuca	≤20% total exploitation rate.	Preseason expectation of an 11% total exploitation rate; postseason estimate unavailable.
Hood Canal	≤45% total exploitation rate.	Preseason expectation of an 43% total exploitation rate; postseason estimate unavailable.
Skagit	≤60% total exploitation rate.	Preseason expectation of an 37% total exploitation rate; postseason estimate unavailable.
Stillaguamish	≤50% total exploitation rate.	Preseason expectation of an 37% total exploitation rate; postseason estimate unavailable.
Snohomish	≤40% total exploitation rate.	Preseason expectation of an 32% total exploitation rate; postseason estimate unavailable.

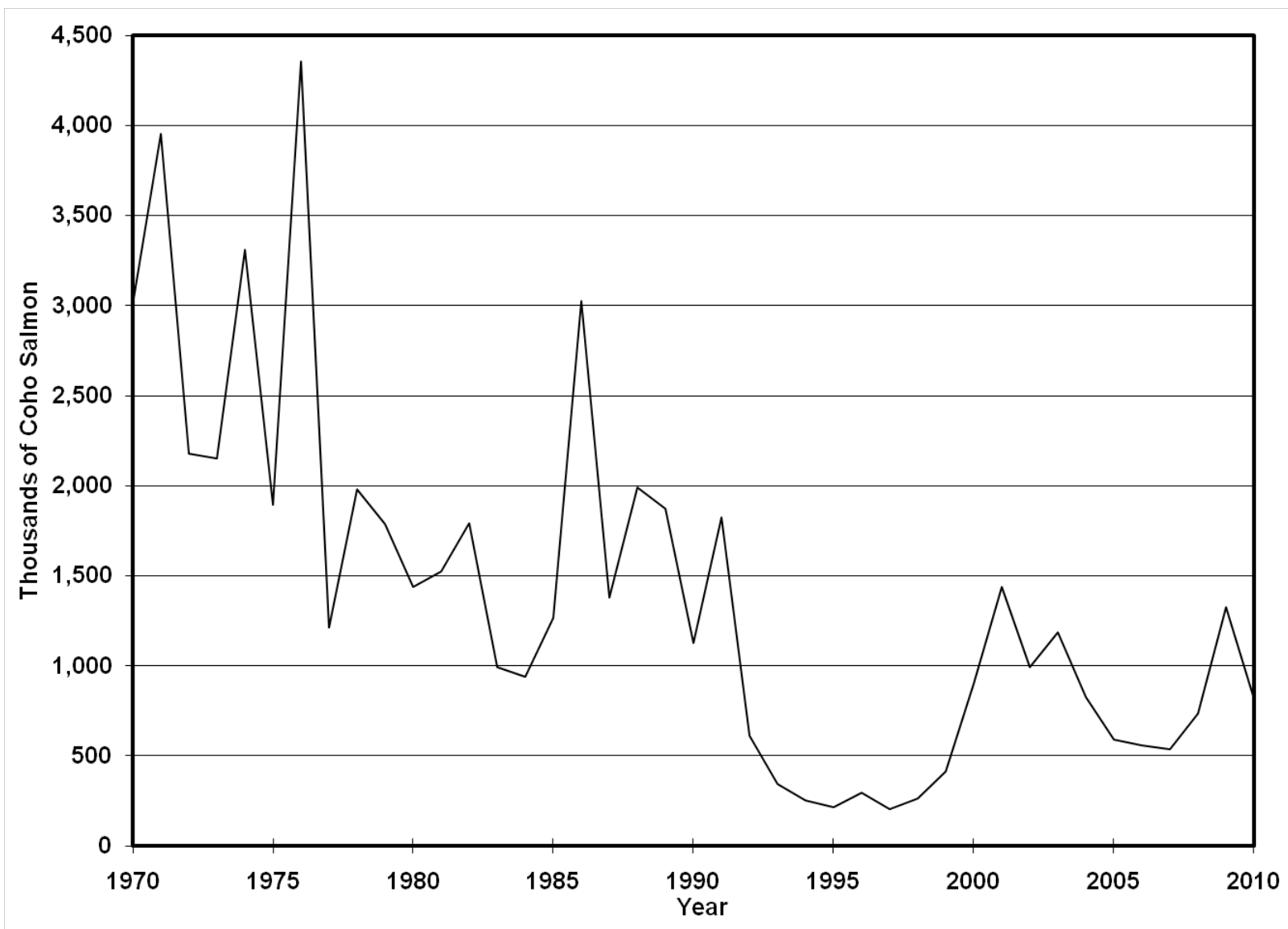


Figure III-1. Oregon Production Index (OPI) area coho abundance estimates by stratified random surveys (SRS) accounting methods, 1970-2010.

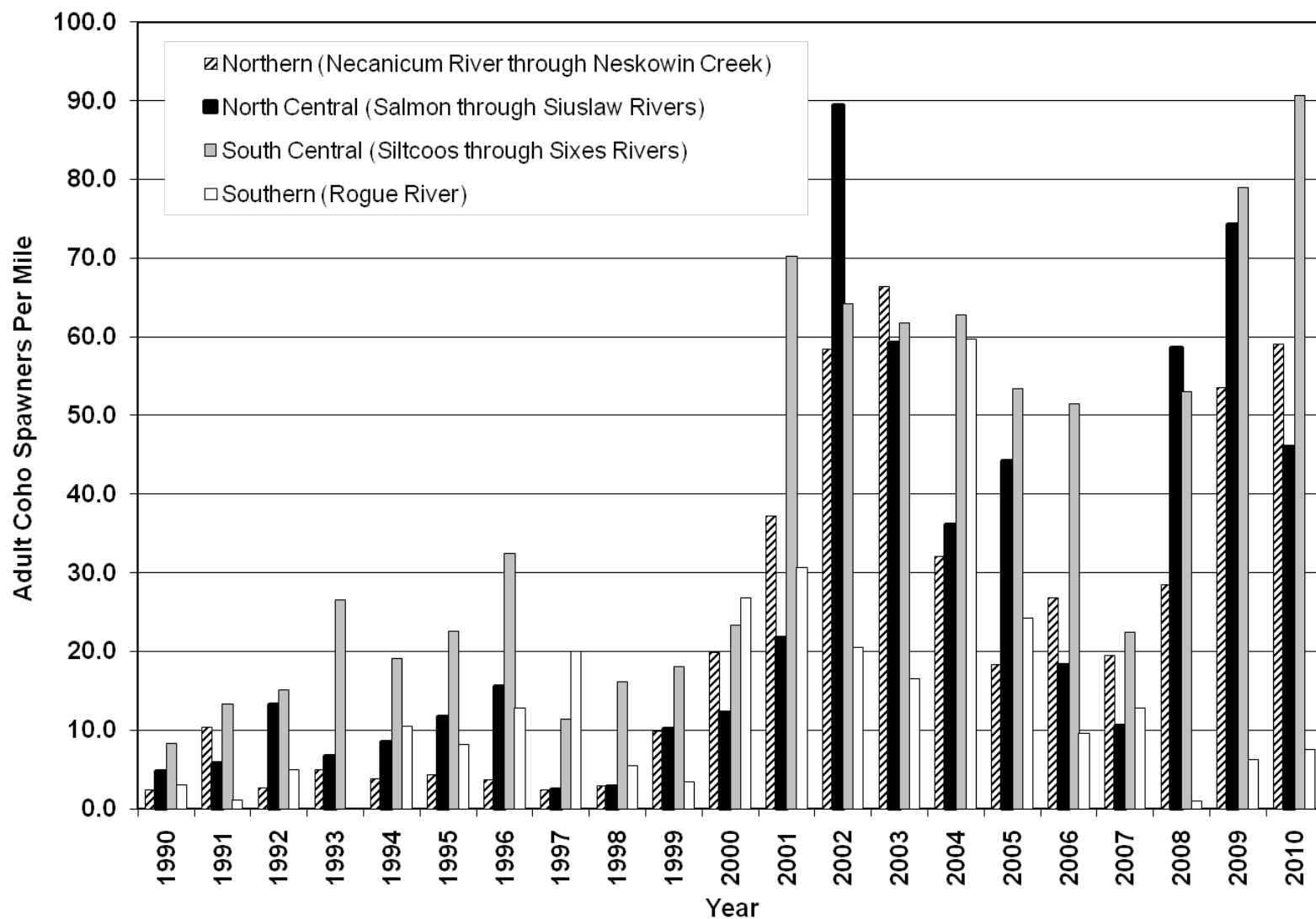


Figure III-2. Oregon coastal natural (OCN) adult coho spawners per habitat mile by coastal region based on SRS accounting methods, 1990-2010.

## CHAPTER IV

### *SOCIOECONOMIC ASSESSMENT OF THE 2010 OCEAN SALMON FISHERIES*

**SUMMARY:** Total 2010 exvessel value of the Council-managed non-Indian commercial salmon fishery was \$7.15 million, which is the fifth lowest on record, but more than four times above its 2009 level of \$1.5 million. California had its first commercial salmon fishery since 2007. The 2010 exvessel value of the commercial fishery was 28 percent below the 2005-2009 inflation-adjusted average of \$10 million and 88 percent below the 1979 through 1990 inflation-adjusted average of \$59.3 million. The coastwide average exvessel price for Chinook in 2010 was \$5.54 per pound. This was four percent below the 2009 level. At \$2.17 per pound, average 2010 West Coast coho prices were six percent higher than in 2009. The preliminary number of vessel-based ocean salmon recreational angler trips taken on the West Coast in 2010 was 182,900 a decrease of three percent from 2009, and 70 percent below the 1979 through 1990 average. Total West Coast income impact associated with recreational and commercial ocean salmon fisheries for all three states combined was estimated at \$25.5 million in 2010. This was 46 percent above the estimated 2009 level of \$17.4 million. 2010 had the third lowest income impacts on record, with 2008 having the lowest on record at \$7.5 million and 2009 the second lowest (adjusted for inflation).

#### **ALLOCATION OF THE SALMON RESOURCE**

Salmon management by the Council involves numerous allocation issues including:

- Determining the amount of salmon available for ocean harvest after considering expected abundances, harvests by inside fisheries, and spawning escapement goals.
- Allocating harvest among broad management areas and among port areas within the management areas.
- Allocating harvest between Indian and non-Indian harvesters.
- Allocating the non-Indian harvest between commercial and recreational harvesters.

The amount of salmon available for harvest in Council management areas depends, in part, on harvest in Canada and Alaska. Allocation of harvest between the West Coast, Canada, and Alaska is determined within the constraints of the PST.

In general, the recreational fishery has tended to have a more stable harvest than the commercial fishery (in both absolute and relative terms) (Figures IV-1 and IV-2). The majority of the annual variation in available ocean harvest is usually taken up in the commercial fishery. However, both fisheries have suffered substantial declines relative to harvest levels of the 1980s, the effects of which are amplified within specific geographic areas.

Decisions on allowable harvests for a particular stock often have implicit allocation effects on the geographic distribution of salmon harvest. Seasons may be more restrictive along a particular area of the coast to protect a depressed stock encountered in that area at a higher rate than other areas. The geographic distribution of harvest opportunity along the coast involves balancing the often conflicting objectives of maximizing ocean harvest and fairly distributing the responsibility for resource conservation. A brief outline of the regulatory objectives which shaped the 2010 season is provided in Chapter I; and an assessment of success in meeting the objectives is provided in Chapters II and III.



## COMMERCIAL SALMON FISHERIES

### *West Coast Non-Indian Commercial Ocean Fishery*

#### **In-season Price Trends**

Monthly exvessel price data provide information on seasonal price trends (Table IV-1). Coastwide average exvessel prices for Chinook and coho in 2010 were \$5.54 and \$2.17 per pound, respectively. California 2010 Chinook prices were at their highest in August, averaging more than \$5.50 per pound. Oregon 2010 Chinook prices were at their highest in October, averaging just under \$6.50 per pound. Washington average Chinook prices were highest in May at \$5.73 per pound. Oregon and Washington average Chinook prices were at their lowest in July and September, respectively. For the season, exvessel Chinook prices in Washington, Oregon and California averaged \$5.61, \$5.49 and \$5.47 per pound, respectively. Coho prices in Washington and Oregon averaged \$2.14 and \$2.23 per pound, respectively.

#### **Annual Trends (Seasons, Value, Prices, and Pounds)**

Available information on Chinook and coho exvessel price and value by species, compiled from state fish receiving tickets and expressed both in nominal terms and inflation-adjusted 2010 dollars, is presented in Tables IV-2, IV-3, and IV-4. Data on pink salmon are provided in Table IV-5. The gross domestic product implicit price deflator, developed by the Bureau of Economic Analysis, was used to adjust nominal values for inflation (Appendix D, Table D-22). Weights of landings by species and port for Chinook and coho are presented in Tables IV-6, IV-7, and IV-8. These tables and the following discussion refer to the non-Indian commercial fishery in Council management areas and associated state territorial ocean area waters.

Total 2010 exvessel value of the Council-managed non-Indian commercial salmon fishery was \$7.15 million, which is the fifth lowest on record. Exvessel value was more than four times above its 2009 level (\$1.5 million) and 88 percent below the 1979 through 1990 inflation-adjusted average of \$59.3 million (including pinks), and 28 percent below the 2005-2009 inflation-adjusted average of \$10 million.

In 2010 California had its first commercial salmon fishery since 2007, although it remained heavily constrained by SRFC management objectives. The exvessel value of the California commercial ocean salmon catch in 2010 was \$1.2 million compared with (inflation adjusted) \$8.2 million in 2007 and a 1979-2009 average of \$17.7 million (inflation adjusted). The 2010 exvessel value for the Oregon commercial catch of \$2.8 million was the highest since 2007, although down 13 percent from the 2005-2009 average, and 85 percent below the 1979-1990 average of \$18.7 million, in inflation-adjusted terms. The 2010 exvessel value of the Washington non-Indian ocean commercial catch of \$3.1 million was up 164 percent from the inflation adjusted value in 2009 of \$1.2 million. Exvessel values of Washington landings over the last nine years (2002-2010) have been higher than any period since 1993 when they were \$1.1 million in inflation-adjusted terms. While 2010 Washington exvessel values were higher in inflation adjusted terms than in any year since 1988, they were still 63 percent below the 1979 through 1990 inflation-adjusted average of \$8.4 million.

The 2010 average West Coast ocean harvest Chinook price was \$5.54 per pound, which is the third highest in nominal terms reported since 1979. The last five years (2006 through 2010) all had average Chinook prices over \$5.48 per pound (adjusted for inflation). Chinook prices have not been this high since 1979, when the average inflation-adjusted price was \$6.70 per pound. One of the main reasons prices have been relatively high in recent years is due to the restricted fishing seasons (see Chapter I and Appendix C for details). The 2010 Chinook price was 2 percent above the recent five year (2005-2009) average of \$5.45 in inflation-adjusted terms, and 18 percent above the 1979-1990 average (\$4.70). At

\$2.17 per pound, average 2010 West Coast coho prices were 6 percent higher than in 2009 in inflation-adjusted terms, but 17 percent lower than in 2008 and 28 percent lower than the 1979-1990 average.

In terms of number of fish, the 2010 coastwide, non-Indian commercial Chinook harvest of 99,600 fish increased more than seven fold compared to 2009 (Figure IV-1). Historically, the 2009 harvest of Chinook was the lowest on record. The number of Chinook harvested in 2010 was 86 percent below the 1976-2009 long-term average of 690,600. The coastwide average weight per Chinook (12.7 pounds) was slightly higher than last year (12.6 pounds) and 12 percent higher than in 2008 (11.4 pounds) (Appendix D, Tables D-2, and D-3). The coastwide average weight per Chinook caught in the commercial fishery in 2010 was equal to the previous five years' (2005-2009) average weight.

Coho catch in 2010 was 3,100 fish, a decrease of more than 93 percent from the 2009 coho harvest (42,100), but still 47 percent above the 2008 catch (2,100). The coastwide average weight per coho (7 pounds) was 10 percent higher than the prior year (6.4 pounds) but 17 percent lower than in 2008 (8.4 pounds), which was the second highest average weight recorded since 1980. The highest average weight during that period was 8.5 pounds recorded in 2006. Coastwide coho exvessel value was \$48 thousand in 2010, a decrease of 91 percent from \$543 thousand recorded in 2009, but very close to 2008's value of \$47 thousand, in inflation adjusted terms (Figure IV-4).

West Coast ports with the most Chinook landings (by weight) were Westport (32 percent), Fort Bragg (14.8 percent) and Newport (14.7 percent). By comparison, in 2009, Westport (54 percent), La Push (15 percent) and Neah Bay (18 percent) were the leading ports, indicative of the absence of salmon fishing opportunities in the south. In 2010, areas north of Cape Falcon accounted for about 51 percent of coastwide Chinook harvest by weight, whereas in 2008 and 2009 areas north of Cape Falcon accounted for 84 and 94 percent of the Chinook harvest by weight, respectively. Compared with 2009, Chinook harvest by weight in 2010 was up 33-fold in Oregon and nearly more than three-fold in Washington. In contrast with 2009, the 2010 coho harvest by weight was down by 95 percent in Oregon, and by 89 percent in Washington. Coho harvest in California has been prohibited since 1992.

### **Ocean Commercial Salmon Harvesters**

Based on Pacific Coast Fisheries Information Network (PacFIN) data, a total of 641 vessels participated in the West Coast commercial salmon fishery in 2010. This is more than double the number that participated in 2009 (313), and nearly triple the number in 2008. However the 2010 total was down 36 percent from 2007's total of 1,007 vessels. Note that these coastwide vessel counts are lower than the totals derived from summing Appendix D state-level tables (Tables D-4, D-5, and D-6) because vessels may be counted in more than one state and because of differences in the degree of completeness at the time the data were summarized for this report.

In 2010, 216 vessels made salmon landings in California compared with zero vessels in 2008 and 2009. In 2007, there were 601 vessels active in California, compared with 477 vessels active in 2006 (Table D-4). In Oregon, the active fleet increased by 144 vessels in 2010, with 369 vessels compared to 225 vessels in 2009 (Table D-5). The number of active vessels in Washington increased from 97 vessels in 2009 to 116 vessels in 2010 and 2009 (Table D-6). Coastwide, the number of limited entry salmon permits issued in 2010 decreased by 104 from the previous year to 2,395. Landings were made on 25 percent of all permits in 2010, up from 13 percent in 2009 and from 9 percent in 2008. Years 2008 and 2009 are the two lowest vessel participation years on record (1982-2010). From 1982 to 1993 an average of 5,193 of 7,942 total permits (65 percent) were used on an annual basis. Harvest opportunity began declining substantially after that time, and some permits were purchased in a buyback program.

In 2010, the coastwide average per vessel, inflation-adjusted exvessel value of salmon landings increased 115 percent compared to 2009, to \$10,201 per vessel. Compared to 2009, 2010 average per vessel exvessel revenue was up nearly five-fold in Oregon, and 121 percent in Washington. California harvesters experienced their first commercial salmon fishery in three years. Some caution needs to be exercised in interpreting the per-vessel averages. For example, the averages may be influenced as much by a disproportionate change in the number of small or large harvesters from one year to the next as by a change in the average revenues of those vessels remaining in the fishery.

Additional historical information on landings by vessel size, percentages of the fleet responsible for the majority of harvest, and harvest by residence of those participating in the fishery off each state is provided in Appendix D.

### *West Coast Treaty Indian Commercial Ocean Fishery*

Treaty Indian commercial fisheries off Washington operate under regulations established by the Council. While some of the treaty Indian harvest was for ceremonial and subsistence purposes, the vast majority of the catch was commercial harvest. Commercial treaty Indian fisheries provide food to consumers and generate income in local and state economies through expenditures on harvesting, processing, and marketing of the catch. From May through September 15<sup>th</sup> 2010, the treaty Indian ocean troll fishery harvested 35,000 Chinook (307,600 pounds) and 11,500 coho (80,500 pounds) compared with 12,811 Chinook (103,700 pounds) and 60,600 coho (347,000 pounds) in 2009 (Tables A-15 and D-3). For all of 2010 the preliminary exvessel value of Chinook and coho landed in the treaty Indian ocean troll fishery was \$1.8 million, compared with the exvessel value in 2009 of \$1.0 million (values based on PacFIN data).

### *Columbia River Commercial Fishery*

Harvest in the ocean salmon fisheries impacts the inriver fisheries by affecting the number of fish available for inside treaty Indian and non-Indian harvest. Table IV-9 shows the exvessel value of Columbia River commercial harvest of Chinook, coho and chum salmon. All prices and values in the table and the following discussion are reported in inflation-adjusted dollars. Exvessel prices for inriver catches of Chinook vary considerably with race (spring versus fall Chinook) and stock (tules versus brights). Spring Chinook generally bring the highest prices, and tule fall Chinook and chum the lowest prices.

Total 2010 exvessel value of commercial salmon harvested in the Columbia River was \$10.0 million. This was 69 percent above the 2009 level (\$5.9 million) and 27 percent above the inflation-adjusted 2008 level (\$7.8 million). Total exvessel value for non-Indian commercial salmon harvested in the Columbia River was \$5.1 million compared with \$3.6 million in both 2008 and 2009 (Table IV-9).

The total 2010 exvessel value of treaty Indian salmon harvested in the Columbia River and sold on fish tickets was \$4.9 million. This is more than double the 2009 value of \$2.2 million and 17 percent above the 2008 value of \$4.2 million. Note that these values include only those sales made to licensed fish buyers. Treaty Indian fisher sales to the public are accounted for in harvest monitoring reports (Table B-20), but estimates of the pounds and value of such sales were not included in Table IV-9.

### *Puget Sound and Washington Coastal Inside Fisheries*

Information on 2010 Puget Sound and Washington coastal inside fisheries is preliminary. Based on PacFIN data, the 2010 exvessel value reported for all salmon species taken in the commercial non-Indian fisheries in Puget Sound and Washington coastal inside fisheries (excluding the Columbia River) was \$6 million. Of this, \$1.1 million was for Chinook and coho. In 2009, the total inflation-adjusted exvessel value of the commercial non-Indian salmon fisheries in these areas was \$5.8 million for all salmon

species, of which \$1.3 million was Chinook and coho. The 1981 through 2009 inflation-adjusted annual average exvessel value was \$17.3 million, of which on average \$4.4 million was Chinook and coho.

The preliminary 2010 exvessel value reported to PacFIN (as of January 25, 2011) for all salmon species taken in the commercial treaty Indian fisheries in Puget Sound and Washington coastal inside fisheries (excluding the Columbia River) was \$6.4 million. Of this, \$3 million was Chinook and coho. In previous years, substantial additional landing reports have come in after publication of this review. The updated value for 2009 was \$11.3 million for all salmon species, of which \$6.6 million was Chinook and coho. The 1981 through 2009 inflation-adjusted exvessel value is \$21.7 million, of which on average \$8.2 million was Chinook and coho.

### *Klamath River Fisheries*

Commercial sales in the Yurok and Hoopa Valley Reservation Indian fall gillnet fisheries in the Klamath River occurred in 1987-1989, 1996, 1999-2004, and 2007-2010. Average commercial catch of fall Chinook was about 17,600 in those years, most of which occurred in the estuary. Commercial sales also occurred in spring gillnet fisheries in 1989, 1996, 2000-2004, and 2007-2009, with an average of about 1,300 fish sold. The 1989 harvest of 27,700 Chinook was sold for \$852,000 (unadjusted for inflation, \$1.4 million adjusted to 2010 dollars) and had an average per fish weight of 15.4 pounds. For the 1996 harvest of 3,129 spring Chinook and 40,147 fall Chinook, the value at first sale was estimated at \$525,000 (unadjusted for inflation, \$700,000 adjusted to 2010 dollars). The average weight per fish landed in 1996 was 13.5 pounds. Records were not available for the weight and value of harvests after 1996 as each Indian fisher now markets their fish independently. In recent years the fishery has occurred fairly regularly with the exceptions of 2005 and 2006. The commercial fall Chinook harvest was 15,300 Chinook in 2010, compared to 15,700 Chinook in 2009 (Appendix B, Table B-5).

## **CEREMONIAL AND SUBSISTENCE SALMON FISHERIES**

In addition to the commercial Indian fisheries discussed above, fish are taken in Indian fisheries each year for ceremonial and subsistence purposes. Estimates of the amount of salmon used for ceremonial and subsistence purposes are documented in Appendix B. Discussion of the importance of ceremonial and subsistence fish to Indian communities is presented in Appendix B to Amendment 14 of the salmon FMP.

## **RECREATIONAL SALMON FISHERIES**

### *Ocean*

The preliminary number of vessel-based ocean salmon recreational angler trips taken on the West Coast in 2010 was 182,900, a decrease of three percent from 2009, and 70 percent less than the 1979 through 1990 average. Compared with 2009, preliminary estimates of the number of trips taken in 2010 decreased by 37 percent in Oregon and 18 percent in Washington. California effort was up substantially since the sport fishery was not restricted to a 10-day fishery in the Klamath Management Zone as it was in 2009; however it was still severely depressed compared to historic levels. (Note that Washington effort estimates shown in Tables IV-10 and IV-13 differ from those in Tables I-4 and Appendix A Table A-17 because the former exclude bank effort from the Columbia River north jetty.)

Recreational salmon fishing takes place primarily in two modes, (1) anglers fishing from privately owned pleasure crafts, and (2) anglers employing the services of the charter boat fleet. In general, success rates on charter vessels tend to be higher than success rates on private vessels. Small amounts of shore-based effort directed toward ocean area salmon occur, primarily from jetties and piers. Coastwide, the proportion of angler trips taken on charter vessels in 2010 was relatively stable at 24 percent compared with 23 percent in 2009; however underlying this trend was a decline in the proportion of charter trips in

Oregon and increases in California and Washington. Figure IV-5 and Tables IV-10, IV-11, IV-12, and IV-13 display details of effort and catch by port area and mode for each state.

## **California**

The California recreational salmon fishery was more open in 2010 than it has been any year since 2007. Fishing was recorded in all areas, although compared with 2009 the number of trips in the Crescent City and Eureka areas declined by 81 percent and 5 percent, respectively. Coastwide 14,697 Chinook were caught in California on a total of 48,757 trips, for a success rate of 0.305 fish per trip.

## **Oregon**

Ocean recreational salmon trips in 2010 in Oregon were down 37 percent to 53,319 trips compared with an estimated 84,524 angler trips in 2009 (Tables IV-10 and IV-12). Total trips in 2010 were 22 percent below the most recent five year average (2005-2009). Compared to 2009, effort was down 49 percent in Newport and 16 percent in Astoria. In the other Oregon ports, change in effort was minus 40 percent in Tillamook and Coos Bay and virtually no change in Brookings. The charter industry's share of Oregon recreational salmon trips in 2010 was about 9 percent, which, with the exception of 2008, was well below the trend of the recent past (Figure IV-5 and Table IV-12).

From 1984 to 1993, coho accounted for 87 percent of the annual Oregon recreational ocean salmon catch, on average. From 1994 through 1998 the lack of opportunity to retain coho south of Cape Falcon generally resulted in much lower angler success rates. With the opportunity to retain coho in mark-selective fisheries south of Cape Falcon beginning in 1999, salmon retention rates increased 75 percent, from 0.25 salmon per angler-day in 1998 to 0.43 in 1999. From 2002 through 2009, retention rates ranged between 0.44 and 1.07 salmon per angler-day. The retention rate for 2010 was at the bottom of this range at 0.44. In 2010, coho contributed almost 79 percent of the total Oregon recreational ocean salmon catch.

## **Washington**

In 2010, 80,827 ocean angler trips were taken on vessels on the Washington coast (Tables IV-10 and IV-13), a decrease of 18 percent from the 98,926 trips taken in 2009, but 12 percent above the recent five year (2005-2009) average. About one third of Washington angler trips were taken on charter vessels in 2010, up slightly from 30 percent in 2009, (Figure IV-5 and Table IV-13), but tied with 2004 for the second-lowest charter trip share observed since 1979.

The angler success rate (in terms of retained fish per angler trip) was 0.905 in 2010, down from 1.52 in 2009 and slightly lower than 0.92 recorded in 2008. Between 1979 and 1990, the retention rate averaged 1.49 salmon per trip. Since that period it has averaged 1.26 salmon per trip. Note that these figures do not include angler effort that occurs from the ocean side of the Columbia River jetty, or angler effort in the state managed Area 4B add-on fishery, when open.

In order to increase angler participation in non-salmon recreational fishing (e.g., bottomfish trips) and to extend the length of the salmon season, partial-week closures were instituted in the recreational fishery north of Cape Falcon beginning in 1985. Sunday through Thursday salmon openings were used beginning in 1996 in the Westport and Columbia River port areas. The Neah Bay and La Push areas were generally open seven days a week, until more recently. In 2010 the recreational salmon fishery was open seven-days-per-week in the Columbia River area (south of Leadbetter Point). All open ports north of Leadbetter Point started the year with partial week openings but switched from partial week openings to a seven-day-per-week fishery in late-July. In 2010, north of Cape Falcon there were 39,600 bottomfish trips, an increase from 37,200 trips in 2009 (Table IV-14). All port areas with the exception of Westport experienced an increase in bottomfish trips compared with 2009.

### *Buoy 10 and Area 4B Add-On Fisheries*

In 2010 anglers made a total of 52,000 trips in the Buoy 10 fishery, fishing from private and charter boats. This effort level is down 28 percent from 73,000 trips in 2009. Angler retention rates decreased from 0.75 salmon per angler day in 2009 to 0.29 salmon per angler day in 2010. This is the second-lowest retention rate on record since 2002, Table IV-15).

In 2000, about 3,400 trips were made in the late-season Area 4B add-on fishery. Since that time there have been no late season Area 4B add-on fisheries (Table IV-15), with the exception of 2008, during which there were an estimated 782 private trips and no charter trips. There was no Area 4B add-on fishery in 2010.

There were numerous other inside recreational salmon fishing opportunities in Puget Sound and coastal streams and estuaries that are not discussed in this chapter of the Review. See Appendix B for estimates of harvest in some of those other fisheries.

## **SALMON FISHERY INCOME IMPACTS AND COMMUNITY DEPENDENCE**

Coastal community income impacts provide information on the effects of fluctuations in salmon harvest on local economies and small businesses. Income impacts are estimated per commercial pound and per recreational fishing day, and were generated using the Fishery Economic Assessment Model (FEAM). Information on FEAM is available from the Council on request.

Estimated state and local community income impacts of commercial and recreational ocean salmon fisheries and selected state-managed fisheries are shown in Tables IV-16 through IV-20. These impacts represent estimates of total personal income associated with harvesting, processing and first level distribution activities in the commercial salmon fisheries, and trip-related expenditures made by recreational anglers, aggregated at the local community (county) and state levels. Income impacts are estimated based on several components: reported landings by area, an inventory of the area fleet and processors, estimates of fleet and processor expenditures, surveys of the expenditure patterns of recreational fishers, and local and state level total income coefficients generated by IMPLAN<sup>®</sup> models constructed for each area. In FEAM, most of the benefit of higher than average exvessel prices is assumed to go to the harvesters. Commercial ocean harvest that is landed outside the coastal areas (e.g., landings in Puget Sound ports) is not included in the estimates of coastal community impacts, but is included in the overall estimate of state-level impacts.

The income impacts presented here are estimates of annual trends and are intended to indicate the possible redirection of activity between nonfishing and fishing-dependent sectors. As such they represent likely upper bounds on the local community and state income impacts generated by West Coast salmon fisheries. All income impact estimates in this review are reported in inflation-adjusted 2010 dollars.

### *West Coast Ocean Fishery Income Impacts*

The total West Coast income impacts associated with recreational and commercial ocean salmon fisheries for all three states combined in 2010 were \$25.4 million, the third lowest on record but the highest since 2007. This was 46 percent above the estimated 2009 level of \$17.4 million and 93 percent below the inflation-adjusted value for 1979 (the highest year in the data time series). The 2010 value was 27 percent below the inflation-adjusted average value for the previous five years (2005-2009) of \$34.7 million (Tables IV-16 through IV-18). West Coast income impacts associated with the 2010 non-Indian commercial ocean fishery were \$10.9 million, more than quadruple the estimate for 2009 (\$2.5 million), but 34 percent below the recent five year (2005-2009) average of \$16.5 million, in inflation-adjusted

terms;<sup>1/</sup> Income impacts related to the 2010 ocean recreational fishery were estimated at \$14.5 million, slightly below last year's level, but two-and-a-half times greater than the 2008 level of \$5.6 million, and 20 percent below the 2005-2009 inflation-adjusted average of \$18.2 million. Note that these coastwide values may mask reductions in particular communities compared with averages during the 1980s. Tables IV-16 through IV-18 provide greater detail on the impacts in individual states and port areas along the West Coast.

### *Selected Inside Fisheries*

#### **Columbia River Commercial Fisheries**

Historically the non-Indian and treaty Indian Columbia River commercial fisheries have generated a substantial amount of income for the Oregon and Washington communities on the Columbia River. An average of \$33.0 million (inflation-adjusted) was generated annually from 1986-1990. In 2010, income impacts associated with the Columbia River commercial catch (non-Indian and treaty Indian) were estimated at \$19.6 million. This value is 79 percent above the 2005-2009 average. By comparison, total income impacts of these fisheries in 2008 and 2009 were \$15.2 million and \$12.2 million, respectively (Table IV-19).

#### **Buoy 10 and Area 4B Add-On**

The estimated local community income impact associated with the 2010 Buoy 10 recreational fishery was \$1.9 million, down 29 percent from the inflation-adjusted 2009 level, and 73 percent below the 1987-1990 inflation-adjusted average of \$7.2 million, but higher than inflation-adjusted average over 2006-2008 of \$1.4 million (Table IV-20). There was no late-season Area 4B add-on fishery in 2010. The most recent add-on fishery occurred in 2008, which was the first since 2000. The inflation-adjusted local community income impact associated with the area 4B add-on in 2008 was \$30,400. Between 1996 and 2000, the average annual inflation-adjusted total state-level income impact associated with the Area 4B add-on fishery was \$137,500 (Table IV-20).

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<sup>1/</sup> Income impact estimates for the commercial fishery do not include postseason settlement payments fishers may have received from buyers. These postseason settlements may be particularly significant for the California fishery.

TABLE IV-1. Average monthly exvessel troll salmon price in dollars per dressed pound for California, Oregon, and Washington in 2010.

Species/Grade	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
<b>CALIFORNIA</b>											
Chinook <sup>a/</sup>	-	-	-	-	5.42	5.54	-	-	-	-	5.47
Coho	-	-	-	-	-	-	-	-	-	-	-
<b>OREGON</b>											
Chinook											
Large (>11 Pounds)	-	-	5.74	5.26	4.71	5.49	5.86	6.47	-	-	5.50
Medium (7-11 Pounds)	-	-	5.35	5.08	4.68	5.30	5.13	6.38	-	-	5.18
Small (<7 Pounds)	-	-	4.86	6.06	3.45	4.57	2.83	4.36	-	-	5.03
Ungraded Chinook	-	-	5.78	5.45	5.50	5.66	4.83	6.76	-	-	5.62
Weighted Average	-	-	5.67	5.28	5.13	5.54	5.43	6.48	-	-	5.49
Mixed Coho	-	-	-	-	2.19	2.09	4.17		-	-	2.23
<b>WASHINGTON<sup>b/</sup></b>											
Chinook											
Large (>11 Pounds)	-	-	5.97	5.77	5.22	5.47	4.71	-	-	-	5.57
Medium (8-11 Pounds)	-	-	5.47	5.52	4.79	5.26	4.35	-	-	-	5.26
Small (<8 Pounds)	-	-	3.90	3.55	3.73	3.87	4.76	-	-	-	3.79
Ungraded Chinook	-	-	-	-	-	-	-	-	-	-	-
Weighted Average	-	-	5.73	5.68	5.16	5.43	4.67	-	-	-	5.61
Mixed Coho	-	-	-	-	2.03	2.17	2.44	-	-	-	2.14

a/ Chinook salmon typically sold in two size categories. Prices paid in these categories are not extracted from dealer ticket information.

b/ Non-Indian data only.



TABLE IV-2. Troll Chinook and coho landed in California, estimates of exvessel value, and average price (dollars per dressed pound) in nominal and real (inflation adjusted, 2010) dollars.<sup>a/</sup>

Year or Avg.	Chinook				Coho				Total <sup>b/</sup>	
	Nominal Value (\$*1,000)	Real Value (\$*1,000)	Nominal Price Per Pound (\$)	Real Price Per Pound (\$)	Nominal Value (\$*1,000)	Real Value (\$*1,000)	Nominal Price Per Pound (\$)	Real Price Per Pound (\$)	Nominal Value (\$*1,000)	Real Value (\$*1,000)
1979	17,356	43,931	2.53	6.40	2,303	5,829	2.19	5.54	19,659	49,760
1980	12,741	29,555	2.27	5.27	408	946	1.36	3.15	13,149	30,501
1981-1985	10,945	21,485	2.42	4.69	554	1,100	1.94	4.11	11,499	22,585
1986-1990	21,151	35,145	2.56	4.22	490	801	1.36	2.72	21,641	35,946
1991-1995	7,335	10,352	2.28	3.25	143	211	1.25	2.40	7,478	10,563
1996	5,984	7,977	1.44	1.92	-	-	-	-	5,984	7,977
1997	7,288	9,547	1.38	1.81	-	-	-	-	7,288	9,547
1998	3,060	3,964	1.66	2.15	-	-	-	-	3,060	3,964
1999	7,429	9,484	1.93	2.46	-	-	-	-	7,429	9,484
2000	10,304	12,875	2.01	2.51	-	-	-	-	10,304	12,875
2001	4,773	5,832	1.98	2.42	-	-	-	-	4,773	5,832
2002	7,776	9,350	1.55	1.87	-	-	-	-	7,776	9,350
2003	12,181	14,338	1.91	2.25	-	-	-	-	12,181	14,338
2004	17,895	20,483	2.87	3.29	-	-	-	-	17,895	20,483
2005	12,913	14,303	2.97	3.29	-	-	-	-	12,913	14,303
2006	5,350	5,739	5.13	5.50	-	-	-	-	5,350	5,739
2007	7,902	8,235	5.18	5.40	-	-	-	-	7,902	8,235
2008	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-
2010 <sup>c/</sup>	1,246	1,246	5.47	5.47	-	-	-	-	1,246	1,246

a/ These exvessel values do not include the postseason settlement payments some fishers may have received from buyers, and therefore may underestimate the true payments received by fishers for their landings. Beginning circa 1999, these postseason settlements are believed to have grown for the California fishery. For 2002, the exvessel value reported here is believed to be under-reported by roughly 5% to 10%.

b/ Does not include pink salmon landings, if any.

c/ Preliminary.

TABLE IV-3. Troll Chinook and coho landed in Oregon, estimates of exvessel value, and average price (dollars per dressed pound) in nominal and real (inflation adjusted, 2010) dollars.

Year or Avg.	Chinook				Coho				Total <sup>a/</sup>	
	Nominal Value (\$*1,000)	Real Value (\$*1,000)	Nominal Price Per Pound (\$)	Real Price Per Pound (\$)	Nominal Value (\$*1,000)	Real Value (\$*1,000)	Nominal Price Per Pound (\$)	Real Price Per Pound (\$)	Nominal Value (\$*1,000)	Real Value (\$*1,000)
1971-1975	2,036	7,611	0.89	3.38	3,658	14,008	0.64	2.41	5,694	21,620
1976-1980	5,290	14,327	2.17	5.85	6,389	17,833	1.51	4.07	11,679	32,160
1981-1985	3,582	6,995	2.46	4.77	2,248	4,580	1.45	2.82	5,830	11,574
1986-1990	9,381	15,562	2.47	4.07	3,203	5,326	1.54	2.54	12,584	20,888
1991-1995	1,971	2,787	2.24	3.19	326	482	0.64	0.93	2,297	3,269
1996	3,007	4,009	1.56	2.08	-	-	-	-	3,007	4,009
1997	2,469	3,234	1.60	2.10	-	-	-	-	2,469	3,234
1998	2,297	2,976	1.64	2.12	-	-	-	-	2,297	2,976
1999	1,400	1,787	1.94	2.48	1	1	1.03	1.31	1,401	1,788
2000	2,988	3,734	2.02	2.52	75	94	1.06	1.32	3,063	3,827
2001	4,680	5,718	1.61	1.97	41	50	0.79	0.97	4,721	5,769
2002	5,383	6,473	1.54	1.85	8	10	0.75	0.90	5,391	6,482
2003	7,186	8,459	1.97	2.32	36	43	0.85	1.00	7,222	8,501
2004	9,832	11,255	3.45	3.95	86	99	1.24	1.42	9,919	11,353
2005	8,466	9,377	3.17	3.51	37	41	1.87	2.07	8,503	9,418
2006	2,663	2,856	5.48	5.88	38	41	2.90	3.11	2,701	2,897
2007	2,630	2,740	5.66	5.90	193	201	1.90	1.98	2,822	2,941
2008	484	493	7.31	7.45	10	11	2.82	2.88	494	504
2009	77	78	5.06	5.11	267	270	2.04	2.06	345	348
2010 <sup>b/</sup>	2,774	2,774	5.49	5.49	16	16	2.23	2.23	2,790	2,790

a/ Does not include pink salmon landings.

b/ Preliminary.

TABLE IV-4. Non-Indian troll Chinook and coho landed in Washington, estimates of exvessel value, and average price (dollars per dressed pound) in nominal and real (inflation adjusted, 2010) dollars.<sup>a/</sup>

Year or Avg.	Chinook				Coho				Total <sup>b/</sup>	
	Nominal Value (\$*1,000)	Real Value (\$*1,000)	Nominal Price Per Pound (\$)	Real Price Per Pound (\$)	Nominal Value (\$*1,000)	Real Value (\$*1,000)	Nominal Price Per Pound (\$)	Real Price Per Pound (\$)	Nominal Value (\$*1,000)	Real Value (\$*1,000)
1971-1975	2,714	10,277	0.89	3.39	3,060	11,615	0.66	2.52	5,775	21,892
1976-1980	5,313	14,694	2.39	6.41	6,086	16,792	1.67	4.49	11,399	31,486
1981-1985	1,954	3,927	2.46	4.77	1,272	2,566	1.32	2.56	3,225	6,494
1986-1990 <sup>c/</sup>	1,310	2,168	2.61	4.32	360	586	1.62	2.67	1,670	2,754
1991-1995 <sup>d/</sup>	550	797	2.17	3.09	120	174	0.86	1.23	670	971
1996	d/	d/	d/	d/	59	78	0.86	1.15	d/	d/
1997	125	164	1.55	2.03	-	-	-	-	125	164
1998	123	159	1.51	1.96	-	-	-	-	123	159
1999	377	481	1.90	2.43	19	24	0.88	1.12	396	506
2000	224	280	1.71	2.14	34	42	1.09	1.36	258	323
2001	349	426	1.44	1.76	34	42	0.69	0.84	383	468
2002	756	909	1.11	1.33	2	2	1.58	1.90	758	911
2003	951	1,119	1.15	1.35	40	47	0.74	0.87	991	1,167
2004	1,079	1,235	2.14	2.45	106	121	1.16	1.33	1,185	1,356
2005	1,273	1,410	2.70	2.99	16	18	1.65	1.83	1,290	1,428
2006	1,029	1,103	4.64	4.98	16	18	1.69	1.81	1,045	1,121
2007	905	943	4.90	5.11	48	50	1.46	1.52	953	993
2008	673	687	6.73	6.86	36	36	2.49	2.54	709	723
2009	893	903	5.76	5.82	276	279	2.02	2.04	1,169	1,181
2010	3,083	3,083	5.61	5.61	32	32	2.14	2.14	3,115	3,115

a/ All values in this table are based on preliminary information available at the start of each year's salmon review.

b/ Does not include pink salmon landings.

c/ There was no legal coho fishery in 1988. The value used in this average for 1988 is for landings of fish caught south of Cape Falcon and seizures of illegal fish.

d/ In 1994-1996 Chinook were caught off Oregon and landed in Washington. Value information was not provided to preserve confidentiality.

TABLE IV-5. Non-Indian troll pink salmon landed in Oregon and Washington, estimates of exvessel value, and average price (dollars per dressed pound) in nominal and real (inflation adjusted, 2010) dollars.

Year or Avg. <sup>a/</sup>	Oregon				Washington				Total <sup>a/</sup>	
	Nominal Value (\$*1,000)	Real Value (\$*1,000)	Nominal Price Per Pound (\$)	Real Price Per Pound (\$)	Nominal Value (\$*1,000)	Real Value (\$*1,000)	Nominal Price Per Pound (\$)	Real Price Per Pound (\$)	Nominal Value (\$*1,000)	Real Value (\$*1,000)
1976-1980	167	473	0.75	2.02	1,200	3,205	0.54	1.47	1,367	3,678
1981-1985	129	255	0.74	1.44	287	576	0.41	0.81	416	831
1986-1990	41	70	0.77	1.27	57	91	0.66	1.09	98	161
1991-1995	1	2	0.88	1.24	38	55	0.64	0.91	39	57
1997	b/	b/	0.56	0.74	b/	b/	0.20	0.26	b/	b/
1999	b/	b/	0.67	0.86	b/	b/	0.38	0.49	b/	b/
2001	1	1	0.58	0.71	b/	b/	0.22	0.27	1	1
2003	b/	b/	0.85	1.00	b/	b/	0.30	0.35	b/	b/
2005	b/	b/	1.25	1.38	b/	b/	0.52	0.58	b/	b/
2007	b/	b/	1.03	1.07	b/	b/	0.33	0.34	b/	b/
2009	b/	b/	1.03	1.04	b/	b/	0.33	0.33	b/	b/

a/ Odd year averages.

b/ Less than \$500.

c/ Preliminary.

TABLE IV-6. Pounds of salmon landed by the commercial troll ocean fishery for major California port areas.<sup>a/b/</sup>

Year or Avg.	Crescent City	Eureka	Fort Bragg	San Francisco	Monterey	State Total
<b>CHINOOK (thousands of dressed pounds)</b>						
1976-1980	393	1,403	1,449	1,733	889	5,867
1981-1985	350	428	1,128	1,806	742	4,454
1986-1990	155	405	2,299	3,648	1,592	8,097
1991-1995	2	25	183	1,893	1,326	3,429
1996-2000	2	35	146	2,155	1,699	4,037
2001	3	61	192	1,735	418	2,409
2002	54	108	872	3,060	912	5,008
2003	38	7	3,096	2,753	498	6,392
2004	308	65	1,292	3,712	853	6,230
2005	25	77	889	2,258	1,098	4,347
2006	-	-	273	684	87	1,043
2007	34	81	357	888	165	1,525
2008	-	-	-	-	-	-
2009	-	-	-	-	-	-
2010 <sup>c/</sup>	-	4	187	16	20	228
<b>COHO (thousands of dressed pounds)</b>						
1976-1980	360	391	277	109	48	1,184
1981-1985	89	104	89	54	9	345
1986-1990	22	43	136	53	9	262
1991-1995	d/	4	11	56	23	94
1996-2000	-	-	-	-	-	-
2001	-	-	-	-	-	-
2002	-	-	-	-	-	-
2003	-	-	-	-	-	-
2004	-	-	-	-	-	-
2005	-	-	-	-	-	-
2006	-	-	-	-	-	-
2007	-	-	-	-	-	-
2008	-	-	-	-	-	-
2009	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	-	-	-	-

a/ The major port areas listed may include smaller ports as follows: Crescent City includes only Crescent City; Eureka includes Trinidad and Humboldt Bay; Fort Bragg includes Shelter Cove, Noyo Harbor, Mendocino, and Pt. Arena; San Francisco includes Bodega Bay, Sausalito, Berkeley, and Half Moon Bay; Monterey includes Santa Cruz, Moss Landing, Morro Bay, Avila, and all ports south of Pt. Conception.

b/ Prior to 2005 landings were based on catch area, not port of landing.

c/ Preliminary.

d/ Less than 500 pounds.

TABLE IV-7. Pounds of salmon landed by the commercial troll ocean fishery for major Oregon port areas.<sup>a/</sup>

Year or Avg.	Astoria	Tillamook	Newport	Coos Bay	Brookings	State Total
<b>CHINOOK (thousands of dressed pounds)</b>						
1976-1980	171	118	530	908	700	2,427
1981-1985	92	45	271	638	386	1,432
1986-1990	52	264	829	2,118	468	3,731
1991-1995	7	86	580	235	31	940
1996-2000	25	70	790	435	92	1,414
2001	73	223	1,673	776	152	2,897
2002	330	275	1,442	1,223	218	3,488
2003	265	245	1,634	1,353	142	3,639
2004	134	113	1,121	1,214	267	2,850
2005	130	214	1,034	1,054	239	2,671
2006	99	67	218	56	45	486
2007	22	37	76	232	98	464
2008	39	19	-	-	8	66
2009	7	4	-	-	5	15
2010 <sup>c/</sup>	116	40	185	122	43	506
<b>COHO (thousands of dressed pounds)</b>						
1976-1980	385	660	1,190	1,661	357	4,252
1981-1985	133	293	451	550	111	1,537
1986-1990	73	473	693	648	69	1,957
1991-1995	17	93	110	104	1	325
1996-2000	14	-	-	-	-	14
2001	50	b/	2	-	-	52
2002	6	5	-	-	-	11
2003	32	11	-	-	-	43
2004	47	22	-	-	-	70
2005	9	11	-	-	-	20
2006	8	5	-	-	-	13
2007	37	34	13	14	3	101
2008	3	1	-	-	-	4
2009	48	43	35	5	b/	131
2010 <sup>c/</sup>	6	1	0	0	0	7

a/ The major port areas listed include smaller ports as follows: Astoria also includes Gearhart/Seaside and Cannon Beach; Tillamook also includes Garibaldi, Netarts, Pacific City, and Nehalem Bay; Newport also includes Depoe Bay, Siletz Bay, Salmon River, and Waldport; Coos Bay also includes Florence, Winchester Bay, Charleston, and Bandon; Brookings also includes Port Orford and Gold Beach.

b/ Less than 500 pounds.

c/ Preliminary.

TABLE IV-8. Pounds of salmon landed by the non-Indian commercial troll ocean fishery for major Washington port areas.<sup>a/b/</sup>

Year or Avg.	Neah Bay	La Push	Westport	Ilwaco	Coastal Community Total	Puget Sound	State Total <sup>c/</sup>
<b>CHINOOK (thousands of dressed pounds)</b>							
1976-1980	288	421	919	261	1,889	426	2,315
1981-1985	88	32	370	74	564	124	689
1986-1990	71	17	234	48	371	122	493
1991-1995 <sup>d/</sup>	137	29	123	9	204	30	234
1996-2000 <sup>d/</sup>	49	1	37	3	80	22	102
2001	97	-	138	6	241	-	241
2002	262	33	322	61	678	-	678
2003	470	67	243	29	810	12	821
2004	250	74	158	15	497	7	504
2005	170	100	181	20	471	e/	471
2006	86	64	40	26	216	5	222
2007	38	31	105	8	182	2	184
2008	20	17	49	13	99	1	100
2009	31	25	92	3	153	2	155
2010	48	62	402	10	522	-	522
<b>COHO (thousands of dressed pounds)</b>							
1976-1980	600	786	1,066	678	3,130	496	3,626
1981-1985	133	63	277	142	616	128	744
1986-1990	70	19	97	53	239	19	259
1991-1995	52	14	49	13	102	12	111
1996-2000	10	e/	8	3	22	2	24
2001	2	-	39	9	49	-	49
2002	-	-	e/	1	1	-	1
2003	11	12	21	8	52	2	54
2004	12	20	53	4	89	1	91
2005	2	1	3	5	10	-	10
2006	3	3	3	1	10	e/	10
2007	3	3	9	17	33	-	33
2008	2	3	8	1	14	e/	14
2009	29	34	54	14	131	5	136
2010	1	2	12	1	15	-	15

a/ All values in this table are based on preliminary information available at the start of each year's salmon review.

b/ The major port areas listed may include smaller ports as follows: Neah Bay includes only Neah Bay; La Push also includes Kalaloch; Westport also includes Aberdeen, Bay City, Copalis Beach, Hoquiam, Moclips, Taholah, Bay Center, Grayland Beach, Raymond, South Bend, and Tokeland; Ilwaco also includes Long Beach, Nahcotta, Naselle, and all Columbia River Ports; Puget Sound includes all Puget Sound ports east of Neah Bay.

c/ State total includes landings where port of landing is not specified.

d/ There was no ocean commercial fishery for Chinook north of Cape Falcon in 1994-1996; however, Chinook were caught off Oregon and landed in Washington.

e/ Less than 500 pounds.

TABLE IV-9. Exvessel values (inflation adjusted, 2010 dollars) of inriver commercial harvest of Columbia River salmon.<sup>a/</sup>  
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Year or Avg.	Non-Indian Gillnet <sup>b/</sup>						Treaty Indian <sup>c/</sup> - All Gears						Columbia River Total By State
	Chinook					TOTAL	Chinook			Coho	Chum	TOTAL	
	Spring	Fall		Tules	Brights <sup>d/</sup>		Spring	Fall					
		Brights <sup>d/</sup>	Tules					Brights <sup>d/</sup>	Tules				
Oregon													
Average Price Per Landed Pound <sup>e/</sup> (dollars)													
1987-2003	4.22	1.44	0.40	1.26	0.55		4.38	1.37	0.35	0.96	-		
2004	4.26	1.57	0.25	1.03	0.29		2.12	1.29	0.11	0.68	-		
2005	3.78	1.79	0.29	1.19	0.34		-	1.15	0.19	1.03	-		
2006	5.02	2.30	0.30	1.41	0.28		3.22	1.64	0.28	1.34	-		
2007	5.62	2.95	0.05	1.69	0.78		3.91	2.72	0.03	1.12	-		
2008 <sup>g/</sup>	6.30	2.55	0.58	1.34	0.66		4.73	2.61	0.46	1.18	0.92		
2009 <sup>g/</sup>	4.55	2.08	0.55	1.22	0.53		3.45	1.41	0.36	0.93	-		
2010 <sup>g/</sup>	4.93	2.12	0.50	1.39	0.67		4.21	2.02	0.63	1.89	-		
Exvessel Value (thousands of dollars)													
1987-2003	507	1,736	102	1,112	2	3,458	6	712	18	6	-	742	4,201
2004	1,175	641	56	778	f/	2,651	169	616	34	20	-	839	3,490
2005	348	490	38	936	f/	1,811	-	230	13	1	-	244	2,055
2006	659	684	19	673	f/	2,035	f/	339	3	15	-	358	2,392
2007	797	368	1	321	f/	1,487	66	377	1	15	-	459	1,946
2008 <sup>g/</sup>	729	1,052	65	684	f/	2,529	329	956	59	52	f/	1,396	3,925
2009 <sup>g/</sup>	441	908	91	1,034	f/	2,475	144	569	36	24	-	773	3,248
2010 <sup>g/</sup>	1,885	901	155	776	1	3,718	495	602	f/	32	-	1,130	4,848
Pounds (thousands)													
1987-2003	116	749	156	785	2	1,807	3	337	62	5	-	407	2,213
2004	276	409	224	755	f/	1,664	80	476	299	29	-	884	2,548
2005	92	273	132	789	f/	1,286	-	200	67	1	-	267	1,554
2006	131	298	65	478	f/	971	f/	206	11	12	-	229	1,200
2007	142	135	f/	189	f/	466	17	138	25	14	-	194	660
2008 <sup>g/</sup>	116	413	112	512	f/	1,152	70	366	129	44	f/	609	1,761
2009 <sup>g/</sup>	97	436	168	846	f/	1,547	42	403	100	26	-	571	2,118
2010 <sup>g/</sup>	382	426	257	560	1	1,626	140	226	140	17	-	524	2,150



TABLE IV-9. Exvessel values (inflation adjusted, 2010 dollars) of inriver commercial harvest of Columbia River salmon.<sup>a/</sup> (Page 2 of 2)

Year or Avg.	Non-Indian Gillnet <sup>b/</sup>						Treaty Indian <sup>c/</sup> - All Gears						Columbia River Total By State
	Chinook			Coho	Chum	TOTAL	Chinook			Coho	Chum	TOTAL	
	Fall		Fall										
	Spring	Brights <sup>d/</sup>	Tules				Brights <sup>d/</sup>	Tules					
Washington <sup>g/h/i/</sup>													
Average Price Per Landed Pound <sup>e/</sup> (dollars)													
1987-2003	5.17	1.34		1.26	0.48		3.73	0.95		0.89	-		
2004	4.50	1.48		1.08	0.29	-	1.80	0.62		0.25	-		
2005	3.97	1.54		1.14	0.89	-	1.87	0.56		0.33	-		
2006	3.94	2.07		1.43	-	-	2.52	1.50		0.60	0.54		
2007	6.99	2.66		1.31	1.01	-	4.64	1.42		0.83	0.94		
2008	6.84	2.60		1.28	0.99	-	4.54	1.39		0.82	0.92		
2009	5.35	1.80		1.14	0.60	-	3.04	0.94		0.58	-		
2010	5.00	1.95		1.31	0.60	-	3.77	1.14		0.88	-		
Exvessel Value (thousands of dollars)													
1987-2003	242	671		461	1	1,360	57	1,091		16	-	1,161	2,521
2004	311	499		398	f/	1,208	189	498		11	-	698	1,906
2005	244	362		217	f/	824	125	793		11	-	929	1,753
2006	343	451		295	-	1,089	454	1,359		27	f/	1,840	2,929
2007	132	240		261	f/	633	f/	1,292		54	f/	1,347	1,980
2008	320	518		282	f/	1,121	989	1,626		150	f/	2,765	3,886
2009	317	543		300	f/	1,160	623	827		25	-	1,475	2,636
2010	542	511		324	1	1,379	1,982	1,734		22	-	3,739	5,118
Pounds (thousands)													
1987-2003	46	333		369	1	747	37	914		18	-	966	1,713
2004	69	338		370	f/	777	105	806		43	-	954	1,731
2005	62	235		191	f/	487	67	1,404		34	-	1,504	1,992
2006	87	218		207	-	512	180	905		45	f/	1,130	1,642
2007	18	91		154	f/	263	f/	638		66	f/	705	968
2008	47	199		219	f/	466	218	1,172		184	f/	1,574	2,040
2009	59	302		262	1	624	205	880		44	-	1,129	1,753
2010	108	262		247	2	620	526	1,521		25	-	2,072	2,693

a/ Excluding pink, sockeye, and steelhead.

b/ Mainstem below Bonneville and select areas (Youngs Bay, Tongue Point, Blind Slough, and Deep River).

c/ Treaty Indian landings and values do not include direct sales to consumers.

d/ For Washington, this column includes fall brights, tules, and jacks. Price changes may reflect a change in the mix of brights, tules, and jacks rather than annual price changes.

e/ Gillnet exvessel salmon prices are recorded in round weight and therefore are not strictly comparable to exvessel troll prices.

f/ Less than \$500 or 500 pounds.

g/ Preliminary. (All Washington values in this table are based on preliminary information available when each year's Salmon Review is drafted.)

h/ Washington prices for years prior to 2000 are based on a combination of Washington and Oregon value information.

i/ Treaty Indian values are primarily mainstem Columbia set gillnet but also include Klickitat dipnet, Drano Lake (Little White Salmon River mouth), and Priest Rapids Pool fisheries.

TABLE IV-10. California, Oregon, and Washington ocean recreational salmon effort in thousands of angler trips and catch in thousands of fish by boat type. (Page 1 of 2)

Year or Avg.	Angler Trips		Chinook Catch <sup>a/</sup>		Coho Catch <sup>a/</sup>	
	Charter	Private	Charter	Private	Charter	Private
<b>CALIFORNIA</b>						
1981-1985	68.9	78.1	74.6	34.4	1.5	18.3
1986-1990	95.9	144.8	100.1	66.3	5.3	35.1
1991-1995	81.7	131.8	85.9	83.0	3.8	18.7
1996-2000	82.2	112.5	77.5	80.3	b/	0.4
2001	69.9	95.2	43.2	55.6	0.1	1.2
2002	86.6	123.4	85.1	96.9	b/	0.8
2003	59.4	75.3	48.3	46.4	0.1	0.6
2004	97.7	121.0	124.7	96.5	b/	1.4
2005	69.1	103.0	61.3	81.9	b/	0.7
2006	44.9	81.6	35.3	61.0	b/	1.6
2007	31.4	74.5	12.4	35.4	b/	0.7
2008	0.1	0.3	0.0	b/	-	-
2009	0.6	4.7	0.1	0.6	-	b/
2010 <sup>c/</sup>	13.1	35.6	4.5	10.2	-	0.2
<b>OREGON<sup>d/e/</sup></b>						
1979	73.7	187.7	5.4	13.3	59.8	101.8
1980	79.0	218.9	5.1	11.9	98.3	207.5
1981-1985	45.7	187.9	6.2	26.9	48.0	117.6
1986-1990	56.5	184.6	7.0	28.8	71.6	148.4
1991-1995	18.0	81.8	1.3	8.0	27.1	76.2
1996-2000	5.3	40.3	1.5	9.7	3.4	9.1
2001	18.2	102.3	6.4	20.8	19.3	75.0
2002	15.7	91.9	7.9	39.5	9.0	27.5
2003	23.4	121.1	8.8	31.8	23.7	90.0
2004	21.1	124.6	14.6	41.8	13.1	58.8
2005	9.9	66.1	4.5	23.4	3.1	10.6
2006	8.0	54.4	1.5	10.1	3.6	12.0
2007	11.4	76.9	0.6	6.4	10.6	50.1
2008	1.9	28.5	0.2	1.4	1.0	11.1
2009	12.6	71.9	0.2	1.3	14.2	75.4
2010 <sup>c/</sup>	5.0	48.3	0.6	4.4	2.8	15.5

TABLE IV-10. California, Oregon, and Washington ocean recreational salmon effort in thousands of angler trips and catch in thousands of fish by boat type. (Page 2 of 2)

Year or Avg.	Angler Trips		Chinook Catch <sup>a/</sup>		Coho Catch <sup>a/</sup>	
	Charter	Private	Charter	Private	Charter	Private
<b>WASHINGTON<sup>d/g/</sup></b>						
1979	220.8	89.8	61.1	15.7	227.9	62.4
1980	193.9	86.2	41.1	12.5	288.4	73.1
1981-1985	102.0	69.7	42.6	13.8	113.3	69.2
1986-1990	53.5	59.4	16.0	10.0	78.0	77.6
1991-1995	28.0	45.1	4.5	4.2	41.5	54.8
1991-1995	13.6	20.6	2.7	2.2	17.4	20.8
2001	41.2	72.4	11.9	10.8	66.2	98.2
2002	37.0	57.4	30.9	27.0	30.4	43.7
2003	44.5	75.5	16.0	18.1	53.4	84.9
2004	36.5	73.1	10.3	14.6	37.6	75.1
2005	31.7	58.9	15.9	20.4	19.2	32.6
2006	24.5	39.1	4.0	6.7	16.2	19.9
2007	26.7	45.9	3.1	5.9	33.7	50.1
2008	14.2	22.2	6.0	8.6	8.3	10.5
2009	29.4	69.5	3.1	9.2	47.9	90.0
2010 <sup>c/</sup>	26.5	54.4	15.4	21.5	14.1	22.2

a/ Catch numbers may include some illegal harvest.

b/ Fewer than 50 fish.

c/ Preliminary.

d/ Salmon data from surveyed ports only. These generally include Astoria, Garibaldi, Depoe Bay, Newport, Winchester Bay, Coos Bay, and Brookings. Since 1981, Pacific City and Florence have also been included. Gold Beach data are included from 1981-1987. Astoria was not included in 1994.

e/ Numbers do not include angling from the Columbia River jetty.

f/ Numbers do not include angling from the Columbia River jetty or from the late-season state waters Area 4B fishery.

g/ Values for 1982-1985 include some inriver Columbia River fishing after closure of the ocean fishery.

TABLE IV-11. Estimates of California recreational ocean salmon angler trips (thousands) by port area and boat type.

Year or Avg.	Crescent City	Eureka	Fort Bragg	San Francisco	Monterey	State Total
<b>CHARTER TRIPS</b>						
1976-1980	1.5	1.2	2.4	63.5	4.0	72.7
1981-1985	0.7	1.3	1.8	62.1	3.0	68.9
1986-1990	1.0	3.5	4.0	74.3	13.1	95.9
1991-1995	0.4	0.8	2.8	55.7	22.0	81.7
1996-2000	a/	0.7	4.2	55.2	22.1	82.1
2001	a/	1.4	9.7	43.4	15.4	69.9
2002	0.0	1.6	10.7	54.9	19.4	86.6
2003	0.0	1.1	8.2	38.7	11.4	59.4
2004	0.1	1.9	10.7	63.4	21.5	97.7
2005	0.0	0.9	8.9	45.8	13.5	69.1
2006	0.0	0.7	6.9	29.2	8.0	44.9
2007	0.0	1.6	5.4	20.9	3.5	31.4
2008	-	-	0.1	-	-	0.1
2009	0.0	0.6	-	-	-	0.6
2010 <sup>b/</sup>	0.0	0.3	1.8	7.5	3.6	13.1
<b>PRIVATE TRIPS</b>						
1976-1980	18.4	22.7	9.3	34.4	6.0	90.8
1981-1985	22.4	21.8	7.8	16.8	9.3	78.1
1986-1990	38.6	34.4	11.4	24.3	36.1	144.8
1991-1995	13.9	14.0	17.6	37.1	49.3	131.9
1996-2000	6.8	10.9	15.0	38.8	40.9	112.5
2001	8.6	14.7	21.1	28.1	22.7	95.2
2002	3.9	16.1	21.1	33.9	48.5	123.4
2003	2.2	12.5	15.5	27.9	17.1	75.3
2004	3.1	20.5	19.8	42.7	35.0	121.0
2005	2.5	13.9	15.4	39.0	32.2	103.0
2006	1.5	14.2	14.1	32.1	19.7	81.6
2007	2.1	16.8	11.7	22.2	21.7	74.5
2008	-	-	0.3	-	-	0.3
2009	1.1	3.6	-	-	-	4.7
2010 <sup>b/</sup>	0.2	3.7	4.9	11.6	15.1	35.6
<b>TOTAL TRIPS</b>						
1976-1980	20.0	23.9	11.7	97.9	10.0	163.5
1981-1985	23.1	23.1	9.6	78.9	12.2	147.0
1986-1990	39.6	37.9	15.4	98.6	49.2	240.7
1991-1995	14.3	14.8	20.4	92.8	71.2	213.6
1996-2000	6.8	11.7	19.1	94.0	63.0	194.6
2001	8.6	16.0	30.8	71.5	38.2	165.1
2002	3.9	17.7	31.8	88.8	67.9	210.1
2003	2.2	13.6	23.7	66.6	28.5	134.6
2004	3.2	22.4	30.6	106.1	56.5	218.7
2005	2.5	14.8	24.3	84.8	45.7	172.1
2006	1.5	15.0	21.0	61.4	27.7	126.5
2007	2.1	18.4	17.1	43.1	25.2	105.9
2008	-	-	0.4	-	-	0.4
2009	1.1	4.3	-	-	-	5.4
2010 <sup>b/</sup>	0.2	4.0	6.7	19.1	18.7	48.8

a/ Fewer than 50 angler trips.

b/ Preliminary.

TABLE IV-12. Estimates of Oregon recreational ocean salmon angler trips (thousands) by port area and boat type.

Year or Avg.	Astoria	Tillamook	Newport	Coos Bay	Brookings	State Total
<b>CHARTER TRIPS</b>						
1979	18.5	2.8	26.7	22.7	3.0	73.7
1980	26.3	3.7	26.7	19.6	2.8	79.1
1981-1985	10.3	3.0	17.2	11.9	3.3	45.7
1986-1990	7.1	5.3	27.5	13.0	3.6	56.5
1991-1995 <sup>a/</sup>	4.3	1.6	7.9	3.5	0.7	18.0
1996-2000	1.3	0.4	2.4	0.6	0.6	5.3
2001	4.3	1.4	8.8	3.0	0.7	18.2
2002	3.1	1.6	7.1	3.5	0.3	15.7
2003	3.9	2.0	13.0	4.0	0.5	23.4
2004	3.0	2.5	11.1	3.8	0.6	21.1
2005	2.3	1.0	3.7	2.6	0.3	9.9
2006	2.1	0.6	3.0	2.0	0.3	8.0
2007	2.6	1.1	5.6	1.9	0.2	11.4
2008	0.7	0.1	0.9	0.1	0.1	1.9
2009	2.7	1.3	8.1	0.3	0.2	12.6
2010 <sup>b/</sup>	1.8	0.4	2.8	0.1	0.1	5.0
<b>PRIVATE TRIPS</b>						
1979	24.3	16.3	45.4	52.9	48.8	187.7
1980	20.1	29.3	56.6	65.2	47.7	218.9
1981-1985	15.6	27.1	40.4	51.8	53.0	187.9
1986-1990	10.6	23.7	47.1	48.4	54.8	184.5
1991-1995 <sup>a/</sup>	8.5	12.0	17.0	22.4	22.0	82.0
1996-2000	4.1	7.7	3.0	7.6	17.8	40.3
2001	19.0	15.1	14.8	28.1	25.4	102.4
2002	9.0	22.8	10.9	29.9	19.4	91.9
2003	15.4	26.0	26.5	38.9	14.3	121.1
2004	15.6	26.8	27.9	36.7	17.7	124.6
2005	11.0	11.1	9.7	22.1	12.3	66.1
2006	6.2	15.3	7.4	15.2	10.4	54.4
2007	9.8	20.0	15.2	21.0	10.9	76.9
2008	2.9	9.0	4.6	7.3	4.7	28.5
2009	9.5	21.1	21.5	14.1	5.8	71.9
2010 <sup>b/</sup>	8.5	13.1	12.2	8.6	5.9	48.3
<b>TOTAL TRIPS</b>						
1979	42.8	19.1	72.1	75.6	51.8	261.4
1980	46.4	33.0	83.3	84.8	50.5	298.0
1981-1985	26.0	30.0	57.5	63.7	56.3	233.5
1986-1990	17.7	29.0	74.6	61.4	58.4	241.0
1991-1995 <sup>a/</sup>	12.8	13.6	24.9	26.0	22.7	100.0
1996-2000	5.4	8.1	5.3	8.3	18.4	45.6
2001	23.3	16.5	23.6	31.1	26.1	120.6
2002	12.1	24.4	18.1	33.4	19.7	107.6
2003	19.3	28.0	39.6	42.9	14.8	144.5
2004	18.6	29.3	39.0	40.5	18.3	145.7
2005	13.3	12.1	13.4	24.6	12.6	76.0
2006	8.2	15.9	10.4	17.2	10.6	62.3
2007	12.4	21.0	20.8	23.0	11.1	88.3
2008	3.7	9.1	5.4	7.4	4.8	30.4
2009	12.3	22.4	29.6	14.4	5.9	84.5
2010 <sup>b/</sup>	10.3	13.5	15.0	8.6	6.0	53.3

a/ The fishery north of Cape Falcon was closed in 1994, and it is assumed that no trips were taken out of Astoria into the south of Cape Falcon area. No samplers were stationed in Astoria.

b/ Preliminary.

TABLE IV-13. Estimates of Washington recreational ocean salmon angler trips (thousands) by port area and boat type.

Year or Avg.	Neah Bay <sup>a/</sup>	La Push	Westport	Ilwaco <sup>b/</sup>	State Total
<b>CHARTER TRIPS</b>					
1984 <sup>c/</sup>	0.3	-	11.6	18.0	29.9
1985 <sup>c/</sup>	2.0	-	42.2	20.7	64.9
1986-1990	2.0	-	35.7	15.9	53.5
1991-1995	0.7	0.1	19.4	7.9	28.0
1996-2000	0.3	0.1	9.7	3.6	13.6
2001	1.4	0.3	25.6	13.9	41.2
2002	1.5	0.4	24.5	10.6	37.0
2003	2.0	0.9	27.3	14.3	44.5
2004	1.9	0.6	22.5	11.4	36.5
2005	1.2	0.6	20.5	9.4	31.7
2006	0.5	0.5	15.4	8.0	24.5
2007	0.6	0.4	15.7	10.1	26.7
2008	0.3	0.2	9.9	3.7	14.2
2009	0.5	0.7	18.5	9.7	29.4
2010 <sup>d/</sup>	0.4	0.6	18.4	7.0	26.5
<b>PRIVATE TRIPS</b>					
1984 <sup>c/</sup>	8.3	0.2	2.3	36.0	46.8
1985 <sup>c/</sup>	15.2	1.5	13.7	19.4	49.8
1986-1990	16.9	2.5	16.6	23.4	59.4
1991-1995	16.4	2.8	18.5	25.4	63.1
1996-2000	8.8	1.6	12.7	12.8	35.8
2001	16.6	3.1	24.1	28.7	72.4
2002	12.2	3.0	16.9	25.3	57.4
2003	18.4	3.5	20.7	32.9	75.5
2004	24.2	3.9	15.7	29.3	73.1
2005	17.2	4.4	14.7	22.6	58.9
2006	12.9	3.6	9.1	13.5	39.1
2007	12.8	2.9	10.2	20.0	45.9
2008	5.3	1.9	8.8	6.3	22.2
2009	16.0	4.4	19.3	29.8	69.5
2010 <sup>d/</sup>	11.1	3.2	20.0	20.1	54.4
<b>TOTAL TRIPS</b>					
1984 <sup>c/</sup>	8.6	0.2	13.9	54.0	76.7
1985 <sup>c/</sup>	17.2	1.5	55.9	40.1	114.7
1986-1990	18.9	2.5	52.3	39.3	113.0
1991-1995	17.1	2.9	37.9	33.3	91.1
1996-2000	9.1	1.6	22.4	16.4	49.4
2001	17.9	3.4	49.7	42.5	113.6
2002	13.7	3.4	41.4	35.9	94.4
2003	20.4	4.4	48.0	47.1	120.0
2004	26.1	4.6	38.2	40.6	109.5
2005	18.5	4.9	35.2	32.1	90.6
2006	13.4	4.1	24.5	21.5	63.6
2007	13.4	3.3	25.9	30.1	72.7
2008	5.6	2.1	18.7	10.0	36.4
2009	16.5	5.1	37.8	39.5	98.9
2010 <sup>d/</sup>	11.5	3.8	38.4	27.0	80.8

a/ Does not include effort from the late-season state water Area 4B fishery, when open.

b/ Does not include effort from the Columbia River Jetty.

c/ Values for 1984 and 1985 include some Columbia River fishing after closure of the ocean fishery.

d/ Fewer than 50 angler trips.

d/ Preliminary.

TABLE IV-14. Oregon and Washington recreational salmon, bottomfish, and sturgeon angler trips (thousands) by ocean port area and boat type for the area north of Cape Falcon.  
(Page 1 of 3)

Year	Columbia River and Buoy 10					Westport			La Push			Neah Bay and Area 4B Add-On		
	Charter	Private	Subtotal	Jetty	Total	Charter	Private	Total	Charter	Private	Total	Charter	Private	Total
<b>SALMON EFFORT</b>														
1984	NA	NA	-	NA	54.0	11.6	2.3	13.9	0.0	0.2	0.2	0.3	8.3	8.6
1985	NA	NA	-	NA	90.3	42.2	13.7	55.9	0.0	1.5	1.5	2.0	15.2	17.2
1986	NA	NA	-	NA	144.3	36.6	14.8	51.4	0.0	1.7	1.7	2.4	17.4	19.8
1987	39.5	130.0	169.5	12.4	181.9	34.1	9.8	43.9	0.0	2.0	2.0	1.9	17.8	19.7
1988	34.5	154.4	188.9	16.9	205.8	23.5	13.9	37.4	0.0	2.8	2.8	2.0	14.8	16.8
1989	40.4	169.2	209.6	22.9	232.5	40.8	18.7	59.5	0.0	1.6	1.6	2.8	25.5	28.3
1990	32.8	128.7	161.5	5.7	167.2	43.4	25.9	69.3	0.0	4.2	4.2	3.0	30.8	33.8
1991	37.9	172.7	210.6	35.5	246.1	28.6	24.2	52.8	0.2	3.3	3.5	1.9	23.5	25.4
1992	22.3	116.6	138.9	28.4	167.3	28.1	25.6	53.7	0.2	2.3	2.5	1.1	18.6	19.7
1993	20.2	103.3	123.5	24.6	148.1	27.4	23.5	50.9	0.1	2.8	2.9	1.6	25.7	27.3
1994	0.5	6.3	6.8	3.6	10.4	-	-	-	-	-	-	-	-	-
1995	9.0	43.4	52.4	8.5	60.9	12.7	9.0	21.7	0.1	1.4	1.5	0.3	9.2	9.5
1996	7.3	26.8	34.1	7.5	41.6	10.3	5.2	15.5	a/	1.3	1.3	0.3	10.6	10.9
1997	8.4	53.0	61.3	7.4	68.7	10.0	7.3	17.3	0.1	0.9	0.9	0.2	4.6	4.8
1998	3.2	30.7	33.9	3.6	37.5	4.5	3.5	8.0	0.0	0.6	0.6	0.1	6.3	6.4
1999	8.7	63.9	72.6	6.2	78.8	11.5	7.6	19.1	0.1	2.9	2.9	0.5	7.6	8.1
2000	9.8	82.2	92.0	7.0	99.0	12.2	7.7	19.8	0.1	1.8	2.0	1.1	10.3	11.4
2001	22.5	165.0	187.5	17.0	204.5	25.6	24.1	49.7	0.3	3.1	3.4	1.4	16.8	18.1
2002	15.2	115.1	130.3	2.8	133.1	44.5	16.9	41.4	0.4	3.0	3.4	1.5	12.2	13.7
2003	19.3	133.3	152.7	7.2	159.8	27.3	20.7	48.0	0.9	3.5	4.4	2.0	18.4	20.4
2004	15.8	113.3	129.2	3.2	132.3	22.5	15.7	38.2	0.6	3.9	4.6	1.9	24.2	26.1
2005	12.0	88.5	100.5	c/	100.5	20.5	14.7	35.2	0.6	4.4	4.9	1.2	17.2	18.5
2006	10.4	59.8	70.2	1.7	71.9	15.4	9.1	24.5	0.5	3.6	4.1	0.5	12.9	13.4
2007	13.6	64.2	77.8	c/	77.8	15.7	10.2	25.9	0.4	2.9	3.3	0.6	12.8	13.4
2008	5.5	40.7	46.1	0.4	46.5	9.9	8.8	18.7	0.2	1.9	2.1	0.3	6.1	6.4
2009	13.1	109.9	122.9	2.6	125.5	18.5	19.3	37.8	0.7	4.4	5.1	0.5	16.0	16.5
2010 <sup>b/</sup>	8.9	79.9	88.9	0.1	89.0	18.4	20.0	38.4	0.6	3.2	3.8	0.4	11.1	11.5

TABLE IV-14. Oregon and Washington recreational salmon, bottomfish, and sturgeon angler trips (thousands) by ocean port area and boat type for the area north of Cape Falcon.  
(Page 2 of 3)

Year	Columbia River and Buoy 10					Westport			La Push			Neah Bay and Area 4B Add-On		
	Charter	Private	Subtotal	Jetty	Total	Charter	Private	Total	Charter	Private	Total	Charter	Private	Total
<b>BOTTOMFISH EFFORT<sup>d/</sup></b>														
1984	2.1	0.1	2.2	-	-	12.4	0.5	12.9	0.0	0.0	0.0	1.8	12.3	14.1
1985	1.9	0.2	2.1	-	-	15.3	1.0	16.3	0.0	0.1	0.1	3.0	10.6	13.6
1986	1.7	0.2	1.9	-	-	19.6	0.8	20.4	0.0	0.2	0.2	3.5	11.4	14.9
1987	1.7	0.3	2.0	0.5	2.5	21.1	1.2	22.3	0.0	0.5	0.5	5.6	16.0	21.6
1988	2.1	0.2	2.3	0.8	3.1	24.4	1.1	25.5	0.0	0.7	0.7	5.7	14.8	20.5
1989	1.2	0.6	1.8	1.5	3.3	19.3	1.0	20.3	0.0	0.6	0.6	6.8	16.3	23.1
1990	1.4	0.3	1.7	2.4	4.1	21.8	0.8	22.6	0.0	0.8	0.8	6.4	18.1	24.5
1991	1.3	0.4	1.7	1.8	3.5	23.5	1.1	24.6	0.0	0.9	0.9	5.9	18.2	24.1
1992	1.4	0.5	1.9	2.3	4.1	20.5	2.2	22.7	0.0	1.5	1.5	4.8	19.1	23.9
1993	2.2	0.6	2.8	2.6	5.4	21.5	1.8	23.0	0.1	1.1	1.2	5.1	19.2	24.3
1994	2.7	0.7	3.3	2.7	6.0	26.0	1.7	27.7	0.2	1.9	2.1	4.1	15.0	19.1
1995	1.3	0.9	2.3	2.2	4.4	21.1	1.6	22.7	a/	1.6	1.6	4.1	19.2	23.3
1996 <sup>e/f/</sup>	1.2	0.5	1.7	1.7	3.4	21.4	1.2	22.6	0.0	1.6	1.6	4.8	21.0	25.8
1997	1.2	0.7	2.0	2.5	4.4	19.2	1.4	20.6	0.0	2.2	2.2	4.9	22.7	27.7
1998	1.8	0.5	2.3	0.9	3.2	21.5	1.3	22.8	0.0	1.2	1.2	5.1	23.9	29.0
1999	1.0	0.5	1.5	0.5	2.0	17.1	1.2	18.3	0.1	1.0	1.1	4.5	20.3	24.9
2000	1.2	0.6	1.8	0.5	2.3	16.7	0.9	17.6	0.2	1.3	1.5	4.5	20.1	24.6
2001	2.8	0.4	3.2	0.9	4.1	13.9	1.2	15.1	0.3	0.9	1.2	4.7	16.5	21.2
2002	14.3	0.5	1.9	0.8	2.8	14.9	1.2	16.1	0.3	1.2	1.6	4.0	15.7	19.7
2003	2.4	0.5	2.9	0.9	3.8	16.3	1.8	18.2	1.0	2.5	3.6	5.2	21.4	26.6
2004	2.4	0.8	3.2	0.3	3.5	14.8	1.7	16.5	0.4	1.7	2.1	3.5	15.2	18.7
2005	2.5	1.1	3.7	c/	3.7	15.5	1.8	17.3	0.5	2.5	3.0	3.5	18.8	22.4
2006	3.6	1.2	4.9	0.9	5.7	17.7	1.8	19.5	0.3	2.8	3.1	4.4	16.9	21.3
2007	3.1	1.5	4.6	c/	4.6	16.2	1.6	17.7	0.5	2.5	3.0	4.3	15.7	20.0
2008	2.9	2.0	4.9	0.4	5.3	15.5	1.7	17.2	1.0	2.3	3.3	2.3	16.2	18.5
2009	2.1	1.3	3.3	0.3	3.6	13.0	2.2	15.2	0.7	2.7	3.4	1.5	13.6	15.1
2010 <sup>b/</sup>	2.9	1.7	4.7	0.5	5.2	11.7	1.8	13.5	0.7	3.6	4.3	1.2	15.4	16.6



TABLE IV-14. Oregon and Washington recreational salmon, bottomfish, and sturgeon angler trips (thousands) by ocean port area and boat type for the area north of Cape Falcon.  
(Page 3 of 3)

Year	Columbia River and Buoy 10					Westport			La Push			Neah Bay and Area 4B Add-On		
	Charter	Private	Subtotal	Jetty	Total	Charter	Private	Total	Charter	Private	Total	Charter	Private	Total
<b>STURGEON EFFORT<sup>g/</sup></b>														
1984	1.7	28.4	30.1	-	30.1	-	-	-	-	-	-	-	-	-
1985	5.0	31.2	36.2	-	36.2	-	-	-	-	-	-	-	-	-
1986	5.7	35.7	41.4	-	41.4	-	-	-	-	-	-	-	-	-
1987	6.0	43.2	49.2	-	49.2	-	-	-	-	-	-	-	-	-
1988	6.2	32.4	38.5	-	38.5	-	-	-	-	-	-	-	-	-
1989	4.3	22.0	26.3	-	26.3	-	-	-	-	-	-	-	-	-
1990	3.9	28.0	31.9	-	31.9	-	-	-	-	-	-	-	-	-
1991	3.6	26.0	29.7	-	29.7	-	-	-	-	-	-	-	-	-
1992	5.0	38.3	43.3	-	43.3	-	-	-	-	-	-	-	-	-
1993	6.1	48.6	54.6	-	54.6	-	-	-	-	-	-	-	-	-
1994	7.5	40.4	47.8	-	47.8	-	-	-	-	-	-	-	-	-
1995	7.7	55.2	62.9	-	62.9	-	-	-	-	-	-	-	-	-
1996	11.1	45.2	56.3	-	56.3	-	-	-	-	-	-	-	-	-
1997	12.2	48.4	60.7	-	60.7	-	-	-	-	-	-	-	-	-
1998	14.2	64.3	78.5	-	78.5	-	-	-	-	-	-	-	-	-
1999	13.2	57.1	70.3	-	70.3	-	-	-	-	-	-	-	-	-
2000	11.6	52.1	63.7	-	63.7	-	-	-	-	-	-	-	-	-
2001	10.8	40.9	51.7	-	51.7	-	-	-	-	-	-	-	-	-
2002	9.9	45.9	55.8	-	55.8	-	-	-	-	-	-	-	-	-
2003	6.6	38.1	44.7	-	44.7	-	-	-	-	-	-	-	-	-
2004	7.4	32.2	39.6	-	39.6	-	-	-	-	-	-	-	-	-
2005	8.7	51.2	59.9	-	59.9	-	-	-	-	-	-	-	-	-
2006	6.7	37.3	44.0	-	44.0	-	-	-	-	-	-	-	-	-
2007	7.9	39.8	47.7	-	47.7	-	-	-	-	-	-	-	-	-
2008	7.5	38.5	46.0	-	46.0	-	-	-	-	-	-	-	-	-
2009	6.1	43.0	49.1	-	49.1	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	5.4	31.4	36.8	-	36.8	-	-	-	-	-	-	-	-	-

a/ Fewer than 50 angler trips.

b/ Preliminary.

c/ Columbia River north jetty was not sampled in 2005 and 2007 due to construction limiting access.

d/ Oregon data is a minimum estimate, as the jetty is not sampled, and bottomfish sampling of vessels only occurs when the ocean is open for salmon.

e/ No Oregon bottomfish trips are included.

f/ Includes tuna trips: Ilwaco - 9 charter, 14 private; Westport - 784 charter, 0 private.

g/ Annual sturgeon angler trips for the lower Columbia River from the western tip of Puget Island to mouth.

TABLE IV-15. Buoy 10<sup>a/b/</sup> and Area 4B add-on recreational salmon angler trips and catch by boat type. (Page 1 of 2)

Year or Avg.	Angler Trips			Chinook Catch			Coho Catch			Pink Catch	
	Charter	Private	Jetty	Charter	Private	Jetty	Charter	Private	Jetty	Charter	Private
<b>OREGON BUOY 10</b>											
1987-1990	4,002	38,619	4,029	793	6,415	29	3,292	18,348	690	0	0
1991-1995	1,528	21,547	4,555	122	1,318	30	1,625	14,520	1,389	0	0
1996-2000	626	15,760	1,832	126	2,712	3	206	3,764	353	0	0
2001	1,616	54,444	4,115	47	5,578	10	1,481	56,403	523	0	0
2002	512	39,943	1,589	31	10,728	-	2	3,058	52	0	0
2003	991	45,461	2,315	47	7,903	-	624	28,518	526	0	0
2004	66	33,092	1,170	19	9,191	-	17	7,585	47	0	0
2005	135	33,051	935	18	6,875	6	51	4,785	36	0	0
2006	37	24,194	1,457	1	1,350	-	-	2,800	-	0	0
2007	156	19,983	793	6	2,511	-	38	4,841	97	0	0
2008	198	19,020	-	43	5,608	-	69	4,487	-	0	0
2009	182	39,425	1,684	1	3,550	16	164	27,000	466	0	0
2010 <sup>c/</sup>	82	30,159	710	2	4,537	11	8	5,171	22	0	0
<b>WASHINGTON BUOY 10</b>											
1987-1990	10,678	71,927	6,567	1,907	14,398	68	8,353	40,415	1,627	1	11
1991-1995	4,162	41,770	5,908	466	3,710	42	5,178	31,681	1,426	0	16
1996-2000	1,957	23,952	1,045	393	3,999	24	950	6,305	82	0	0
2001	2,765	62,944	-	-	6,791	-	3,282	70,349	-	0	0
2002	1,001	40,927	485	232	8,424	26	98	3,023	-	0	0
2003	216	39,844	-	22	8,344	-	139	24,633	-	0	0
2004	685	33,805	-	45	6,791	-	139	7,381	-	0	0
2005	183	20,879	-	5	2,383	-	34	1,972	-	0	0
2006	421	14,597	-	5	351	-	8	879	-	0	0
2007	711	14,421	-	33	1,226	-	343	3,037	-	0	0
2008	804	12,445	-	154	2,544	-	436	3,581	-	0	0
2009	389	31,123	-	4	2,369	-	312	20,185	-	0	0
2010 <sup>c/</sup>	106	21,241	-	7	2,250	-	11	2,767	-	0	0

TABLE IV-15. Buoy 10<sup>a/b/</sup> and Area 4B add-on recreational salmon angler trips and catch by boat type. (Page 2 of 2)

Year or Avg.	Angler Trips			Chinook Catch			Coho Catch			Pink Catch	
	Charter	Private	Jetty	Charter	Private	Jetty	Charter	Private	Jetty	Charter	Private
<b>TOTAL BUOY 10</b>											
1987-1990	14,680	110,547	10,596	2,700	20,812	98	11,645	58,763	2,317	1	11
1991-1995	5,690	63,317	10,463	588	5,029	72	6,803	46,201	2,814	0	16
1996-2000	2,583	39,712	2,877	519	6,710	27	1,157	10,070	435	0	0
2001	4,381	117,388	4,115	47	12,369	10	4,763	126,752	523	0	0
2002	1,513	80,870	2,074	263	19,152	26	100	6,081	52	0	0
2003	1,207	85,305	2,315	69	16,247	0	763	53,151	526	0	0
2004	751	66,897	1,170	64	15,982	0	156	14,966	47	0	0
2005	318	53,930	935	23	9,258	6	85	6,757	36	0	0
2006	458	38,791	1,457	6	1,701	0	8	3,679	0	0	0
2007	867	34,404	793	39	3,737	0	381	7,878	97	0	0
2008	1,002	31,465	0	197	8,152	0	505	8,068	0	0	0
2009	571	70,548	1,684	5	5,919	16	476	47,185	466	0	0
2010 <sup>c/</sup>	188	51,400	710	9	6,787	11	19	7,938	22	0	0
<b>TOTAL AREA 4B ADD-ON<sup>d/</sup></b>											
1989-1990	1,084	10,941	-	62	375	-	2,095	18,021	-	36	212
1991-1995	429	6,852	-	12	153	-	725	9,188	-	73	970
1996	36	1,511	-	-	5	-	61	2,266	-	0	0
1997	136	1,788	-	-	4	-	65	1,429	-	139	412
1998	71	6,296	-	5	98	-	125	7,937	-	0	3
1999 <sup>e/</sup>	-	-	-	-	-	-	-	-	-	0	0
2000	373	3,046	-	-	8	-	614	3,796	-	0	0
2001-2005 <sup>f/</sup>	-	-	-	-	-	-	-	-	-	0	0
2006 <sup>e/</sup>	-	-	-	-	-	-	-	-	-	0	0
2007 <sup>f/</sup>	-	-	-	-	-	-	-	-	-	0	0
2008	-	782	-	-	11	-	-	137	-	0	0
2009 <sup>f/</sup>	-	-	-	-	-	-	-	-	-	0	0
2010 <sup>f/</sup>	-	-	-	-	-	-	-	-	-	0	0

a/ Starting in 2000, includes catch upstream from the Astoria-Megler Bridge to the new boundary line from Tongue Point, Oregon to Rocky Point, Washington. Prior to 2000 includes only downstream from the Astoria-Megler Bridge.

b/ Prior to 1987, data on charter and private anglers were combined. Total Buoy 10 catch and effort data prior to 1987 are provided in Table B-21.

c/ Preliminary.

d/ There was no Area 4B add-on fishery prior to 1989.

e/ There was no Area 4B add-on fishery opening because the Area 4 ocean quota was not attained.

f/ There was no Area 4B add-on fishery planned.

TABLE IV-16. Estimates of California coastal community and state personal income impacts in thousands of real (inflation adjusted, 2010) dollars of the troll and recreational ocean salmon fishery for major port areas.<sup>a/</sup>

Year or Avg.	Crescent City	Eureka	Fort Bragg	San Francisco	Monterey	Coastal Community Total <sup>b/</sup>	State Total
<b>OCEAN TROLL<sup>c/</sup></b>							
1976-1980	6,638	16,860	16,532	21,687	9,309	71,026	91,313
1981-1985	3,362	4,056	9,492	17,918	6,105	40,933	50,963
1986-1990	1,264	3,130	16,648	32,327	12,090	65,458	80,336
1991-1995	10	149	1,046	12,166	6,931	20,302	24,465
1996-2000	11	177	739	12,736	7,722	21,385	22,626
2001	15	301	993	10,433	2,207	13,947	14,477
2002	263	503	3,581	14,898	4,012	23,256	24,705
2003	212	37	14,534	15,143	2,388	32,314	35,939
2004	1,862	411	7,121	22,370	5,035	36,799	37,573
2005	139	418	5,185	12,911	6,776	25,428	26,064
2006	-	-	2,359	6,101	927	9,388	9,693
2007	316	785	3,244	7,742	1,578	13,666	13,910
2008	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-
2010 <sup>d/e/</sup>	-	34	1,689	135	153	2,011	2,090
<b>RECREATIONAL</b>							
1976-1980	1,288	1,493	870	13,068	875	17,593	19,734
1981-1985	1,411	1,454	697	11,573	924	16,058	18,075
1986-1990	2,390	2,491	1,215	14,143	3,800	24,039	28,014
1991-1995	867	933	1,409	11,963	5,729	20,901	24,541
1996-2000	402	739	1,439	11,994	5,268	19,842	23,084
2001	344	748	2,018	7,280	2,930	13,320	14,330
2002	154	832	2,134	9,146	4,505	16,771	18,008
2003	87	626	1,612	6,616	2,177	11,118	11,908
2004	131	1,050	2,090	10,713	4,221	18,205	19,469
2005	99	664	1,690	8,078	3,067	13,599	14,571
2006	59	656	1,393	5,468	1,846	9,421	10,151
2007	83	856	1,124	3,877	1,343	7,283	7,909
2008	-	-	25	-	-	25	30
2009	44	221	-	-	-	265	310
2010 <sup>d/</sup>	8	185	410	1,540	1,087	3,230	3,515

a/ Per pound and per day estimates of income impacts provided from output of the Fishery Economic Assessment Model (FEAM). These are the income impacts associated with expenditures in the troll or recreational sectors. There is no differentiation between money new to the area and money which would otherwise have been expended in other sectors. It is assumed that all fish landed at a port is processed in the port area. Values through 1995 are based on a 1992 run of the FEAM using 1989 U.S. Forest Service IMPLAN data. Values from 1996 through 2000 are based on a 1998 run of the FEAM using 1996 U.S. Forest Service IMPLAN data. Beginning in 2001 values are based on a 2003 run of the FEAM using 1998 U.S. Forest Service IMPLAN data.

b/ Total personal income impacts on coastal areas. Totals do not include impacts of one coastal area on another.

c/ Excluding pink salmon.

d/ Preliminary.

e/ Eureka impacts from fish caught in the Fort Bragg area fishery and landed in Eureka.

TABLE IV-17. Estimates of Oregon coastal community and state personal income impacts in thousands of real (inflation adjusted, 2010) dollars of the troll and recreational ocean salmon fishery for major port areas.<sup>a/</sup>

Year or Avg.	Astoria	Tillamook	Newport	Coos Bay	Brookings	Coastal Community Total <sup>b/</sup>	State Total
<b>OCEAN TROLL<sup>c/</sup></b>							
1976-1980	4,261	5,485	12,867	19,801	8,232	50,646	68,668
1981-1985	1,380	1,776	4,165	7,345	3,188	17,854	24,264
1986-1990	637	3,715	8,269	15,940	3,021	31,583	42,653
1991-1995	89	693	2,838	1,379	140	5,139	6,928
1996-2000	147	290	3,004	1,734	418	5,594	6,816
2001	370	755	5,656	2,972	610	10,364	12,615
2002	1,058	896	4,839	4,278	774	11,846	14,347
2003	1,035	938	6,256	5,687	670	14,586	17,648
2004	872	698	6,174	6,718	1,438	15,900	17,183
2005	722	1,202	5,137	5,088	1,204	13,353	14,429
2006	942	586	1,541	415	361	3,846	4,126
2007	277	393	640	1,866	742	3,919	4,206
2008	394	193	-	-	69	656	691
2009 <sup>d/</sup>	161	151	133	18	40	503	537
2010 <sup>d/</sup>	898	260	1,304	885	349	3,695	3,968
<b>RECREATIONAL</b>							
1979	3,572	1,140	5,432	5,500	2,647	18,292	23,583
1980	4,313	1,895	5,997	5,764	2,573	20,542	26,456
1981-1985	2,106	1,698	4,055	4,136	2,878	14,872	19,307
1986-1990	1,441	1,803	5,612	4,088	2,996	15,940	20,752
1991-1995	979	788	1,785	1,593	1,125	6,269	8,130
1996-2000	379	435	428	472	908	2,622	3,456
2001	1,360	732	1,729	1,449	1,011	6,281	7,699
2002	793	1,040	1,363	1,589	745	5,529	6,805
2003	1,157	1,202	2,726	1,985	584	7,655	9,416
2004	1,040	1,307	2,518	1,876	722	7,462	9,189
2005	754	539	856	1,166	482	3,797	4,653
2006	541	635	672	834	410	3,092	3,799
2007	760	862	1,304	1,043	420	4,389	5,395
2008	218	340	283	283	182	1,305	1,607
2009 <sup>d/</sup>	766	930	1,880	561	231	4,368	5,377
2010 <sup>d/</sup>	586	522	819	325	220	2,473	3,033

a/ Per pound and per day estimates of income impacts provided by the FEAM. These are the income impacts associated with expenditures in the troll or recreational sectors. There is no differentiation between money new to the area and money which would otherwise have been expended in other sectors. It is assumed that all fish landed at a port is processed in the port area. Values through 1995 are based on a 1992 run of the FEAM using 1989 U.S. Forest Service IMPLAN data. Values from 1996 through 2000 are based on a 1998 run of the FEAM using 1996 U.S. Forest Service IMPLAN data. Beginning in 2001 values are based on a 2003 run of the FEAM using 1998 U.S. Forest Service IMPLAN data.

b/ Total personal income impacts on coastal areas. Totals do not include impacts of one coastal area on another.

c/ Excluding pink salmon.

d/ Preliminary.

TABLE IV-18. Estimates of Washington coastal community and state personal income impacts in thousands of real (inflation adjusted, 2010) dollars of the troll and recreational ocean salmon fishery for major port areas.<sup>a/</sup>

Year or Avg.	Neah Bay	La Push	Westport	Ilwaco <sup>b/</sup>	Coastal Community Total <sup>c/d/</sup>	Puget Sound	State Total
<b>OCEAN TROLL<sup>e/f/</sup></b>							
1976-1980	6,154	8,402	16,657	5,965	37,178	8,280	59,311
1981-1985	1,209	490	4,564	1,092	7,355	1,767	11,561
1986-1990	669	176	2,097	456	3,398	1,023	5,567
1991-1995 <sup>g/</sup>	492	109	700	50	1,354	198	1,992
1996-2000	166	3	200	19	388	102	533
2001	303	0	631	42	976	0	1,056
2002	626	81	1,098	183	1,988	0	2,191
2003	1,135	192	937	137	2,401	43	2,784
2004	836	264	1,039	101	2,240	26	2,588
2005	684	409	1,052	130	2,275	1	2,570
2006	508	412	395	265	1,580	34	1,870
2007	224	227	929	115	1,496	20	1,663
2008	146	176	550	130	1,001	12	1,167
2009	296	305	1,063	74	1,737	34	1,981
2010	319	502	3,792	82	4,695	-	4,904
<b>RECREATIONAL</b>							
1976-1980	2,267	1,125	22,551	11,039	36,981	-	49,203
1981-1985	1,371	140	8,873	4,560	14,944	-	19,914
1986-1990	1,052	120	5,035	2,714	8,922	-	11,820
1991-1995	559	109	3,108	1,576	5,352	-	7,037
1996-2000	296	80	1,455	712	2,543	-	3,337
2001	765	156	5,689	3,604	10,214	-	11,932
2002	651	166	5,240	2,869	8,926	-	10,429
2003	946	265	5,902	3,823	10,936	-	12,793
2004	1,109	235	4,815	3,155	9,314	-	10,920
2005	760	238	4,394	2,555	7,947	-	9,306
2006	499	209	3,244	1,987	5,939	-	6,951
2007	508	162	3,329	2,596	6,596	-	7,712
2008	220	97	2,190	925	3,432	-	4,011
2009	593	260	4,178	2,859	7,891	-	9,229
2010	428	214	4,183	2,001	6,826	-	7,976

a/ Per pound and per recreational day estimates of income impacts provided by the FEAM. These are the income impacts associated with expenditures in the troll or recreational sectors. There is no differentiation between money new to the area and money which would otherwise have been expended in other sectors. It is assumed that all fish landed at a port is processed in the port area. Values through 1995 are based on a 1992 run of the FEAM using 1989 U.S. Forest Service IMPLAN data. Values from 1996 through 2000 are based on a 1998 run of the FEAM using 1996 U.S. Forest Service IMPLAN data. Beginning in 2001 values are based on a 2003 run of the FEAM using 1998 U.S. Forest Service IMPLAN data.

b/ Recreational values exclude recreational shorebased effort from the Columbia River north jetty.

c/ Total personal income impacts on coastal areas. Totals do not include impacts of one coastal area on another.

d/ Through 1993, commercial values include a very small amount of fish landed in Washington coastal areas not included in the major port groups.

e/ Excluding pink salmon.

f/ All commercial values in this table are based on preliminary information available at the start of each year's Salmon Review.

g/ The non-Indian commercial and recreational fisheries were closed north of Cape Falcon in 1994. Some commercial catch taken south of Cape Falcon was landed in the Puget Sound area.

TABLE IV-19. Local personal income impacts in real (inflation adjusted, 2010) dollars of the inriver commercial salmon fishery on Oregon and Washington Columbia River communities.<sup>a/</sup>

Oregon and Washington Columbia River Communities													
	Non-Indian - Gillnet <sup>b/</sup>						Treaty Indian - All Gears <sup>c/</sup>						Columbia River Total
	Chinook			Coho	Chum	TOTAL	Chinook			Coho	Chum	TOTAL	
	Fall		Fall										
	Spring	Brights <sup>d/</sup>	Tules	Coho	Chum	TOTAL	Spring	Brights <sup>d/</sup>	Tules	Coho	Chum	TOTAL	
Oregon													
1987-2003	983	2,606	262	1,921	3	5,775	13	1,103	78	11	e/	1,205	6,980
2004	2,154	1,429	304	1,733	1	5,621	359	1,467	353	55	-	2,234	7,855
2005	647	1,036	181	1,895	e/	3,758	-	547	83	1	-	631	4,390
2006	1,169	1,344	88	1,269	e/	3,870	1	728	14	30	-	773	4,643
2007	1,390	736	e/	510	e/	2,636	121	707	e/	31	-	859	3,494
2008 <sup>f/</sup>	1,253	1,996	188	1,293	e/	4,730	584	1,805	196	103	-	2,688	7,418
2009 <sup>f/</sup>	787	1,801	271	2,020	e/	4,880	267	1,259	139	54	-	1,719	6,599
2010 <sup>f/</sup>	3,324	1,775	398	1,439	2	6,938	1,064	912	241	44	-	2,260	9,199
Washington <sup>f/g/h/</sup>													
1987-2003	438	1,120		871	2	2,430	128	2,242		36	-	2,406	4,836
2004	565	1,135		888	e/	2,589	419	1,668		60	-	2,148	4,737
2005	450	803		438	e/	1,691	272	2,743		49	-	3,064	4,755
2006	630	908		555	-	2,094	908	3,005		78	e/	3,992	6,085
2007	224	454		413	e/	1,092	1	2,601		129	e/	2,731	3,823
2008	547	980		541	1	2,068	1,767	3,631		354	e/	5,752	7,821
2009	554	1,118		602	1	2,276	1,184	2,168		72	-	3,424	5,700
2010	955	1,028		613	4	2,599	3,626	4,119		50	-	7,795	10,394
Columbia River													
1987-2003	1,421	3,988		2,791	5	8,205	140	3,424		47	e/	3,611	11,815
2004	2,720	2,868		2,622	1	8,210	779	3,488		115	-	4,382	12,592
2005	1,097	2,020		2,333	e/	5,450	-	3,372		50	-	3,695	9,145
2006	1,799	2,340		1,825	-	5,963	909	3,748		108	-	4,765	10,728
2007	1,614	1,191		923	e/	3,728	122	3,308		160	-	3,589	7,317
2008 <sup>f/</sup>	1,800	3,164		1,834	1	6,798	2,351	5,632		457	-	8,440	15,238
2009 <sup>f/</sup>	1,342	3,191		2,622	1	7,156	1,452	3,566		126	-	5,143	12,299
2010 <sup>f/</sup>	4,278	3,201		2,051	6	9,537	4,689	5,271		95	-	10,055	19,592

a/ Excluding pink, sockeye, and steelhead. Values through 1995 are based on a 1992 run of the FEAM using 1989 U.S. Forest Service IMPLAN data. Values from 1996 through 2000 are based on a 1998 run of the FEAM using 1996 U.S. Forest Service IMPLAN data. Beginning in 2001 values are based on a 2003 run of the FEAM using 1998 U.S. Forest Service

b/ Mainstem below Bonneville and Select Areas (Youngs Bay, Tongue Point, Blind Slough, and Deep River).

c/ Treaty Indian values do not include direct sales to consumers.

d/ For Washington and the Columbia River this column includes fall brights, tules, and jacks.

e/ Less than \$500.

f/ Preliminary. (All Washington values in this table are based on preliminary information available when each year's Salmon

g/ Washington income impacts for years prior to 2000 are based on a combination of Washington and Oregon value

h/ Treaty Indian values are primarily mainstem Columbia set gillnet but also include Klickitat dipnet, Drano Lake (Little White Salmon River mouth), and Priest Rapids Pool fisheries.

TABLE IV-20. Local personal income impacts in real (inflation adjusted, 2010) dollars of the Buoy 10 recreational fishery in Oregon and Washington and the Area 4B add-on fishery in Washington.

Year	Total Angler Trips (thousands)	Income Impacts (thousands of dollars)		
		Oregon	Washington	Total
BUOY 10 (including bank fishing)				
1987-1990	136	2,664	4,645	7,308
1991-1995	79	1,515	2,578	4,093
1996-2000	45	971	1,328	2,299
2001	126	2,507	2,646	5,153
2002	84	1,686	1,585	3,271
2003	89	1,998	1,383	3,380
2004	69	1,339	1,269	2,608
2005	55	1,339	738	2,076
2006	41	1,001	572	1,573
2007	36	829	621	1,450
2008	32	767	572	1,339
2009	73	1,622	1,122	2,744
2010 <sup>b/</sup>	52	1,210	735	1,945
AREA 4B ADD-ON <sup>c/</sup>				
1989-1990	12	-	658	658
1991-1995	6	-	384	384
1996-2000	3	-	138	138
2001	-	-	-	-
2002	-	-	-	-
2003	-	-	-	-
2004	-	-	-	-
2005	-	-	-	-
2006	-	-	-	-
2007	-	-	-	-
2008	1	-	30	30
2009	-	-	-	-
2010 <sup>b/</sup>	-	-	-	-

a/ Values through 1995 are based on a 1992 run of the FEAM using 1989 U.S. Forest Service IMPLAN data. Values from 1996 through 2000 are based on a 1998 run of the FEAM using 1996 U.S. Forest Service IMPLAN data. Beginning in 2001 values are based on a 2003 run of the FEAM using 1998 U.S. Forest Service IMPLAN data.

b/ Preliminary

c/ There were no Area 4B add-on fisheries prior to 1989.



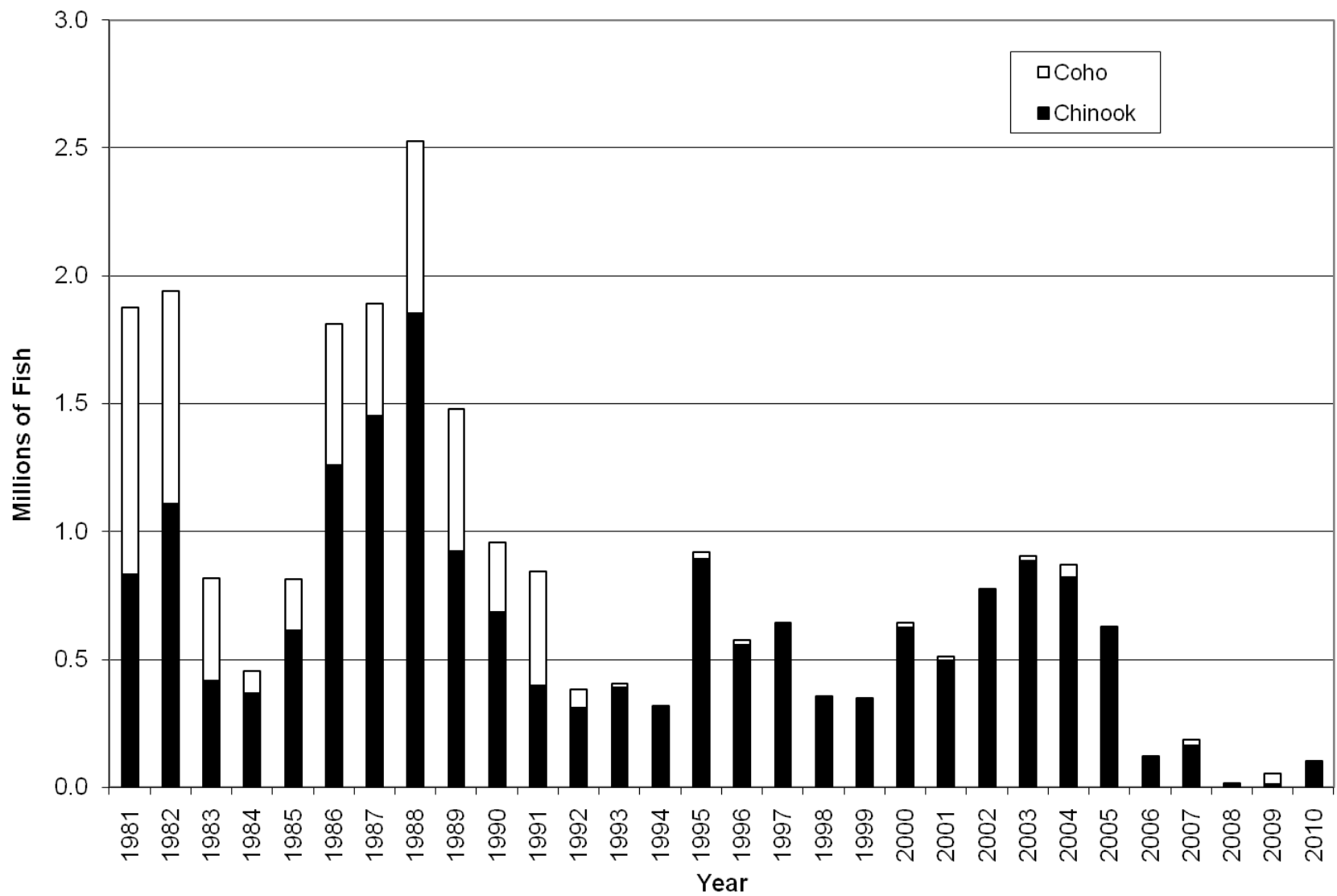


Figure IV-1. West Coast ocean non-Indian commercial Chinook and coho harvest.

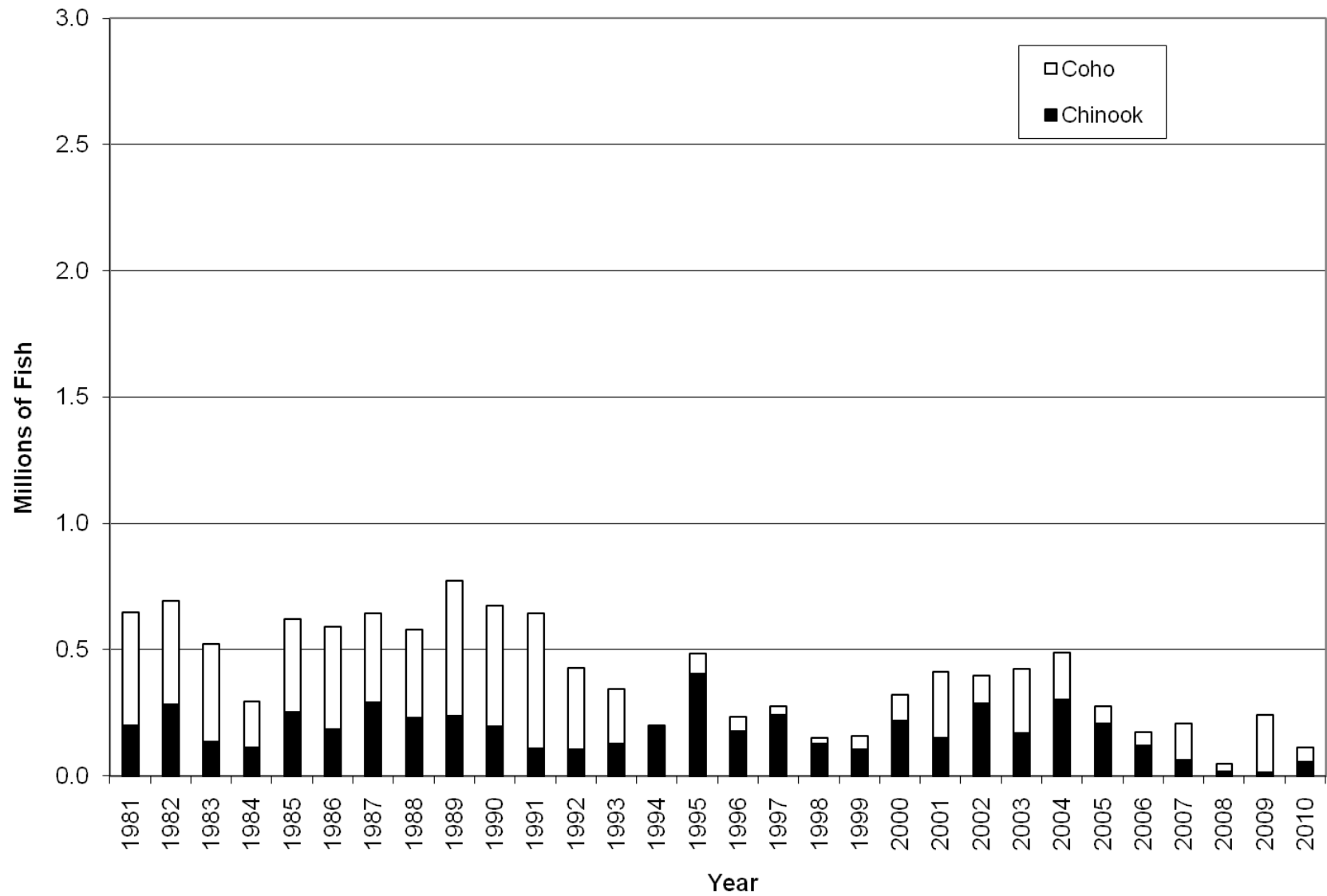


Figure IV-2. West Coast ocean recreational Chinook and coho harvest.

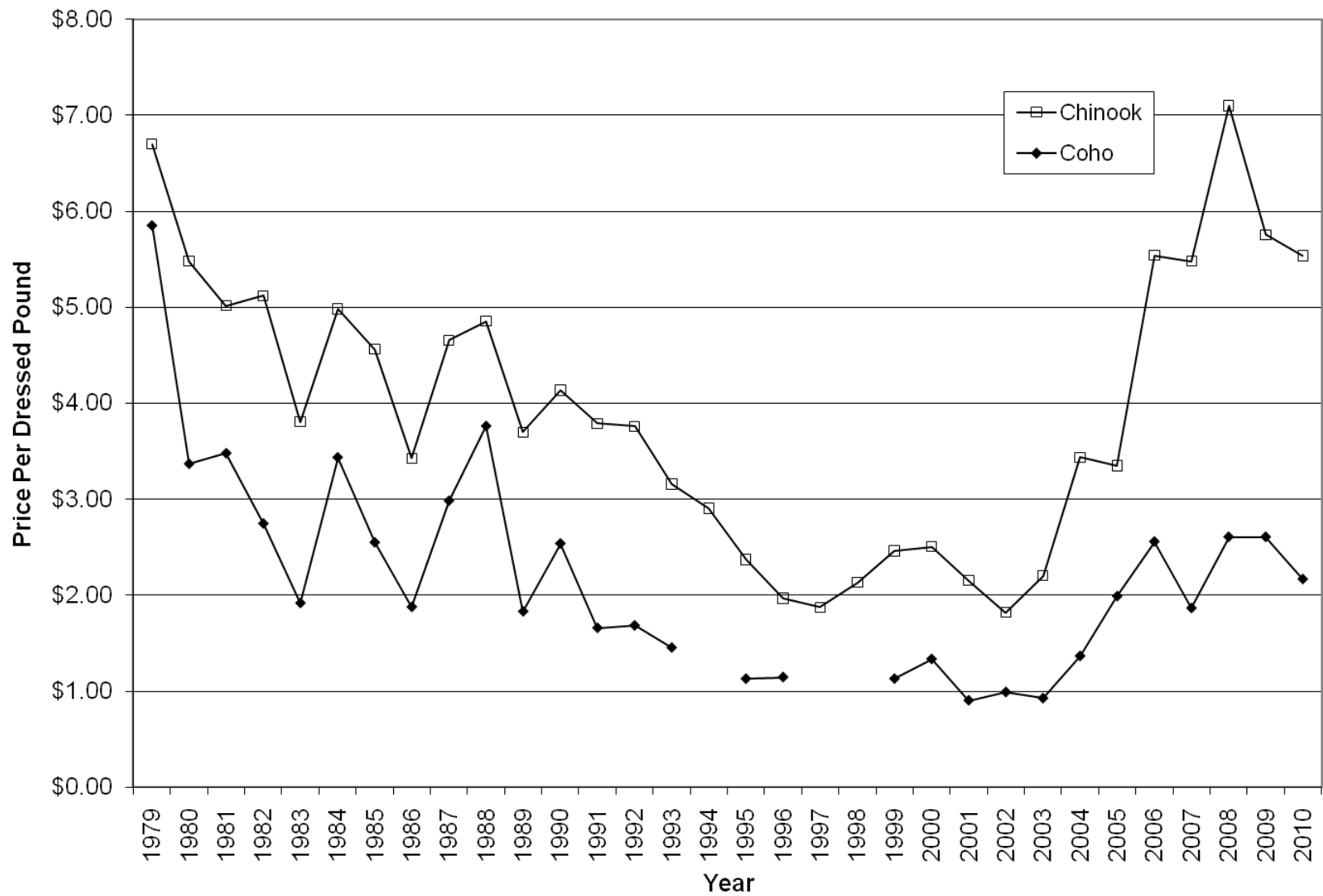


Figure IV-3. West Coast non-Indian ocean commercial salmon annual exvessel prices (inflation adjusted, 2010 dollars).

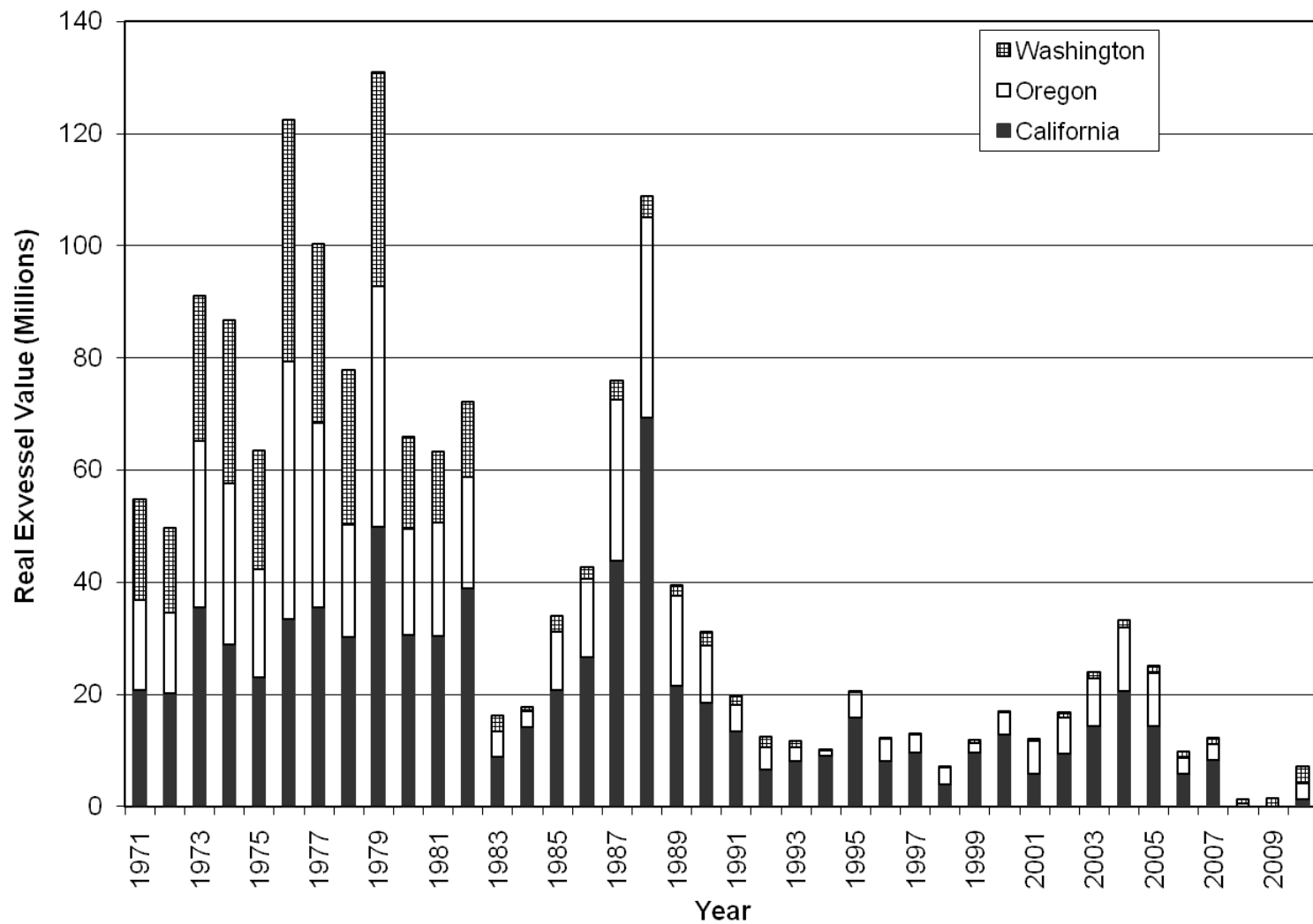


Figure IV-4. Exvessel value of West Coast non-Indian ocean commercial Chinook and coho landings by state of landing (inflation adjusted, 2010 dollars).

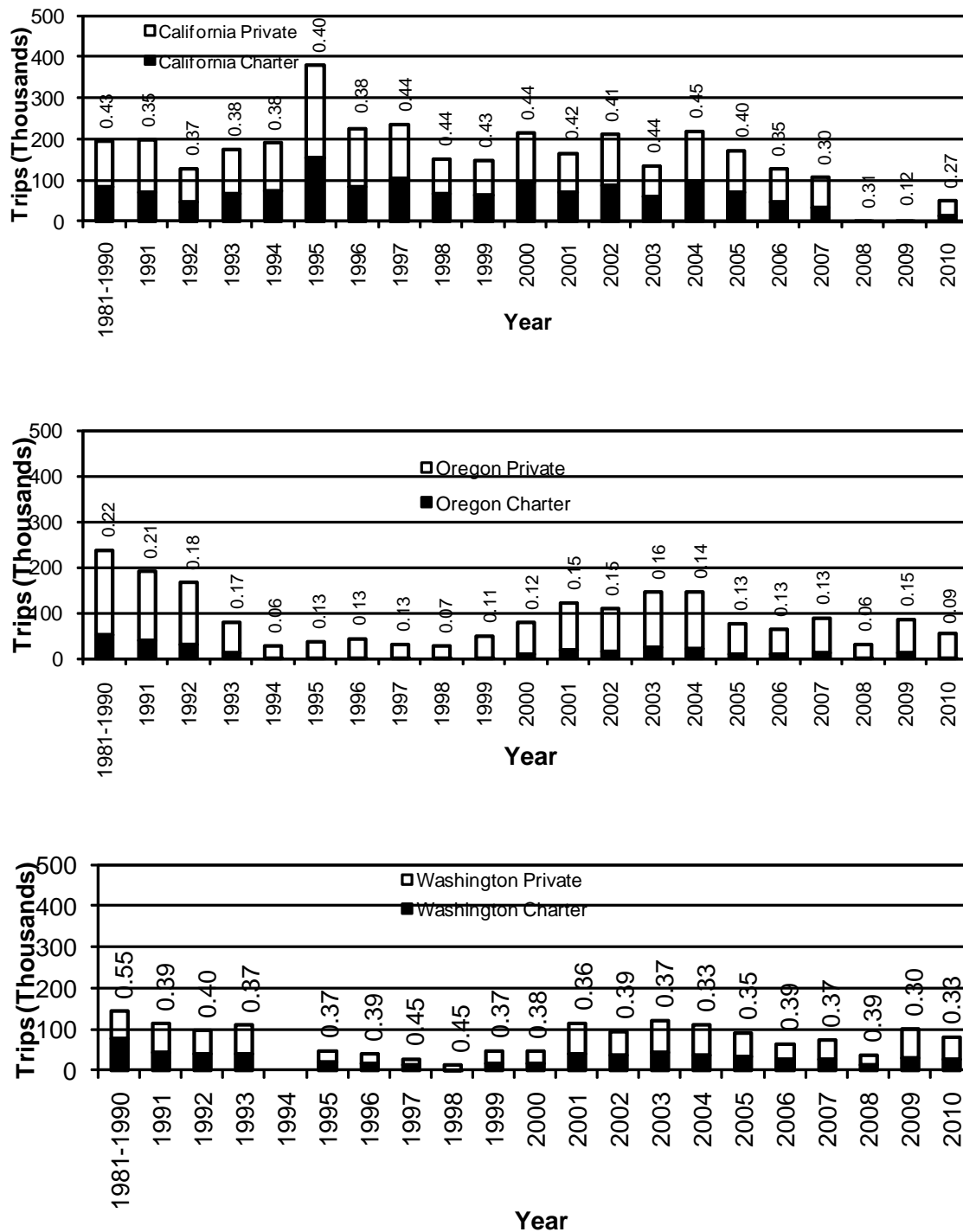


Figure IV-5. Total recreational ocean salmon trips for California, Oregon, and Washington, with proportion of charter trips shown above each bar.

# **APPENDIX A** **HISTORICAL RECORD OF OCEAN SALMON FISHERY** **EFFORT AND LANDINGS**

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TABLE A-1. Summary of California commercial troll salmon fishing effort in days fished and landings in numbers of fish by catch area. (Page 1 of 1)

Year or Avg.	Crescent City <sup>a/</sup>	Eureka	Fort Bragg	San Francisco	Monterey	Oregon	Season
<b>DAYS FISHED</b>							
1978-1980 <sup>b/</sup>	18,370	20,654	23,483	22,622	17,277	0	102,405
1981-1985	8,076	8,463	13,716	21,892	10,958	0	63,104
1986-1990	851	2,477	16,392	25,555	14,391	12	59,677
1991-1995	-	600	4,475	13,340	10,820	0	29,235
1996-2000	23	305	1,836	9,526	7,633	0	19,322
2001	18	297	816	8,951	3,759	0	13,841
2002	171	426	2,124	9,145	5,529	8	17,403
2003	50	55	6,296	6,770	2,744	26	15,941
2004	35	262	5,584	10,856	4,769	227	21,733
2005	58	266	1,455	8,670	6,569	-	17,018
2006	-	-	434	5,488	2,337	-	8,259
2007	87	270	1,400	6,736	2,178	-	10,671
2008	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	1,503	228	248	-	1,979
<b>CHINOOK</b>							
1978-1980	44,259	166,282	143,867	174,684	89,545	0	618,637
1981-1985	48,548	61,130	109,258	181,548	84,103	0	484,587
1986-1990	13,997	32,329	252,416	351,115	144,846	1,064	795,767
1991-1995	-	4,700	17,354	200,588	126,517	-	349,159
1996-2000	126	3,379	12,529	195,662	156,305	-	368,001
2001	223	5,300	14,993	136,630	35,940	0	193,086
2002	3,663	9,008	65,336	242,872	69,980	796	391,655
2003	1,356	688	248,875	202,876	36,099	2,000	491,894
2004	565	5,695	107,259	298,229	64,707	25,655	502,110
2005	1,255	5,799	45,869	170,531	117,408	-	340,862
2006	-	-	10,835	47,689	11,204	-	69,728
2007	2,367	6,395	16,116	75,254	14,009	-	114,141
2008	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	12,577	1,086	1,435	-	15,098
<b>COHO</b>							
1978-1980	72,133	90,024	29,918	20,778	9,418	0	222,270
1981-1985	20,094	23,675	14,628	7,728	1,356	0	67,480
1986-1990	3,795	5,998	26,000	9,377	1,611	39	46,819
1991-1995	-	3,100	4,500	26,900	11,775	-	46,275
1996-2000	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-

a/ Includes minor effort off Oregon for fish landed in California prior to 1986.

b/ Data not available prior to 1978.

c/ Preliminary.



TABLE A-2. California commercial troll salmon fishing effort in days fished by port area and month. (Page 1 of 2)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
<u>Crescent City<sup>a/</sup></u>								
1978-1980	56	2,043	4,261	6,285	5,025	756	-	18,370
1981-1985	-	1,363	961	1,947	2,509	1,295	-	8,076
1986-1990	-	9	360	219	253	10	-	851
1991-1995	-	-	-	-	-	-	-	-
1996-2000	-	-	-	-	10	13	-	23
2001	-	-	-	-	-	18	-	18
2002	-	-	-	-	27	146	6	179 <sup>b/</sup>
2003	14	2	4	-	-	50	6	76 <sup>b/</sup>
2004	22	-	2	36	167	35	-	262 <sup>b/</sup>
2005	-	-	-	-	-	58	-	58
2006	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	87	-	87
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-
<u>Eureka</u>								
1978-1980	264	5,684	7,152	4,083	2,323	1,411	-	20,654
1981-1985	-	2,029	1,075	2,608	1,931	821	-	8,463
1986-1990	-	-	882	518	547	467	64	2,477
1991-1995	-	-	-	-	-	500	100	600
1996-2000	-	-	-	-	128	177	-	305
2001	-	-	-	-	-	297	-	297
2002	-	-	-	-	94	332	-	426
2003	-	-	-	-	-	55	-	55
2004	-	-	-	-	-	262	-	262
2005	-	-	-	-	-	266	-	266
2006	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	270	-	270
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-
<u>Fort Bragg</u>								
1978-1980	29	2,285	4,678	9,987	4,348	2,185	-	23,483
1981-1985	-	2,084	2,156	5,527	2,422	1,527	-	13,716
1986-1990	-	2,775	3,887	5,151	3,802	777	-	16,392
1991-1995	-	100	-	-	3,500	875	-	4,475
1996-2000	-	-	-	-	1,300	536	-	1,836
2001	-	206	-	-	-	610	-	816
2002	-	-	-	216	1,327	581	-	2,124
2003	-	1,022	-	1,497	2,355	1,422	-	6,296
2004	-	-	-	2,426	2,095	1,063	-	5,584
2005	-	-	-	-	-	1,455	-	1,455
2006	-	-	-	-	-	434	-	434
2007	106	-	-	-	1,252	42	-	1,400
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	-	633	870	-	-	1,503

TABLE A-2. California commercial troll salmon fishing effort in days fished by port area and month. (Page 2 of 2)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
<b><u>San Francisco</u></b>								
1978-1980	347	5,780	5,242	7,139	2,417	2,044	-	22,622
1981-1985	727	3,897	2,958	6,819	5,214	3,003	-	21,892
1986-1990	-	6,506	7,111	5,948	4,125	1,864	-	25,555
1991-1995	-	3,480	2,540	2,700	2,840	1,780	-	13,340
1996-2000	100	1,525	1,732	2,730	1,916	1,624	-	9,526
2001	-	2,000	774	2,694	1,392	1,590	501	8,951
2002	-	2,258	1,630	2,856	1,198	1,064	139	9,145
2003	-	1,046	2,228	1,409	1,212	739	136	6,770
2004	-	3,120	2,942	2,724	1,076	704	290	10,856
2005	-	-	-	3,533	2,586	2,150	401	8,670
2006	-	-	-	616	2,549	1,949	374	5,488
2007	-	1,656	-	2,954	1,152	806	168	6,736
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	-	228	-	-	-	228
<b><u>Monterey</u></b>								
1978-1980	1,024	5,293	4,310	4,581	2,220	873	-	17,277
1981-1985	1,311	4,245	2,767	2,746	964	236	-	10,958
1986-1990	-	5,235	4,255	3,367	1,335	198	-	14,391
1991-1995	-	4,360	3,080	2,460	780	140	-	10,820
1996-2000	313	3,117	2,441	1,840	147	88	-	7,633
2001	-	2,688	674	348	27	22	-	3,759
2002	-	1,988	1,617	1,592	291	41	-	5,529
2003	-	1,006	499	791	178	270	-	2,744
2004	-	2,026	1,092	1,147	299	205	-	4,769
2005	-	3,881	377	1,468	779	64	-	6,569
2006	-	2,062	103	34	44	94	-	2,337
2007	-	1,476	29	334	255	84	-	2,178
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	-	248	-	-	-	248
<b><u>Total Statewide<sup>a/</sup></u></b>								
1978-1980	1,718	21,086	25,641	32,076	16,334	7,268	-	102,405
1981-1985	2,037	12,939	9,510	18,736	12,153	5,613	-	58,950
1986-1990	-	14,524	16,246	14,658	9,741	3,316	64	58,549
1991-1995	-	7,860	5,620	5,160	4,320	2,720	100	25,780
1996-2000	363	4,642	4,173	4,570	2,351	2,419	-	18,154
2001	-	4,894	1,448	3,042	1,419	2,537	501	13,841
2002	-	4,246	3,247	4,664	2,937	2,164	145	17,403
2003	14	3,076	2,731	3,697	3,745	2,536	142	15,941
2004	22	5,146	4,036	6,333	3,637	2,269	290	21,733
2005	-	3,881	377	5,001	3,365	3,993	401	17,018
2006	-	2,062	103	650	2,593	2,477	374	8,259
2007	106	3,132	29	3,288	2,659	1,289	168	10,671
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	-	1,109	870	-	-	1,979

a/ Includes minor effort off Oregon for fish landed in California.

b/ Commercial fishery closed except in August (2002) and September (2002-2004); effort for other months reportedly occurred off Oregon.

c/ Preliminary.

TABLE A-3. California commercial troll Chinook and coho salmon landings in numbers of fish by catch area and month. (Page 1 of 3)

[illegible]

TABLE A-3. California commercial troll Chinook and coho salmon landings in numbers of fish by port area and month. (Page 2 of 3)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK									COHO							
<u>Fort Bragg</u>																
1978-1980	1,676	24,780	26,128	57,010	26,841	12,992	-	143,867	6	5,210	35,041	14,500	3,093	191	-	29,918
1981-1985	-	15,487	21,136	48,976	16,891	6,767	-	109,258	-	205	2,695	9,916	1,659	194	-	14,628
1986-1990	-	46,868	72,418	91,861	36,174	5,095	-	252,416	-	-	9,106	14,014	3,376	190	-	26,000
1991-1995	-	388	-	-	34,300	8,682	-	17,354	-	-	-	-	4,500	-	-	4,500
1996-2000	-	-	-	-	14,443	9,640	-	12,529	-	-	-	-	-	-	-	-
2001	-	4,297	-	-	-	10,696	-	14,993	-	-	-	-	-	-	-	-
2002	-	-	-	18,627	40,788	5,921	-	65,336	-	-	-	-	-	-	-	-
2003	-	31,132	-	70,542	84,285	62,916	-	248,875	-	-	-	-	-	-	-	-
2004	-	-	-	65,937	30,487	10,835	-	107,259	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	45,869	-	45,869	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	10,835	-	10,835	-	-	-	-	-	-	-	-
2007	748	-	-	-	15,173	195	-	16,116	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	-	6,397	6,180	-	-	12,577	-	-	-	-	-	-	-	-
<u>San Francisco</u>																
1978-1980	20,205	53,699	37,115	53,367	12,126	9,637	-	174,684	8	5,239	13,116	3,586	1,142	315	-	20,778
1981-1985	15,704	44,645	25,209	60,551	35,241	9,621	-	181,548	8	312	2,174	4,737	495	70	-	7,728
1986-1990	-	131,362	111,938	71,214	26,550	10,050	-	351,115	-	-	5,375	3,280	820	82	-	9,377
1991-1995	-	69,489	43,811	43,504	29,911	13,873	-	200,588	-	-	33,100	19,700	500	-	-	26,900
1996-2000	3,266	49,931	51,659	57,754	20,264	15,401	-	195,662	-	-	-	-	-	-	-	-
2001	-	38,710	8,122	60,701	14,056	11,386	3,655	136,630	-	-	-	-	-	-	-	-
2002	-	64,569	68,773	88,077	13,584	7,399	470	242,872	-	-	-	-	-	-	-	-
2003	-	31,148	94,684	39,442	25,978	9,742	1,882	202,876	-	-	-	-	-	-	-	-
2004	-	75,176	127,403	77,267	12,843	4,329	1,211	298,229	-	-	-	-	-	-	-	-
2005	-	-	-	110,823	29,468	27,935	2,305	170,531	-	-	-	-	-	-	-	-
2006	-	-	-	16,437	18,341	11,839	1,072	47,689	-	-	-	-	-	-	-	-
2007	-	25,396	-	39,878	7,434	2,194	352	75,254	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	-	1,086	-	-	-	1,086	-	-	-	-	-	-	-	-

TABLE A-3. California commercial troll Chinook and coho salmon landings in numbers of fish by port area and month. (Page 3 of 3)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK									COHO							
<u>Monterey</u>																
1978-1980	12,314	29,539	23,936	18,117	9,381	3,509	-	89,545	37	3,539	4,986	1,778	72	34	-	9,418
1981-1985	15,312	34,978	16,852	19,382	5,619	1,148	-	84,103	84	149	896	260	65	12	-	1,356
1986-1990	-	61,484	42,139	29,992	9,011	2,220	-	144,846	-	-	1,024	508	89	10	-	1,611
1991-1995	-	51,806	30,129	37,446	5,936	1,200	-	126,517	-	-	9,300	2,400	75	-	-	11,775
1996-2000	5,947	71,787	50,021	30,878	1,131	421	-	156,305	-	-	-	-	-	-	-	-
2001	-	30,037	3,375	2,383	116	29	-	35,940	-	-	-	-	-	-	-	-
2002	-	21,551	24,441	21,328	2,524	136	-	69,980	-	-	-	-	-	-	-	-
2003	-	10,954	9,517	13,728	823	1,077	-	36,099	-	-	-	-	-	-	-	-
2004	-	22,420	26,772	14,033	1,195	287	-	64,707	-	-	-	-	-	-	-	-
2005	-	76,855	5,001	29,105	5,578	869	-	117,408	-	-	-	-	-	-	-	-
2006	-	9,911	391	346	248	308	-	11,204	-	-	-	-	-	-	-	-
2007	-	11,202	156	1,930	605	116	-	14,009	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	-	1,435	-	-	-	1,435	-	-	-	-	-	-	-	-
<u>Total Statewide<sup>a/</sup></u>																
1978-1980	42,724	200,034	136,693	173,352	67,912	33,804	-	618,637	38	54,897	149,408	53,987	12,921	2,035	-	210,303
1981-1985	31,016	124,589	74,723	145,130	82,132	23,673	-	462,652	92	5,037	12,948	28,164	12,469	1,079	-	58,726
1986-1990	-	240,135	257,835	195,138	77,291	24,112	480	794,703	-	-	23,790	18,257	4,444	1,138	125	46,780
1990-1995	-	121,373	73,940	80,950	42,707	22,878	400	341,928	-	-	25,850	12,250	2,825	3,000	100	42,475
1996-2000	7,580	121,717	101,679	88,632	24,597	28,344	-	368,001	-	-	-	-	-	-	-	-
2001	-	73,044	11,497	63,084	14,172	27,634	3,655	193,086	-	-	-	-	-	-	-	-
2002	-	86,120	93,214	128,032	58,969	24,426	894	391,655	-	-	-	-	-	-	-	-
2003	1,654	73,318	104,301	123,712	111,086	75,779	2,044	491,894	-	-	-	-	-	-	-	-
2004	718	97,596	154,181	162,482	64,211	21,711	1,211	502,110	-	-	-	-	-	-	-	-
2005	-	76,855	5,001	139,928	35,046	81,727	2,305	340,862	-	-	-	-	-	-	-	-
2006	-	9,911	391	16,783	18,589	22,982	1,072	69,728	-	-	-	-	-	-	-	-
2007	748	36,598	156	41,808	23,212	11,267	352	114,141	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>c/</sup>	-	-	-	8,918	6,180	-	-	15,098	-	-	-	-	-	-	-	-

a/ Includes minor catches made off Oregon and landed in California prior to 2005.

b/ Commercial fishery closed except in August (2002) and September (2002-2004); catch for other months reportedly occurred off Oregon.

c/ Preliminary.

TABLE A-4. California ocean recreational salmon fishing effort in angler trips by port and month. (Page 1 of 3)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
<u>Crescent City</u>											
1976-1980	--	--	1	41	3,679	9,656	5,384	1,211	0	0	19,973
1981-1985	--	--	0	572	3,912	11,525	6,620	504	0	0	23,133
1986-1990	--	--	-	1,417	11,087	19,316	6,758	981	-	-	39,560
1991-1995	-	-	-	2,376	4,333	9,250	2,319	1,563	-	-	14,334
1996-2000	-	-	-	555	2,320	1,460	2,184	331	-	-	6,849
2001	-	-	-	881	2,141	3,011	2,339	273	-	-	8,645
2002	-	-	-	1,036	1,131	132	1,333	237	-	-	3,869
2003	-	-	-	319	521	521	493	340	-	-	2,194
2004	-	-	-	603	604	689	843	413	-	-	3,152
2005	-	-	-	131	794	492	904	181	-	-	2,502
2006	-	-	-	325	754	312	-	87	-	-	1,478
2007	-	-	-	277	484	1,027	225	69	-	-	2,082
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	498	607	-	-	1,105
2010 <sup>av</sup>	-	-	-	72	38	48	33	15	-	-	206
<u>Eureka</u>											
1976-1980	--	--	3	315	5,292	12,575	5,346	350	12	0	23,893
1981-1985	--	--	1	1,222	4,740	11,724	4,914	493	14	0	23,108
1986-1990	--	--	-	1,648	9,487	18,674	7,126	963	0	-	37,898
1991-1995	-	-	-	1,480	5,837	8,301	2,249	2,151	21	-	14,789
1996-2000	-	-	-	1,539	3,808	1,758	3,815	723	-	-	11,643
2001	-	-	-	1,994	5,297	3,854	3,855	1,048	-	-	16,048
2002	-	-	-	2,186	5,379	599	7,428	2,082	-	-	17,674
2003	-	-	-	2,226	3,102	2,915	4,176	1,164	-	-	13,583
2004	-	-	-	3,995	3,367	4,725	8,211	2,147	-	-	22,445
2005	-	-	-	1,143	4,795	1,160	5,075	2,654	-	-	14,827
2006	-	-	-	3,951	5,208	2,146	-	3,668	-	-	14,973
2007	-	-	-	1,737	4,987	4,914	5,212	1,511	-	-	18,361
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	2,017	2,237	-	-	4,254
2010 <sup>av</sup>	-	-	-	464	638	897	1,850	183	-	-	4,032

TABLE A-4. California ocean recreational salmon fishing effort in angler trips by port and month. (Page 2 of 3)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
<u>Fort Bragg</u>											
1976-1980	--	--	0	117	1,652	5,610	3,703	596	1	0	11,679
1981-1985	--	--	2	53	2,246	5,039	2,074	138	4	0	9,557
1986-1990	0	2	80	705	4,483	7,055	2,464	650	4	0	15,441
1991-1995	161	313	745	2,001	6,137	9,103	5,427	1,316	276	6	20,573
1996-2000	32	374	910	2,269	6,011	3,120	5,059	1,277	265	--	19,117
2001	--	690	1,269	3,402	7,228	9,454	6,879	1,754	107	15	30,798
2002	194	897	2,428	4,889	7,004	8,494	7,458	435	3	0	31,802
2003	607	1,282	938	2,662	5,729	8,252	3,466	768	5	0	23,709
2004	183	999	1,069	2,408	8,760	11,560	4,266	1,061	240	27	30,573
2005	869	521	841	1,910	4,525	6,666	7,994	964	22	0	24,312
2006	289	298	800	2,327	5,917	6,655	4,051	631	0	0	20,968
2007	249	855	692	2,280	5,593	5,271	2,013	146	25	0	17,124
2008	206	185	-	-	-	-	-	-	-	-	391
2009	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>a/</sup>	-	-	1,269	1,251	763	1,477	1,712	232	-	-	6,704
<u>San Francisco</u>											
1976-1980	8,103	10,269	7,245	8,582	10,414	15,307	15,199	12,488	7,866	4,022	97,886
1981-1985	4,117	5,811	6,039	6,892	10,779	15,006	14,061	9,291	5,577	1,343	78,915
1986-1990	4,825	9,832	12,258	8,986	12,572	18,560	15,985	9,606	4,755	1,198	98,579
1991-1995	345	6,148	6,812	8,020	12,807	29,791	17,622	8,726	4,520	148	94,781
1996-2000	-	6,364	9,125	9,112	13,999	27,446	17,266	7,577	3,985	916	93,968
2001	-	-	5,689	8,646	4,968	17,387	15,521	10,727	5,974	2,578	71,490
2002	-	-	5,322	10,758	14,016	28,354	21,029	7,104	1,820	381	88,784
2003	-	-	4,013	8,559	11,885	22,201	11,087	5,945	2,662	264	66,616
2004	-	-	7,232	15,145	15,864	32,723	21,167	8,372	4,063	1,512	106,078
2005	-	-	9,003	10,890	9,888	22,712	13,543	11,925	5,846	965	84,772
2006	-	-	3,860	11,575	13,994	20,739	5,557	3,371	1,827	448	61,371
2007	-	-	3,505	6,915	8,340	13,775	4,908	2,511	1,766	1,394	43,114
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>a/</sup>	-	-	3,937	1,626	1,645	4,713	5,559	1,594	-	-	19,074

TABLE A-4. California ocean recreational salmon fishing effort in angler trips by port and month. (Page 3 of 3)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
<u>Monterey</u>											
1976-1980	1,763	2,199	1,984	1,229	931	1,137	498	161	101	56	10,038
1981-1985	990	2,134	2,730	1,953	1,317	1,993	805	164	67	84	12,237
1986-1990	3,447	7,261	11,695	4,141	6,637	10,555	4,182	637	269	364	49,189
1991-1995	505	9,243	15,522	12,159	11,062	16,341	4,519	1,051	1,498	600	71,520
1996-2000	-	11,189	15,209	10,403	11,864	12,301	3,672	762	-	-	63,009
2001	-	883	19,395	10,966	2,071	3,934	604	301	-	-	38,154
2002	-	2,863	32,727	11,892	9,005	8,983	2,304	149	-	-	67,923
2003	-	5,092	10,118	5,834	3,165	4,083	233	--	-	-	28,525
2004	-	-	24,564	11,320	4,443	13,358	2,335	475	0	-	56,495
2005	-	-	14,787	6,997	13,298	8,870	1,354	361	-	-	45,667
2006	-	-	14,538	3,226	5,465	4,311	76	100	-	-	27,716
2007	-	-	10,846	4,102	5,687	2,502	1,611	434	26	-	25,208
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>a/</sup>	-	-	11,772	4,059	300	2,004	546	60	-	-	18,741
<b>Total Statewide</b>											
1976-1980	9,865	12,468	9,233	10,285	21,968	44,285	30,130	14,806	7,981	4,078	163,469
1981-1985	5,107	7,945	8,772	10,692	22,993	45,287	28,475	10,590	5,662	1,426	146,950
1986-1990	8,272	17,094	24,034	16,896	44,266	74,160	36,515	12,837	5,029	1,563	240,667
1991-1995	675	15,641	23,079	25,264	38,143	62,125	30,137	14,807	5,943	302	215,996
1996-2000	32	17,927	25,245	23,878	38,002	46,084	31,995	10,517	4,144	916	194,586
2001	--	1,573	26,353	25,889	21,705	37,640	29,198	14,103	6,081	2,593	165,135
2002	194	3,760	40,477	30,761	36,535	46,562	39,552	10,007	1,823	381	210,052
2003	607	6,374	15,069	19,600	24,402	37,972	19,455	8,217	2,667	264	134,627
2004	183	999	32,865	33,471	33,038	63,055	36,822	12,468	4,303	1,539	218,743
2005	869	521	24,631	21,071	33,300	39,900	28,870	16,085	5,868	965	172,080
2006	289	298	19,198	21,404	31,338	34,163	9,684	7,857	1,827	448	126,506
2007	249	855	15,043	15,311	25,091	27,489	13,969	4,671	1,817	1,394	105,889
2008	206	185	-	-	-	-	-	-	-	-	391
2009	-	-	-	-	-	-	2,515	2,844	-	-	5,359
2010 <sup>a/</sup>	-	-	16,978	7,472	3,384	9,139	9,700	2,084	-	-	48,757

a/ Preliminary.



TABLE A-5. California ocean recreational salmon landings in numbers of fish by port of landing and month. (Page 1 of 2)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	
CHINOOK												COHO											
<u>Crescent City</u>																							
1976-1980	--	--	0	2	470	1,756	1,286	81	0	0	3,595	--	--	0	9	3,087	6,587	2,049	156	0	0	11,889	
1981-1985	--	--	0	497	1,439	3,107	1,925	65	0	0	7,032	--	--	0	23	1,222	4,403	1,656	72	0	0	7,376	
1986-1990	--	--	-	414	4,552	7,689	1,640	315	-	-	14,610	--	--	-	71	3,561	8,430	1,645	141	-	-	13,847	
1991-1995	-	-	-	1,316	1,402	1,101	301	405	-	-	3,481	-	-	-	5	2,223	5,171	725	133	-	-	5,597	
1996-2000	-	-	-	166	827	680	659	81	-	-	2,413	-	-	-	4	27	23	21	19	-	-	61	
2001	-	-	-	484	607	533	507	105	-	-	2,236	-	-	-	3	52	24	16	-	-	-	95	
2002	-	-	-	283	245	31	392	156	-	-	1,107	-	-	-	-	26	3	4	-	-	-	33	
2003	-	-	-	62	76	60	90	103	-	-	391	-	-	-	-	4	-	12	-	-	-	16	
2004	-	-	-	487	259	172	309	63	-	-	1,290	-	-	-	8	7	40	24	-	-	-	79	
2005	-	-	-	11	829	389	240	29	-	-	1,498	-	-	-	-	4	-	17	-	-	-	21	
2006	-	-	-	252	273	216	-	15	-	-	756	-	-	-	3	9	8	-	-	-	-	20	
2007	-	-	-	30	198	589	27	27	-	-	871	-	-	-	-	8	43	-	5	-	-	56	
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	36	111	-	-	147	-	-	-	-	-	-	-	3	-	-	3	
2010 <sup>av</sup>	-	-	-	0	0	0	0	0	-	-	0	-	-	-	-	-	-	-	-	-	-	-	
<u>Eureka</u>																							
1976-1980	--	--	0	159	1,247	3,656	953	56	4	0	6,075	--	--	1	97	4,135	7,074	1,734	74	0	0	13,114	
1981-1985	--	--	1	1,284	2,226	4,927	1,075	73	8	0	9,594	--	--	0	157	2,585	5,755	1,718	151	0	0	10,366	
1986-1990	--	--	-	953	4,926	6,722	3,014	184	0	-	15,798	--	--	-	660	5,551	12,445	2,726	269	0	-	21,651	
1991-1995	-	-	-	621	3,097	1,890	725	625	1	-	5,313	-	-	-	209	3,364	5,067	506	381	2	-	6,642	
1996-2000	-	-	-	805	1,948	992	2,064	239	-	-	6,049	-	-	-	12	38	16	44	12	-	-	108	
2001	-	-	-	1,399	3,622	2,113	2,025	1,429	-	-	10,588	-	-	-	8	50	20	13	-	-	-	91	
2002	-	-	-	2,259	4,991	564	5,487	1,723	-	-	15,024	-	-	-	10	196	23	24	9	-	-	262	
2003	-	-	-	2,875	1,764	1,379	1,686	657	-	-	8,361	-	-	-	29	50	8	34	-	-	-	121	
2004	-	-	-	5,496	1,946	4,377	7,153	2,582	-	-	21,554	-	-	-	184	76	74	123	24	-	-	481	
2005	-	-	-	1,015	6,485	1,879	4,020	2,647	-	-	16,046	-	-	-	24	44	3	11	48	-	-	130	
2006	-	-	-	4,316	5,413	2,113	-	3,805	-	-	15,647	-	-	-	88	20	25	-	88	-	-	221	
2007	-	-	-	797	5,050	4,296	6,037	1,845	-	-	18,025	-	-	-	-	105	96	108	36	-	-	345	
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	266	259	-	-	525	-	-	-	-	-	-	-	5	-	-	5	
2010 <sup>av</sup>	-	-	-	17	158	36	478	31	-	-	720	-	-	-	-	-	-	54	-	-	-	54	
<u>Fort Bragg</u>																							
1976-1980	--	--	0	19	367	1,724	1,212	100	0	0	3,423	--	--	0	59	634	1,239	391	82	0	0	2,406	
1981-1985	--	--	1	29	616	1,553	319	11	1	0	2,530	--	--	0	0	224	568	137	3	0	0	932	
1986-1990	0	1	85	360	2,626	3,857	674	71	2	0	7,676	0	0	0	38	860	1,862	264	70	0	0	3,094	
1991-1995	52	85	429	1,182	5,940	2,869	2,378	456	43	1	11,801	0	1	4	177	1,847	7,157	678	111	10	0	6,985	
1996-2000	6	112	641	1,433	4,923	3,268	3,312	728	37	-	14,291	-	-	3	8	66	20	46	17	-	-	123	
2001	--	464	516	2,663	6,305	10,402	5,348	358	6	2	26,064	-	-	-	57	199	145	36	-	-	-	437	
2002	14	200	2,496	3,960	8,636	11,582	4,151	163	0	0	31,202	-	-	-	3	47	127	30	-	-	-	207	
2003	444	845	428	1,222	5,063	6,353	1,420	400	5	0	16,180	-	-	-	3	45	45	11	5	-	-	109	
2004	41	510	107	1,657	8,494	10,211	1,334	729	122	0	23,205	-	-	-	-	64	230	61	21	-	-	376	
2005	285	111	183	1,142	3,848	6,632	9,642	335	5	0	22,183	-	-	-	-	-	48	28	-	-	-	76	
2006	55	109	255	1,418	4,630	4,672	2,743	111	0	0	13,993	-	-	-	19	140	176	40	-	-	-	375	
2007	48	200	67	1,425	1,873	1,980	158	0	0	0	5,751	-	-	-	-	5	12	4	-	-	-	21	
2008	0	6	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010 <sup>av</sup>	-	-	204	264	27	417	681	109	-	-	1,702	-	-	-	7	-	15	19	-	-	-	41	

TABLE A-5. California ocean recreational salmon landings in numbers of fish by port of landing and month. (Page 2 of 2)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	
CHINOOK												COHO											
<u>San Francisco</u>																							
1976-1980	5,338	7,787	7,423	5,763	10,882	14,396	8,390	7,292	6,618	1,328	75,216	4	8	229	1,341	875	883	203	53	14	2	3,611	
1981-1985	5,339	5,819	5,505	7,181	12,346	16,869	16,032	8,497	5,527	1,367	84,484	0	1	11	138	439	323	145	37	29	0	1,123	
1986-1990	4,510	10,976	16,873	8,315	12,172	17,167	15,479	7,596	4,108	1,094	98,291	0	1	38	159	339	379	480	83	12	0	1,490	
1991-1995	106	5,185	7,028	6,921	14,149	33,404	13,387	8,221	3,591	52	91,971	1	8	17	71	1,035	1,184	157	31	13	0	2,517	
1996-2000	-	6,310	8,191	8,343	13,124	27,456	12,395	4,759	2,955	982	82,664	-	-	-	8	60	68	12	15	6	-	140	
2001	-	-	3,314	6,207	1,613	11,167	6,717	6,552	3,065	1,221	39,856	-	-	-	165	8	306	10	-	-	-	489	
2002	-	-	4,953	13,189	17,955	34,305	13,097	3,100	348	61	87,008	-	-	2	19	72	191	16	-	-	-	300	
2003	-	-	4,707	9,358	13,179	19,974	5,067	3,288	1,043	0	56,616	-	-	-	38	71	94	-	4	-	-	207	
2004	-	-	6,847	18,714	23,692	47,484	22,562	7,887	2,696	338	130,220	-	-	-	41	40	236	140	13	-	-	470	
2005	-	-	7,878	10,827	12,593	20,653	5,959	10,609	3,950	355	72,824	-	-	-	16	147	110	-	-	-	-	273	
2006	-	-	1,803	12,416	18,151	20,092	1,280	861	256	67	54,926	-	-	-	57	296	310	9	-	-	-	672	
2007	-	-	796	4,245	4,642	5,419	650	278	441	325	16,796	-	-	-	37	30	114	9	14	-	-	204	
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010 <sup>a/</sup>	-	-	1,018	452	564	1,691	1,934	268	-	-	5,927	-	-	-	-	68	-	-	-	-	-	68	
<u>Monterey</u>																							
1976-1980	493	717	1,292	456	532	437	92	41	45	11	4,114	6	6	9	39	43	29	7	0	0	0	139	
1981-1985	608	1,446	1,731	444	341	568	236	22	18	43	5,457	0	0	10	11	17	12	20	0	0	0	70	
1986-1990	1,120	4,312	9,407	1,362	4,126	7,467	1,704	167	129	225	30,020	0	0	18	15	101	144	28	1	0	0	306	
1991-1995	215	6,106	14,107	7,457	7,574	18,690	2,519	248	1,032	372	57,730	0	0	2	12	245	361	34	0	6	0	657	
1996-2000	-	7,763	15,030	7,820	11,023	9,943	1,908	490	-	-	52,326	-	-	-	-	19	12	4	-	-	-	20	
2001	-	792	14,229	3,022	235	1,552	89	120	-	-	20,039	-	-	4	198	4	11	-	-	-	-	217	
2002	-	2,779	30,310	4,784	3,751	5,441	611	27	-	-	47,703	-	-	-	-	11	15	-	-	-	-	26	
2003	-	3,133	4,434	1,629	801	3,115	14	-	-	-	13,126	-	-	-	29	81	50	-	-	-	-	160	
2004	-	-	24,516	4,476	1,762	12,916	1,074	101	0	-	44,845	-	-	-	-	9	9	-	-	-	-	18	
2005	-	-	6,194	2,303	14,910	6,809	414	76	-	-	30,706	-	-	-	19	95	85	-	-	-	-	199	
2006	-	-	7,350	399	1,318	1,893	0	10	-	-	10,970	-	-	-	32	204	102	-	-	-	-	338	
2007	-	-	2,289	735	2,098	681	346	112	0	-	6,261	-	-	-	16	69	23	12	-	-	-	120	
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010 <sup>a/</sup>	-	-	4,095	1,692	5	387	169	0	-	-	6,348	-	-	8	-	-	-	-	-	-	-	8	
<u>Total Statewide</u>																							
1976-1980	5,830	8,504	8,715	6,399	13,497	21,969	11,933	7,569	6,667	1,338	92,422	10	14	239	1,545	8,774	15,812	4,383	366	15	2	31,158	
1981-1985	5,947	7,266	7,239	9,435	16,968	27,024	19,587	8,667	5,554	1,410	109,097	0	1	21	329	4,486	11,061	3,677	262	29	0	19,866	
1986-1990	5,630	15,288	26,365	11,404	28,402	42,902	22,512	8,333	4,240	1,319	166,395	0	1	56	943	10,412	23,259	5,142	563	12	0	40,388	
1991-1995	244	11,376	21,564	17,109	31,262	55,610	18,628	9,956	4,451	239	170,296	0	9	23	389	7,597	11,982	1,717	656	25	0	22,399	
1996-2000	6	14,184	23,734	18,567	31,846	42,339	20,338	6,198	2,977	982	157,742	-	-	3	16	167	126	125	29	6	-	452	
2001	-	1,256	18,059	13,775	12,382	25,767	14,686	8,564	3,071	1,223	98,783	-	-	4	431	313	506	75	-	-	-	1,329	
2002	14	2,979	37,759	24,475	35,578	51,923	23,738	5,169	348	61	182,044	-	-	2	32	352	359	74	9	-	-	828	
2003	444	3,978	9,569	15,146	20,883	30,881	8,277	4,448	1,048	0	94,674	-	-	-	99	251	197	57	9	-	-	613	
2004	41	510	31,470	30,830	36,153	75,160	32,432	11,362	2,818	338	221,114	-	-	-	233	196	589	348	58	-	-	1,424	
2005	285	111	14,255	15,298	38,665	36,362	20,275	13,696	3,955	355	143,257	-	-	-	59	290	246	56	48	-	-	699	
2006	55	109	9,408	18,801	29,785	28,986	4,023	4,802	256	67	96,292	-	-	-	199	669	621	49	88	-	-	1,626	
2007	48	200	3,152	7,232	13,861	12,965	7,218	2,262	441	325	47,704	-	-	-	53	217	288	133	55	-	-	746	
2008	0	6	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	302	370	-	-	672	-	-	-	-	-	-	-	8	-	-	8	
2010 <sup>a/</sup>	-	-	5,317	2,425	754	2,531	3,262	408	-	-	14,697	-	-	8	7	68	15	73	-	-	-	171	

a/ Preliminary.

TABLE A-6. Summary of Oregon commercial troll salmon fishing effort in days fished and landings in fish by catch area.<sup>a/</sup> (Page 1 of 2)

Year or Average	Astoria	Tillamook	Newport	Coos Bay	Brookings	Oregon Subtotal	Alaska	Washington	California	Total
<b>DAYS FISHED</b>										
1976-1980	2,875	7,782	15,029	20,620	9,578	55,885	0	1	0	55,886
1981-1985	1,096	3,409	6,008	9,960	5,024	25,496	8	295	210	26,009
1986-1990	659	6,887	8,650	20,307	1,652	38,154	3	74	44	38,275
1991-1995	374	1,941	4,722	2,011	196	9,016	0	22	7	9,046
1996-2000	70	947	3,733	2,135	316	7,187	0	12	31	7,230
2001	242	1,357	5,248	3,830	471	11,148	0	19	26	11,193
2002	430	1,648	4,391	4,804	428	11,701	0	286	7	11,994
2003	413	1,889	4,562	5,026	528	12,418	0	101	9	12,528
2004	347	1,341	4,839	6,159	518	13,204	0	221	0	13,425
2005	516	1,722	4,279	4,857	249	11,623	0	0	0	11,623
2006	981	749	2,248	367	183	4,528	0	0	0	4,528
2007	325	703	1,115	2,626	464	5,233	0	0	0	5,233
2008	661	49	-	48	51	809	0	0	-	809
2009	528	271	284	136	-	1,219	0	0	-	1,219
2010 <sup>b/</sup>	635	398	1,521	1,554	181	4,289	0	0	-	4,289
<b>CHINOOK LANDINGS</b>										
1976-1980	15,336	11,222	46,613	85,563	73,899	232,632	300	2,800	900	236,632
1981-1985	5,556	5,901	27,917	63,507	42,623	145,503	89	2,982	2,157	150,731
1986-1990	3,477	26,242	82,957	253,426	28,825	394,927	137	1,179	1,386	397,628
1991-1995	937	6,887	76,934	15,554	1,679	100,945	0	212	276	101,432
1996-2000	572	8,191	81,290	36,042	3,542	129,523	0	54	597	130,175
2001	4,091	26,357	168,644	72,272	3,599	274,963	0	1,194	539	276,696
2002	12,797	30,331	132,084	122,174	6,803	304,189	0	14,966	182	319,337
2003	10,384	33,516	148,550	132,156	5,072	329,678	0	3,188	833	333,699
2004	3,118	9,677	91,288	140,142	8,484	252,709	0	8,522	0	261,231
2005	10,085	27,980	90,064	120,900	2,266	251,295	0	0	0	251,295
2006	10,489	2,756	19,003	1,979	738	34,965	0	0	0	34,965
2007	1,443	4,178	4,064	21,705	4,097	35,487	0	0	0	35,487
2008	5,434	76	-	208	236	5,954	0	0	-	5,954
2009	712	144	-	293	-	1,149	0	0	-	1,149
2010 <sup>b/</sup>	11,121	3,645	12,377	11,418	869	39,430	0	0	-	39,430

TABLE A-6. Summary of Oregon commercial troll salmon fishing effort in days fished and landings in numbers of fish by catch area.<sup>a/</sup> (Page 2 of 2)

Year or Average	Astoria	Tillamook	Newport	Coos Bay	Brookings	Oregon Subtotal	Alaska	Washington	California	Total
<b>COHO LANDINGS</b>										
1976-1980	73,122	126,085	192,121	290,131	60,235	741,694	1,800	9,300	300	753,094
1981-1985	21,305	84,331	109,715	131,470	24,728	301,499	0	9,590	621	311,710
1986-1990	21,364	106,658	135,872	132,522	6,375	397,243	7	4,179	279	401,708
1991-1995	9,949	48,905	41,190	35,625	-	119,367	0	106	55	119,527
1996-2000	12,258	-	-	8	-	6,133	0	57	-	6,190
2001	9,333	-	-	-	-	9,333	0	34	-	9,367
2002	1,515	-	-	-	-	1,515	0	0	-	1,515
2003	6,441	-	-	-	-	6,441	0	270	-	6,711
2004	8,839	-	-	-	-	8,839	0	453	-	9,292
2005	2,618	-	-	-	-	2,618	0	0	-	2,618
2006	1,414	-	-	-	-	1,414	0	0	-	1,414
2007	11,553	1,279	1,872	2,391	-	17,095	0	0	-	17,095
2008	435	-	-	-	-	435	0	0	-	435
2009	12,688	3,491	5,103	686	-	21,968	0	0	-	21,968
2010 <sup>b/</sup>	1,038	-	-	-	-	1,038	0	0	-	1,038

a/ Days fished and landings are reported by port of landing through 1978 and by area of catch beginning in 1979. Catch and landing areas include the following port areas: Astoria area includes Oregon ports from Astoria through Cannon Beach; Tillamook area includes Nehalem through Pacific City; Newport area includes Depoe Bay through Waldport; Coos Bay area prior to 1986 includes Florence through Bandon and after 1987 includes Florence through Port Orford; Brookings area prior to 1986 includes Port Orford through Brookings and after 1987 includes Gold Beach through Brookings. Values include state-waters only terminal area fisheries.

b/ Preliminary.

TABLE A-7. Oregon commercial troll salmon effort in days fished by area and month (beginning in 1979, monthly totals are the sum of statistical weeks with closest fit to the calendar month).<sup>a/</sup> (Page 1 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
<u>Astoria</u>											
1976-1980	-	-	205	299	1,220	844	251	56	-	1	2,875
1981-1985	-	-	402	0	322	338	33	0	-	-	1,096
1986-1990	-	-	146	26	183	579	273	22	-	-	659
1991-1995	-	-	58	43	50	166	111	-	-	-	374
1996-2000	-	-	2	2	-	246	18	-	-	-	70
2001	-	-	5	26	84	100	27	-	-	-	242
2002	-	-	24	56	156	194	-	-	-	-	430
2003	-	-	95	20	111	143	44	-	-	-	413
2004	-	-	48	1	66	88	144	-	-	-	347
2005	-	-	216	36	30	234	-	-	-	-	516
2006	-	-	510	299	2	77	93	-	-	-	981
2007	-	-	77	46	40	148	14	-	-	-	325
2008	-	-	279	282	33	57	10	-	-	-	661
2009	-	-	72	85	232	130	9	-	-	-	528
2010 <sup>b/</sup>	-	-	69	288	141	120	17	-	-	-	635
<u>Tillamook</u>											
1976-1980	-	-	23	1,152	3,574	2,656	316	62	-	-	7,782
1981-1985	-	-	98	47	2,030	999	140	94	-	-	3,409
1986-1990	-	-	182	328	2,931	1,831	1,007	604	17	-	6,887
1991-1995	-	-	96	95	714	476	558	513	2	-	1,941
1996-2000	-	-	71	188	61	186	276	186	13	-	947
2001	-	46	101	227	307	302	248	117	9	-	1,357
2002	13	19	132	242	125	323	396	394	4	-	1,648
2003	9	15	534	453	159	148	285	264	22	-	1,889
2004	15	201	226	136	106	126	290	227	14	-	1,341
2005	247	40	347	710	-	-	287	90	1	-	1,722
2006	-	-	-	177	11	34	178	318	31	-	749
2007	-	8	284	101	4	86	95	95	30	-	703
2008	-	-	-	-	-	-	37	12	--	-	49
2009	-	-	-	-	-	-	247	24	-	-	271
2010 <sup>b/</sup>	-	-	32	176	109	37	35	9	-	-	398

TABLE A-7. Oregon commercial troll salmon effort in days fished by area and month (beginning in 1979, monthly totals are the sum of statistical weeks with closest fit to the calendar month).<sup>a/</sup> (Page 2 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
<u>Newport</u>											
1976-1980	-	-	300	1,662	6,370	5,374	1,003	321	1	-	15,029
1981-1985	-	-	600	300	3,004	1,728	198	174	4	-	6,008
1986-1990	-	-	826	1,180	3,835	1,597	619	594	-	-	8,650
1991-1995	-	-	945	1,236	1,176	1,159	601	554	-	-	4,722
1996-2000	-	-	920	915	329	848	453	241	-	-	3,733
2001	-	446	1,264	1,033	495	1,081	591	338	-	-	5,248
2002	186	345	788	471	278	411	746	1,166	-	-	4,391
2003	41	265	884	528	470	626	927	821	-	-	4,562
2004	485	1,060	1,279	628	383	405	496	103	-	-	4,839
2005	296	145	554	1,953	-	-	1,005	326	-	-	4,279
2006	-	-	-	857	476	152	423	248	92	-	2,248
2007	-	81	354	294	94	166	91	29	6	-	1,115
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	284	-	-	-	284
2010 <sup>b/</sup>	-	-	478	409	288	346	-	-	-	-	1,521
<u>Coos Bay</u>											
1976-1980	-	-	524	2,531	9,644	6,069	1,491	355	2,628	2,628	20,620
1981-1985	-	-	714	664	5,159	2,633	604	180	5	-	9,960
1986-1990	-	-	2,737	2,986	7,267	4,665	1,588	964	497	-	20,307
1991-1995	-	-	193	696	554	418	287	255	88	-	2,011
1996-2000	-	-	291	471	570	498	243	209	104	-	2,135
2001	-	445	646	720	556	668	375	293	126	1	3,830
2002	168	476	792	1,252	279	559	465	644	154	15	4,804
2003	125	1,110	1,439	560	273	573	453	362	117	14	5,026
2004	406	1,245	632	1,055	336	1,302	573	374	215	21	6,159
2005	755	184	1,931	-	-	-	1,227	544	141	75	4,857
2006	-	-	-	-	-	-	30	156	155	26	367
2007	-	249	560	396	166	891	118	120	125	1	2,626
2008	-	-	-	-	-	-	-	-	48	-	48
2009	-	-	-	-	-	-	100	36	-	-	136
2010 <sup>b/</sup>	-	-	508	400	167	331	-	148	-	-	1,554

TABLE A-7. Oregon commercial troll salmon effort in days fished by area and month (beginning in 1979, monthly totals are the sum of statistical weeks with closest fit to the calendar month).<sup>a/</sup> (Page 3 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
<b>Brookings</b>											
1976-1980	-	-	187	1,090	3,079	2,241	1,469	939	572	-	9,578
1981-1985	-	-	265	188	1,367	1,708	427	732	336	-	5,024
1986-1990	-	-	319	647	556	607	125	224	217	-	1,652
1991-1995	-	-	45	-	48	56	22	186	-	-	196
1996-2000	-	-	55	-	-	80	47	150	-	-	316
2001	-	-	18	41	-	150	96	166	-	-	471
2002	3	15	22	73	82	67	70	96	-	-	428
2003	0	7	47	70	109	106	80	107	2	-	528
2004	2	9	73	139	102	53	61	61	18	-	518
2005	6	1	-	-	-	-	114	110	18	-	249
2006	-	-	-	-	-	-	6	150	27	-	183
2007	-	6	8	137	99	95	60	47	12	-	464
2008	-	-	-	-	-	-	-	51	-	-	51
2009	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	43	-	26	40	-	72	-	-	181
<b>South of Cape Falcon</b>											
1976-1980	-	-	1,034	6,435	22,667	16,340	4,280	1,677	577	-	53,010
1981-1985	-	-	1,678	1,199	11,559	7,068	1,368	1,180	346	-	24,400
1986-1990	-	-	4,065	5,011	14,144	8,457	3,289	2,296	292	-	37,495
1991-1995	-	-	1,252	2,027	1,845	1,654	1,339	1,396	88	-	8,792
1996-2000	-	-	1,337	1,579	960	1,612	992	786	116	-	7,131
2001	-	937	2,029	2,021	1,358	2,201	1,310	914	135	1	10,906
2002	370	855	1,734	2,038	764	1,360	1,677	2,300	158	15	11,271
2003	175	1,397	2,904	1,611	1,011	1,453	1,745	1,554	141	14	12,005
2004	908	2,515	2,210	1,958	927	1,886	1,420	765	247	21	12,857
2005	1,304	370	2,832	2,663	-	-	2,633	1,070	160	75	11,107
2006	-	-	-	1,034	487	186	637	872	305	26	3,547
2007	-	344	1,206	928	363	1,238	364	291	173	1	4,908
2008	-	-	-	-	-	-	37	63	48	-	148
2009	-	-	-	-	-	-	631	60	-	-	691
2010 <sup>b/</sup>	-	-	1,061	985	590	754	35	229	-	-	3,654

TABLE A-7. Oregon commercial troll salmon effort in days fished by area and month (beginning in 1979, monthly totals are the sum of statistical weeks with closest fit to the calendar month).<sup>a/</sup> (Page 4 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
<b><u>Statewide Total</u></b>											
1976-1980	-	-	1,238	6,734	23,887	17,184	4,531	1,733	577	1	55,885
1981-1985	-	-	2,080	1,199	11,881	7,407	1,401	1,181	346	-	25,496
1986-1990	-	-	4,211	5,027	14,180	8,804	3,398	2,301	292	-	38,154
1991-1995	-	-	1,287	1,647	1,870	1,753	1,384	1,396	88	-	9,016
1996-2000	-	-	1,339	1,581	960	1,661	995	786	116	-	7,187
2001	-	937	2,034	2,047	1,442	2,301	1,337	914	135	1	11,148
2002	370	855	1,758	2,094	920	1,554	1,677	2,300	158	15	11,701
2003	175	1,397	2,999	1,631	1,122	1,596	1,789	1,554	141	14	12,418
2004	908	2,515	2,258	1,959	993	1,974	1,564	765	247	21	13,204
2005	1,304	370	3,048	2,699	30	234	2,633	1,070	160	75	11,623
2006	-	-	510	1,333	489	263	730	872	305	26	4,528
2007	-	344	1,283	974	403	1,386	378	291	173	1	5,233
2008	-	-	279	282	33	57	47	63	48	-	809
2009	-	-	72	85	232	130	640	60	-	-	1,219
2010 <sup>b/</sup>	-	-	1,130	1,273	731	874	52	229	-	-	4,289

a/ Summary of ODFW fish receiving ticket information. Excludes effort occurring off Alaska, Washington, and California. Days fished data are reported by port of landing prior to 1979 and by area of catch after 1978. Catch and landing areas include the following port areas: Astoria area includes Oregon ports from Astoria through Cannon Beach; Tillamook area includes Nehalem through Pacific City; Newport area includes Depoe Bay through Waldport; Coos Bay area prior to 1986 includes Florence through Bandon and after 1987 includes Florence through Port Orford; Brookings area prior to 1986 includes Port Orford through Brookings and after 1987 includes Gold Beach through Brookings. Values include state-waters only terminal area fisheries.

b/ Preliminary.



TABLE A-8. Oregon commercial troll Chinook and coho salmon landings in numbers of fish by catch area and month (beginning in 1979, monthly totals are the sum of statistical weeks with closest fit to the calendar month).<sup>a/</sup> (Page 1 of 4)

Year or Avg.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season	June	July	Aug.	Sept.	Oct.	Season
CHINOOK												COHO					
<u>Astoria</u>																	
1952-1975	6,179	4,901	4,813	3,439	2,234	2,715	973	346	-	-	20,451	13,070	24,252	20,450	11,547	1,263	70,582
1976-1980	-	-	5,039	4,624	3,123	1,480	492	577	-	-	15,336	28,655	31,526	12,401	5,569	879	73,122
1981-1985	-	-	4,738	0	499	293	23	2	-	-	5,556	-	18,828	11,874	2,543	-	21,305
1986-1990	-	-	1,791	363	2,225	1,172	765	71	-	-	3,477	-	7,390	21,733	6,281	304	21,364
1991-1995	-	-	318	322	78	187	88	-	-	-	937	-	435	7,655	3,007	-	9,949
1996-2000	-	-	9	64	-	1,951	49	-	-	-	572	-	-	11,600	658	-	12,258
2001	-	-	380	1,704	925	753	329	-	-	-	4,091	-	3,701	3,376	2,256	-	9,333
2002	-	-	855	3,189	4,241	4,512	-	-	-	-	12,797	-	-	1,515	-	-	1,515
2003	-	-	4,927	1,171	1,310	2,377	599	-	-	-	10,384	-	1,473	3,657	1,311	-	6,441
2004	-	-	1,884	17	381	331	505	-	-	-	3,118	-	718	1,399	6,722	-	8,839
2005	-	-	5,119	927	367	3,672	-	-	-	-	10,085	-	204	2,414	-	-	2,618
2006	-	-	7,167	3,168	1	61	92	-	-	-	10,489	-	10	1,182	222	-	1,414
2007	-	-	777	374	115	163	14	-	-	-	1,443	22	1,040	10,334	157	-	11,553
2008	-	-	2,616	2,508	129	161	20	-	-	-	5,434	-	49	357	29	-	435
2009	-	-	119	232	240	117	4	-	-	-	712	-	9,065	3,458	165	-	12,688
2010 <sup>b/</sup>	-	-	580	6,652	2,121	1,657	111	-	-	-	11,121	-	636	367	35	-	1,038
<u>Tillamook</u>																	
1952-1975	-	3	47	436	853	1,355	324	59	-	-	3,078	6,799	24,958	22,977	2,518	102	57,355
1976-1980	-	-	476	3,256	4,108	2,688	505	189	-	-	11,222	49,936	66,185	27,829	2,034	124	126,085
1981-1985	-	-	1,547	283	2,380	1,210	281	199	7	-	5,901	-	68,832	20,120	1,637	-	84,331
1986-1990	-	-	1,745	3,147	8,129	6,212	4,946	2,060	11	-	26,242	-	82,150	29,287	5,397	-	106,658
1991-1995	-	-	306	375	1,435	2,843	1,922	1,607	7	-	6,887	-	45,367	7,065	-	-	48,905
1996-2000	-	-	363	2,863	370	2,082	1,413	1,259	21	-	8,191	-	-	-	-	-	-
2001	-	791	927	4,799	7,629	6,776	3,968	1,425	42	-	26,357	-	-	-	-	-	-
2002	131	98	1,270	4,684	1,671	5,361	6,983	10,128	5	-	30,331	-	-	-	-	-	-
2003	335	84	13,970	11,718	1,205	1,451	2,649	2,071	33	-	33,516	-	-	-	-	-	-
2004	31	2,967	3,373	562	332	457	1,001	882	72	-	9,677	-	-	-	-	-	-
2005	7,027	498	6,451	10,655	-	-	2,480	866	3	-	27,980	-	-	-	-	-	-
2006	-	-	-	1,153	60	39	450	959	95	-	2,756	-	-	-	-	-	-
2007	-	14	2,757	922	6	59	136	237	47	-	4,178	-	-	1,195	84	-	1,279
2008	-	-	-	-	-	-	64	12	-	-	76	-	-	-	-	-	-
2009	-	-	-	-	-	-	105	39	-	-	144	-	-	-	3,491	-	3,491
2010 <sup>b/</sup>	-	-	108	2,466	931	72	53	15	-	-	3,645	-	-	-	-	-	-

TABLE A-8. Oregon commercial troll Chinook and coho salmon landings in numbers of fish by catch area and month (beginning in 1979, monthly totals are the sum of statistical weeks with closest fit to the calendar month).<sup>a/</sup> (Page 2 of 4)

Closest fit to the calendar month): (Page 2 of 4)																	
Year or Avg.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season	June	July	Aug.	Sept.	Oct.	Season
CHINOOK												COHO					
<u>Newport</u>																	
1952-1975	19	192	1,863	6,947	11,599	13,546	6,810	1,524	-	-	42,483	23,816	69,383	72,472	15,038	1,319	182,027
1976-1980	-	-	3,649	6,485	12,469	16,372	4,788	2,828	106	-	46,613	60,615	95,719	54,446	4,784	1,339	192,121
1981-1985	-	-	6,292	2,256	11,737	5,174	959	1,476	111	-	27,917	-	75,337	66,674	4,161	-	109,715
1986-1990	-	-	8,800	14,067	27,795	14,835	6,926	10,533	-	-	82,957	56	108,283	44,241	5,166	-	135,872
1991-1995	-	-	11,091	14,000	14,613	29,112	11,702	10,884	-	-	76,934	58,218	24,704	7,972	-	-	41,190
1996-2000	-	-	17,947	16,800	3,786	24,729	12,138	4,150	-	-	81,290	-	-	-	-	-	-
2001	-	8,536	45,372	28,016	15,669	40,694	20,356	10,001	-	-	168,644	-	-	-	-	-	-
2002	3,938	4,321	12,233	7,372	5,135	7,648	34,931	56,506	-	-	132,084	-	-	-	-	-	-
2003	674	8,915	24,752	12,180	12,769	22,804	36,204	30,252	-	-	148,550	-	-	-	-	-	-
2004	12,970	12,286	26,499	7,350	8,085	11,018	12,354	726	-	-	91,288	-	-	-	-	-	-
2005	4,171	2,209	7,347	39,240	-	-	29,592	7,505	-	-	90,064	-	-	-	-	-	-
2006	-	-	-	8,505	3,556	923	3,852	1,528	639	-	19,003	-	-	-	-	-	-
2007	-	279	1,553	1,427	323	338	88	54	2	-	4,064	-	-	1,596	276	-	1,872
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,103	-	5,103
2010 <sup>b/</sup>	-	-	3,950	3,513	2,505	2,409	-	-	-	-	12,377	-	-	-	-	-	-
<u>Coos Bay</u>																	
1952-1975	16	155	2,913	11,578	18,162	26,765	8,692	1,872	111	-	70,148	47,943	96,268	52,431	9,087	964	206,694
1976-1980	-	17	3,113	11,974	30,188	28,911	7,483	3,863	28	-	85,563	88,960	168,959	47,488	2,358	264	290,131
1981-1985	-	-	5,515	4,301	29,871	17,260	5,419	1,129	11	-	63,507	-	115,958	31,021	5	-	131,470
1986-1990	-	-	30,467	28,162	103,530	64,284	18,029	8,518	2,178	-	253,426	22	103,641	44,708	10,213	-	132,522
1991-1995	-	-	1,102	3,642	3,908	4,544	3,587	1,701	451	-	15,554	33,031	35,841	1,069	-	-	35,625
1996-2000	-	-	3,377	8,994	9,724	11,353	4,218	1,930	981	-	36,042	8	-	-	-	-	8
2001	-	9,209	14,253	10,111	14,241	13,237	6,211	3,686	1,303	21	72,272	-	-	-	-	-	-
2002	2,593	6,167	9,949	47,825	5,515	15,292	16,947	16,571	1,250	65	122,174	-	-	-	-	-	-
2003	2,183	49,900	34,800	7,943	5,605	13,066	10,793	6,766	963	137	132,156	-	-	-	-	-	-
2004	8,042	18,736	7,398	14,987	5,651	65,177	11,176	6,714	2,079	182	140,142	-	-	-	-	-	-
2005	17,099	2,075	41,943	-	-	-	49,865	8,799	784	335	120,900	-	-	-	-	-	-
2006	-	-	-	-	-	-	65	962	821	131	1,979	-	-	-	-	-	-
2007	-	1,563	3,018	2,114	1,430	11,963	489	504	621	3	21,705	-	-	2,232	159	-	2,391
2008	-	-	-	-	-	-	-	-	208	-	208	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	293	-	-	293	-	-	-	686	-	686
2010 <sup>b/</sup>	-	-	4,961	2,987	840	1,315	-	1,315	-	-	11,418	-	-	-	-	-	-

TABLE A-8. Oregon commercial troll Chinook and coho salmon landings in numbers of fish by catch area and month (beginning in 1979, monthly totals are the sum of statistical weeks with closest fit to the calendar month).<sup>a/</sup> (Page 3 of 4)

Year or Avg.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season	June	July	Aug.	Sept.	Oct.	Season
CHINOOK												COHO					
<b>Brookings</b>																	
1952-1975	0	115	1,001	5,127	10,173	8,226	2,936	1,199	1,203	93	28,885	15,507	31,926	10,269	1,028	81	58,810
1976-1980	-	-	1,815	4,472	21,039	27,055	10,526	6,583	2,409	-	73,899	13,633	39,564	8,784	876	174	60,235
1981-1985	-	-	1,782	1,845	10,357	20,079	3,952	3,495	1,113	-	42,623	-	15,830	35,594	-	-	24,728
1986-1990	-	-	5,087	16,802	9,562	8,706	2,844	963	1,460	-	28,825	4,594	7,121	-	-	-	6,375
1991-1995	-	-	265	-	1,682	234	210	1,191	-	-	1,679	-	-	-	-	-	-
1996-2000	-	-	1,064	-	-	1,049	665	696	-	-	3,542	-	-	-	-	-	-
2001	-	-	233	362	-	1,290	986	728	-	-	3,599	-	-	-	-	-	-
2002	5	103	118	952	1,457	1,326	2,305	537	-	-	6,803	-	-	-	-	-	-
2003	0	110	575	484	1,082	1,108	1,119	591	3	-	5,072	-	-	-	-	-	-
2004	6	32	774	2,825	2,305	2,011	271	220	40	-	8,484	-	-	-	-	-	-
2005	87	6	-	-	-	-	1,376	641	156	-	2,266	-	-	-	-	-	-
2006	-	-	-	-	-	-	12	590	136	-	738	-	-	-	-	-	-
2007	-	15	25	727	1,150	1,524	400	209	47	-	4,097	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	236	-	-	236	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	164	-	51	125	-	529	-	-	869	-	-	-	-	-	-
<b>South of Cape Falcon</b>																	
1952-1975	35	465	5,824	24,088	40,787	49,892	18,762	4,654	1,313	93	144,594	94,065	222,535	158,148	27,671	2,466	504,885
1976-1980	-	17	9,052	26,186	67,804	75,026	23,302	13,463	2,458	-	217,296	185,506	370,427	138,547	10,052	1,901	668,571
1981-1985	-	-	15,135	8,684	54,345	43,724	10,612	6,299	1,149	-	139,947	-	275,957	97,114	5,803	-	350,243
1986-1990	-	-	46,099	58,818	141,367	90,555	31,607	21,689	1,642	-	391,449	3,700	295,499	95,999	20,776	-	380,152
1991-1995	-	-	12,605	18,016	15,388	29,246	16,869	14,668	453	-	100,382	91,249	105,911	8,382	-	-	109,418
1996-2000	-	-	22,751	29,104	13,880	39,214	18,035	8,035	1,002	-	129,065	8	-	-	-	-	8
2001	-	18,536	60,785	43,288	37,539	61,997	31,521	15,840	1,345	21	270,872	-	-	-	-	-	-
2002	6,667	10,689	23,570	60,833	13,778	29,627	61,166	83,742	1,255	65	291,392	-	-	-	-	-	-
2003	3,192	59,009	74,097	32,325	20,661	38,429	50,765	39,680	999	137	319,294	-	-	-	-	-	-
2004	21,049	34,021	38,044	25,724	16,373	78,663	24,802	8,542	2,191	182	249,591	-	-	-	-	-	-
2005	28,384	4,788	55,741	49,895	-	-	83,313	17,811	943	335	241,210	-	-	-	-	-	-
2006	-	-	-	9,658	3,616	962	4,379	4,039	1,691	131	24,476	-	-	-	-	-	-
2007	-	1,871	7,353	5,190	2,909	13,884	1,113	1,004	717	3	34,044	-	-	5,023	519	-	5,542
2008	-	-	-	-	-	-	64	248	208	-	520	-	-	-	-	-	-
2009	-	-	-	-	-	-	105	332	-	-	437	-	-	-	9,280	-	9,280
2010 <sup>b/</sup>	-	-	9,183	8,966	4,327	3,921	53	1,859	-	-	28,309	-	-	-	-	-	-

TABLE A-8. Oregon commercial troll Chinook and coho salmon landings in numbers of fish by catch area and month (beginning in 1979, monthly totals are the sum of statistical weeks with closest fit to the calendar month).<sup>a/</sup> (Page 4 of 4)

Year or Avg.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season	June	July	Aug.	Sept.	Oct.	Season
CHINOOK												COHO					
<b>Statewide Total</b>																	
1952-1975	6,214	5,366	10,638	27,526	43,020	52,608	19,735	4,999	1,313	93	165,045	107,135	246,787	178,599	39,218	3,729	575,468
1976-1980	-	17	14,092	30,810	70,928	76,506	23,794	14,041	2,458	-	232,632	214,161	401,952	150,948	15,621	2,305	741,694
1981-1985	-	-	19,873	8,684	54,844	44,017	10,635	6,301	1,149	-	145,503	-	290,078	84,710	8,346	-	301,499
1986-1990	-	-	47,890	59,035	141,812	91,259	31,913	21,703	1,642	-	394,927	3,700	296,977	89,839	11,112	304	397,243
1991-1995	-	-	12,795	14,606	15,426	29,358	16,904	14,668	453	-	100,945	91,249	70,897	16,037	3,007	19	119,367
1996-2000	-	-	22,757	29,154	13,880	39,604	18,044	8,035	1,002	-	129,523	8	-	11,600	658	-	6,133
2001	-	18,536	61,165	44,992	38,464	62,750	31,850	15,840	1,345	21	274,963	-	3,701	3,376	2,256	-	9,333
2002	6,667	10,689	24,425	64,022	18,019	34,139	61,166	83,742	1,255	65	304,189	-	-	1,515	-	-	1,515
2003	3,192	59,009	79,024	33,496	21,971	40,806	51,364	39,680	999	137	329,678	-	1,473	3,657	1,311	-	6,441
2004	21,049	34,021	39,928	25,741	16,754	78,994	25,307	8,542	2,191	182	252,709	-	718	1,399	6,722	-	8,839
2005	28,384	4,788	60,860	50,822	367	3,672	83,313	17,811	943	335	251,295	-	204	2,414	-	-	2,618
2006	-	-	7,167	12,826	3,617	1,023	4,471	4,039	1,691	131	34,965	-	10	1,182	222	-	1,414
2007	-	1,871	8,130	5,564	3,024	14,047	1,127	1,004	717	3	35,487	22	1,040	15,357	676	-	17,095
2008	-	-	2,616	2,508	129	161	84	248	208	-	5,954	-	49	357	29	-	435
2009	-	-	119	232	240	117	109	332	-	-	1,149	-	9,065	3,458	9,445	-	21,968
2010 <sup>b/</sup>	-	-	9,763	15,618	6,448	5,578	164	1,859	-	-	39,430	-	636	367	35	-	1,038

a/ Excludes harvests off Alaska, Washington (north of Leadbetter Point), and California that were landed in Oregon. Landings are reported by port of landing through 1978 and by area of catch beginning in 1979. Catch and landing areas include the following port areas: Astoria area includes Oregon ports from Astoria through Cannon Beach; Tillamook area includes Nehalem through Pacific City; Newport area includes Depoe Bay through Waldport; Coos Bay area prior to 1988 includes Florence through Bandon and after 1987 includes Florence through Port Orford; Brookings area prior to 1988 includes Port Orford through Brookings and after 1987 includes Gold Beach through Brookings. Values include state-waters only terminal area fisheries.

b/ Preliminary.

TABLE A-9. Oregon ocean recreational effort in salmon angler trips by catch area and month.<sup>a/</sup> (Page 1 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
<u>Astoria</u>										
1976-1980	-	0	890	8,582	17,436	25,284	8,325	374	22	60,746
1981-1985	-	-	977	3,269	11,837	9,897	4,192	-	-	26,221
1986-1990	-	-	146	1,110	8,890	9,559	1,423	-	-	17,740
1991-1995	-	-	-	1,496	6,681	6,695	2,084	-	-	15,833
1996-2000	-	-	-	-	2,457	2,909	946	-	-	5,442
2001	-	-	-	-	7,990	12,960	2,291	-	-	23,241
2002	-	-	155	372	3,989	6,373	1,156	6	-	12,051
2003	-	-	-	151	5,275	12,550	1,250	-	-	19,226
2004	-	-	-	256	4,439	11,290	2,608	-	-	18,593
2005	-	-	-	-	2,246	8,116	2,900	-	-	13,262
2006	-	-	-	-	1,711	5,769	762	-	-	8,242
2007	-	-	-	-	2,548	8,849	989	-	-	12,386
2008	-	-	66	498	1,875	1,215	-	-	-	3,654
2009	-	-	-	85	5,698	6,097	370	-	-	12,250
2010 <sup>b/</sup>	-	-	-	306	2,211	6,996	741	-	-	10,254
<u>Tillamook</u>										
1976-1980	-	0	1,043	5,476	14,753	18,525	3,792	393	61	43,838
1981-1985	-	-	678	2,040	14,150	14,502	3,413	1,603	-	30,298
1986-1990	-	-	222	2,005	12,063	11,291	4,392	--	--	29,007
1991-1995	-	-	728	1,722	10,452	4,271	2,075	4,879	396	13,369
1996-2000	-	-	489	102	1,451	346	2,772	2,895	170	8,126
2001	-	0	526	2,827	7,278	895	2,747	2,051	162	16,486
2002	-	11	386	360	7,005	4,787	5,041	6,767	50	24,407
2003	21	5	435	1,860	11,990	5,450	4,819	3,019	395	27,994
2004	8	94	397	2,849	11,855	6,729	4,442	2,647	291	29,312
2005	28	66	463	2,318	3,216	1,622	3,799	599	12	12,123
2006	2	16	382	1,334	3,299	497	5,293	4,988	98	15,909
2007	-	16	828	1,753	4,612	8,074	3,459	2,286	--	21,028
2008	-	-	-	643	1,269	1,226	3,635	2,348	--	9,121
2009	-	-	-	974	10,482	7,131	1,772	2,009	-	22,368
2010 <sup>b/</sup>	-	-	126	1,158	3,833	3,620	3,718	1,048	-	13,503

TABLE A-9. Oregon ocean recreational effort in salmon angler trips by catch area and month.<sup>a/</sup> (Page 2 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
<u>Newport</u>										
1976-1980	-	0	2,686	14,777	37,841	34,826	6,813	1,205	46	97,675
1981-1985	-	-	1,237	6,383	28,951	25,961	3,812	--	-	57,094
1986-1990	-	-	997	7,789	37,404	24,000	5,730	-	-	74,574
1991-1995	-	-	484	3,881	26,682	9,837	1,389	117	-	24,888
1996-2000	-	-	101	114	3,819	1,090	249	29	-	5,396
2001	-	0	175	6,648	13,301	2,432	872	143	-	23,571
2002	-	34	123	502	12,360	2,837	1,469	738	-	18,063
2003	24	28	310	3,761	20,799	12,739	1,371	526	-	39,558
2004	36	57	139	4,642	17,640	12,676	3,423	413	-	39,026
2005	0	264	429	3,927	3,562	1,863	3,187	167	-	13,399
2006	8	43	139	1,593	5,785	584	1,919	299	-	10,370
2007	19	26	87	3,472	8,013	8,284	778	46	40	20,765
2008	-	-	-	1,128	2,301	2,020	-	-	-	5,449
2009	-	-	-	2,126	13,786	12,307	1,388	-	-	29,607
2010 <sup>b/</sup>	-	-	349	1,093	2,933	8,491	2,127	-	-	14,993
<u>Coos Bay</u>										
1976-1980	-	0	5,296	24,105	44,633	29,677	6,974	652	98	111,116
1981-1985	-	-	3,365	13,367	34,917	20,849	3,452	--	--	63,724
1986-1990	-	-	891	8,744	33,097	15,721	3,842	--	--	61,349
1991-1995	-	-	605	5,646	26,029	8,416	1,728	21	--	25,929
1996-2000	-	-	118	381	4,301	2,953	507	53	--	8,282
2001	-	0	648	8,073	15,394	6,122	765	60	--	31,062
2002	-	230	786	5,319	17,293	6,570	2,812	388	--	33,398
2003	36	106	950	5,263	21,326	12,880	2,247	90	--	42,898
2004	34	87	954	7,376	19,875	9,368	2,734	34	--	40,462
2005	2	76	578	6,353	7,042	6,312	4,262	12	--	24,637
2006	14	33	279	1,991	9,250	2,736	2,784	81	--	17,168
2007	17	33	329	2,603	9,442	9,550	990	9	--	22,973
2008	-	-	-	1,482	4,111	1,806	-	-	--	7,399
2009	-	-	-	1,044	8,744	3,991	583	--	--	14,362
2010 <sup>b/</sup>	-	-	388	709	2,350	4,683	489	--	--	8,619

TABLE A-9. Oregon ocean recreational effort in salmon angler trips by catch area and month.<sup>a/</sup> (Page 3 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
<b>Brookings</b>										
1976-1980	-	0	1,250	11,841	27,828	20,162	6,768	5,604	913	74,368
1981-1985	-	-	2,109	10,478	25,949	15,387	3,357	3,402	230	56,207
1986-1990	-	-	2,226	12,965	24,727	13,463	3,098	5,030	--	58,492
1991-1995	-	-	2,866	5,957	11,093	3,333	4,014	3,831	-	22,694
1996-2000	-	-	1,177	3,022	2,353	6,833	2,212	2,766	-	18,363
2001	-	-	3,667	4,123	4,409	9,200	362	4,340	-	26,101
2002	-	-	1,767	4,048	528	5,651	3,755	3,973	-	19,722
2003	-	-	1,124	1,480	3,910	4,081	1,522	2,630	-	14,747
2004	-	-	1,232	3,448	3,813	4,396	3,845	1,575	-	18,309
2005	-	-	525	3,510	280	2,802	3,063	2,398	-	12,578
2006	-	-	611	2,657	716	-	3,565	3,081	-	10,630
2007	-	-	332	752	1,600	4,741	424	3,263	-	11,112
2008	-	-	-	712	2,317	701	-	1,065	-	4,795
2009	-	-	-	268	2,329	754	2,580	-	-	5,931
2010 <sup>b/</sup>	-	-	129	95	335	619	2,502	2,270	-	5,950
<b>South of Cape Falcon</b>										
1976-1980	-	0	10,275	56,199	125,056	103,191	24,348	6,954	974	326,997
1981-1985	-	-	4,749	32,267	103,968	64,436	11,899	3,723	230	207,322
1986-1990	-	-	3,869	31,504	107,292	64,475	14,270	5,030	--	223,421
1991-1995	-	-	4,110	16,015	74,256	11,676	6,091	7,130	396	86,880
1996-2000	-	-	1,885	3,618	11,923	11,221	5,739	5,699	170	40,167
2001	-	0	5,016	21,671	40,382	18,649	4,746	6,594	162	97,220
2002	-	275	3,062	10,229	37,186	19,845	13,077	11,866	50	95,590
2003	81	139	2,819	12,364	58,025	35,150	9,959	6,265	395	125,197
2004	78	238	2,722	18,315	53,183	33,169	14,444	4,669	291	127,109
2005	30	406	1,995	16,108	14,100	12,599	14,311	3,176	12	62,737
2006	24	92	1,411	7,575	19,050	3,817	13,561	8,449	98	54,077
2007	36	75	1,576	8,580	23,667	30,649	5,651	5,604	40	75,878
2008	-	-	-	3,965	9,998	5,753	3,635	3,413	--	26,764
2009	-	-	-	4,412	35,341	24,183	6,323	2,009	--	72,268
2010 <sup>b/</sup>	-	-	992	3,055	9,451	17,413	8,836	3,318	--	43,065

TABLE A-9. Oregon ocean recreational effort in salmon angler trips by catch area and month.<sup>a/</sup> (Page 4 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
<b>Total All Areas</b>										
1976-1980	-	0	11,165	64,781	142,492	128,475	32,673	7,179	978	387,743
1981-1985	-	-	4,993	27,469	115,805	74,334	13,575	3,723	230	233,544
1986-1990	-	-	3,898	32,392	116,182	72,122	14,554	5,030	--	241,161
1991-1995	-	-	4,110	16,314	62,372	17,032	7,757	7,130	396	99,547
1996-2000	-	-	1,885	3,618	13,888	14,130	6,307	5,699	170	45,609
2001	-	0	5,016	21,671	48,372	31,609	7,037	6,594	162	120,461
2002	-	275	3,217	10,601	41,175	26,218	14,233	11,872	50	107,641
2003	81	139	2,819	12,515	63,300	47,700	11,209	6,265	395	144,423
2004	78	238	2,722	18,571	57,622	44,459	17,052	4,669	291	145,702
2005	30	406	1,995	16,108	16,346	20,715	17,211	3,176	12	75,999
2006	24	92	1,411	7,575	20,761	9,586	14,323	8,449	98	62,319
2007	36	75	1,576	8,580	26,215	39,498	6,640	5,604	40	88,264
2008	-	-	66	4,463	11,873	6,968	3,635	3,413	--	30,418
2009	-	-	-	4,497	41,039	30,280	6,693	2,009	--	84,518
2010 <sup>b/</sup>	-	-	992	3,361	11,662	24,409	9,577	3,318	--	53,319

a/ Monthly totals are the sum of statistical weeks with closest fit to the calendar month. The average 1976-1980 effort is from combined salmon/steelhead punch card and sampled port data. Since 1981, data from sampled ports only. Effort since 1979 consists of salmon angler trips only. Data prior to 1979 include combined bottomfish and salmon trips. Astoria area includes Astoria, Warrenton, and Hammond; Tillamook area includes Garibaldi and Pacific City; Newport area includes Depoe Bay and Newport; Coos Bay area includes Florence, Winchester Bay, and Coos Bay; Brookings area includes Gold Beach and Brookings. Values include state-waters only terminal area fisheries.

b/ Preliminary.



TABLE A-10. Oregon ocean recreational salmon landings in numbers of fish by catch area and month.<sup>a/</sup> (Page 1 of 3)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	May	June	July	Aug.	Sept.	Oct. <sup>b/</sup>	Season <sup>b/</sup>
CHINOOK											COHO						
<u>Astoria</u>																	
1976-1980 <sup>b/</sup>	-	0	333	3,210	4,073	7,975	1,490	85	4	17,132	897	12,916	20,699	21,677	7,142	323	63,525
1981-1985	-	-	29	922	2,427	1,902	729	-	-	5,364	1,699	4,463	16,455	11,211	5,509	-	33,780
1986-1990	-	-	29	127	954	1,459	87	-	-	2,246	-	1,825	15,220	14,456	1,307	-	28,506
1991-1995	-	-	-	81	224	302	63	-	-	609	-	2,409	10,831	9,892	2,332	-	23,657
1996-2000	-	-	-	-	197	223	38	-	-	403	-	-	3,775	3,675	935	-	7,257
2001	-	-	-	-	1,000	1,478	140	-	-	2,618	-	-	13,537	21,990	3,662	-	39,189
2002	-	-	33	347	1,540	827	4	3	-	2,754	-	-	4,432	8,530	1,441	-	14,403
2003	-	-	-	8	546	1,659	117	-	-	2,330	-	55	8,237	19,891	1,588	-	29,771
2004	-	-	-	25	303	1,426	429	-	-	2,183	-	368	6,583	13,601	1,946	-	22,498
2005	-	-	-	-	481	2,637	517	-	-	3,635	-	-	2,165	6,337	1,464	-	9,966
2006	-	-	-	-	81	370	58	-	-	509	-	-	1,616	3,560	235	-	5,411
2007	-	-	-	-	81	457	56	-	-	594	-	-	3,812	13,807	778	-	18,397
2008	-	-	17	152	343	305	-	-	-	817	-	101	1,108	982	-	-	2,191
2009	-	-	-	4	422	543	11	-	-	980	-	138	9,593	9,330	358	-	19,419
2010 <sup>c/</sup>	-	-	-	37	388	1,321	66	-	-	1,812	-	12	1,479	4,404	213	-	6,108
<u>Tillamook</u>																	
1976-1980 <sup>b/</sup>	-	0	104	152	409	655	99	19	29	1,436	342	3,155	6,284	11,402	960	194	22,259
1981-1985	-	0	18	28	790	582	117	42	-	1,533	89	855	10,321	8,671	766	3	20,171
1986-1990	-	0	10	67	441	864	486	--	--	1,766	29	1,993	12,423	8,726	1,827	63	24,621
1991-1995	-	-	62	140	380	186	169	1,237	-	1,084	26	1,457	11,796	3,732	717	-	12,184
1991-1995	-	-	70	10	65	31	502	494	--	1,188	-	-	976	6	9	-	602
2001	-	0	70	235	727	234	826	431	23	2,546	-	3,398	8,771	37	69	22	12,297
2002	-	1	56	108	3,170	2,182	1,531	1,735	0	8,783	-	-	4,753	1,096	41	22	5,912
2003	--	-	54	439	1,724	737	1,468	936	64	5,422	2	1,407	14,049	5,705	42	14	21,219
2004	--	5	40	501	3,146	2,755	940	1,409	69	8,865	-	1,305	8,693	4,212	175	23	14,408
2005	6	10	36	371	684	291	1,142	186	0	2,726	-	543	502	11	2	-	1,058
2006	0	0	40	75	204	14	1,079	1,944	49	3,405	-	184	1,055	-	119	-	1,358
2007	-	0	41	58	109	241	507	474	--	1,430	2	1,206	4,305	6,926	124	-	12,563
2008	-	-	-	2	-	3	262	201	--	468	-	43	220	930	45	3	1,241
2009	-	-	-	4	23	20	92	226	-	365	-	1,141	12,672	9,456	310	6	23,585
2010 <sup>c/</sup>	-	-	12	72	112	190	323	122	-	831	-	323	1,392	1,390	268	-	3,373
<u>Newport</u>																	
1976-1980 <sup>b/</sup>	-	0	112	520	839	806	184	31	1	2,480	1,273	12,737	25,257	22,756	1,813	211	63,962
1981-1985	-	-	18	344	1,462	942	89	--	-	2,706	126	3,484	22,849	19,232	2,241	-	46,040
1986-1990	-	-	68	497	1,687	1,029	601	-	-	3,649	662	9,013	46,079	23,917	3,429	-	82,281
1991-1995	-	-	44	143	1,155	507	65	28	-	1,113	31	8,315	36,626	11,925	1,119	-	40,251
1996-2000	-	-	26	44	262	408	95	3	-	837	-	-	8,151	30	7	-	3,286
2001	-	0	70	362	1,541	2,324	858	160	-	5,315	2	7,803	15,631	16	3	-	23,455
2002	-	14	37	196	3,269	1,031	1,179	804	-	6,530	-	-	9,819	933	22	2	10,776
2003	--	1	95	871	6,939	3,049	1,126	334	-	12,415	-	2,694	21,419	14,419	-	-	38,532
2004	--	17	83	554	6,931	8,225	1,507	485	-	17,802	-	2,707	13,981	6,625	207	-	23,520
2005	0	94	109	392	463	1,000	2,556	92	-	4,706	-	659	376	18	84	-	1,137
2006	2	1	17	77	326	41	128	80	-	672	-	101	3,970	10	473	-	4,554
2007	1	0	13	82	150	163	28	0	16	453	-	2,715	6,516	5,982	175	-	15,388
2008	-	-	-	-	3	-	-	-	-	3	-	106	865	1,820	-	-	2,791
2009	-	-	-	2	6	25	-	-	-	33	-	2,564	17,733	14,694	447	-	35,438
2010 <sup>c/</sup>	-	-	55	52	135	471	88	-	-	801	-	27	551	6,286	966	-	7,830

TABLE A-10. Oregon ocean recreational salmon landings in numbers of fish by catch area and month.<sup>a/</sup> (Page 2 of 3)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. <sup>a/</sup>	Nov.	Season	May	June	July	Aug.	Sept.	Oct. <sup>b/</sup>	Season <sup>b/</sup>
CHINOOK											COHO						
<b>Coos Bay</b>																	
1976-1980 <sup>b/</sup>	-	0	484	2,108	2,866	3,618	1,181	94	24	10,323	7,484	31,027	44,646	20,736	2,845	265	106,898
1981-1985	-	-	37	921	4,075	1,994	436	--	--	7,087	2,106	13,671	29,455	13,020	1,699	--	53,301
1986-1990	-	-	75	1,213	4,999	2,206	963	--	--	9,249	453	10,859	39,003	12,888	1,568	-	64,366
1991-1995	-	-	40	862	1,495	352	231	7	--	2,033	465	12,213	39,345	10,077	2,713	-	59,645
1996-2000	-	-	11	89	1,660	793	142	16	--	2,702	-	-	2,042	22	3	-	1,549
2001	-	0	77	1,441	5,548	2,163	281	3	--	9,513	19	6,470	12,691	152	4	-	19,336
2002	-	140	237	4,840	10,170	2,782	1,213	97	--	19,479	-	35	5,129	134	40	-	5,338
2003	2	21	119	1,626	6,453	5,449	1,366	3	--	15,039	-	3,477	15,393	5,194	22	-	24,086
2004	2	2	192	2,849	11,416	3,666	2,606	13	--	20,746	2	943	8,275	830	84	-	10,134
2005	0	0	56	2,933	3,081	3,273	1,826	2	--	11,171	-	862	544	8	21	-	1,435
2006	0	3	11	388	3,225	927	656	0	--	5,210	-	184	3,321	26	42	-	3,573
2007	2	0	18	115	545	672	62	0	--	1,414	-	813	8,402	3,509	12	-	12,736
2008	-	-	-	7	3	-	-	-	--	10	-	621	1,726	1,381	-	-	3,728
2009	-	-	-	3	7	2	-	--	--	12	-	1,154	7,596	1,175	42	-	9,967
2010 <sup>c/</sup>	-	-	8	83	133	444	28	--	--	696	-	18	238	663	8	-	927
<b>Brookings</b>																	
1976-1980 <sup>b/</sup>	-	0	91	982	2,803	3,365	570	717	75	8,602	378	10,569	15,434	5,252	483	716	32,545
1981-1985	-	-	853	2,140	9,162	4,185	566	507	14	16,395	247	3,102	7,541	2,962	165	4	12,102
1986-1990	-	-	415	5,447	7,146	4,010	1,436	872	-	18,803	350	3,346	11,414	3,280	467	16	18,863
1991-1995	-	-	816	1,506	1,489	533	819	870	-	4,517	97	3,448	5,118	994	386	3	6,341
1996-2000	-	-	327	861	924	2,899	389	702	-	6,102	17	11	21	32	11	9	75
2001	-	-	807	996	1,213	3,022	314	856	-	7,208	-	16	11	29	-	13	69
2002	-	-	506	2,532	35	2,654	3,906	301	-	9,934	-	31	16	29	32	-	108
2003	-	-	448	316	1,199	1,354	1,579	552	-	5,448	-	5	17	17	12	-	51
2004	-	-	531	2,325	1,541	1,638	569	233	-	6,837	2	357	673	222	18	3	1,275
2005	-	-	180	2,904	49	989	1,181	404	-	5,707	-	89	0	12	9	-	110
2006	-	-	52	513	186	-	644	397	-	1,792	2	474	117	-	81	7	681
2007	-	-	14	42	116	2,000	343	535	-	3,050	-	132	606	809	19	3	1,569
2008	-	-	-	-	-	-	-	280	-	280	-	449	1,273	409	-	3	2,134
2009	-	-	-	-	9	23	163	-	-	195	-	6	1,123	59	9	-	1,197
2010 <sup>c/</sup>	-	-	7	2	3	24	247	541	-	824	-	-	19	25	16	-	60
<b>South of Cape Falcon</b>																	
1976-1980 <sup>b/</sup>	-	0	792	3,762	6,917	8,445	2,033	804	90	22,841	9,476	57,488	91,620	60,146	6,100	1,387	225,663
1981-1985	-	-	908	2,071	15,489	7,703	1,208	516	9	27,722	1,988	21,112	70,167	43,292	4,870	4	131,613
1986-1990	-	-	535	7,125	14,274	8,109	3,075	349	--	33,467	1,259	25,210	108,918	48,811	5,926	16	190,131
1991-1995	-	-	798	2,349	4,518	844	1,004	1,024	28	8,747	554	19,075	92,885	11,088	1,663	3	84,075
1996-2000	-	-	434	1,004	2,911	4,132	1,128	1,204	14	10,828	17	11	5,092	74	18	8	5,203
2001	-	0	1,024	3,034	9,029	7,743	2,279	1,450	23	24,582	21	17,687	37,104	234	76	35	55,157
2002	-	155	836	7,676	16,644	8,649	7,829	2,937	0	44,726	-	66	19,717	2,192	135	24	22,134
2003	2	22	716	3,252	16,315	10,589	5,539	1,825	64	38,324	2	7,583	50,878	25,335	76	14	83,888
2004	2	24	846	6,229	23,034	16,284	5,622	2,140	69	54,250	4	5,312	31,622	11,889	484	26	49,337
2005	6	104	381	6,600	4,277	5,553	6,705	684	0	24,310	-	2,153	1,422	49	116	-	3,740
2006	2	4	120	1,053	3,941	982	2,507	2,421	49	11,079	2	943	8,463	36	715	7	10,166
2007	3	0	86	297	920	3,076	940	1,009	16	6,347	2	4,866	19,829	17,226	330	3	42,256
2008	-	-	-	9	6	3	262	481	--	761	-	1,219	4,084	4,540	45	6	9,894
2009	-	-	-	9	45	70	255	226	--	605	-	4,865	39,124	25,384	808	6	70,187
2010 <sup>c/</sup>	-	-	82	209	383	1,129	686	663	--	3,152	-	368	2,200	8,364	1,258	-	12,190

TABLE A-10. Oregon ocean recreational salmon landings in numbers of fish by catch area and month.<sup>a/</sup> (Page 3 of 3)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	May	June	July	Aug.	Sept.	Oct. <sup>b/</sup>	Season <sup>b/</sup>
CHINOOK											COHO						
<b>Total All Areas</b>																	
1976-1980 <sup>b/</sup>	-	0	1,125	6,972	10,989	16,420	3,522	854	91	39,974	10,373	70,404	112,320	81,823	13,242	1,710	289,189
1981-1985	-	-	915	2,809	17,916	9,605	1,499	516	9	33,085	2,412	20,297	86,622	54,503	7,625	4	165,393
1986-1990	-	-	541	7,227	15,227	9,276	3,093	349	--	35,713	1,259	26,670	124,138	60,376	6,187	16	218,637
1991-1995	-	-	798	2,365	3,613	1,085	1,055	1,024	28	9,234	554	19,677	80,495	19,002	3,528	3	103,001
1996-2000	-	-	434	1,004	3,069	4,355	1,150	1,204	14	11,231	17	11	8,112	3,750	580	8	12,459
2001	-	0	1,024	3,034	10,029	9,221	2,419	1,450	23	27,200	21	17,687	50,641	22,224	3,738	35	94,346
2002	-	155	869	8,023	18,184	9,476	7,833	2,940	0	47,480	-	66	24,149	10,722	1,576	24	36,537
2003	2	22	716	3,260	16,861	12,248	5,656	1,825	64	40,654	2	7,638	59,115	45,226	1,664	14	113,659
2004	2	24	846	6,254	23,337	17,710	6,051	2,140	69	56,433	4	5,680	38,205	25,490	2,430	26	71,835
2005	6	104	381	6,600	4,758	8,190	7,222	684	0	27,945	-	2,153	3,587	6,386	1,580	-	13,706
2006	2	4	120	1,053	4,022	1,352	2,565	2,421	49	11,588	2	943	10,079	3,596	950	7	15,577
2007	3	0	86	297	1,001	3,533	996	1,009	16	6,941	2	4,866	23,641	31,033	1,108	3	60,653
2008	-	-	17	161	349	308	262	481	--	1,578	-	1,320	5,192	5,522	45	6	12,085
2009	-	-	-	13	467	613	266	226	--	1,585	-	5,003	48,717	34,714	1,166	6	89,606
2010 <sup>c/</sup>	-	-	82	246	771	2,450	752	663	--	4,964	-	380	3,679	12,768	1,471	-	18,298

a/ Monthly totals are the sum of statistical weeks with closest fit to the calendar month and may include illegal catch. The 1976-1980 catch is from combined salmon/steelhead punch card and sampled port data. Since 1981, data is from sampled ports only. Astoria area includes Astoria, Warrenton, and Hammond; Tillamook area includes Garibaldi and Pacific City; Newport area includes Depoe Bay and Newport; Coos Bay area includes Florence, Winchester Bay, and Coos Bay; Brookings area includes Gold Beach and Brookings. Values include state-waters only terminal area fisheries.

b/ October, season, and total catch for the following port areas and years includes the following catch in November: Astoria 1976 - 29 coho; Tillamook 1976 - 38 coho; Newport 1976 - 22 coho; Coos Bay 1976 - 66 coho; Brookings 1976 - 367 coho.

c/ Preliminary.

TABLE A-11. Summary of Washington non-Indian commercial troll salmon fishing effort in days fished and landings in numbers of fish by catch area. (Page 1 of 2)

Year or Avg.	Ilwaco	Westport	La Push	Neah Bay <sup>a/</sup>	Washington Subtotal	Oregon	California	Alaska	Total
<b>DAYS FISHED</b>									
1976-1980	9,007	15,023	9,446	9,707	43,184	664	42	970	44,860
1981-1985	1,961	5,194	1,553	3,111	11,819	244	18	25	12,106
1986-1990	871	2,619	300	928	4,718	100	0	3	4,821
1991-1995	335	2,079	243	1,421	4,476	100	0	3	4,579
1996-2000	20	128	55	235	431	30	0	0	460
2001	76	435	39	214	764	174	0	0	938
2002	65	782	94	397	1,338	272	0	0	1,610
2003	114	603	313	668	1,698	188	0	0	1,886
2004	52	575	246	508	1,381	0	0	0	1,381
2005	103	570	282	483	1,438	-	0	0	1,438
2006	134	367	597	340	1,438	-	0	0	1,438
2007	100	638	436	100	1,274	-	0	0	1,274
2008	128	655	331	109	1,223	-	-	0	1,223
2009	87	1,144	564	196	1,991	-	-	0	1,991
2010 <sup>b/</sup>	92	1,620	426	298	2,436	-	-	0	2,436
<b>CHINOOK LANDINGS</b>									
1976-1980	23,518	81,100	44,972	33,934	183,524	4,878	648	12,666	201,716
1981-1985	9,172	34,995	7,061	10,074	61,303	901	184	203	62,591
1986-1990	5,089	27,281	4,251	9,601	46,222	1,431	0	1	47,654
1991-1995	1,386	13,907	2,769	12,082	25,628	1,431	0	1	27,060
1996-2000	184	1,329	1,503	7,048	10,018	812	0	0	10,830
2001	944	12,903	1,129	6,253	21,229	6,309	0	0	27,538
2002	1,756	30,329	3,026	18,708	53,819	7,701	0	0	61,520
2003	1,920	16,773	6,995	30,514	56,202	4,599	0	0	60,801
2004	358	11,088	4,842	19,084	35,372	0	0	0	35,372
2005	1,486	15,178	6,411	11,991	35,066	-	0	0	35,066
2006	2,124	2,557	7,877	4,211	16,769	-	0	0	16,769
2007	500	8,111	5,103	554	14,268	-	0	0	14,268
2008	1,242	4,673	2,222	499	8,636	-	-	0	8,636
2009	261	8,132	2,722	1,201	12,316	-	-	0	12,316
2010 <sup>b/</sup>	886	34,171	5,911	4,131	45,099	-	-	0	45,099

TABLE A-11. Summary of Washington non-Indian commercial troll salmon fishing effort in days fished and landings in numbers of fish by catch area. (Page 2 of 2)

Year or Avg.	Ilwaco	Westport	La Push	Neah Bay <sup>a/</sup>	Washington Subtotal	Oregon	California	Alaska	Total
<b>COHO LANDINGS</b>									
1976-1980	136,926	207,515	203,330	156,502	704,272	21,460	1,595	15,218	742,545
1981-1985	32,087	63,633	34,020	42,272	152,480	8,260	33	876	161,649
1986-1990	23,765	15,616	4,139	19,563	54,379	1,501	0	103	55,983
1991-1995	5,957	8,689	2,876	13,939	27,800	1,501	0	103	29,404
1991-1995	1,413	2,387	851	7,478	8,881	0	-	103	8,984
2001	1,458	6,209	165	280	8,112	91	-	0	8,203
2002	127	53	-	-	180	0	-	0	180
2003	1,290	3,200	2,784	1,683	8,957	7	-	0	8,964
2004	1,130	6,365	3,175	2,623	13,293	0	-	0	13,293
2005	638	373	94	337	1,442	-	-	0	1,442
2006	74	184	766	241	1,265	-	-	0	1,265
2007	2,865	1,783	1,091	147	5,886	-	-	0	5,886
2008	77	1,132	490	7	1,706	-	-	0	1,706
2009	2,254	10,060	7,157	584	20,055	-	-	0	20,055
2010 <sup>b/</sup>	151	1,657	209	87	2,104	-	-	0	2,104
<b>PINK LANDINGS<sup>c/</sup></b>									
1976-1980	3,598	27,219	143,277	238,787	412,880	1,829	0	2,380	417,089
1981-1985	1,272	7,589	22,914	107,620	139,394	342	1	263	140,000
1986-1990	45	412	364	18,894	19,714	19	0	0	19,733
1991-1995	30	11	1,773	23,992	25,792	19	0	0	25,811
1991-1995	0	2	7	21	29	19	0	0	48
2001	2	14	0	16	32	91	0	0	123
2002	0	0	0	0	0	0	0	0	0
2003	36	37	108	70	251	7	0	0	258
2004	0	0	0	0	0	0	0	0	0
2005	0	3	5	0	8	-	0	0	8
2006	0	0	0	0	0	-	0	0	0
2007	0	1	122	24	147	-	0	0	147
2008	0	0	0	0	0	-	-	0	0
2009	0	9	117	9	135	-	-	0	135
2010 <sup>b/</sup>	0	0	0	0	0	-	-	0	0

a/ Neah Bay data includes landings from Subarea 4B.

b/ Preliminary.

c/ Landings primarily in odd-years only, averages are odd-year average.

TABLE A-12. Washington non-Indian commercial troll salmon fishing effort in days fished by catch area and month.<sup>a/</sup> (Page 1 of 2)

Year or Avg.	May	June	July	Aug.	Sept. <sup>b/</sup>	Oct.	Season
<u>Neah Bay<sup>c/</sup></u>							
1976-1980	656	402	3,064	4,198	1,734	-	9,707
1981-1985	416	53	1,662	1,332	14	-	3,111
1986-1990	480	178	8	434	-	-	928
1991-1995	652	416	296	406	132	-	1,421
1996-2000	140	63	96	88	-	-	235
2001	84	81	49	-	-	-	214
2002	97	81	139	80	-	-	397
2003	280	92	150	132	14	-	668
2004	198	1	160	116	33	-	508
2005	164	24	149	146	-	-	483
2006	144	89	15	54	38	-	340
2007	49	10	37	2	2	-	100
2008	34	65	1	9	0	-	109
2009	68	74	50	2	2	-	196
2010 <sup>d/</sup>	139	97	44	18	0	-	298
<u>La Push</u>							
1976-1980	570	541	3,812	3,609	1,143	-	9,446
1981-1985	175	25	1,199	505	-	-	1,553
1986-1990	186	110	5	136	15	-	300
1991-1995	74	85	127	52	16	-	243
1996-2000	36	23	12	8	5	-	55
2001	29	4	6	-	-	-	39
2002	0	3	53	38	-	-	94
2003	42	24	148	91	8	-	313
2004	17	4	105	99	21	-	246
2005	65	23	69	125	-	-	282
2006	39	179	63	209	107	-	597
2007	29	180	168	57	2	-	436
2008	10	118	119	73	11	-	331
2009	123	114	173	124	30	-	564
2010 <sup>d/</sup>	154	93	95	81	3	-	426
<u>Westport</u>							
1976-1980	2,255	1,320	5,000	4,231	2,218	-	15,023
1981-1985	2,109	250	2,790	1,087	-	-	5,194
1986-1990	1,723	614	855	390	-	-	2,619
1991-1995	852	552	352	235	309	-	2,079
1996-2000	46	39	51	65	2	-	128
2001	96	127	104	70	38	-	435
2002	331	99	228	124	-	-	782
2003	99	79	178	192	55	-	603
2004	245	5	127	127	71	-	575
2005	263	57	119	131	-	-	570
2006	176	113	21	33	24	-	367
2007	367	63	149	55	4	-	638
2008	202	170	103	131	49	-	655
2009	276	363	209	194	102	-	1,144
2010 <sup>d/</sup>	218	668	362	329	43	-	1,620

TABLE A-12. Washington non-Indian commercial troll salmon fishing effort in days fished by catch area and month.<sup>a/</sup>  
(Page 2 of 2)

Year or Avg.	May	June	July	Aug.	Sept. <sup>b/</sup>	Oct.	Season
<u>Ilwaco</u>							
1976-1980	695	673	3,199	2,907	1,668	-	9,007
1981-1985	566	97	1,092	710	568	-	1,961
1986-1990	197	61	284	583	578	-	871
1991-1995	95	9	63	160	44	-	335
1996-2000	0	0	-	48	11	-	20
2001	24	1	13	26	12	-	76
2002	16	1	26	22	-	-	65
2003	18	4	41	32	19	-	114
2004	3	3	16	18	12	-	52
2005	14	15	25	49	-	-	103
2006	71	54	1	2	6	-	134
2007	22	27	10	31	10	-	100
2008	34	80	3	8	3	-	128
2009	7	13	20	43	4	-	87
2010 <sup>d/</sup>	23	22	23	17	7	-	92
<u>Statewide Total</u>							
1976-1980	4,177	2,800	15,075	14,944	6,187	-	43,184
1981-1985	3,266	382	6,469	2,956	291	-	11,819
1986-1990	2,452	876	580	1,100	585	-	4,718
1991-1995	1,673	1,063	838	755	333	-	4,476
1996-2000	221	124	158	145	10	-	431
2001	233	213	172	96	50	-	764
2002	444	184	446	264	-	-	1,338
2003	439	199	517	447	96	-	1,698
2004	463	13	408	360	137	-	1,381
2005	506	119	362	451	-	-	1,438
2006	430	435	100	298	175	-	1,438
2007	467	280	364	145	18	-	1,274
2008	280	433	226	221	63	-	1,223
2009	474	564	452	363	138	-	1,991
2010 <sup>d/</sup>	534	880	524	445	53	-	2,436

a/ Summary of Washington Department of Fish and Wildlife fish receiving ticket information by statistical month, excluding Washington landings from Oregon, California, and Alaska.

b/ Data for September includes any effort after September.

c/ Neah Bay area includes effort and catches from Strait of Juan de Fuca Area 4B.

d/ Preliminary.

TABLE A-13. Washington non-Indian commercial troll Chinook, coho, and pink salmon landings in numbers of fish by catch area and month.<sup>a/</sup> (Page 1 of 3)

Year or Avg.	May	June	July	Aug.	Sept. <sup>b/</sup>	Season	May	June	July	Aug.	Sept. <sup>b/</sup>	Season	May	June	July	Aug.	Sept. <sup>b/</sup>	Season
CHINOOK						COHO						PINKS						
<u>Neah Bay<sup>c/</sup></u>																		
1976-1980	6,781	3,805	12,440	8,782	2,659	33,934	-	19,014	67,297	58,787	33,270	156,502	45	235	42,003	192,169	4,336	238,787
1981-1985	3,293	532	6,289	1,424	31	10,074	-	-	43,965	15,853	100	42,272	113	20	38,466	103,127	415	107,620
1986-1990	8,157	4,180	74	672	-	9,601	-	-	776	24,066	-	19,563	0	-	1,524	36,263	-	18,894
1991-1995	8,818	5,679	1,388	424	366	12,082	-	-	3,378	9,604	5,293	13,939	9	9	64	23,603	535	23,992
1996-2000	3,887	1,923	3,428	1,524	-	7,048	-	-	2,997	4,481	-	7,478	1	1	30	8	-	21
2001	2,072	2,284	1,897	-	-	6,253	-	-	280	-	-	280	1	8	7	-	-	16
2002	5,626	4,680	5,589	2,813	-	18,708	-	-	-	-	-	-	-	-	-	-	-	-
2003	13,364	4,385	6,554	5,848	363	30,514	-	-	706	866	111	1,683	0	0	47	23	0	70
2004	7,128	510	4,685	5,727	1,034	19,084	-	-	647	1,745	231	2,623	-	-	-	-	-	-
2005	4,929	595	3,285	3,182	-	11,991	-	-	62	275	-	337	0	0	0	0	-	0
2006	2,434	545	109	662	461	4,211	-	-	12	206	23	241	-	-	-	-	-	-
2007	223	122	171	20	18	554	-	-	143	0	4	147	8	0	16	0	0	24
2008	47	434	1	17	0	499	-	-	0	7	0	7	-	-	-	-	-	-
2009	597	461	138	3	2	1,201	-	-	458	102	24	584	1	8	0	0	0	9
2010 <sup>d/</sup>	1,902	1,529	368	332	0	4,131	-	-	69	18	0	87	-	-	-	-	-	-
<u>La Push</u>																		
1976-1980	6,487	5,777	19,674	10,996	2,548	44,972	-	46,357	112,723	63,373	22,453	203,330	281	156	39,572	102,977	293	143,277
1981-1985	1,879	257	4,971	1,313	-	7,061	-	-	29,610	8,820	-	34,020	39	-	7,150	15,725	-	22,914
1986-1990	3,225	2,241	40	527	11	4,251	-	-	350	5,397	16	4,139	0	-	728	0	-	364
1991-1995	921	1,020	734	335	11	2,769	-	-	1,773	1,465	1,050	2,876	0	0	20	1,736	46	1,773
1996-2000	966	416	336	150	-	1,503	-	-	140	547	328	851	0	0	0	13	0	7
2001	843	106	180	-	-	1,129	-	-	165	-	-	165	0	0	0	-	-	0
2002	0	72	1,803	1,151	-	3,026	-	-	-	-	-	-	-	-	-	-	-	-
2003	964	787	3,564	1,631	49	6,995	-	-	1,752	928	104	2,784	0	0	63	35	10	108
2004	237	273	1,974	2,056	302	4,842	-	-	1,059	1,847	269	3,175	-	-	-	-	-	-
2005	1,939	450	1,469	2,553	-	6,411	-	-	2	92	-	94	4	0	0	1	-	5
2006	723	2,371	844	2,658	1,281	7,877	-	-	100	551	115	766	-	-	-	-	-	-
2007	144	2,932	1,588	437	2	5,103	-	-	803	286	2	1,091	0	19	103	0	0	122
2008	24	1,259	501	380	58	2,222	-	-	186	265	39	490	-	-	-	-	-	-
2009	1,372	523	522	272	33	2,722	-	-	2,466	3,888	803	7,157	0	2	80	34	1	117
2010 <sup>d/</sup>	2,125	1,632	984	1,147	23	5,911	-	-	121	87	1	209	-	-	-	-	-	-



TABLE A-13. Washington non-Indian commercial troll Chinook, coho, and pink salmon landings in numbers of fish by catch area and month (odd year averages).<sup>a/</sup> (Page 2 of 3)

Year or Avg.	May	June	July	Aug.	Sept. <sup>b/</sup>	Season	May	June	July	Aug.	Sept. <sup>b/</sup>	Season	May	June	July	Aug.	Sept. <sup>b/</sup>	Season
CHINOOK						COHO						PINKS						
<u>Westport</u>																		
1976-1980	28,493	15,087	18,923	13,306	5,291	81,100	97	69,485	123,307	52,640	17,651	207,515	239	53	13,298	13,510	119	27,219
1981-1985	20,022	2,850	13,121	3,661	-	34,995	-	-	55,366	11,022	-	63,633	78	20	4,976	3,773	-	7,589
1986-1990	17,976	6,478	17,639	1,489	-	27,281	-	-	34,992	9,157	-	15,616	115	182	390	23	-	412
1991-1995	6,118	5,160	1,807	1,207	929	13,907	-	-	1,968	3,364	6,020	8,689	2	1	4	6	4	11
1996-2000	394	559	266	619	3	1,329	-	-	769	1,855	29	2,387	0	1	1	0	0	2
2001	4,177	4,798	2,863	846	219	12,903	-	-	1,524	2,070	2,615	6,209	0	1	13	0	0	14
2002	12,384	6,249	7,879	3,817	-	30,329	-	-	-	53	-	53						
2003	3,592	3,636	4,254	4,577	714	16,773	-	-	821	1,961	418	3,200	0	0	32	5	0	37
2004	7,889	374	1,232	1,102	491	11,088	-	-	336	1,060	4,969	6,365						
2005	11,426	1,159	1,255	1,338	-	15,178	-	-	102	271	-	373	0	0	2	1	-	3
2006	1,578	632	120	138	89	2,557	-	-	10	59	115	184						
2007	5,326	814	1,700	264	7	8,111	-	-	998	757	28	1,783	0	0	0	1	0	1
2008	1,380	1,657	671	764	201	4,673	-	-	165	645	322	1,132						
2009	3,576	3,111	955	405	85	8,132	-	-	1,933	5,291	2,836	10,060	0	4	2	3	0	9
2010 <sup>d/</sup>	4,192	19,171	4,761	5,788	259	34,171	-	-	895	639	123	1,657						
<u>Ilwaco</u>																		
1976-1980	7,990	6,369	3,933	3,312	3,188	23,518	6	92,879	72,101	28,995	17,251	136,926	5	5	1,817	1,348	423	3,598
1981-1985	6,464	1,263	2,309	603	418	9,172	-	-	29,801	14,415	13,373	32,087	4	-	931	647	-	1,272
1986-1990	2,998	901	1,324	1,518	937	5,089	-	-	10,844	19,388	13,026	23,765	0	0	87	1	1	45
1991-1995	1,147	36	57	156	15	1,386	-	-	477	5,019	930	5,957	0	0	0	30	0	30
1996-2000	0	0	-	513	40	184	-	-	-	1,221	385	1,413	0	0	-	-	-	0
2001	518	9	111	148	158	944	-	-	351	594	513	1,458	0	0	0	2	0	2
2002	371	48	855	482	-	1,756	-	-	-	127	-	127						
2003	790	110	486	383	151	1,920	-	-	417	512	361	1,290	0	0	34	2	0	36
2004	56	77	72	99	54	358	-	-	188	309	633	1,130						
2005	254	308	262	662	-	1,486	-	-	154	484	-	638	0	0	0	0	-	0
2006	1,746	364	0	1	13	2,124	-	-	7	29	38	74						
2007	173	226	43	50	8	500	-	-	338	2,401	126	2,865	0	0	0	0	0	0
2008	361	847	7	24	3	1,242	-	-	4	65	8	77						
2009	146	49	20	46	0	261	-	-	587	1,667	0	2,254	0	0	0	0	0	0
2010 <sup>d/</sup>	210	230	168	237	41	886	-	-	99	38	14	151						

TABLE A-13. Washington non-Indian commercial troll Chinook, coho, and pink salmon landings in numbers of fish by catch area and month (odd year averages).<sup>a/</sup> (Page 3 of 3)

Year or Avg.	May	June	July	Aug.	Sept. <sup>b/</sup>	Season	May	June	July	Aug.	Sept. <sup>b/</sup>	Season	May	June	July	Aug.	Sept. <sup>b/</sup>	Season		
CHINOOK							COHO							PINKS						
<u>Statewide Total</u>																				
1976-1980	49,751	29,764	54,970	36,395	12,644	183,524	36	227,735	375,428	203,795	79,481	704,272	570	449	96,689	310,003	5,170	412,880		
1981-1985	31,659	4,389	26,113	5,153	225	61,303	-	-	140,300	37,526	4,524	152,480	234	33	51,212	87,639	415	139,394		
1986-1990	30,079	11,970	9,576	2,950	943	46,222	-	-	23,869	49,522	13,034	54,379	115	182	2,729	36,287	1	19,714		
1991-1995	17,003	11,895	3,985	1,396	1,132	25,628	-	-	7,595	17,356	8,862	27,800	10	9	88	25,360	390	25,792		
1996-2000	5,247	2,897	4,030	1,713	43	10,018	-	-	3,905	6,021	386	8,881	1	2	31	21	0	29		
2001	7,610	7,197	5,051	994	377	21,229	-	-	2,320	2,664	3,128	8,112	1	9	20	2	0	32		
2002	18,381	11,049	16,126	8,263	-	53,819	-	-	-	180	-	180								
2003	18,710	8,918	14,858	12,439	1,277	56,202	-	-	3,696	4,267	994	8,957	0	0	176	65	10	251		
2004	15,310	1,234	7,963	8,984	1,881	35,372	-	-	2,230	4,961	6,102	13,293								
2005	18,548	2,512	6,271	7,735	-	35,066	-	-	320	1,122	-	1,442	4	0	2	2	-	8		
2006	6,481	3,912	1,073	3,459	1,844	16,769	-	-	129	845	291	1,265								
2007	5,866	4,094	3,502	771	35	14,268	-	-	2,282	3,444	160	5,886	8	19	119	1	0	147		
2008	1,812	4,197	1,180	1,185	262	8,636	-	-	355	982	369	1,706								
2009	5,691	4,144	1,635	726	120	12,316	-	-	5,444	10,948	3,663	20,055	1	14	82	37	1	135		
2010 <sup>d/</sup>	8,429	22,562	6,281	7,504	323	45,099	-	-	1,184	782	138	2,104								

a/ Summary of Washington Department of Fish and Wildlife fish receiving ticket information by statistical month excluding Washington landings from Oregon, California, and Alaska.

b/ Data for September include any catch after September.

c/ Neah Bay area includes effort and catches from Strait of Juan de Fuca Area 4B.

d/ Preliminary.

TABLE A-14. Treaty Indian ocean troll salmon fishing effort in deliveries by catch area and month. (Page 1 of 2)

Year or Avg.	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	Total May-Sept.	Year Total
<u>Area 4B</u>										
1976-1980	207	33	41	37	44	22	4	37	177	424
1981-1985	167	53	43	54	57	16	14	32	224	436
1986-1990	167	63	53	75	92	24	2	43	309	520
1991-1995	75	35	27	29	64	3	26	26	158	269
1996-2000	14	12	14	1	25	6	-	2	58	74
2001	22	42	33	47	60	23	-	5	205	232
2002	13	8	12	5	1	0	-	3	26	42
2003	5	2	1	2	0	3	-	2	8	15
2004	28	0	12	38	68	22	-	107	140	275
2005	103	21	32	45	5	3	-	206	106	415
2006	28	13	157	16	15	10	-	39	211	278
2007	179	9	29	48	18	0	-	129	104	412
2008 <sup>a/</sup>	52	9	20	59	110	12	-	51	210	313
2009 <sup>a/</sup>	76	48	202	87	114	3	-	20	454	550
2010 <sup>a/</sup>	145	143	200	32	5	1	-	40	381	566
<u>Neah Bay</u>										
1976-1980	2	14	59	93	65	19	2	2	250	257
1981-1985	0	11	59	115	140	100	3	0	424	427
1986-1990	1	44	52	167	149	75	0	0	486	487
1991-1995	0	29	34	83	95	28	0	1	269	271
1996-2000	0	18	20	2	52	43	-	0	136	136
2001	0	11	31	74	112	79	-	0	307	307
2002	1	23	29	54	44	41	-	0	191	192
2003	2	21	25	61	53	40	-	0	200	202
2004	0	26	37	86	78	52	-	0	279	279
2005	0	67	110	78	133	67	-	0	455	455
2006	1	78	118	138	112	101	-	2	547	550
2007	0	13	161	135	125	4	-	0	438	438
2008 <sup>a/</sup>	1	14	74	30	83	74	-	0	275	276
2009 <sup>a/</sup>	0	26	27	122	112	0	-	0	287	287
2010 <sup>a/</sup>	0	19	105	111	99	42	-	0	376	376
<u>La Push<sup>b/</sup></u>										
1976-1980	0	14	37	54	43	8	0	0	156	156
1981-1985	0	10	26	86	93	29	0	0	243	243
1986-1990	0	21	39	119	150	37	-	-	366	366
1991-1995	0	3	7	44	100	5	-	-	160	160
1996-2000	0	0	1	0	3	2	-	-	6	6
2001	0	0	0	0	0	2	-	-	2	2
2002	0	0	0	1	2	0	10	-	3	13
2003	0	0	1	0	0	0	15	-	1	16
2004	0	0	0	2	2	0	15	-	4	19
2005	0	1	1	3	3	1	0	-	9	9
2006	0	2	7	11	8	3	5	-	31	36
2007	0	0	15	2	13	1	0	-	31	31
2008 <sup>a/</sup>	0	4	27	11	9	2	1	-	53	54
2009 <sup>a/</sup>	0	2	3	2	6	0	4	-	13	17
2010 <sup>a/</sup>	0	4	18	19	6	0	4	-	47	51

TABLE A-14. Treaty Indian ocean troll salmon fishing effort in deliveries by catch area and month. (Page 2 of 2)

Year or Avg.	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct. <sup>b/</sup>	Nov.-Dec.	Total May-Sept.	Year Total
<b><u>Westport</u></b>										
1976-1980	0	1	1	8	10	0	0	0	20	20
1981-1985	0	6	12	30	23	2	0	0	72	72
1986-1990	0	10	24	73	68	24	-	-	199	199
1991-1995	0	1	4	26	52	10	-	-	95	95
1996-2000	0	1	2	8	15	3	-	-	29	29
2001	0	0	1	1	0	0	-	-	2	2
2002	0	0	1	1	4	0	-	-	6	6
2003	0	1	0	0	4	2	-	-	7	7
2004	0	1	0	1	4	2	-	-	8	8
2005	0	9	3	0	9	6	-	-	27	27
2006	0	3	3	2	5	3	-	-	16	16
2007	0	0	0	4	11	2	-	-	17	17
2008 <sup>a/</sup>	0	3	4	2	29	3	-	-	41	41
2009 <sup>a/</sup>	0	6	6	8	28	1	-	-	49	49
2010 <sup>a/</sup>	0	7	40	47	45	9	-	-	148	148
<b><u>Statewide Total</u></b>										
1976-1980	209	61	137	192	162	50	6	39	603	858
1981-1985	167	79	141	284	313	146	17	32	963	1,179
1986-1990	168	138	168	434	460	161	2	43	1,360	1,572
1991-1995	75	69	71	182	311	48	10	27	682	794
1996-2000	14	31	38	11	96	53	-	2	229	246
2001	22	53	65	122	172	104	-	5	516	543
2002	14	31	42	61	51	41	10	3	226	253
2003	7	24	27	63	57	45	15	2	216	240
2004	28	27	49	127	152	76	15	107	431	581
2005	103	98	146	126	150	77	0	206	597	906
2006	29	96	285	167	140	117	5	41	805	880
2007	179	22	205	189	167	7	0	129	590	898
2008 <sup>a/</sup>	53	30	125	102	231	91	1	51	579	684
2009 <sup>a/</sup>	76	82	238	219	260	4	4	20	803	903
2010 <sup>a/</sup>	145	173	363	209	155	52	4	40	952	1,141

a/ Preliminary.

b/ October effort beginning in 2002 occurred during Quileute ceremonial and subsistence fishery.

TABLE A-15. Treaty Indian ocean troll Chinook and coho salmon landings in numbers of fish by catch area and month. (Page 1 of 3)

Year or	Total										Total									
Avg.	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	May-Sept.	Year	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	May-Sept.	Year
CHINOOK										COHO										
Area 4B																				
1976-1980	8,521	360	641	98	103	27	10	776	1,229	10,536	406	23	499	191	252	152	5	61	1,116	1,589
1981-1985	13,109	1,066	248	94	49	29	145	823	1,485	15,562	42	245	184	825	1,015	208	36	7	2,476	2,561
1986-1990	6,009	2,540	1,746	284	323	63	12	2,677	4,956	13,654	9	0	65	2,150	7,766	813	7	13	10,794	10,822
1991-1995	3,549	467	865	60	282	2	147	1,068	1,677	6,323	2	0	0	554	4,036	30	257	7	4,620	4,731
1996-2000	694	371	459	25	113	31	-	32	1,000	1,726	0	0	0	0	1,221	132	-	0	1,353	1,353
2001	1,364	1,208	4,293	928	478	137	-	273	7,044	8,681	0	0	1	2,543	3,103	730	-	1	6,377	6,378
2002	366	467	848	113	31	0	-	25	1,459	1,850	0	0	0	0	0	0	-	0	0	0
2003	187	25	46	14	0	2	-	3	87	277	0	0	0	4	0	141	-	0	145	145
2004	1,555	0	2,544	1,032	1,910	1,647	-	14,588	7,133	23,276	0	0	0	1,958	12,817	1,829	-	108	16,604	16,712
2005	999	238	3,764	522	6	6	-	3,935	4,536	9,470	3	0	0	2,040	64	25	-	41	2,129	2,173
2006	157	154	2,335	50	93	81	-	456	2,713	3,326	0	1	3	96	22	47	-	0	169	169
2007	2,218	53	324	556	167	0	-	1,340	1,100	4,658	0	0	0	1,496	29	0	-	5	1,525	1,530
2008	483	35	271	618	1,607	104	-	375	2,635	3,493	0	0	8	81	486	71	-	0	646	646
2009 <sup>a/</sup>	464	481	4,528	593	615	12	-	68	6,229	6,761	0	0	0	3,319	4,555	17	-	0	7,891	7,891
2010 <sup>a/</sup>	1,724	1,657	3,286	170	29	9	-	200	5,151	7,075	0	0	0	106	7	0	-	12	113	125
Neah Bay																				
1976-1980	8	297	1,140	1,168	146	16	1	9	2,766	2,784	1	57	3,527	1,486	483	256	6	2	5,809	5,818
1981-1985	0	520	1,191	2,406	673	772	54	11	5,561	5,626	0	8	4,647	9,017	16,515	13,404	18	0	43,590	43,609
1986-1990	6	2,604	2,317	3,114	2,657	685	0	0	11,376	11,382	0	3	106	16,829	16,934	7,241	0	0	41,114	41,114
1991-1995	0	3,800	2,807	2,797	2,704	471	0	16	12,579	12,595	0	1	1	12,665	13,860	4,816	0	1	31,342	31,343
1996-2000	1	2,191	5,957	353	3,368	1,809	-	17	13,679	13,697	0	0	0	15	9,027	7,940	-	0	16,982	16,982
2001	0	1,070	9,047	5,438	2,510	3,171	-	0	21,236	21,236	0	0	11	5,967	24,881	21,335	-	0	52,194	52,194
2002	34	4,897	10,263	11,805	8,005	3,123	-	0	38,093	38,127	0	1	1	3,449	4,530	9,042	-	0	17,023	17,023
2003	21	2,821	12,946	12,921	5,023	1,031	-	0	34,742	34,763	98	3	0	4,445	4,164	2,012	-	0	10,624	10,722
2004	0	9,809	14,433	9,670	4,978	3,387	-	0	42,277	42,277	0	3	3	14,114	23,814	7,361	-	0	45,295	45,295
2005	0	4,733	14,608	4,272	7,105	3,097	-	0	33,815	33,815	0	3	1	1,715	15,460	3,972	-	0	21,151	21,151
2006	6	2,565	5,714	6,827	5,696	4,744	-	35	25,546	25,587	2	15	99	9,928	9,304	10,418	-	0	29,764	29,766
2007	0	263	12,532	2,639	4,099	52	-	0	19,585	19,585	0	0	12	20,862	14,951	745	-	0	36,570	36,570
2008	55	243	5,694	1,066	3,119	3,071	-	0	13,193	13,248	17	0	8	511	2,107	9,304	-	0	11,930	11,947
2009 <sup>a/</sup>	0	802	1,083	1,615	1,649	0	-	0	5,149	5,149	0	0	0	21,558	23,832	0	-	0	45,390	45,390
2010 <sup>a/</sup>	0	436	8,954	5,080	8,486	957	-	0	23,913	23,913	0	0	13	1,324	4,580	2,882	-	0	8,799	8,799

TABLE A-15. Treaty Indian ocean troll Chinook and coho salmon landings in numbers of fish by catch area and month. (Page 2 of 3)

Year or	Total										Total									
Avg.	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	May-Sept.	Year	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	May-Sept.	Year
CHINOOK											COHO									
<u>La Push<sup>b/</sup></u>																				
1976-1980	0	118	243	483	142	27	0	0	1,013	1,013	0	641	3,624	1,229	482	34	0	0	6,010	6,010
1981-1985	0	243	321	827	508	212	0	0	2,112	2,112	0	30	2,251	5,302	6,393	2,855	0	0	16,832	16,832
1986-1990	0	1,062	944	2,044	744	259	-	-	5,054	5,054	0	0	2,694	8,430	7,021	2,250	-	-	20,395	20,395
1991-1995	0	61	278	465	601	22	-	-	1,428	1,428	0	0	0	2,863	6,123	201	-	-	9,187	9,187
1996-2000	0	0	16	0	40	7	-	-	63	63	0	0	0	0	103	95	-	-	198	198
2001	0	0	0	0	0	3	-	-	3	3	0	0	0	0	0	24	-	-	24	24
2002	0	0	0	124	4	0	30	-	128	158	0	0	0	0	372	0	80	-	372	452
2003	0	0	47	0	0	0	35	-	47	82	0	0	0	0	0	0	85	-	0	85
2004	0	0	0	50	6	0	25	-	56	81	0	0	0	61	23	0	100	-	84	184
2005	0	258	1	177	188	74	0	-	698	698	0	0	0	1	26	36	0	-	63	63
2006	0	82	248	825	870	66	15	-	2,091	2,106	0	0	0	446	1,272	123	5	-	1,841	1,846
2007	0	0	1,773	60	234	5	0	-	2,072	2,072	0	0	0	248	1,099	52	0	-	1,399	1,399
2008	0	58	2,834	380	888	368	1	-	4,528	4,529	0	0	2	267	297	379	0	-	945	945
2009 <sup>a/</sup>	0	83	99	20	158	25	25	-	385	410	0	0	0	102	3,060	15	15	-	3,177	3,192
2010 <sup>a/</sup>	0	6	85	754	732	41	10	-	1,618	1,628	0	2	0	157	241	13	15	-	413	428
<u>Westport</u>																				
1976-1980	0	12	14	27	24	1	0	0	78	78	0	0	27	10	58	1	0	0	95	95
1981-1985	0	321	123	310	105	6	0	0	865	865	0	0	353	1,262	561	199	0	0	2,376	2,376
1986-1990	0	671	949	1,283	783	241	-	-	3,926	3,926	0	0	1,391	4,901	4,221	747	-	-	11,260	11,260
1991-1995	0	15	231	188	656	74	-	-	1,165	1,165	0	0	0	1,138	2,019	228	-	-	3,385	3,385
1996-2000	0	18	91	67	286	46	-	-	508	508	0	0	0	0	712	367	-	-	1,079	1,079
2001	0	0	365	195	0	0	-	-	560	560	0	0	0	0	0	0	-	-	0	0
2002	0	0	95	37	34	0	-	-	166	166	0	0	0	0	27	0	-	-	27	27
2003	0	10	0	0	209	77	-	-	296	296	0	0	0	0	112	61	-	-	173	173
2004	0	138	0	13	66	52	-	-	269	269	0	0	0	0	30	84	-	-	114	114
2005	0	1,629	1	0	801	495	-	-	2,926	2,926	0	0	0	0	399	255	-	-	654	654
2006	0	20	44	34	31	66	-	-	195	195	0	0	0	5	36	123	-	-	164	164
2007	0	0	0	94	79	13	-	-	186	186	0	0	0	137	344	63	-	-	544	544
2008	0	23	64	35	393	31	-	-	546	546	0	0	0	6	674	65	-	-	745	745
2009 <sup>a/</sup>	0	128	118	101	144	0	-	-	491	491	0	0	0	443	3,694	68	-	-	4,205	4,205
2010 <sup>a/</sup>	0	37	766	938	436	522	-	-	2,699	2,699	0	0	50	448	245	1,417	-	-	2,160	2,160

TABLE A-15. Treaty Indian ocean troll Chinook and coho salmon landings in numbers of fish by catch area and month. (Page 3 of 3)

Year or	Total										Total									
Avg.	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	May-Sept.	Year	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	May-Sept.	Year
CHINOOK										COHO										
Statewide Total																				
1976-1980	8,529	787	2,037	1,776	415	70	11	785	5,086	14,411	407	720	7,677	2,915	1,275	443	11	63	13,030	13,512
1981-1985	13,109	2,150	1,883	3,636	1,336	1,018	198	834	10,023	24,164	42	283	7,435	16,406	24,484	16,666	54	7	65,274	65,377
1986-1990	6,015	6,877	5,955	6,726	4,506	1,248	12	2,677	25,312	34,016	9	3	4,256	32,310	35,942	11,051	7	13	83,563	83,591
1991-1995	3,549	4,343	4,181	3,511	4,243	571	29	1,084	16,849	21,511	2	1	1	17,220	26,038	5,275	103	8	48,535	48,647
1996-2000	695	2,580	6,524	446	3,806	1,893	-	49	15,249	15,994	0	0	0	15	11,063	8,533	-	0	19,611	19,611
2001	1,364	2,278	13,705	6,561	2,988	3,311	-	273	28,843	30,480	0	0	12	8,510	27,984	22,089	-	1	58,595	58,596
2002	400	5,364	11,206	12,079	8,074	3,123	30	25	39,846	40,301	0	1	1	3,449	4,929	9,042	80	0	17,422	17,502
2003	208	2,856	13,039	12,935	5,232	1,110	35	3	35,172	35,418	98	3	0	4,449	4,276	2,214	85	0	10,942	11,125
2004	1,555	9,947	16,977	10,765	6,960	5,086	25	14,588	49,735	65,903	0	3	3	16,133	36,684	9,274	100	108	62,097	62,305
2005	999	6,858	18,374	4,971	8,100	3,672	0	3,935	41,975	46,909	3	3	1	3,756	15,949	4,288	0	41	23,997	24,041
2006	163	2,821	8,341	7,736	6,690	4,957	15	491	30,545	31,214	2	16	102	10,475	10,634	10,711	5	0	31,938	31,945
2007	2,218	316	14,629	3,349	4,579	70	0	1,340	22,943	26,501	0	0	12	22,743	16,423	860	0	5	40,038	40,043
2008	538	359	8,863	2,099	6,007	3,574	1	375	20,902	21,816	17	0	18	865	3,564	9,819	0	0	14,266	14,283
2009 <sup>a/</sup>	464	1,494	5,828	2,329	2,566	37	25	68	12,254	12,811	0	0	0	25,422	35,141	100	15	0	60,663	60,678
2010 <sup>a/</sup>	1,724	2,136	13,091	6,942	9,683	1,529	10	200	33,381	35,315	0	2	63	2,035	5,073	4,312	15	12	11,485	11,512

a/ Preliminary.

b/ October landings beginning in 2002 occurred during Quileute ceremonial and subsistence fishery.

TABLE A-16. Treaty Indian ocean troll pink salmon landings (odd years only) in numbers of fish by catch area and month.  
(Page 1 of 2)

Year or Avg. <sup>a/</sup>	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	Total	
									May-Sept.	Year
<u>Area 4B</u>										
1977-1979	1	2	267	158	649	16	0	0	1,092	1,092
1981-1985	0	23	2	108	698	7	0	0	838	838
1987-1989	0	0	0	1,395	643	142	0	0	2,179	2,179
1991-1995	0	0	0	43	1,233	2	0	0	1,278	1,278
1997-1999	0	0	0	0	550	7	-	0	557	557
2001	0	0	0	504	334	15	-	0	853	853
2003	0	0	0	0	0	0	-	0	0	0
2005	0	0	0	154	88	0	-	0	242	242
2007 <sup>b/</sup>	0	0	0	82	141	0	-	0	223	223
2009 <sup>b/</sup>	0	0	0	189	219	0	-	0	408	408
<u>Neah Bay</u>										
1977-1979	0	42	91	636	1,339	5	0	0	2,112	2,112
1981-1985	0	0	94	1,340	6,684	302	0	0	8,419	8,419
1987-1989	0	2	4	6,553	2,901	377	0	0	9,837	9,837
1991-1995	0	0	1	385	4,002	249	0	0	4,636	4,636
1997-1999	0	0	0	0	1,023	74	-	0	1,096	1,096
2001	0	11	0	192	1,203	192	-	0	1,598	1,598
2003	0	0	0	172	41	23	-	0	236	236
2005	0	0	0	32	103	3	-	0	138	138
2007 <sup>b/</sup>	0	0	7	244	96	0	-	0	347	347
2009 <sup>b/</sup>	0	0	0	237	145	0	-	0	382	382
<u>La Push</u>										
1977-1979	0	5	1,192	259	1,032	0	0	0	2,488	2,488
1981-1985	0	7	100	654	418	12	0	0	1,191	1,191
1987-1989	0	3	6	625	667	65	-	-	1,365	1,365
1991-1995	0	0	0	65	277	10	-	-	353	353
1997-1999	0	0	0	0	0	0	-	-	0	0
2001	0	0	0	0	0	0	-	-	0	0
2003	0	0	0	0	0	0	0	-	0	0
2005	0	0	0	0	1	0	0	-	1	1
2007 <sup>b/</sup>	0	0	0	0	14	0	0	-	14	14
2009 <sup>b/</sup>	0	0	0	1	4	0	0	-	5	5
<u>Westport</u>										
1977-1979	0	0	0	0	0	0	0	0	0	0
1981-1985	0	1	18	106	6	0	0	0	132	132
1987-1989	0	0	0	419	44	8	-	-	471	471
1991-1995	0	0	0	7	6	0	-	-	13	13
1997-1999	0	0	0	0	0	0	-	-	0	0
2001	0	0	0	0	0	0	-	-	0	0
2003	0	0	0	0	0	0	-	-	0	0
2005	0	0	0	0	6	0	-	-	6	6
2007 <sup>b/</sup>	0	0	0	0	0	0	-	-	0	0
2009 <sup>b/</sup>	0	0	0	0	0	0	-	-	0	0



TABLE A-16. Treaty Indian ocean troll pink salmon landings (odd years only) in numbers of fish by catch area and month. (Page 2 of 2)

Year or Avg. <sup>a/</sup>	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	Total	
									May-Sept.	Year
<b>Total Statewide</b>										
1977-1979	1	49	1,550	1,053	3,019	21	0	0	5,691	5,692
1981-1985	0	32	214	2,208	7,806	320	0	0	10,580	10,580
1987-1989	0	5	10	8,991	4,254	591	0	0	13,851	13,851
1991-1995	0	0	1	499	5,519	261	0	0	6,280	6,280
1997-1999	0	0	0	0	1,573	81	-	0	1,653	1,653
2001	0	11	0	696	1,537	207	-	0	2,451	2,451
2003	0	0	0	172	41	23	0	0	236	236
2005	0	0	0	186	198	3	0	0	387	387
2007 <sup>b/</sup>	0	0	7	326	251	0	0	0	584	584
2009 <sup>b/</sup>	0	0	0	427	368	0	0	0	795	795

a/ Odd year averages only.

b/ Preliminary.

TABLE A-17. Washington ocean recreational salmon fishing effort in angler trips by port and statistical month. (Page 1 of 2)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
<u>Neah Bay</u>								
1976-1980	746	1,094	4,100	13,027	17,885	6,974	529	44,206
1981-1985	80	557	979	9,338	13,391	3,382	126	27,495
1986-1990	-	431	491	13,953	7,341	2,193	-	23,175
1991-1995 <sup>a/</sup>	-	1,258	4	12,553	9,455	994	-	20,494
1996-2000 <sup>a/</sup>	-	-	-	3,462	5,345	1,098	-	8,301
2001	-	-	-	10,450	6,516	981	-	17,947
2002	-	576	2,533	3,957	5,467	1,151	-	13,684
2003	-	-	1,372	10,109	8,071	897	-	20,449
2004	-	-	435	14,337	10,376	993	-	26,141
2005	-	-	-	11,462	4,977	1,972	-	18,410
2006	-	-	946	6,600	4,935	928	-	13,409
2007	-	-	-	6,945	5,731	691	-	13,367
2008	-	-	1,066	2,475	2,582	247	-	6,370
2009	-	-	225	6,436	8,608	1,202	-	16,471
2010 <sup>b/</sup>	-	-	1,239	5,701	3,803	807	-	11,549
<u>La Push</u>								
1976-1980	24	344	1,341	7,932	11,716	3,916	436	24,736
1981-1985	-	0	77	1,119	2,075	231	239	3,332
1986-1990	-	66	60	1,768	749	154	113	2,478
1991-1995	-	-	-	2,236	548	480	8	2,587
1996-2000	-	-	-	1,060	666	588	-	1,537
2001	-	-	-	1,941	960	247	239	3,387
2002	-	59	231	1,089	1,350	568	113	3,410
2003	-	-	244	1,774	1,595	628	128	4,369
2004	-	-	123	1,883	1,484	1,053	20	4,563
2005	-	-	-	1,867	2,039	895	160	4,961
2006	-	-	173	1,029	1,943	740	258	4,143
2007	-	-	-	989	1,640	639	0	3,268
2008	-	-	281	535	709	508	38	2,071
2009	-	-	102	1,462	2,700	601	212	5,077
2010 <sup>b/</sup>	-	-	390	838	1,940	513	154	3,836
<u>Westport</u>								
1976-1980	4,720	12,340	37,368	66,487	66,306	23,133	3,454	210,286
1981-1985	-	3,607	20,142	34,172	23,472	2,602	208	78,766
1986-1990	-	1,451	3,663	30,256	15,991	5,000	40	52,492
1991-1995	-	-	4,955	20,127	15,146	8,072	706	44,760
1996-2000	-	-	-	7,529	8,354	1,951	-	15,938
2001	-	-	-	25,363	16,256	8,063	-	49,682
2002	-	1,861	10,849	16,358	12,343	-	-	41,411
2003	-	-	4,278	20,747	18,302	4,722	-	48,049
2004	-	-	1,455	15,722	15,045	5,967	-	38,189
2005	-	-	1,119	12,560	15,488	6,003	-	35,170
2006	-	-	-	8,857	13,802	1,883	-	24,541
2007	-	-	-	9,548	14,143	2,225	-	25,916
2008	-	-	2,660	8,381	5,880	1,809	-	18,731
2009	-	-	777	10,217	21,238	5,599	-	37,831
2010 <sup>b/</sup>	-	-	7,822	11,841	13,804	4,961	-	38,428

TABLE A-17. Washington ocean recreational salmon fishing effort in angler trips by port and statistical month. (Page 2 of 2)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
<b><u>Ilwaco<sup>c/</sup></u></b>								
1976-1980	914	4,670	20,809	41,988	62,372	18,676	2,127	150,581
1981-1985	-	921	7,560	23,249	21,383	3,652	721	53,751
1986-1990	-	298	1,641	19,733	19,450	1,782	-	41,268
1991-1995	-	-	1,660	17,100	11,766	7,412	-	37,108
1996-2000	-	-	-	4,775	7,041	3,037	-	12,683
2001	-	-	-	21,097	25,229	9,060	-	55,386
2002	-	215	1,290	9,004	18,137	8,016	-	36,662
2003	-	-	455	15,033	29,574	6,938	-	52,000
2004	-	-	597	11,662	23,716	7,836	-	43,811
2005	-	-	-	6,070	18,968	7,016	-	32,054
2006	-	-	-	5,740	15,480	1,950	-	23,170
2007	-	-	-	7,486	20,350	2,295	-	30,132
2008	-	-	777	4,506	5,156	-	-	10,439
2009	-	-	193	10,271	30,247	1,470	-	42,181
2010 <sup>b/</sup>	-	-	557	7,165	17,349	2,070	-	27,141
<b><u>Total Statewide<sup>c/</sup></u></b>								
1976-1980	3,574	18,447	63,618	129,433	158,279	51,916	5,256	429,809
1981-1985	80	4,067	22,991	67,877	60,321	7,746	436	163,344
1986-1990	-	1,339	5,840	65,710	43,382	5,090	40	119,412
1991-1995 <sup>a/</sup>	-	1,258	4,140	48,319	36,915	16,837	714	104,949
1996-2000 <sup>a/</sup>	-	-	-	15,695	21,407	4,496	-	38,459
2001	-	-	-	58,851	48,961	18,351	239	126,402
2002	-	2,711	14,903	30,408	37,297	9,735	113	95,167
2003	-	-	6,349	47,663	57,542	13,185	128	124,867
2004	-	-	2,610	43,604	50,621	15,849	20	112,704
2005	-	-	1,119	31,959	41,472	15,886	160	90,595
2006	-	-	1,119	22,226	36,159	5,501	258	65,263
2007	-	-	-	24,968	41,865	5,851	0	72,683
2008	-	-	4,784	15,898	14,327	2,564	38	37,610
2009	-	-	1,297	28,386	62,792	8,872	212	101,560
2010 <sup>b/</sup>	-	-	10,008	25,546	36,896	8,351	154	80,955

a/ Includes effort from the Washington State waters Area 4B fishery (none in 1994 or 1999).

b/ Preliminary.

c/ Includes effort from the North Jetty when the ocean fishery was open; does not include effort reported as occurring inside the Columbia River mouth (North Jetty effort when the ocean fishery was closed and Buoy 10 was open).

TABLE A-18. Washington ocean recreational Chinook and coho salmon landings in numbers of fish by port of landing and statistical month. (Page 1 of 3)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK									COHO							
<u>Neah Bay</u>																
1976-1980	318	534	1,197	2,438	1,424	617	96	6,334	213	537	3,363	11,424	20,652	7,761	252	44,158
1981-1985	57	149	234	1,293	483	194	35	2,224	80	338	639	8,878	16,452	3,414	150	29,436
1986-1990 <sup>a/</sup>	-	114	143	2,554	358	35	-	2,963	-	-	384	15,896	11,629	3,446	-	29,747
1991-1995 <sup>b/</sup>	-	148	-	1,443	232	62	-	1,420	-	40	-	15,654	13,052	991	-	25,804
1996-2000 <sup>b/</sup>	-	-	-	396	68	5	-	267	-	-	-	1,686	5,023	1,782	-	7,103
2001	-	-	-	1,103	366	54	-	1,523	-	-	-	9,840	6,936	1,101	-	17,877
2002	-	234	1,225	3,004	757	7	-	5,227	-	-	-	1,792	5,419	1,185	-	8,396
2003	-	-	589	3,071	997	40	-	4,697	-	-	785	9,104	8,721	1,139	-	19,749
2004	-	-	235	4,117	1,090	73	-	5,515	-	-	361	14,188	13,846	1,005	-	29,400
2005	-	-	-	2,254	316	213	-	2,784	-	-	-	7,033	2,420	765	-	10,218
2006	-	-	166	734	443	73	-	1,417	-	-	380	3,763	1,570	309	-	6,023
2007	-	-	-	1,179	245	47	-	1,471	-	-	-	4,981	4,997	631	-	10,608
2008 <sup>b/</sup>	-	-	311	725	317	3	-	1,357	-	-	-	679	1,459	23	-	2,161
2009	-	-	51	1,277	1,071	47	-	2,447	-	-	118	4,807	7,500	912	-	13,336
2010 <sup>c/</sup>	-	-	144	1,573	1,453	129	-	3,299	-	-	1	1,926	1,609	150	-	3,687
<u>La Push</u>																
1976-1980	0	8	161	948	1,318	410	135	2,844	22	271	1,671	8,586	15,198	3,879	43	28,864
1981-1985	-	0	7	132	166	8	-	304	-	0	72	861	2,786	251	-	3,791
1986-1990 <sup>a/</sup>	-	9	10	303	93	15	-	391	-	-	37	2,129	1,026	125	-	3,022
1991-1995	-	-	-	215	31	29	2	207	-	-	-	2,766	606	444	2	3,014
1996-2000	-	-	-	188	125	54	-	259	-	-	-	894	732	704	-	1,550
2001	-	-	-	324	100	60	100	584	-	-	-	1,785	1,357	153	15	3,310
2002	-	7	123	1,132	579	92	43	1,976	-	-	-	492	1,010	146	4	1,652
2003	-	-	128	785	802	111	62	1,888	-	-	136	1,564	1,502	193	12	3,407
2004	-	-	38	853	529	404	6	1,830	-	-	37	1,437	1,266	420	3	3,163
2005	-	-	-	605	694	309	43	1,651	-	-	-	274	1,395	633	18	2,320
2006	-	-	36	247	955	342	91	1,670	-	-	36	744	1,041	61	2	1,884
2007	-	-	-	132	348	116	0	595	-	-	-	758	1,869	142	0	2,769
2008	-	-	80	244	300	106	6	736	-	-	-	102	273	165	1	541
2009	-	-	7	194	329	53	97	680	-	-	165	1,944	4,317	377	92	6,896
2010 <sup>c/</sup>	-	-	38	294	715	86	45	1,177	-	-	-	211	709	223	37	1,180

TABLE A-18. Washington ocean recreational Chinook and coho salmon landings in numbers of fish by port of landing and statistical month. (Page 2 of 3)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK									COHO							
<u>Westport</u>																
1976-1980	2,826	5,744	20,759	18,019	15,844	5,707	929	67,945	161	12,374	43,808	89,416	63,127	21,910	2,274	232,518
1981-1985	-	2,328	16,253	17,397	7,513	407	17	40,102	-	2,457	11,790	27,665	22,997	3,371	34	63,289
1986-1990	-	667	1,539	10,334	5,012	1,692	-	17,387	-	19	2,220	40,125	23,296	7,004	45	69,421
1991-1995	-	-	1,911	3,062	2,764	1,496	213	7,853	-	-	6,781	24,170	19,803	8,578	322	54,327
1996-2000	-	-	-	1,908	1,667	585	-	3,544	-	-	-	8,644	9,155	1,241	-	17,062
2001	-	-	-	12,205	2,758	782	-	15,745	-	-	-	31,372	25,115	12,909	-	69,396
2002	-	2,313	13,877	17,848	8,548	-	-	42,586	-	5	271	8,043	10,762	-	-	19,081
2003	-	-	1,972	9,103	8,953	1,786	-	21,814	-	-	2,714	14,882	17,343	4,328	-	39,267
2004	-	-	254	4,087	5,358	1,647	-	11,340	-	-	1,183	7,060	12,476	8,617	-	29,336
2005	-	-	364	5,245	12,179	4,585	-	22,373	-	-	126	3,139	4,869	2,374	-	10,508
2006	-	-	-	2,293	3,125	398	-	5,815	-	-	-	2,008	5,675	1,096	-	8,779
2007	-	-	-	2,494	2,545	208	-	5,247	-	-	-	7,289	14,055	1,648	-	22,992
2008	-	-	2,145	4,459	2,735	305	-	9,644	-	-	30	2,550	3,383	1,564	-	7,528
2009	-	-	124	2,080	2,594	225	-	5,023	-	-	539	10,745	33,181	9,403	-	53,868
2010 <sup>c/</sup>	-	-	4,711	9,948	10,586	1,744	-	26,989	-	-	45	3,680	3,957	4,925	-	12,607
<u>Ilwaco<sup>d/</sup></u>																
1976-1980	286	2,019	9,143	7,497	15,789	2,261	182	36,969	493	5,627	40,398	69,166	65,240	23,882	2,221	206,286
1981-1985	-	214	3,364	4,545	4,505	279	40	12,031	-	5,410	10,296	36,373	26,437	5,982	825	75,883
1986-1990	-	111	233	1,793	3,302	76	-	5,334	-	-	2,638	32,864	27,048	2,114	-	62,868
1991-1995	-	-	86	704	736	194	-	1,677	-	-	2,733	25,600	14,459	6,796	-	48,220
1996-2000	-	-	-	356	561	129	-	923	-	-	-	7,157	8,380	2,707	-	15,730
2001	-	-	-	2,253	2,300	569	-	5,122	-	-	-	32,325	34,359	10,795	-	77,479
2002	-	53	1,927	3,380	2,571	101	-	8,032	-	-	30	10,136	23,997	10,842	-	45,005
2003	-	-	44	1,498	3,561	681	-	5,784	-	-	600	24,359	43,757	7,957	-	76,673
2004	-	-	22	765	4,039	1,396	-	6,222	-	-	935	17,203	27,040	5,859	-	51,037
2005	-	-	-	1,174	7,002	1,385	-	9,561	-	-	-	7,000	17,066	4,658	-	28,724
2006	-	-	-	478	1,148	140	-	1,765	-	-	-	6,533	12,222	646	-	19,401
2007	-	-	-	292	1,225	114	-	1,631	-	-	-	12,170	32,559	2,689	-	47,419
2008	-	-	474	1,166	1,258	-	-	2,898	-	-	330	3,337	4,973	-	-	8,640
2009	-	-	10	925	3,239	28	-	4,202	-	-	334	17,246	45,207	1,605	-	64,392
2010 <sup>c/</sup>	-	-	106	1,485	3,588	229	-	5,409	-	-	1	6,430	11,725	650	-	18,805

TABLE A-18. Washington ocean recreational Chinook and coho salmon landings in numbers of fish by port of landing and statistical month. (Page 3 of 3)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK									COHO							
<b>Total Statewide<sup>d/</sup></b>																
1976-1980	2,392	8,304	31,259	28,901	34,375	8,790	1,285	114,092	551	18,809	89,239	178,591	164,217	56,656	3,873	511,827
1981-1985	57	2,153	15,884	23,367	12,667	645	46	54,662	80	2,961	22,620	73,777	68,672	9,800	436	172,399
1986-1990 <sup>a/</sup>	-	901	1,886	14,984	8,674	1,212	-	26,075	-	19	5,077	91,015	62,794	7,165	45	165,058
1991-1995 <sup>b/</sup>	-	148	1,041	5,009	3,756	1,743	215	11,156	-	40	6,124	63,585	47,920	16,697	324	131,364
1996-2000 <sup>b/</sup>	-	-	-	2,603	2,407	564	-	4,940	-	-	-	17,736	23,289	3,967	-	41,445
2001	-	-	-	15,885	5,524	1,465	100	22,974	-	-	-	75,322	67,767	24,958	15	168,062
2002	-	2,607	17,152	25,364	12,455	200	43	57,821	-	5	301	20,463	41,188	12,173	4	74,134
2003	-	-	2,733	14,457	14,313	2,618	62	34,183	-	-	4,235	49,909	71,323	13,617	12	139,096
2004	-	-	549	9,822	11,016	3,520	6	24,907	-	-	2,516	39,888	54,628	15,901	3	112,936
2005	-	-	364	9,278	20,191	6,492	43	36,369	-	-	126	17,446	25,750	8,430	18	51,770
2006	-	-	202	3,751	5,670	953	91	10,667	-	-	416	13,047	20,509	2,112	2	36,087
2007	-	-	-	4,097	4,362	485	0	8,944	-	-	-	25,198	53,479	5,110	0	83,788
2008	-	-	3,011	6,594	4,611	414	6	14,635	-	-	360	6,669	10,088	1,752	1	18,870
2009	-	-	192	4,476	7,233	353	97	12,351	-	-	1,157	34,742	90,204	12,297	92	138,493
2010 <sup>c/</sup>	-	-	5,000	13,299	16,341	2,189	45	36,874	-	-	47	12,247	17,999	5,947	37	36,278

a/ Neah Bay and La Push statistics do not include estimates of 707 Chinook killed during Chinook nonretention fishery (July 19-August 20, 1987).

b/ Includes catch from the Washington State waters Area 4B fishery in 1991, 1992, 1993, 1996, 1997, 1998, 2000, and 2008.

c/ Preliminary.

d/ Includes catch from the North Jetty when the ocean fishery was open; does not include catch reported as occurring inside the Columbia River mouth (North Jetty catch when the ocean fishery was closed, and Buoy 10 was open).

TABLE A-19. Washington ocean recreational pink salmon landings in numbers of fish by port of landing and statistical month.  
(Page 1 of 2)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
<u>Neah Bay</u>								
1977	0	0	15	1,667	8,714	89	0	10,485
1979	17	1	308	2,375	8,408	646	24	11,779
1981	-	18	7	1,787	5,965	-	27	7,804
1983	-	-	-	409	3,605	154	-	4,168
1985	-	-	0	143	1,071	9	-	1,223
1987	-	-	6	686	713	-	-	1,405
1989 <sup>a/</sup>	-	0	0	1,443	295	202	-	1,940
1991 <sup>a/</sup>	-	-	-	479	1,543	0	-	2,022
1993 <sup>a/</sup>	-	0	-	609	1,264	371	-	2,244
1995	-	-	-	-	2,578	30	-	2,608
1997 <sup>a/</sup>	-	-	-	79	498	-	-	577
1999	-	-	-	730	1,165	81	-	1,976
2001	-	-	-	1,715	1,081	3	-	2,799
2003	-	-	6	2,863	5,136	120	-	8,125
2005	-	-	-	1,456	1,375	62	-	2,893
2007	-	-	-	1,268	2,766	0	-	4,033
2009 <sup>b/</sup>	-	-	9	2,591	4,266	270	-	7,136
<u>La Push</u>								
1977	0	0	40	600	2,328	8	0	2,976
1979	-	1	16	259	1,529	0	-	1,805
1981	-	0	0	0	336	-	-	336
1983	-	-	-	7	253	1	-	261
1985	-	-	0	9	33	0	-	42
1987	-	-	0	12	37	-	-	49
1989	-	0	0	0	-	-	-	0
1991	-	-	-	46	-	-	-	46
1993	-	-	-	46	34	4	-	84
1995	-	-	-	-	78	11	-	89
1997	-	-	-	195	0	-	-	195
1999	-	-	-	87	47	0	-	134
2001	-	-	-	129	32	-	-	161
2003	-	-	4	419	459	23	0	905
2005	-	-	-	41	167	2	0	210
2007	-	-	-	42	84	0	0	126
2009 <sup>b/</sup>	-	-	6	148	77	0	0	231
<u>Westport</u>								
1977	0	303	1,424	11,649	909	10	0	14,295
1979	-	40	748	990	2,188	0	-	3,966
1981	-	31	177	771	717	-	-	1,696
1983	-	0	2	26	0	2	-	30
1985	-	-	0	695	907	4	-	1,606
1987	-	-	0	183	45	-	-	228
1989	-	0	0	28	45	-	-	73
1991	-	-	0	43	33	4	-	80
1993	-	-	-	33	35	2	-	70
1995	-	-	-	40	51	2	-	93
1997	-	-	-	520	96	22	-	638
1999	-	-	-	35	40	0	-	75
2001	-	-	-	782	136	-	-	918
2003	-	-	12	3,559	756	32	-	4,359
2005	-	-	0	26	128	0	-	154
2007	-	-	-	261	240	2	-	503
2009 <sup>b/</sup>	-	-	51	79	131	0	-	261

TABLE A-19. Washington ocean recreational pink salmon landings in numbers of fish by port of landing and statistical month.  
(Page 2 of 2)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
<b><u>Ilwaco<sup>c/</sup></u></b>								
1977	0	33	171	689	602	4	0	1,499
1979	-	3	8	246	26	0	-	283
1981	-	2	4	101	260	-	-	367
1983	-	0	0	0	2	0	-	2
1985	-	-	0	6	203	-	-	209
1987	-	-	0	110	9	-	-	119
1989	-	0	0	11	12	-	-	23
1991	-	-	0	45	21	0	-	66
1993	-	-	-	7	11	0	-	18
1995	-	-	-	4	18	9	-	31
1997	-	-	-	0	0	-	-	0
1999	-	-	-	0	3	0	-	3
2001	-	-	-	5	31	4	-	40
2003	-	-	0	2	16	0	-	18
2005	-	-	-	3	0	0	-	3
2007	-	-	-	5	3	0	-	8
2009 <sup>b/</sup>	-	-	0	0	0	0	-	0
<b><u>Total Statewide<sup>c/</sup></u></b>								
1977	0	336	1,650	14,605	12,553	111	0	29,255
1979	17	45	1,080	3,870	12,151	646	24	17,833
1981	-	51	188	2,659	7,278	-	27	10,203
1983	-	0	2	442	3,860	157	-	4,461
1985	-	-	0	853	2,214	13	-	3,080
1987	-	-	6	991	804	-	-	1,801
1989 <sup>a/</sup>	-	0	0	1,482	352	202	-	2,036
1991 <sup>a/</sup>	-	-	0	613	1,597	4	-	2,214
1993 <sup>a/</sup>	-	0	-	695	1,344	377	-	2,416
1995	-	-	-	44	2,725	52	-	2,821
1997 <sup>a/</sup>	-	-	-	794	594	22	-	1,410
1999	-	-	-	852	1,255	81	-	2,188
2001	-	-	-	2,631	1,280	7	-	3,918
2003	-	-	22	6,843	6,367	175	0	13,407
2005	-	-	0	1,526	1,670	64	0	3,260
2007	-	-	-	1,575	3,093	2	0	4,670
2009 <sup>b/</sup>	-	-	65	2,818	4,474	270	0	7,627

a/ Includes catch from the Washington State waters Area 4B fishery.

b/ Preliminary.

c/ Includes catch from the North Jetty when the ocean fishery was open; does not include catch reported as occurring inside the Columbia River mouth (North Jetty catch when the ocean fishery was closed and Buoy 10 was open).



TABLE A-20. Cape Falcon to U.S./Mexico border commercial troll salmon fishing effort in days fished by region and month.<sup>a/</sup>  
(Page 1 of 2)

Year or Avg.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
<u>Cape Falcon to Humbug Mt.<sup>a/</sup></u>											
1978-1980	-	-	650	2,964	12,169	11,602	1,692	598	10	-	29,684
1981-1985	-	-	1,413	1,011	10,193	5,360	941	448	10	-	19,377
1986-1990	-	-	3,745	4,494	14,033	8,093	3,214	2,162	257	-	35,843
1991-1995	-	-	1,234	2,027	2,444	2,054	1,335	1,321	88	-	8,674
1996-2000	-	-	1,282	1,573	960	1,532	973	636	114	-	6,815
2001	-	937	2,011	1,980	1,358	2,051	1,214	748	135	1	10,435
2002	367	840	1,712	1,965	682	1,293	1,607	2,204	158	15	10,843
2003	175	1,390	2,857	1,541	902	1,347	1,665	1,447	139	14	11,477
2004	906	2,506	2,137	1,819	825	1,833	1,359	704	229	21	12,339
2005	1,298	369	2,832	2,663	-	-	2,519	960	142	75	10,858
2006	-	-	-	1,034	487	186	631	722	278	26	3,364
2007	-	338	1,198	791	264	1,143	304	244	161	1	4,444
2008	-	-	-	-	-	-	37	12	48	-	97
2009	-	-	-	-	-	-	631	60	-	-	691
2010 <sup>b/</sup>	-	-	1,018	985	564	714	35	157	-	-	3,473
<u>Humbug Mt. to Horse Mt. (KMZ)<sup>a/c/</sup></u>											
1978-1980	-	320	7,953	8,898	12,009	9,367	3,437	955	568	-	43,400
1981-1985	-	-	2,979	1,817	5,010	5,260	1,273	732	336	-	17,408
1986-1990	-	-	326	1,889	756	1,406	551	160	217	-	3,825
1991-1995	-	-	45	-	48	56	522	157	-	-	396
1996-2000	-	-	55	-	-	107	208	150	-	-	533
2001	-	-	18	41	-	150	411	166	-	-	786
2002	3	15	22	73	82	188	548	102	-	-	1,033
2003	0	21	49	74	109	106	185	113	2	-	659
2004	2	31	73	141	138	220	358	61	18	-	1,042
2005	6	1	-	-	-	-	438	110	18	-	573
2006	-	-	-	-	-	-	6	150	27	-	183
2007	-	6	8	137	99	95	417	47	12	-	821
2008	-	-	-	-	-	-	-	51	-	-	51
2009	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	43	-	26	40	-	72	-	-	181

TABLE A-20. Cape Falcon to U.S./Mexico border commercial troll salmon fishing effort in days fished by region and month. (Page 2 of 2)

Year or Avg.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
<b><u>Horse Mt. to U.S./Mexico Border</u></b>											
1978-1980	-	1,399	13,359	14,229	21,707	8,985	5,102	-	-	-	59,571
1981-1985	-	2,037	10,225	7,881	15,092	8,601	4,766	-	-	-	47,380
1986-1990	-	-	14,517	15,253	14,467	9,262	2,839	-	-	-	56,337
1991-1995	-	-	7,860	5,620	5,160	4,320	2,620	-	-	-	25,580
1996-2000	-	-	4,642	4,173	4,570	2,323	2,230	-	-	-	18,082
2001	-	-	4,894	1,448	3,042	1,419	2,222	501	-	-	13,526
2002	-	-	4,246	3,247	4,664	2,816	1,686	139	-	-	16,798
2003	-	-	3,074	2,727	3,697	3,745	2,431	136	-	-	15,810
2004	-	-	5,146	4,034	6,297	3,470	1,972	290	-	-	21,209
2005	-	-	3,881	377	5,001	3,365	3,669	401	-	-	16,694
2006	-	-	2,062	103	650	2,593	2,477	374	-	-	8,259
2007	-	106	3,132	29	3,288	2,659	932	168	-	-	10,314
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	-	-	1,109	870	-	-	-	-	1,979
<b><u>Total South of Cape Falcon</u></b>											
1978-1980	-	1,718	21,962	21,347	45,885	29,955	10,230	1,553	578	-	132,655
1981-1985	-	2,037	14,617	10,709	30,296	19,221	6,981	1,180	346	-	84,165
1986-1990	-	-	18,589	21,258	28,802	18,198	6,604	2,322	292	-	96,006
1991-1995	-	-	9,112	7,242	6,636	5,974	4,059	1,416	88	-	34,492
1996-2000	-	-	5,979	5,752	4,953	3,962	3,411	786	116	-	25,430
2001	-	937	6,923	3,469	4,400	3,620	3,847	1,415	135	1	24,747
2002	370	855	5,980	5,285	5,428	4,297	3,841	2,445	158	15	28,674
2003	175	1,411	5,980	4,342	4,708	5,198	4,281	1,696	141	14	27,946
2004	908	2,537	7,356	5,994	7,260	5,523	3,689	1,055	247	21	34,590
2005	1,304	370	6,713	3,040	5,001	3,365	6,626	1,471	160	75	28,125
2006	-	-	2,062	1,137	1,137	2,779	3,114	1,246	305	26	11,806
2007	-	450	4,338	957	3,651	3,897	1,653	459	173	1	15,579
2008	-	-	-	-	-	-	37	63	48	-	-
2009	-	-	-	-	-	-	631	60	-	-	-
2010 <sup>b/</sup>	-	-	1,061	985	1,699	1,624	35	229	-	-	5,633

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month.

b/ Preliminary.

c/ The current KMZ boundaries are Humbug Mt. to Horse Mt. These have changed slightly since the early 1980s.

TABLE A-21. Cape Falcon to U.S./Mexico border commercial troll Chinook and coho salmon landings in numbers of fish by region and month<sup>a/</sup> (Page 1 of 2)

TABLE A-21: Cape Falcon to U.S./Mexico border: commercial fish Chinook and coho salmon landings in numbers of fish by region and month (Page 1 of 2)																			
Year or Avg.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK												COHO							
<u>Cape Falcon to Humbug Mt.<sup>a/</sup></u>																			
1978-1980	-	17	7,238	21,715	46,765	47,971	12,776	6,880	49	-	143,411	-	-	171,873	330,863	129,763	9,176	1,727	643,402
1981-1985	-	-	13,353	6,839	43,988	23,644	6,660	2,804	36	-	97,325	-	-	-	260,127	85,249	5,803	-	351,179
1986-1990	-	-	41,012	45,376	139,455	85,332	29,901	21,111	1,095	-	363,282	-	-	40	294,074	95,999	20,776	-	410,889
1991-1995	-	-	12,499	18,016	19,956	36,499	16,827	14,191	453	-	118,442	-	-	91,249	105,911	8,382	-	19	205,560
1996-2000	-	-	21,687	28,657	13,880	38,164	17,769	7,339	1,002	-	128,498	-	-	8	-	-	-	-	8
2001	-	18,536	60,552	42,926	37,539	60,707	30,535	15,112	1,345	21	267,273	-	-	-	-	-	-	-	-
2002	6,662	10,586	23,452	59,881	12,321	28,301	58,861	83,205	1,255	65	284,589	-	-	-	-	-	-	-	-
2003	3,192	58,899	73,522	31,841	19,579	37,321	49,646	39,089	996	137	314,222	-	-	-	-	-	-	-	-
2004	21,043	33,989	37,270	22,899	14,068	76,652	24,531	8,322	2,151	182	241,107	-	-	-	-	-	-	-	-
2005	28,297	4,782	55,741	49,895	-	-	81,937	17,170	787	335	238,944	-	-	-	-	-	-	-	-
2006	-	-	-	9,658	3,616	962	4,367	3,449	1,555	131	23,738	-	-	-	-	-	-	-	-
2007	-	1,856	7,328	4,463	1,759	12,360	713	795	670	3	29,947	-	-	-	-	5,023	519	-	5,542
2008	-	-	-	-	-	-	64	12	208	-	284	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	105	332	-	-	437	-	-	-	-	-	9,280	-	9,280
2010 <sup>b/</sup>	-	-	9,019	8,966	4,276	3,796	53	1,330	-	-	27,440	-	-	-	-	-	-	-	-
<u>Humbug Mt. to Horse Mt. (KMZ)<sup>a/c/</sup></u>																			
1978-1980	-	8,530	93,832	44,084	65,898	46,619	18,192	6,583	2,409	-	286,146	26,012	40,909	87,919	73,686	17,399	2,371	104	181,479
1981-1985	-	-	31,261	13,370	26,577	44,460	10,089	3,495	1,113	-	130,365	-	3,527	7,183	25,915	17,370	803	0	51,270
1986-1990	-	-	5,509	55,976	9,956	17,966	8,453	770	1,460	-	100,090	-	-	11,960	2,350	51	565	0	14,926
1991-1995	-	-	265	-	1,682	234	4,510	927	-	-	7,618	-	-	-	-	-	3	0	3
1996-2000	-	-	1,064	-	-	1,589	3,232	696	-	-	6,580	-	-	-	-	-	-	-	0
2001	-	-	233	362	-	1,290	6,509	728	-	-	9,122	-	-	-	-	-	-	-	-
2002	5	103	118	952	1,457	3,399	13,275	961	-	-	20,270	-	-	-	-	-	-	-	-
2003	0	1,764	659	584	1,082	1,108	3,163	753	3	-	9,116	-	-	-	-	-	-	-	-
2004	6	750	774	2,831	7,550	21,697	6,531	220	40	-	40,399	-	-	-	-	-	-	-	-
2005	87	6	-	-	-	-	8,430	641	156	-	9,320	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	12	590	136	-	738	-	-	-	-	-	-	-	-
2007	-	15	25	727	1,150	1,524	9,162	209	47	-	12,859	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	236	-	-	236	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	164	-	51	125	-	529	-	-	869	-	-	-	-	-	-	-	-

TABLE A-21. Cape Falcon to U.S./Mexico border commercial troll Chinook and coho salmon landings in numbers of fish by region and month. (Page 2 of 2)

Year or Avg.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK												COHO							
<u>Horse Mt. to U.S./Mexico Border</u>																			
1976-1980	-	34,194	108,017	87,178	128,494	48,348	26,139	-	-	-	432,370	13	13,988	42,514	19,864	4,307	540	0	67,225
1981-1985	-	31,016	95,110	63,197	128,909	57,751	17,536	-	-	-	393,519	37	503	5,765	14,913	2,219	276	0	23,173
1986-1990	-	-	239,714	226,495	193,068	71,735	17,365	-	-	-	748,377	-	-	15,505	17,802	3,427	163	0	36,897
1991-1995	-	-	121,373	73,940	80,950	42,707	22,018	-	-	-	340,988	-	-	25,850	12,250	2,825	-	-	40,925
1996-2000	-	-	121,717	101,679	88,632	24,057	25,378	-	-	-	361,464	-	-	-	-	-	-	-	0
2001	-	-	73,044	11,497	63,084	14,172	22,111	3,655	-	-	187,563	-	-	-	-	-	-	-	-
2002	-	-	86,120	93,214	128,032	56,896	13,456	470	-	-	378,188	-	-	-	-	-	-	-	-
2003	-	-	73,234	104,201	123,712	111,086	73,735	1,882	-	-	487,850	-	-	-	-	-	-	-	-
2004	-	-	97,596	154,175	157,237	44,525	15,451	1,211	-	-	470,195	-	-	-	-	-	-	-	-
2005	-	-	76,855	5,001	139,928	35,046	74,673	2,305	-	-	333,808	-	-	-	-	-	-	-	-
2006	-	-	9,911	391	16,783	18,589	22,982	1,072	-	-	69,728	-	-	-	-	-	-	-	-
2007	-	748	36,598	156	41,808	23,212	2,505	352	-	-	105,379	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	-	-	8,918	6,180	-	-	-	-	15,098	-	-	-	-	-	-	-	-
<u>Total South of Cape Falcon</u>																			
1976-1980	-	42,728	209,087	135,541	241,157	142,938	57,106	13,463	2,458	-	844,479	26,024	54,897	267,931	424,414	151,469	12,087	1,141	857,041
1981-1985	-	31,016	139,724	83,407	199,475	125,855	34,284	6,299	1,149	-	621,208	37	4,029	12,948	248,929	70,738	2,240	0	334,855
1986-1990	-	-	286,235	316,652	336,505	167,846	55,719	21,881	1,642	-	1,186,481	-	-	27,490	313,756	80,277	4,883	0	426,405
1991-1995	-	-	133,977	88,353	93,260	71,953	39,747	14,748	453	-	442,491	-	-	71,475	118,161	10,265	3	12	199,916
1996-2000	-	-	144,468	130,783	94,184	63,810	46,379	8,035	1,002	-	488,661	-	-	8	-	-	-	-	8
2001	-	18,536	133,829	54,785	100,623	76,169	59,155	19,495	1,345	21	463,958	-	-	-	-	-	-	-	-
2002	6,667	10,689	109,690	154,047	141,810	88,596	85,592	84,636	1,255	65	683,047	-	-	-	-	-	-	-	-
2003	3,192	60,663	147,415	136,626	144,373	149,515	126,544	41,724	999	137	811,188	-	-	-	-	-	-	-	-
2004	21,049	34,739	135,640	179,905	178,855	142,874	46,513	9,753	2,191	182	751,701	-	-	-	-	-	-	-	-
2005	28,384	4,788	132,596	54,896	139,928	35,046	165,040	20,116	943	335	582,072	-	-	-	-	-	-	-	-
2006	-	-	9,911	10,049	20,399	19,551	27,361	5,111	1,691	131	94,204	-	-	-	-	-	-	-	-
2007	-	2,619	43,951	5,346	44,717	37,096	12,380	1,356	717	3	148,185	-	-	-	-	5,023	519	-	5,542
2008	-	-	-	-	-	-	64	248	208	-	520	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	105	332	-	-	437	-	-	-	-	-	9,280	-	9,280
2010 <sup>b/</sup>	-	-	9,183	8,966	13,245	10,101	53	1,859	-	-	43,407	-	-	-	-	-	-	-	-

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month.

b/ Preliminary.

c/ The current KMZ boundaries are Humbug Mt. to Horse Mt. These have changed slightly since the early 1980s.

TABLE A-22. Cape Falcon to U.S/Mexico border ocean recreational fishing effort in salmon angler trips by region and month.<sup>a/</sup>  
(Page 1 of 2)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
<u>Cape Falcon to Humbug Mt.<sup>a/</sup></u>											
1978-1980	-	-	0	9,025	44,358	97,228	83,028	17,580	2,250	151	252,629
1981-1985	-	-	-	5,279	21,790	78,019	61,312	10,677	1,603	--	151,116
1986-1990	-	-	-	2,054	18,538	82,564	51,012	11,171	--	--	164,930
1991-1995	-	-	-	1,817	11,249	63,162	22,523	5,191	4,948	396	64,187
1996-2000	-	-	-	708	596	9,570	4,388	3,527	2,933	170	21,804
2001	-	-	0	1,349	17,548	35,973	9,449	4,384	2,254	162	71,119
2002	-	-	275	1,295	6,181	36,658	14,194	9,322	7,893	50	75,868
2003	-	81	139	1,695	10,884	54,115	31,069	8,437	3,635	395	110,450
2004	-	78	238	1,490	14,867	49,370	28,773	10,599	3,094	291	108,800
2005	-	30	406	1,470	12,598	13,820	9,797	11,248	778	12	50,159
2006	-	24	92	800	4,918	18,334	3,817	9,996	5,368	98	43,447
2007	-	36	75	1,244	7,828	22,067	25,908	5,227	2,341	40	64,766
2008	-	-	-	-	3,253	7,681	5,052	3,635	2,348	--	21,969
2009	-	-	-	-	4,144	33,012	23,429	3,743	2,009	--	66,337
2010 <sup>b/</sup>	-	-	-	863	2,960	9,116	16,794	6,334	1,048	--	37,115
<u>Humbug Mt. to Horse Mt. (KMZ)<sup>a/c/</sup></u>											
1978-1980	0	0	4	1,607	20,812	50,059	30,892	8,329	5,617	913	118,233
1981-1985	0	0	1	3,481	14,938	49,198	26,922	4,354	3,416	138	102,448
1986-1990	0	0	-	5,291	33,539	62,718	27,347	5,042	3,353	-	135,949
1991-1995	-	-	-	6,722	16,127	28,644	7,901	7,727	2,879	-	51,816
1996-2000	-	-	-	3,271	9,150	5,570	12,832	3,266	2,766	-	36,854
2001	-	-	-	6,542	11,561	11,274	15,394	1,683	4,340	-	50,794
2002	-	-	-	4,989	10,558	1,259	14,412	6,074	3,973	-	41,265
2003	-	-	-	3,669	5,103	7,346	8,750	3,026	2,630	-	30,524
2004	-	-	-	5,830	7,419	9,227	13,450	6,405	1,575	-	43,906
2005	-	-	-	1,799	9,099	1,932	8,781	5,898	2,398	-	29,907
2006	-	-	-	4,887	8,619	3,174	-	7,320	3,081	-	27,081
2007	-	-	-	2,346	6,223	7,541	10,178	2,004	3,263	-	31,555
2008	-	-	-	-	712	2,317	701	-	1,065	-	4,795
2009	-	-	-	-	268	2,329	3,269	5,424	-	-	11,290
2010 <sup>b/</sup>	-	-	-	665	771	1,280	2,502	2,700	2,270	-	10,188

TABLE A-22. Cape Falcon to U.S./Mexico border ocean recreational fishing effort in salmon angler trips by region and month. (Page 2 of 2)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
<b><u>Horse Mt. to U.S./Mexico Border</u></b>											
1976-1980	9,865	12,468	9,230	9,929	12,998	22,054	19,400	13,245	7,968	4,078	119,603
1981-1985	5,107	7,945	8,771	8,898	14,341	22,038	16,941	9,593	5,648	1,426	100,709
1986-1990	8,272	17,094	24,034	13,831	23,693	36,170	22,631	10,893	5,029	1,563	163,209
1991-1995	675	15,641	23,079	22,180	30,007	51,595	26,483	11,093	5,939	302	186,873
1996-2000	32	14,341	25,245	21,784	31,874	42,867	25,997	9,463	4,144	610	176,094
2001	0	1,573	26,353	23,014	14,267	30,775	23,004	12,782	6,081	2,593	140,442
2002	194	3,760	40,477	27,539	30,025	45,831	30,791	7,688	1,823	381	188,509
2003	607	6,374	15,069	17,055	20,779	34,536	14,786	6,713	2,667	264	118,850
2004	183	999	32,865	28,873	29,067	57,641	27,768	9,908	4,303	1,539	193,146
2005	869	521	24,631	19,797	27,711	38,248	22,891	13,250	5,868	965	154,751
2006	289	298	19,198	17,128	25,376	31,705	9,684	4,102	1,827	448	110,055
2007	249	855	15,043	13,297	19,620	21,548	8,532	3,091	1,817	1,394	85,446
2008	206	185	-	-	-	-	-	-	-	-	391
2009	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	16,978	6,936	2,708	8,194	7,817	1,886	-	-	44,519
<b><u>Total South of Cape Falcon</u></b>											
1976-1980	9,865	12,468	9,233	20,561	78,167	169,341	133,321	39,154	14,935	3,420	490,465
1981-1985	5,107	7,945	8,772	14,491	42,353	149,255	92,912	22,489	9,385	1,564	354,272
1986-1990	8,272	17,094	24,034	20,765	75,770	181,452	100,990	27,107	7,041	1,563	464,088
1991-1995	675	15,641	23,079	29,374	54,157	106,679	41,813	20,897	10,221	425	302,876
1996-2000	32	14,341	25,258	25,763	41,620	58,007	43,217	16,256	9,843	723	234,753
2001	0	1,573	26,353	30,905	43,376	78,022	47,847	18,849	12,675	2,755	262,355
2002	194	3,760	40,752	33,823	46,764	83,748	59,397	23,084	13,689	431	305,642
2003	607	6,455	15,208	22,419	36,766	95,997	54,605	18,176	8,932	659	259,824
2004	183	1,077	33,103	36,193	51,353	116,238	69,991	26,912	8,972	1,830	345,852
2005	869	551	25,037	23,066	49,408	54,000	41,469	30,396	9,044	977	234,817
2006	289	322	19,290	22,815	38,913	53,213	13,501	21,418	10,276	546	180,583
2007	249	891	15,118	16,887	33,671	51,156	44,618	10,322	7,421	1,434	181,767
2008	206	185	-	-	3,965	9,998	5,753	3,635	3,413	--	27,155
2009	-	-	-	-	4,412	35,341	26,698	9,167	2,009	--	77,627
2010 <sup>b/</sup>	-	-	16,978	8,464	6,439	18,590	27,113	10,920	3,318	--	91,822

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month.

b/ Preliminary.

c/ The current KMZ boundaries are Humbug Mt. to Horse Mt. These have changed slightly since the early 1980s.

TABLE A-23. Cape Falcon to U.S./Mexico border ocean recreational salmon landings in numbers of fish by region and month.<sup>a/</sup> (Page 1 of 2)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
CHINOOK												COHO										
<u>Cape Falcon to Humbug Mt.<sup>a/</sup></u>																						
1978-1980	-	-	0	700	2,780	4,114	5,079	1,463	144	39	14,239	-	-	-	9,099	46,920	76,187	54,894	5,617	671	-	193,118
1981-1985	-	-	-	55	787	6,327	3,518	642	42	--	11,326	-	-	-	2,321	18,010	62,626	40,922	4,706	-	-	119,511
1986-1990	-	-	-	150	1,678	7,128	4,099	1,639	--	--	14,664	-	-	-	1,136	21,865	97,505	45,530	6,824	-	-	171,268
1991-1995	-	-	-	146	1,144	3,030	1,044	465	1,254	42	4,230	-	-	-	522	21,985	87,767	25,734	3,192	-	-	97,169
1996-2000	-	-	-	107	142	1,987	1,233	738	503	36	4,726	-	-	-	-	-	8,452	42	12	1	-	5,127
2001	-	-	0	217	2,038	7,816	4,721	1,965	594	23	17,374	-	-	-	21	17,671	37,093	205	76	22	-	55,088
2002	-	-	155	330	5,144	16,609	5,995	3,923	2,636	0	34,792	-	-	-	-	35	19,701	2,163	103	24	-	22,026
2003	-	2	22	268	2,936	15,116	9,235	3,960	1,273	64	32,876	-	-	-	2	7,578	50,861	25,318	64	14	-	83,837
2004	-	2	24	315	3,904	21,493	14,646	5,053	1,907	69	47,413	-	-	-	2	4,955	30,949	11,667	466	23	-	48,062
2005	-	6	104	201	3,696	4,228	4,564	5,524	280	0	18,603	-	-	-	-	2,064	1,422	37	107	-	-	3,630
2006	-	2	4	68	540	3,755	982	1,863	2,024	49	9,287	-	-	-	-	469	8,346	36	634	-	-	9,485
2007	-	3	0	72	255	804	1,076	597	474	16	3,297	-	-	-	2	4,734	19,223	16,417	311	-	-	40,687
2008	-	-	-	-	9	6	3	262	201	--	481	-	-	-	-	770	2,811	4,131	45	3	-	7,760
2009	-	-	-	-	9	36	47	92	226	--	410	-	-	-	-	4,859	38,001	25,325	799	6	-	68,990
2010 <sup>b/</sup>	-	-	-	75	207	380	1,105	439	122	--	2,328	-	-	-	-	368	2,181	8,339	1,242	-	-	12,130
<u>Humbug Mt. to Horse Mt. (KMZ)<sup>a/c/</sup></u>																						
1978-1980	-	0	0	252	2,699	8,214	5,604	706	721	75	18,272	--	--	1	483	17,791	29,095	9,034	713	430	0	57,548
1981-1985	-	0	1	2,463	4,949	17,196	7,185	703	515	9	33,021	--	--	0	378	5,668	17,700	5,744	354	1	0	29,844
1986-1990	-	0	-	1,782	14,924	21,557	8,664	1,935	581	-	49,211	--	--	-	1,081	12,458	32,289	7,650	877	10	-	54,361
1991-1995	-	-	-	2,752	6,005	4,480	1,559	1,849	653	-	13,312	-	-	-	186	8,173	15,356	2,224	900	2	-	18,580
1996-2000	-	-	-	1,298	3,637	2,596	5,622	709	702	-	14,564	-	-	-	33	63	55	98	22	9	-	244
2001	-	-	-	2,690	5,225	3,859	5,554	1,848	856	-	20,032	-	-	-	11	118	55	58	-	13	-	255
2002	-	-	-	3,048	7,768	630	8,533	5,785	301	-	26,065	-	-	-	10	253	42	57	41	-	-	403
2003	-	-	-	3,385	2,156	2,638	3,130	2,339	552	-	14,200	-	-	-	29	59	25	63	12	-	-	188
2004	-	-	-	6,514	4,530	6,090	9,100	3,214	233	-	29,681	-	-	-	194	440	787	369	42	3	-	1,835
2005	-	-	-	1,206	10,218	2,317	5,249	3,857	404	-	23,251	-	-	-	24	137	3	40	57	-	-	261
2006	-	-	-	4,620	6,199	2,515	-	4,464	397	-	18,195	-	-	-	93	503	150	-	169	7	-	922
2007	-	-	-	841	5,290	5,001	8,064	2,215	535	-	21,946	-	-	-	-	245	745	917	60	3	-	1,970
2008	-	-	-	-	-	-	-	-	280	-	280	-	-	-	-	449	1,273	409	-	3	-	2,134
2009	-	-	-	-	-	9	325	533	-	-	867	-	-	-	-	6	1,123	59	17	-	-	1,205
2010 <sup>b/</sup>	-	-	-	24	160	39	502	278	541	-	1,544	-	-	-	-	-	19	79	16	-	-	114

TABLE A-23. Cape Falcon to U.S./Mexico border ocean recreational salmon landings in numbers of fish by region and month. (Page 2 of 2)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
CHINOOK												COHO										
<u>Horse Mt. to U.S./Mexico Border</u>																						
1976-1980	5,830	8,504	8,715	6,238	11,781	16,557	9,694	7,432	6,663	1,338	82,753	10	14	238	1,439	1,551	2,151	600	136	14	2	6,155
1981-1985	5,947	7,266	7,238	7,654	13,303	18,990	16,587	8,530	5,546	1,410	92,471	0	1	21	149	680	903	303	40	29	0	2,125
1986-1990	5,630	15,288	26,365	10,037	18,925	28,491	17,858	7,834	4,240	1,319	135,987	0	1	56	212	1,300	2,384	772	153	12	0	4,890
1991-1995	244	11,376	21,564	15,561	27,663	53,815	17,807	8,925	4,451	159	161,502	0	9	23	260	3,128	5,839	733	142	25	--	10,159
1996-2000	6	14,184	23,734	17,596	29,070	40,667	17,615	5,878	2,977	982	149,280	-	-	3	11	112	91	59	16	6	-	283
2001	--	1,256	18,059	11,892	8,153	23,121	12,154	7,030	3,071	1,223	85,959	-	-	4	420	211	462	46	-	-	-	1,143
2002	14	2,979	37,759	21,933	30,342	51,328	17,859	3,290	348	61	165,913	-	-	2	22	130	333	46	-	-	-	533
2003	444	3,978	9,569	12,209	19,043	29,442	6,501	3,688	1,048	0	85,922	-	-	-	70	197	189	11	9	-	-	476
2004	41	510	31,470	24,847	33,948	70,611	24,970	8,717	2,818	338	198,270	-	-	-	41	113	475	201	34	-	-	864
2005	285	111	14,255	14,272	31,351	34,094	16,015	11,020	3,955	355	125,713	-	-	-	35	242	243	28	-	-	-	548
2006	55	109	9,408	14,233	24,099	26,657	4,023	982	256	67	79,889	-	-	-	108	640	588	49	-	-	-	1,385
2007	48	200	3,152	6,405	8,613	8,080	1,154	390	441	325	28,808	-	-	-	53	104	149	25	14	-	-	345
2008	0	6	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	5,317	2,408	596	2,495	2,784	377	-	-	13,977	-	-	8	7	68	15	19	-	-	-	117
<u>Total South of Cape Falcon</u>																						
1976-1980	5,830	8,504	8,715	7,190	17,259	28,886	20,378	9,602	7,471	1,428	115,264	10	14	239	11,021	66,262	107,432	64,529	6,466	847	2	256,821
1981-1985	5,947	7,266	7,239	10,162	19,039	42,513	27,290	9,875	6,070	1,419	136,819	0	1	21	1,919	17,153	81,228	46,969	4,158	30	0	151,479
1986-1990	5,630	15,288	26,365	11,939	35,527	57,176	30,621	11,409	4,588	1,319	199,862	0	1	56	2,202	35,623	132,177	53,953	6,489	18	0	230,519
1991-1995	244	11,376	21,564	17,908	33,611	58,321	19,472	10,960	5,475	140	179,043	0	9	23	722	22,857	67,713	12,805	2,319	26	--	106,474
1996-2000	2	11,347	23,735	19,001	32,850	45,250	24,470	7,326	4,181	678	168,570	-	-	3	22	175	5,218	199	42	9	-	5,655
2001	0	1,256	18,059	14,799	15,416	34,796	22,429	10,843	4,521	1,246	123,365	-	-	4	452	18,000	37,610	309	76	35	-	56,486
2002	14	2,979	37,914	25,311	43,254	68,567	32,387	12,998	3,285	61	226,770	-	-	2	32	418	20,076	2,266	144	24	-	22,962
2003	444	3,980	9,591	15,862	24,135	47,196	18,866	9,987	2,873	64	132,998	-	-	-	101	7,834	51,075	25,392	85	14	-	84,501
2004	41	512	31,494	31,676	42,382	98,194	48,716	16,984	4,958	407	275,364	-	-	-	237	5,508	32,211	12,237	542	26	-	50,761
2005	285	117	14,359	15,679	45,265	40,639	25,828	20,401	4,639	355	167,567	-	-	-	59	2,443	1,668	105	164	-	-	4,439
2006	55	111	9,412	18,921	30,838	32,927	5,005	7,309	2,677	116	107,371	-	-	-	201	1,612	9,084	85	803	7	-	11,792
2007	48	203	3,152	7,318	14,158	13,885	10,294	3,202	1,450	341	54,051	-	-	-	55	5,083	20,117	17,359	385	3	-	43,002
2008	0	6	-	-	9	6	3	262	481	--	767	-	-	-	-	1,219	4,084	4,540	45	6	-	9,894
2009	-	-	-	-	9	45	372	625	226	--	1,277	-	-	-	-	4,865	39,124	25,384	816	6	-	70,195
2010 <sup>b/</sup>	-	-	5,317	2,507	963	2,914	4,391	1,094	663	--	17,849	-	-	8	7	436	2,215	8,437	1,258	-	-	12,361

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month.

b/ Preliminary.

c/ The current KMZ boundaries are Humbug Mt. to Horse Mt. These have changed slightly since the early 1980s.



TABLE A-24. U.S./Canada border to Cape Falcon commercial troll salmon fishing effort in days fished by area and month.<sup>a/</sup>  
(Page 1 of 3)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season
<b><u>U.S./Canada Border to Leadbetter Pt. - Non-Indian</u></b>							
1976-1980	3,482	2,262	11,876	12,038	4,519	-	34,176
1981-1985	2,700	309	5,650	2,388	14	-	9,858
1986-1990	2,255	830	438	750	15	-	3,847
1991-1995	1,578	1,054	775	635	304	-	3,224
1996-2000	221	124	158	129	5	-	419
2001	209	212	159	70	38	-	688
2002	428	183	420	242	-	-	1,273
2003	421	195	476	415	77	-	1,584
2004	460	10	392	342	125	-	1,329
2005	492	104	337	402	-	-	1,335
2006	359	381	99	296	169	-	1,304
2007	445	253	354	114	8	-	1,174
2008	246	353	223	213	60	-	1,095
2009	467	551	432	320	134	-	1,904
2010 <sup>b/</sup>	511	858	501	428	46	-	2,344
<b><u>U.S./Canada Border to Leadbetter Pt. - Treaty Indian<sup>c/</sup></u></b>							
1976-1980	61	137	192	162	50	6	603
1981-1985	79	141	284	313	146	17	963
1986-1990	138	168	434	460	161	2	1,360
1991-1995	69	71	182	311	48	10	682
1996-2000	31	38	11	96	53	-	229
2001	53	65	122	172	104	-	516
2002	31	42	61	51	41	10	226
2003	24	27	63	57	45	15	216
2004	27	49	127	152	76	15	431
2005	98	146	126	150	77	0	597
2006	96	285	167	140	117	5	805
2007	22	205	189	167	7	0	590
2008 <sup>b/</sup>	30	125	102	231	91	1	579
2009 <sup>b/</sup>	82	238	219	260	4	4	803
2010 <sup>b/</sup>	173	363	209	155	52	4	952
<b><u>U.S./Canada Border to Leadbetter Pt. - Total<sup>c/</sup></u></b>							
1976-1980	3,543	2,399	12,069	12,200	4,569	6	34,780
1981-1985	2,779	388	4,804	2,701	149	17	10,821
1986-1990	2,393	832	609	1,210	164	2	5,207
1991-1995	1,016	704	492	819	230	10	3,260
1996-2000	208	137	74	173	55	-	648
2001	262	277	281	242	142	-	1,204
2002	459	225	481	293	41	10	1,499
2003	445	222	539	472	122	15	1,800
2004	487	59	519	494	201	15	1,760
2005	590	250	463	552	77	0	1,932
2006	455	666	266	436	286	5	2,109
2007	467	458	543	281	15	0	1,764
2008 <sup>b/</sup>	276	478	325	444	151	1	1,674
2009 <sup>b/</sup>	549	789	651	580	138	4	2,707
2010 <sup>b/</sup>	684	1,221	710	583	98	4	3,296

TABLE A-24. U.S./Canada border to Cape Falcon commercial troll salmon fishing effort in days fished by area and month.<sup>a/</sup>  
(Page 2 of 3)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season
<u>Leadbetter Pt. to Cape Falcon - Non-Indian</u>							
1976-1980	900	838	4,419	3,751	1,920	56	11,882
1981-1985	969	58	977	906	146	0	3,057
1986-1990	343	87	467	1,162	850	22	1,530
1991-1995	153	52	113	326	155	-	709
1996-2000	2	2	-	294	29	-	85
2001	29	27	97	126	39	-	318
2002	40	57	182	216	-	-	495
2003	113	24	152	175	63	-	527
2004	51	4	82	106	156	-	399
2005	230	51	55	283	-	-	619
2006	581	353	3	79	99	-	1,115
2007	99	73	50	179	24	-	425
2008	313	362	36	65	13	-	789
2009	79	98	252	173	13	-	615
2010 <sup>b/</sup>	92	310	164	137	24	-	727
<u>U.S./Canada Border to Cape Falcon - Non-Indian Total</u>							
1976-1980	4,382	3,100	16,295	15,788	6,438	56	46,058
1981-1985	3,669	305	5,497	3,294	149	0	12,915
1986-1990	2,598	895	671	1,447	858	22	5,377
1991-1995	1,731	1,106	888	879	407	-	3,756
1996-2000	223	126	158	227	19	-	487
2001	238	239	256	196	77	-	1,006
2002	468	240	602	458	-	-	1,768
2003	534	219	628	590	140	-	2,111
2004	511	14	474	448	281	-	1,728
2005	722	155	392	685	-	-	1,954
2006	940	734	102	375	268	-	2,419
2007	544	326	404	293	32	-	1,599
2008	559	715	259	278	73	-	1,884
2009	546	649	684	493	147	-	2,519
2010 <sup>b/</sup>	603	1,168	665	565	70	-	3,071
<u>U.S./Canada Border to Cape Falcon - Treaty Indian Total<sup>c/</sup></u>							
1976-1980	61	137	192	162	50	6	603
1981-1985	79	141	284	313	146	17	963
1986-1990	138	168	434	460	161	2	1,360
1991-1995	69	71	182	311	48	10	682
1996-2000	31	38	11	96	53	-	229
2001	53	65	122	172	104	-	516
2002	31	42	61	51	41	10	226
2003	24	27	63	57	45	15	216
2004	27	49	127	152	76	15	431
2005	98	146	126	150	77	0	597
2006	96	285	167	140	117	5	805
2007	22	205	189	167	7	0	590
2008 <sup>b/</sup>	30	125	102	231	91	1	579
2009 <sup>b/</sup>	82	238	219	260	4	4	803
2010 <sup>b/</sup>	173	363	209	155	52	4	952

TABLE A-24. U.S./Canada border to Cape Falcon commercial troll salmon fishing effort in days fished by area and month.<sup>a/</sup>  
(Page 3 of 3)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season
<b>U.S./Canada Border to Cape Falcon - Total Treaty Indian and Non-Indian<sup>c/</sup></b>							
1976-1980	4,598	1,584	14,872	14,595	3,982	38	39,663
1981-1985	3,186	443	3,575	1,919	273	16	9,396
1986-1990	2,569	1,036	678	1,862	635	16	6,784
1991-1995	720	519	515	556	178	0	2,489
1996-2000	265	193	105	239	79	-	881
2001	291	304	378	368	181	-	1,522
2002	499	282	663	509	41	10	1,994
2003	558	246	691	647	185	15	2,327
2004	538	63	601	600	357	15	2,159
2005	820	301	518	835	77	0	2,551
2006	1,036	1,019	269	515	385	5	3,224
2007	566	531	593	460	39	0	2,189
2008 <sup>b/</sup>	589	840	361	509	164	1	2,463
2009 <sup>b/</sup>	628	887	903	753	151	4	3,322
2010 <sup>b/</sup>	776	1,531	874	720	122	4	4,023

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month. Washington data are summarized by statistical month.

b/ Preliminary.

c/ Treaty troll effort in number of landings, which closely approximates days fished because treaty Indian fishers do not usually make multi-day trips. Season totals do not include January-April, October, or November-December treaty troll effort.

TABLE A-25. U.S./Canada border to Cape Falcon ocean troll Chinook and coho landings in number of fish by catch area and month.<sup>a/</sup> (Page 1 of 4)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK								COHO						
<u>U.S./Canada Border to Leadbetter Pt. - Non-Indian</u>														
1976-1980	41,761	24,669	51,037	33,083	9,456	-	160,006	97	134,856	303,327	174,800	62,229	-	567,347
1981-1985	25,195	3,442	24,381	4,671	31	-	52,131	-	-	117,950	25,994	100	-	120,394
1986-1990	27,081	11,294	8,914	1,811	11	-	41,133	-	-	18,447	34,981	16	-	35,367
1991-1995	15,857	11,859	3,929	1,279	1,118	-	24,589	-	-	7,119	13,592	8,242	-	23,332
1996-2000	5,247	2,897	4,030	1,456	3	-	9,880	-	-	3,905	5,207	193	-	7,939
2001	7,092	7,188	4,940	846	219	-	20,285	-	-	1,969	2,070	2,615	-	6,654
2002	18,010	11,001	15,271	7,781	-	-	52,063	-	-	-	53	-	-	53
2003	17,920	8,808	14,372	12,056	1,126	-	54,282	-	-	3,279	3,755	633	-	7,667
2004	15,254	1,157	7,891	8,885	1,827	-	35,014	-	-	2,042	4,652	5,469	-	12,163
2005	18,294	2,204	6,009	7,073	-	-	33,580	-	-	166	638	-	-	804
2006	4,735	3,548	1,073	3,458	1,831	-	14,645	-	-	122	816	253	-	1,191
2007	5,693	3,868	3,459	721	27	-	13,768	-	-	1,944	1,043	34	-	3,021
2008	1,451	3,350	1,173	1,161	259	-	7,394	-	-	351	917	361	-	1,629
2009	5,545	4,095	1,615	680	120	-	12,055	-	-	4,857	9,281	3,663	-	17,801
2010 <sup>b/</sup>	8,219	22,332	6,113	7,267	282	-	44,213	-	-	1,085	744	124	-	1,953
<u>U.S./Canada Border to Leadbetter Pt. - Treaty Indian<sup>c/</sup></u>														
1976-1980	787	2,037	1,776	415	70	11	5,086	720	7,677	2,915	1,275	443	11	13,030
1981-1985	2,150	1,883	3,636	1,336	1,018	198	10,023	283	7,435	16,406	24,484	16,666	54	65,274
1986-1990	6,877	5,955	6,726	4,506	1,248	12	25,312	3	4,256	32,310	35,942	11,051	7	83,563
1991-1995	4,343	4,181	3,511	4,243	571	29	16,849	1	1	17,220	26,038	5,275	103	48,535
1996-2000	2,580	6,524	446	3,806	1,893	-	15,249	0	0	15	11,063	8,533	-	19,611
2001	2,278	13,705	6,561	2,988	3,311	-	28,843	0	12	8,510	27,984	22,089	-	58,595
2002	5,364	11,206	12,079	8,074	3,123	30	39,846	1	1	3,449	4,929	9,042	80	17,422
2003	2,856	13,039	12,935	5,232	1,110	35	35,172	3	0	4,449	4,276	2,214	85	10,942
2004	9,947	16,977	10,765	6,960	5,086	25	49,735	3	3	16,133	36,684	9,274	100	62,097
2005	6,858	18,374	4,971	8,100	3,672	0	41,975	3	1	3,756	15,949	4,288	0	23,997
2006	2,821	8,341	7,736	6,690	4,957	15	30,545	16	102	10,475	10,634	10,711	5	31,938
2007	316	14,629	3,349	4,579	70	0	22,943	0	12	22,743	16,423	860	0	40,038
2008	359	8,863	2,099	6,007	3,574	1	20,902	0	18	865	3,564	9,819	0	14,266
2009 <sup>b/</sup>	1,494	5,828	2,329	2,566	37	25	12,254	0	0	25,422	35,141	100	15	60,663
2010 <sup>b/</sup>	2,136	13,091	6,942	9,683	1,529	10	33,381	2	63	2,035	5,073	4,312	15	11,485

TABLE A-25. U.S./Canada border to Cape Falcon ocean troll Chinook and coho landings in number of fish by catch area and month.<sup>a/</sup> (Page 2 of 4)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK								COHO						
<b>U.S./Canada Border to Leadbetter Pt. - Total<sup>c/</sup></b>														
1976-1980	42,548	26,706	52,813	33,498	9,526	11	165,092	740	34,648	306,242	176,074	62,673	11	580,376
1981-1985	27,345	4,637	23,141	6,007	1,024	198	62,154	283	7,435	110,766	50,478	16,706	54	185,667
1986-1990	33,958	14,990	10,291	5,955	1,250	12	66,445	3	4,256	39,689	63,927	11,054	7	118,930
1991-1995	13,857	11,297	5,082	5,266	1,018	29	36,520	1	1	20,068	36,911	10,220	103	67,200
1996-2000	6,778	8,842	1,252	4,389	1,893	-	23,153	0	0	1,577	14,187	8,610	-	24,375
2001	9,370	20,893	11,501	3,834	3,530	-	49,128	0	12	10,479	30,054	24,704	-	65,249
2002	23,374	22,207	27,350	15,855	3,123	30	91,909	1	1	3,449	4,982	9,042	80	17,475
2003	20,776	21,847	27,307	17,288	2,236	35	89,454	3	0	7,728	8,031	2,847	85	18,609
2004	25,201	18,134	18,656	15,845	6,913	25	84,749	3	3	18,175	41,336	14,743	100	74,260
2005	25,152	20,578	10,980	15,173	3,672	0	75,555	3	1	3,922	16,587	4,288	0	24,801
2006	7,556	11,889	8,809	10,148	6,788	15	45,190	16	102	10,597	11,450	10,964	5	33,129
2007	6,009	18,497	6,808	5,300	97	0	36,711	0	12	24,687	17,466	894	0	43,059
2008	1,810	12,213	3,272	7,168	3,833	1	28,296	0	18	1,216	4,481	10,180	0	15,895
2009 <sup>b/</sup>	7,039	9,923	3,944	3,246	157	25	24,309	0	0	30,279	44,422	3,763	15	78,464
2010 <sup>b/</sup>	10,355	35,423	13,055	16,950	1,811	10	77,594	2	63	3,120	5,817	4,436	15	13,438
<b>Leadbetter Pt. to Cape Falcon - Non-Indian</b>														
1976-1980	13,048	10,310	7,546	5,975	4,004	577	41,459	6	37,584	95,592	40,793	21,260	1,875	189,215
1981-1985	11,202	758	1,884	775	107	2	14,728	-	-	48,629	26,289	15,916	-	53,392
1986-1990	4,789	1,264	3,549	2,691	1,702	71	8,566	-	-	18,234	41,121	19,306	304	45,128
1991-1995	1,465	357	134	344	103	-	2,323	-	-	911	12,674	3,937	-	15,906
1996-2000	9	64	-	2,464	89	-	710	-	-	-	7,021	1,043	-	7,542
2001	898	1,713	1,036	901	487	-	5,035	-	-	4,052	3,970	2,769	-	10,791
2002	1,226	3,237	5,096	4,994	-	-	14,553	-	-	-	1,642	-	-	1,642
2003	5,717	1,281	1,796	2,760	750	-	12,304	-	-	1,890	4,169	1,672	-	7,731
2004	1,940	94	453	430	559	-	3,476	-	-	906	1,708	7,355	-	9,969
2005	5,373	1,235	629	4,334	-	-	11,571	-	-	358	2,898	-	-	3,256
2006	8,913	3,532	1	62	105	-	12,613	-	-	17	1,211	260	-	1,488
2007	950	600	158	213	22	-	1,943	-	22	1,378	12,735	283	-	14,418
2008	2,977	3,355	136	185	23	-	6,676	-	-	53	422	37	-	512
2009	265	281	260	163	4	-	973	-	-	9,652	5,125	165	-	14,942
2010 <sup>b/</sup>	790	6,882	2,289	1,894	152	-	12,007	-	-	735	405	49	-	1,189

TABLE A-25. U.S./Canada border to Cape Falcon ocean troll Chinook and coho landings in number of fish by catch area and month.<sup>a/</sup> (Page 3 of 4)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK								COHO						
<u>U.S./Canada Border to Cape Falcon - Non-Indian</u>														
1976-1980	54,809	34,978	58,583	39,058	13,460	577	201,465	36	71,298	398,919	215,593	83,490	1,875	756,562
1981-1985	36,397	3,511	21,389	5,446	113	2	66,859	-	-	154,422	47,025	5,372	-	173,785
1986-1990	31,870	12,242	10,688	3,829	1,708	71	49,699	-	-	27,564	65,822	19,314	304	71,470
1991-1995	17,321	12,216	4,063	1,537	1,220	-	26,331	-	-	8,030	23,097	10,866	-	35,261
1996-2000	5,255	2,961	4,030	2,688	92	-	10,590	-	-	3,905	9,887	715	-	12,967
2001	7,990	8,901	5,976	1,747	706	-	25,320	-	-	6,021	6,040	5,384	-	17,445
2002	19,236	14,238	20,367	12,775	-	-	66,616	-	-	-	1,695	-	-	1,695
2003	23,637	10,089	16,168	14,816	1,876	-	66,586	-	-	5,169	7,924	2,305	-	15,398
2004	17,194	1,251	8,344	9,315	2,386	-	38,490	-	-	2,948	6,360	12,824	-	22,132
2005	23,667	3,439	6,638	11,407	-	-	45,151	-	-	524	3,536	-	-	4,060
2006	13,648	7,080	1,074	3,520	1,936	-	27,258	-	-	139	2,027	513	-	2,679
2007	6,643	4,468	3,617	934	49	-	15,711	-	22	3,322	13,778	317	-	17,439
2008	4,428	6,705	1,309	1,346	282	-	14,070	-	-	404	1,339	398	-	2,141
2009	5,810	4,376	1,875	843	124	-	13,028	-	-	14,509	14,406	3,828	-	32,743
2010 <sup>b/</sup>	9,009	29,214	8,402	9,161	434	-	56,220	-	-	1,820	1,149	173	-	3,142
<u>U.S./Canada Border to Cape Falcon - Treaty Indian<sup>c/</sup></u>														
1976-1980	787	2,037	1,776	415	70	11	5,086	720	7,677	2,915	1,275	443	11	13,030
1981-1985	2,150	1,883	3,636	1,336	1,018	198	10,023	283	7,435	16,406	24,484	16,666	54	65,274
1986-1990	6,877	5,955	6,726	4,506	1,248	12	25,312	3	4,256	32,310	35,942	11,051	7	83,563
1991-1995	4,343	4,181	3,511	4,243	571	29	16,849	1	1	17,220	26,038	5,275	103	48,535
1996-2000	2,580	6,524	446	3,806	1,893	-	15,249	0	0	15	11,063	8,533	-	19,611
2001	2,278	13,705	6,561	2,988	3,311	-	28,843	0	12	8,510	27,984	22,089	-	58,595
2002	5,364	11,206	12,079	8,074	3,123	30	39,846	1	1	3,449	4,929	9,042	80	17,422
2003	2,856	13,039	12,935	5,232	1,110	35	35,172	3	0	4,449	4,276	2,214	85	10,942
2004	9,947	16,977	10,765	6,960	5,086	25	49,735	3	3	16,133	36,684	9,274	100	62,097
2005	6,858	18,374	4,971	8,100	3,672	0	41,975	3	1	3,756	15,949	4,288	0	23,997
2006	2,821	8,341	7,736	6,690	4,957	15	30,545	16	102	10,475	10,634	10,711	5	31,938
2007	316	14,629	3,349	4,579	70	0	22,943	0	12	22,743	16,423	860	0	40,038
2008	359	8,863	2,099	6,007	3,574	1	20,902	0	18	865	3,564	9,819	0	14,266
2009 <sup>b/</sup>	1,494	5,828	2,329	2,566	37	25	12,254	0	0	25,422	35,141	100	15	60,663
2010 <sup>b/</sup>	2,136	13,091	6,942	9,683	1,529	10	33,381	2	63	2,035	5,073	4,312	15	11,485

TABLE A-25. U.S./Canada border to Cape Falcon ocean troll Chinook and coho landings in number of fish by catch area and month.<sup>a/</sup> (Page 4 of 4)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK								COHO						
U.S./Canada Border to Cape Falcon - Total Treaty Indian and Non-Indian <sup>c/</sup>														
1976-1980	55,596	37,016	60,359	39,473	13,530	588	206,551	742	64,715	401,834	216,868	83,933	1,511	769,591
1981-1985	38,547	5,395	25,025	6,782	1,131	201	76,882	283	7,435	139,943	71,509	19,889	54	239,059
1986-1990	38,747	15,749	11,001	7,570	1,931	26	75,011	3	4,256	43,336	88,600	18,777	68	155,033
1991-1995	14,736	11,511	5,136	5,472	1,059	29	37,914	1	1	20,432	44,516	11,795	103	76,744
1996-2000	6,784	8,892	1,252	4,881	1,911	-	23,721	0	0	1,577	16,996	8,819	-	27,392
2001	10,268	22,606	12,537	4,735	4,017	-	54,163	0	12	14,531	34,024	27,473	-	76,040
2002	24,600	25,444	32,446	20,849	3,123	30	106,462	1	1	3,449	6,624	9,042	80	19,117
2003	26,493	23,128	29,103	20,048	2,986	35	101,758	3	0	9,618	12,200	4,519	85	26,340
2004	27,141	18,228	19,109	16,275	7,472	25	88,225	3	3	19,081	43,044	22,098	100	84,229
2005	30,525	21,813	11,609	19,507	3,672	0	87,126	3	1	4,280	19,485	4,288	0	28,057
2006	16,469	15,421	8,810	10,210	6,893	15	57,803	16	102	10,614	12,661	11,224	5	34,617
2007	6,959	19,097	6,966	5,513	119	0	38,654	0	34	26,065	30,201	1,177	0	57,477
2008	4,787	15,568	3,408	7,353	3,856	1	34,972	0	18	1,269	4,903	10,217	0	16,407
2009 <sup>b/</sup>	7,304	10,204	4,204	3,409	161	25	25,282	0	0	39,931	49,547	3,928	15	93,406
2010 <sup>b/</sup>	11,145	42,305	15,344	18,844	1,963	10	89,601	2	63	3,855	6,222	4,485	15	14,627

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month. Washington data are summarized by statistical month.

b/ Preliminary.

c/ Season totals do not include January-April, October, or November-December treaty troll catches.

TABLE A-26. U.S./Canada border to Cape Falcon ocean troll pink salmon landings in numbers of fish by catch area and month (odd-year averages).<sup>a/</sup> (Page 1 of 2)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season
<u>U.S./Canada Border to Leadbetter Pt. - Non-Indian</u>							
1976-1980	565	444	94,872	308,655	4,747	-	409,282
1981-1985	230	33	50,591	86,991	415	-	138,123
1986-1990	115	182	2,642	36,286	-	-	19,670
1991-1995	10	9	88	25,340	390	-	25,772
1997	2	3	-	-	-	-	5
1999	0	1	31	21	0	-	53
2001	1	9	20	0	0	-	30
2003	0	0	142	63	10	-	215
2005	4	0	2	2	-	-	8
2007	8	19	119	1	0	-	147
2009 <sup>b/</sup>	1	14	82	37	1	-	135
<u>U.S./Canada Border to Leadbetter Pt. - Treaty Indian<sup>c/</sup></u>							
1976-1980	49	1,550	1,053	3,019	21	0	5,691
1981-1985	32	214	2,208	7,806	320	0	10,580
1986-1990	5	10	8,991	4,254	591	0	13,851
1991-1995	0	1	499	5,519	261	0	6,280
1997	0	0	0	1,757	53	-	1,810
1999	0	0	0	1,388	108	-	1,496
2001	11	0	696	1,537	207	-	2,451
2003	0	0	172	41	23	0	236
2005	0	0	186	198	3	0	387
2007	0	7	326	251	0	0	584
2009 <sup>b/</sup>	0	0	427	368	0	0	795
<u>U.S./Canada Border to Leadbetter Pt. - Total<sup>c/</sup></u>							
1976-1980	614	1,993	95,925	311,674	4,768	0	414,973
1981-1985	262	247	52,799	94,798	597	0	148,703
1986-1990	120	101	10,312	22,397	591	0	33,520
1991-1995	7	7	528	30,859	651	0	32,052
1997	2	3	0	1,757	53	-	1,815
1999	0	1	31	1,409	108	-	1,549
2001	12	9	716	1,537	207	-	2,481
2003	0	0	314	104	33	0	451
2005	4	0	188	200	3	0	395
2007	8	26	445	252	0	0	731
2009 <sup>b/</sup>	1	14	509	405	1	0	930
<u>Leadbetter Pt. to Cape Falcon - Non-Indian</u>							
1976-1980	5	36	3,110	3,798	1,052	-	8,000
1981-1985	5	4	842	2,327	0	0	3,178
1986-1990	0	0	109	1	1	0	111
1991-1995	0	0	0	55	0	-	55
1997	0	0	0	0	0	-	0
1999	0	0	0	0	0	-	0
2001	195	50	50	51	0	-	346
2003	0	2	43	16	0	-	61
2005	0	0	1	1	1	-	3
2007	65	0	4	11	0	-	80
2009 <sup>b/</sup>	0	0	2	8	8	-	18



TABLE A-26. U.S./Canada border to Cape Falcon ocean troll pink salmon landings in numbers of fish by catch area and month (odd-year averages).<sup>a/</sup> (Page 2 of 2)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season
<b>U.S./Canada Border to Cape Falcon - Non-Indian</b>							
1976-1980	570	479	97,982	312,453	5,799	-	417,282
1981-1985	235	37	51,434	89,318	277	-	141,301
1986-1990	115	91	1,430	18,144	1	-	19,781
1991-1995	7	6	29	25,395	390	-	25,827
1997	2	3	0	0	0	-	5
1999	0	1	31	21	0	-	53
2001	196	59	70	51	0	-	376
2003	0	2	185	79	10	-	276
2005	4	0	3	3	1	-	11
2007	73	19	123	12	0	-	227
2009 <sup>b/</sup>	1	14	84	45	9	-	153
<b>U.S./Canada Border to Cape Falcon - Treaty Indian<sup>c/</sup></b>							
1976-1980	49	1,550	1,053	3,019	21	0	5,691
1981-1985	32	214	2,208	7,806	320	0	10,580
1986-1990	5	10	8,991	4,254	591	0	13,851
1991-1995	0	1	499	5,519	261	0	6,280
1991	0	2	1,148	3,356	0	0	4,506
1993	0	0	349	2,261	783	0	3,393
1995	0	0	0	10,940	0	0	10,940
1997	0	0	0	1,757	53	-	1,810
1999	0	0	0	1,388	108	-	1,496
2001	11	0	696	1,537	207	-	2,451
2003	0	0	172	41	23	0	236
2005	0	0	186	198	3	0	387
2007	0	7	326	251	0	0	584
2009 <sup>b/</sup>	0	0	427	368	0	0	795
<b>U.S./Canada Border to Cape Falcon - Total<sup>c/</sup></b>							
1976-1980	619	2,029	99,035	315,472	5,820	0	422,973
1981-1985	267	251	53,641	97,124	597	0	151,881
1986-1990	120	101	10,421	22,398	592	0	33,631
1991-1995	7	7	528	30,914	651	0	32,107
1997	2	3	0	1,757	53	-	1,815
1999	0	1	31	1,409	108	-	1,549
2001	207	59	766	1,588	207	-	2,827
2003	0	2	357	120	33	0	512
2005	4	0	189	201	4	0	398
2007	73	26	449	263	0	0	811
2009 <sup>b/</sup>	1	14	511	413	9	0	948

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month. Washington data are summarized by statistical month.

b/ Preliminary.

c/ Season totals do not include October treaty troll catches.

TABLE A-27. U.S./Canada border to Cape Falcon ocean recreational fishing effort in salmon angler trips by area and month.<sup>a/</sup>

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season <sup>b/</sup>
<u>U.S./Canada Border to Leadbetter Pt.<sup>c/</sup></u>								
1976-1980	3,118	13,778	42,809	87,445	95,907	33,240	3,554	279,228
1981-1985	80	3,331	16,943	44,629	38,938	5,555	196	109,593
1986-1990	-	1,190	4,199	45,977	23,931	4,377	40	78,144
1991-1995	-	1,258	4,959	31,219	25,149	9,425	714	67,841
1996-2000	-	-	-	10,921	14,366	2,674	-	25,776
2001	-	-	-	37,754	23,732	9,291	239	71,016
2002	-	2,496	13,613	21,404	19,160	1,719	113	58,505
2003	-	-	5,894	32,630	27,968	6,247	128	72,867
2004	-	-	2,013	31,942	26,905	8,013	20	68,893
2005	-	-	1,119	25,889	22,504	8,870	160	58,541
2006	-	-	1,119	16,486	20,679	3,551	258	42,093
2007	-	-	-	17,482	21,514	3,555	0	42,551
2008	-	-	4,007	11,392	9,171	2,564	38	27,171
2009	-	-	1,104	18,115	32,546	7,402	212	59,379
2010 <sup>d/</sup>	-	-	9,451	18,380	19,546	6,282	154	53,813
<u>Leadbetter Pt. to Cape Falcon</u>								
1976-1980	609	5,560	29,391	59,424	87,656	27,001	2,407	211,327
1981-1985	-	1,165	10,828	35,085	31,281	4,835	721	79,973
1986-1990	-	444	2,751	28,624	27,098	2,493	-	59,008
1991-1995	-	-	2,408	23,781	18,461	9,495	-	52,941
1996-2000	-	-	-	7,231	9,950	3,983	-	18,125
2001	-	-	-	29,087	38,189	11,351	-	78,627
2002	-	370	1,662	12,993	24,510	9,172	6	48,713
2003	-	-	606	20,308	42,124	8,188	-	71,226
2004	-	-	853	16,101	35,006	10,444	-	62,404
2005	-	-	-	8,316	27,084	9,916	-	45,316
2006	-	-	-	7,451	21,249	2,712	-	31,412
2007	-	-	-	10,034	29,199	3,284	-	42,518
2008	-	66	1,275	6,381	6,371	-	-	14,093
2009	-	-	278	15,969	36,344	1,840	-	54,431
2010 <sup>d/</sup>	-	-	863	9,376	24,345	2,811	-	37,395
<u>U.S./Canada Border to Cape Falcon<sup>b/</sup></u>								
1976-1980	3,574	19,337	72,200	146,869	183,563	60,241	5,480	490,555
1981-1985	80	4,263	25,606	79,714	70,218	9,423	436	189,565
1986-1990	-	1,412	6,950	74,600	51,029	5,374	40	137,152
1991-1995	-	1,258	4,888	55,000	43,610	18,921	714	120,782
1996-2000	-	-	-	18,152	24,315	5,064	-	43,901
2001	-	-	-	66,841	61,921	20,642	239	149,643
2002	-	2,866	15,275	34,397	43,670	10,891	119	107,218
2003	-	-	6,500	52,938	70,092	14,435	128	144,093
2004	-	-	2,866	48,043	61,911	18,457	20	131,297
2005	-	-	1,119	34,205	49,588	18,786	160	103,857
2006	-	-	1,119	23,937	41,928	6,263	258	73,505
2007	-	-	-	27,516	50,714	6,840	0	85,069
2008	-	66	5,282	17,773	15,542	2,564	38	41,264
2009	-	-	1,382	34,084	68,889	9,242	212	113,810
2010 <sup>d/</sup>	-	-	10,314	27,757	43,892	9,092	154	91,209

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month. Washington data are summarized by statistical month.

b/ Includes minor effort from November in some years.

c/ Includes catch from the Washington State waters Area 4B fishery in 1991, 1992, 1993, 1996, 1997, 1998, 2000, and 2008.

d/ Preliminary.

TABLE A-28. U.S./Canada border to Cape Falcon ocean recreational Chinook and coho salmon landings in numbers of fish by area and month.<sup>a/</sup> (Page 1 of 2)

Year or Avg.	April	May	June	July	Aug.	Sept.	Oct.	Season	April	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK									COHO							
<u>U.S./Canada Border to Leadbetter Pt.<sup>b/</sup></u>																
1976-1980	2,202	6,285	22,116	21,405	18,586	6,528	1,103	77,123	304	13,182	48,841	109,426	98,977	32,774	2,097	305,540
1981-1985	57	1,982	13,193	18,822	8,162	505	26	42,631	80	1,157	12,324	37,404	42,235	6,211	161	96,516
1986-1990	-	790	1,653	13,191	5,373	1,161	-	20,741	-	19	2,439	58,151	35,746	6,320	45	102,190
1991-1995	-	148	1,911	4,305	3,020	1,549	215	9,479	-	40	6,781	37,985	33,461	9,902	324	83,144
1996-2000	-	-	-	2,246	1,846	467	-	4,016	-	-	-	10,579	14,909	2,343	-	25,715
2001	-	-	-	13,632	3,224	896	100	17,852	-	-	-	42,997	33,408	14,163	15	90,583
2002	-	2,554	15,225	21,984	9,884	99	43	49,789	-	5	271	10,327	17,191	1,331	4	29,129
2003	-	-	2,689	12,959	10,752	1,937	62	28,399	-	-	3,635	25,550	27,566	5,660	12	62,423
2004	-	-	527	9,057	6,977	2,124	6	18,685	-	-	1,581	22,685	27,588	10,042	3	61,899
2005	-	-	364	8,104	13,189	5,107	43	26,808	-	-	126	10,446	8,684	3,772	18	23,046
2006	-	-	202	3,274	4,522	813	91	8,902	-	-	416	6,514	8,287	1,466	2	16,686
2007	-	-	-	3,804	3,138	371	0	7,313	-	-	-	13,028	20,920	2,421	0	36,369
2008	-	-	2,537	5,428	3,352	414	6	11,737	-	-	30	3,332	5,115	1,752	1	10,230
2009	-	-	182	3,551	3,994	325	97	8,149	-	-	823	17,496	44,998	10,692	92	74,101
2010 <sup>c/</sup>	-	-	4,893	11,814	12,753	1,960	45	31,465	-	-	46	5,817	6,275	5,297	37	17,473
<u>Leadbetter Pt. to Cape Falcon</u>																
1976-1980	191	2,352	12,353	11,569	23,764	3,751	246	54,102	493	6,524	53,314	89,865	86,917	31,024	2,463	269,812
1981-1985	-	221	4,286	6,972	6,406	672	40	17,395	-	7,109	14,759	52,828	37,648	7,241	825	109,663
1986-1990	-	140	360	2,747	4,469	120	-	7,580	-	-	4,463	48,084	38,613	2,767	-	91,374
1991-1995	-	-	126	928	1,038	257	-	2,286	-	-	3,938	36,431	24,351	9,127	-	57,502
1996-2000	-	-	-	553	783	167	-	1,326	-	-	-	10,932	12,055	3,643	-	22,986
2001	-	-	-	3,253	3,778	709	-	7,740	-	-	-	45,862	56,349	14,457	-	116,668
2002	-	86	2,274	4,920	3,398	105	3	10,786	-	-	30	14,568	32,527	12,283	-	59,408
2003	-	-	52	2,044	5,220	798	-	8,114	-	-	655	32,596	63,648	9,545	-	106,444
2004	-	-	47	1,068	5,465	1,825	-	8,405	-	-	1,303	23,786	40,641	7,805	-	73,535
2005	-	-	-	1,655	9,639	1,902	-	13,196	-	-	-	9,165	23,403	6,122	-	38,690
2006	-	-	-	559	1,518	198	-	2,274	-	-	-	8,149	15,782	881	-	24,812
2007	-	-	-	373	1,682	170	-	2,225	-	-	-	15,982	46,366	3,467	-	65,816
2008	-	17	626	1,509	1,563	-	-	3,715	-	-	431	4,445	5,955	-	-	10,831
2009	-	-	14	1,347	3,782	39	-	5,182	-	-	472	26,839	54,537	1,963	-	83,811
2010 <sup>c/</sup>	-	-	143	1,873	4,909	295	-	7,221	-	-	13	7,909	16,129	863	-	24,913

TABLE A-28. U.S./Canada border to Cape Falcon ocean recreational Chinook and coho salmon landings in numbers of fish by area and month.<sup>a/</sup> (Page 2 of 2)

Year or Avg.	April	May	June	July	Aug.	Sept.	Oct.	Season	April	May	June	July	Aug.	Sept.	Oct.	Season
CHINOOK									COHO							
U.S./Canada Border to Cape Falcon <sup>b/</sup>																
1976-1980	1,794	8,638	34,469	32,974	42,350	10,279	1,348	131,225	551	19,705	102,155	199,291	185,895	63,798	4,067	575,352
1981-1985	57	2,159	16,622	25,794	14,568	1,009	46	60,026	80	3,527	27,083	90,232	79,883	12,003	436	206,178
1986-1990	-	930	2,014	15,938	9,841	1,241	-	28,321	-	19	6,902	106,235	74,359	7,427	45	193,564
1991-1995	-	148	1,082	5,233	4,058	1,806	215	11,765	-	40	7,328	74,416	57,812	19,029	324	124,017
1996-2000	-	-	-	2,799	2,629	592	-	5,342	-	-	-	21,511	26,964	4,529	-	48,702
2001	-	-	-	16,885	7,002	1,605	100	25,592	-	-	-	88,859	89,757	28,620	15	207,251
2002	-	2,640	17,499	26,904	13,282	204	46	60,575	-	5	301	24,895	49,718	13,614	4	88,537
2003	-	-	2,741	15,003	15,972	2,735	62	36,513	-	-	4,290	58,146	91,214	15,205	12	168,867
2004	-	-	574	10,125	12,442	3,949	6	27,090	-	-	2,884	46,471	68,229	17,847	3	135,434
2005	-	-	364	9,759	22,828	7,009	43	40,004	-	-	126	19,611	32,087	9,894	18	61,736
2006	-	-	202	3,832	6,040	1,011	91	11,176	-	-	416	14,663	24,069	2,347	2	41,498
2007	-	-	-	4,178	4,819	541	0	9,538	-	-	-	29,010	67,286	5,888	0	102,185
2008	-	17	3,163	6,937	4,916	414	6	15,452	-	-	461	7,777	11,070	1,752	1	21,061
2009	-	-	196	4,898	7,776	364	97	13,331	-	-	1,295	44,335	99,534	12,655	92	157,912
2010 <sup>c/</sup>	-	-	5,037	13,687	17,662	2,255	45	38,686	-	-	59	13,726	22,403	6,160	37	42,386

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month. Washington data are summarized by statistical month.

b/ Includes catch from the Washington State waters Area 4B fishery in 1991, 1992, 1993, 1996, 1997, 1998, 2000, and 2008.

c/ Preliminary.

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## APPENDIX B

### HISTORICAL RECORD OF ESCAPEMENTS TO INLAND FISHERIES AND SPAWNING AREAS

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TABLE B-1. California Central Valley natural area fall Chinook salmon spawning escapement in numbers of fish.<sup>a/</sup>

Year or Average	Upper Sacramento River <sup>b/c/</sup>		Lower Sacramento River								Sacramento River Totals		San Joaquin River Totals		Central Valley	
	Adults	Jacks	Feather River		Yuba River		American River		Total		Adults	Jacks	Adults	Jacks	Adults	Jacks
1971-1975	58,462	18,289	40,221	9,745	10,877	1,615	41,726	3,695	92,824	15,055	151,286	33,345	13,820	1,411	165,105	34,756
1976-1980	67,012	17,905	33,954	3,544	7,387	1,563	28,509	1,344	69,850	6,452	136,862	24,356	2,886	763	139,747	25,120
1981-1985	57,913	22,432	36,252	5,243	12,825	5,146	32,332	4,954	81,409	15,343	139,322	37,775	34,930	10,721	174,252	48,496
1986-1990	87,396	17,244	38,709	6,426	9,261	2,444	24,420	3,323	72,390	12,193	159,787	29,437	10,853	4,377	170,640	33,815
1991-1995	60,151	11,496	32,578	4,355	8,309	2,131	28,549	4,151	69,436	10,637	129,587	22,134	2,626	904	132,212	23,038
1996	131,268	11,649	44,593	12,577	23,492	4,408	67,719	7,026	135,803	24,012	267,071	35,661	5,766	5,979	272,837	41,640
1997	167,353	13,736	47,009	3,538	19,202	6,746	46,036	6,159	112,246	16,444	279,599	30,180	17,983	1,146	297,583	31,325
1998	60,713	5,137	39,600 <sup>d/</sup>	3,400	26,737	4,353	41,094	13,698	107,431	21,451	168,144	26,588	13,119	6,292	181,263	32,880
1999	256,629	7,495	30,000 <sup>d/</sup>	7,500	18,778	5,452	48,311	8,688	97,089	21,640	353,718	29,135	10,708	7,185	364,426	36,320
2000	152,923	3,900	109,924	7,017	12,954	2,041	93,413	5,646	216,291	14,704	369,214	18,604	36,896	2,578	406,110	21,182
2001	179,198	11,853	169,588	9,114	21,567	1,825	167,062	13,553	358,217	24,492	537,415	36,345	23,899	3,705	561,314	40,050
2002	474,812 <sup>e/</sup>	11,259	93,766	11,397	18,406	4,796	95,711	10,635	207,883	26,828	682,695	38,087	21,852	3,788	704,547	41,875
2003	164,802	4,402	85,578	4,369	26,820	1,489	136,238	9,627	248,636	15,485	413,438	19,887	14,519	2,164	427,957	22,051
2004	70,548	7,220	48,580	5,591	9,260	5,208	75,090	13,774	132,930	24,573	203,478	31,793	7,250	3,310	210,728	35,103
2005	96,716	3,267	43,738	4,848	16,251	987	54,001	2,842	113,990	8,677	210,706	11,944	15,843	1,577	226,549	13,521
2006	89,933	2,874	75,545	1,869	7,891	230	21,755	1,145	105,191	3,244	195,124	6,118	5,622	669	200,746	6,787
2007	36,079	978	21,541	321	2,523	81	9,855	130	33,919	532	69,998	1,510	1,521	164	71,519	1,674
2008	36,274	2,074	5,703	236	3,084	424	1,791	154	10,578	814	46,852	2,888	2,010	316	48,862	3,204
2009	12,277	1,624	3,950	897	3,992	803	3,118	575	11,060	2,275	23,337	3,899	1,394	688	24,731	4,587
2010 <sup>f/</sup>	25,682	6,872	40,981	3,933	13,157	1,218	5,831	1,742	59,969	6,893	85,651	13,765	4,003	934	89,654	14,699

a/ Most estimates based on carcass surveys with a jack length cut-off. In 2004, CDFG reviewed and updated 1971-2003 escapement estimates to reflect final project reports.

b/ Upper Sacramento mainstem estimates generally based on carcass surveys with a jack length cut-off, however jack estimates from Red Bluff Diversion Dam (RBDD) reports have occasionally been used. Early (pre-2001) mainstem Sacramento River adult and jack estimates based on RBDD passage.

c/ Upper Sacramento River escapement includes Sacramento River mainstem; Battle, Clear, Mill, Deer, Butte, Cottonwood, and Cow creeks; and other small tributaries when surveys were conducted. Specific escapement estimates by tributary can be found at [www.calfish.org](http://www.calfish.org).

d/ Survey methodology was variable; may not be comparable to other surveys.

e/ Change in estimation methodology due to extremely high Battle Creek escapement.

f/ Preliminary.



TABLE B-2. California Central Valley hatchery fall Chinook salmon escapement in numbers of fish.<sup>a/</sup>

Year or Average	Sacramento Hatcheries								San Joaquin Hatcheries						Central Valley Hatchery Totals	
	C oleman <sup>b/</sup>		F eather River <sup>b/</sup>		Nimbus <sup>c/</sup>		Totals		Mokelumne River		M erced River		Totals		Adults	Jacks
	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults <sup>d/</sup>	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks		
1971-1975	1, 373	1, 167	3, 882	1, 387	7, 791	1, 311	13, 661	4, 065	305	156	460	19	765	175	14, 427	4, 240
1976-1980	4, 239	1, 292	4, 261	1, 043	7, 845	2, 270	17, 804	5, 040	271	59	346	23	617	82	18, 421	5, 122
1981-1985	11, 557	3, 734	6, 845	884	10, 543	2, 444	30, 303	7, 877	759	734	797	449	1, 556	1, 183	31, 859	9, 060
1986-1990	11, 507	2, 288	5, 837	1, 947	6, 927	1, 943	24, 271	6, 178	278	286	299	140	577	426	24, 847	6, 604
1991-1995	11, 948	2, 295	10, 537	2, 762	7, 669	1, 664	30, 154	6, 721	1, 077	554	239	233	1, 316	788	31, 471	7, 509
1996	18, 848	2, 330	6, 494	1, 613	9, 219	2, 273	34, 561	6, 216	1, 828	2, 055	395	746	2, 223	2, 801	36, 784	9, 017
1997	44, 590	6, 080	13, 358	1, 770	7, 293	2, 435	65, 241	10, 285	6, 305	189	838	108	7, 143	297	72, 384	10, 582
1998	42, 400	1, 951	17, 567	1, 322	17, 797	3, 979	77, 763	7, 253	2, 686	585	347	452	3, 033	1, 037	80, 796	8, 290
1999	23, 194	3, 776	12, 822	1, 104	10, 095	5, 543	46, 112	10, 422	1, 611	1, 542	650	987	2, 261	2, 529	48, 372	12, 952
2000	20, 793	866	16, 470	1, 676	11, 060	1, 893	48, 323	4, 435	4, 637	887	1, 615	331	6, 252	1, 218	54, 575	5, 653
2001	23, 710	988	24, 001	871	11, 649	4, 547	59, 360	6, 406	4, 467	1, 427	1, 137	523	5, 604	1, 950	64, 964	8, 356
2002	61, 895	4, 029	17, 516	2, 991	7, 762	8, 146	87, 173	15, 166	5, 800	2, 119	1, 250	588	7, 050	2, 707	94, 223	17, 873
2003	82, 882	5, 352	13, 615	1, 352	13, 081	7, 032	109, 578	13, 736	5, 108	3, 009	392	157	5, 500	3, 166	115, 078	16, 902
2004	52, 145	17, 027	15, 769	5, 535	15, 493	21, 390	83, 407	43, 952	5, 477	4, 879	456	594	5, 933	5, 473	89, 340	49, 425
2005	139, 979	2, 694	20, 597	1, 787	24, 723	3, 437	185, 299	7, 918	5, 035	528	346	75	5, 381	603	190, 680	8, 521
2006	56, 819	1, 013	13, 400	634	9, 687	681	79, 906	2, 328	2, 801	1, 338	130	20	2, 931	1, 358	82, 837	3, 686
2007	11, 543	201	5, 169	172	4, 664	21	21, 376	394	1, 004	40	70	9	1, 074	49	22, 450	443
2008	10, 181	458	5, 031	323	3, 300	453	18, 512	1, 234	116	123	39	37	155	160	18, 667	1, 394
2009	5, 433	719	6, 240	3, 723	5, 863	1, 126	17, 536	5, 568	730	823	109	137	839	960	18, 375	6, 528
2010 <sup>e/</sup>	8, 666	8, 572	17, 215	2, 757	13, 821	2, 389	39, 702	13, 718	3, 543	1, 733	115	31	3, 658	1, 764	43, 360	15, 482
GOALS <sup>f/</sup>	12, 000	-	6, 000	-	4, 000	-	22, 000	-	5, 000	-	1, 000	-	6, 000	-	26, 000	-

a/ In 2004, CDFG reviewed and updated 1971-2003 adult and jack spawner escapements based on final project reports.

b/ Chinook spawning during the fall; may include spring run fish.

c/ Nimbus Hatchery adult and jack counts include fish taken at Nimbus Weir, 1979-current.

d/ Total adults in Sacramento Hatcheries include Tehama-Colusa Fish Facility escapements, 1971-1985.

e/ Preliminary.

f/ Current hatchery-specific goals, not PFMC goals.

TABLE B-3. Sacramento River late-fall, winter, and spring Chinook salmon spawning escapement in numbers of fish.

Upper Sacramento River											
Year or Average	Late Fall <sup>a/b/c/</sup>		Winter <sup>d/</sup>				Spring				
	Adults	Jacks	RBDD <sup>a/c/</sup>		Carcass Survey		Tributary <sup>e/</sup>	Sacramento River <sup>a/f/</sup>		Feather River <sup>g/</sup>	
			Adults	Jacks	Adults	Jacks	Adults and Jacks <sup>h/</sup>	Adults	Jacks	Adults	Jacks
1971-1975	18,193	1,087	22,863	9,063	--	--	5,194	5,098	1,718	366	-
1976-1980	9,662	1,798	13,499	2,640	--	--	1,201	8,335	2,571	375	-
1981-1985	8,102	1,746	5,027	921	--	--	1,061	9,798	4,241	1,446	133
1986-1990	10,047	1,761	1,369	390	--	--	1,658	8,795	1,930	2,884	406
1991-1995	3,844 <sup>i/</sup>	383 <sup>i/</sup>	586	78	--	--	2,813	410	165	3,441	465
1999-2000	16,061 <sup>i/</sup>	2,478 <sup>i/</sup>	940	1,032	--	--	7,768	242	160	4,393	503
2001	20,614	1,199	1,696	3,827	7,443	781	21,623 <sup>j/</sup>	981	0 <sup>h/</sup>	4,052	83
2002	39,818	765	7,614	1,555	7,047	417	20,198 <sup>j/</sup>	430	53	3,982	207
2003	8,122	613	6,172	3,585	7,675	543	21,798 <sup>j/</sup>	0	0	8,373	389
2004	12,458	1,574	2,588	4,604	5,786	2,083	12,556 <sup>j/</sup>	763	326	3,630	572
2005	14,047	2,141	3,521	1,778	14,683	1,156	21,319 <sup>j/</sup>	21	9	1,811 <sup>k/</sup>	24 <sup>k/</sup>
2006	14,709	351	4,792	2,623	16,764	385	10,669 <sup>j/</sup>	0	0	2,052 <sup>k/</sup>	9 <sup>k/</sup>
2007	11,954	714	3,004	3,140	2,402	131	8,951 <sup>j/</sup>	226	22	2,669 <sup>k/</sup>	5 <sup>k/</sup>
2008	9,946	381	1,504	2,131	2,521	204	11,943 <sup>j/</sup>	0	0	1,056 <sup>k/</sup>	10 <sup>k/</sup>
2009	9,515	460	m/	m/	4,363	53	3,517 <sup>j/</sup>	m/	m/	867 <sup>k/</sup>	122 <sup>k/</sup>
2010 <sup>l/</sup>	8,847	1,000	m/	m/	1,555	41	2,951 <sup>j/</sup>	m/	m/	1,655 <sup>k/</sup>	6 <sup>k/</sup>

a/ Estimated number of jacks and adults based on sampling at Red Bluff Diversion Dam (RBDD) from unpublished CDFG data. Beginning in 1987 for late-fall and winter runs, estimates have been based on historical run patterns and partial counts at RBDD due to raising of dam gates during the last part of the late-fall run and first part of the winter run.

b/ Since 1998, late-fall adult and jack estimates are based on carcass counts of natural spawners plus fish spawned at Coleman Hatchery.

c/ Variable numbers of late-fall and winter run are trapped at Keswick Dam and spawned at Coleman or Livingston Stone Hatcheries.

d/ RBDD and carcass survey estimates represent alternative methods for determining winter run Chinook escapement.

e/ Natural spawning spring run which are isolated from fall run; primarily Mill Creek, Deer Creek, and Butte Creek escapement.

f/ Sacramento River spring run estimates are the total RBDD counts minus the spring run numbers in the upper Sacramento tributaries. If this number is less than or equal to zero, then upper Sacramento River spring run estimates are zero.

g/ Feather River spring run estimates are primarily fish returning to Feather River Hatchery. Spring run are not distinguished from fall run in the natural spawning surveys and are reported in the fall run natural escapement numbers.

h/ Jack proportion could not be determined.

i/ Primarily number of fish spawned at Coleman Hatchery 1991-1997. No data are available for natural spawners, as RBDD gates were raised during the time coinciding with the late-fall run.

j/ Methodology change from using snorkel survey to carcass survey for Butte Creek spring run estimates.

k/ Methodology change for distinguishing spring run Chinook at Feather River Hatchery was implemented in 2005. Fish arriving at the hatchery prior to the spring Chinook spawning period were tagged and returned to the river. The spring Chinook escapement estimate is the number of these tagged fish that subsequently returned to the hatchery during the spring Chinook spawning period.

l/ Preliminary.

m/ RBDD did not go into operation until June 15th, a month later than normal; thus RBDD winter and spring run estimates are unavailable.

TABLE B-4. Summary of Klamath River fall Chinook salmon estimates in numbers of adults and jacks.

Table B-4. Summary of Klamath River fall Chinook salmon estimates in numbers of adults and jacks.															
Year or Average	Category	Total Inriver Run	Inriver Harvest		Total	Nonlanded		Spawning Escapement							
			Indian	Sport		Fishery Mortality	Klamath River			Trinity River			Total		
							Hatchery	Natural	Total	Hatchery	Natural	Total	Hatchery	Natural	Total
1978-1980	Adults	63,306	14,621	2,777	17,398	1,329	3,886	21,277	25,163	3,823	15,593	19,416	7,709	36,871	44,579
	Jacks	23,731	1,379	3,385	4,764	189	544	8,224	8,768	1,515	8,495	10,010	2,059	16,719	18,778
1981-1985	Adults	63,230	17,128	5,096	22,224	1,593	8,812	16,313	25,125	2,934	11,354	14,288	11,746	27,667	39,413
	Jacks	29,811	1,287	6,447	7,734	243	1,162	6,227	7,389	4,888	9,556	14,444	6,050	15,783	21,833
1986-1990	Adults	151,203	36,669	15,145	51,814	3,498	13,194	21,543	34,737	11,912	49,242	61,154	25,106	70,785	95,891
	Jacks	20,227	446	4,924	5,370	139	1,009	3,460	4,469	2,285	7,964	10,248	3,294	11,423	14,718
1991-1995	Adults	80,666	10,574	3,094	13,668	983	12,980	26,594	39,574	5,104	21,339	26,442	18,084	47,932	66,016
	Jacks	12,038	291	2,741	3,032	81	1,140	3,216	4,356	1,134	3,435	4,569	2,274	6,651	8,925
1996	Adults	175,773	56,476	12,766	69,242	5,172	13,622	38,680	52,302	6,411	42,646	49,057	20,033	81,326	101,359
	Jacks	9,532	190	2,312	2,502	64	543	1,696	2,239	249	4,478	4,727	792	6,174	6,966
1997	Adults	83,736	12,087	5,676	17,763	1,167	13,275	34,637	47,912	5,387	11,507	16,894	18,662	46,144	64,806
	Jacks	7,993	35	2,409	2,444	52	452	1,380	1,832	820	2,845	3,665	1,272	4,225	5,497
1998	Adults	90,647	10,187	7,710	17,897	1,043	14,923	18,028	32,951	14,296	24,460	38,756	29,219	42,488	71,707
	Jacks	4,639	53	1,108	1,161	28	403	881	1,284	192	1,974	2,166	595	2,855	3,450
1999	Adults	51,048	14,660	2,282	16,942	1,322	9,290	11,660	20,950	5,037	6,797	11,834	14,327	18,457	32,784
	Jacks	19,248	271	1,616	1,887	57	4,830	6,293	11,123	2,027	4,154	6,181	6,857	10,447	17,304
2000	Adults	218,077	29,415	5,650	35,065	2,673	71,635	58,388	130,023	25,976	24,340	50,316	97,611	82,728	180,339
	Jacks	10,246	303	1,582	1,885	58	839	2,891	3,730	1,070	3,503	4,573	1,909	6,394	8,303
2001	Adults	187,333	38,645	12,134	50,779	3,608	37,204	40,944	78,148	17,908	36,890	54,798	55,112	77,834	132,946
	Jacks	11,343	399	1,500	1,899	66	1,364	6,378	7,742	267	1,369	1,636	1,631	7,747	9,378
2002	Adults	160,788 <sup>a/</sup>	24,574	10,495	35,069	2,351	23,667	54,225	77,892	3,516	11,410	14,926	27,183	65,635	92,818
	Jacks	9,226	126	870	996	29	1,294	1,529	2,823	1,037	2,338	3,375	2,331	3,867	6,198
2003	Adults	191,949	30,034	9,680	39,714	2,810	31,970	55,423	87,393	29,812	32,219	62,031	61,782	87,642	149,424
	Jacks	3,845	44	814	858	21	290	848	1,138	574	1,254	1,828	864	2,102	2,966
2004	Adults	78,943	25,803	4,003	29,806	2,325	10,582	10,711	21,293	12,399	13,120	25,519	22,982	23,831	46,813
	Jacks	9,646	168	2,741	2,909	71	937	846	1,783	1,044	3,839	4,883	1,980	4,685	6,665
2005	Adults	65,227	8,016	1,985	10,001	738	13,955	13,554	27,509	13,744	13,235	26,979	27,699	26,789	54,488
	Jacks	2,296	70	1,030	1,100	27	42	398	440	59	670	729	101	1,068	1,169
2006	Adults	61,374	10,283	62	10,345	1,344	11,604	14,264	25,868	7,918	15,899	23,817	19,522	30,163	49,685
	Jacks	26,935	415	5,527	5,942	149	2,386	6,516	8,902	4,076	7,866	11,942	6,462	14,382	20,844
2007	Adults	132,131	27,573	6,312	33,885	2,526	16,969	21,292	38,261	18,081	39,378	57,459	35,050	60,670	95,720
	Jacks	1,684	21	369	390	10	180	232	412	33	839	872	213	1,071	1,284
2008	Adults	70,554	22,259	1,919	24,178	24,178	9,101	19,020	28,121	4,451	11,830	16,281	13,552	30,850	44,402
	Jacks	25,247	641	4,308	4,949	144	2,130	9,425	11,555	801	11,555	8,599	2,931	17,223	20,154
2009	Adults	100,644	28,387	5,651	34,038	2,583	12,263	27,743	40,006	7,351	16,666	24,017	19,614	44,409	64,023
	Jacks	11,914	178	2,214	2,392	60	1,229	1,948	3,177	143	6,142	6,285	1,372	8,090	9,462
2010 <sup>b/</sup>	Adults	90,972	29,996	3,035	33,031	2,670	10,276	15,166	25,442	7,774	22,055	29,829	18,050	37,221	55,271
	Jacks	16,652	436	1,832	2,268	75	1,071	1,811	2,882	1,432	9,995	11,427	2,503	11,806	14,309
GOAL	Adults														≥35,000 <sup>c/</sup>

a/ Total inriver run includes an estimated 30,550 fish that died prior to spawning in September 2002.

b/ Preliminary.

c/ In 2008 -2010, fisheries were managed for a natural area spawning escapement of 40,700 adults.

TABLE B-5. Estimates of Yurok and Hoopa Valley reservation Indian gillnet Chinook harvest in numbers of fish.

Year	Area <sup>a/</sup>	Spring Run			Fall Run		
		Jack	Adult	Total	Jack	Adult	Total
2004	Commercial:Estuary	2	408	410	13	14,251	14,264
	Upper Klamath	0	0	0	13	540	554
	Subsistence:Estuary	10	2,178	2,188	62	6,787	6,848
	Middle Klamath	6	2,346	2,352	14	577	591
	Upper Klamath	11	1,715	1,726	46	1,959	2,005
	Trinity River	62	1,944	2,006	20	1,689	1,709
	Total	91	8,591	8,682	168	25,083	25,971
2005	Commercial:Estuary	0	0	0	0	0	0
	Upper Klamath	0	0	0	0	0	0
	Subsistence:Estuary	0	477	477	21	2,293	2,314
	Middle Klamath	0	518	518	5	464	469
	Upper Klamath	0	1,320	1,320	33	2,851	2,884
	Trinity River	17	1,858	1,858	11	2,409	2,420
	Total	33	7,286	7,302	70	8,017	8,087
2006	Commercial:Estuary	0	0	0	0	0	0
	Upper Klamath	0	0	0	0	0	0
	Subsistence:Estuary	8	302	310	30	2,726	2,756
	Middle Klamath	3	1,113	1,116	93	1,310	1,403
	Upper Klamath	36	1,257	1,293	147	2,086	2,233
	Trinity River	58	1,632	1,690	145	4,161	4,306
	Total	105	4,304	4,409	415	10,283	10,698
2007	Commercial:Estuary	0	2,300	2,300	1	21,100	21,101
	Upper Klamath	0	0	0	0	0	0
	Subsistence:Estuary	0	1,363	1,363	15	2,375	2,390
	Middle Klamath	0	200	200	1	425	426
	Upper Klamath	0	631	631	4	1,375	1,379
	Trinity River	6	1,349	1,355	0	2,298	2,298
	Total	6	5,843	5,849	21	27,573	27,594
2008	Commercial:Estuary	0	323	323	201	11,804	12,005
	Middle Klamath	0	0	0	11	154	165
	Subsistence:Estuary	0	295	295	101	5,906	6,007
	Middle Klamath	0	722	722	62	870	932
	Upper Klamath	9	685	694	114	1,612	1,726
	Trinity River	77	1,328	1,405	152	1,914	2,066
	Total	86	3,353	3,439	641	22,260	22,901
2009	Commercial:Estuary	0	21	21	34	15,463	15,497
	Middle Klamath	0	0	0	2	243	245
	Subsistence:Estuary	0	763	763	9	4,002	4,011
	Middle Klamath	2	487	489	18	2,202	2,220
	Upper Klamath	0	451	451	19	2,324	2,343
	Trinity River	74	1,764	1,838	96	4,153	4,249
	Total	76	3,486	3,562	178	28,387	28,565
2010 <sup>b/</sup>	Commercial:Estuary	0	258	258	3	15,196	15,199
	Middle Klamath	0	0	0	1	85	86
	Subsistence:Estuary	0	0	0	17	6,529	6,546
	Middle Klamath	0	0	0	32	1,821	1,853
	Upper Klamath	0	0	0	123	2,555	2,678
	Trinity River	4	1,740	1,744	260	3,810	4,070
	Total	4	1,998	2,002	436	29,996	30,432

a/ Klamath River tribal fishing areas are defined as follows: Estuary: mouth to Highway 101 bridge; Middle Klamath: Highway 101 bridge to Surpur Creek; Upper Klamath: Surpur Creek to Weitchpec.

b/ Preliminary.

TABLE B-6. Shasta, Scott, and Salmon rivers fall Chinook salmon spawning escapement estimates in numbers of fish.

Year	Shasta River <sup>a/</sup>		Scott River <sup>b/c/</sup>		Salmon River <sup>b/</sup>	
	Adults	Jacks	Adults	Jacks	Adults	Jacks
1931-1935 <sup>d/</sup>	37,474	12,690	-	-	-	-
1936-1940	26,165	8,223	-	-	-	-
1941-1945	9,654	3,129	-	-	-	-
1946-1950	1,862	178	-	-	-	-
1951-1955	1,577	370	-	-	-	-
1956-1960	6,146	1,074	-	-	-	-
1961-1965	15,167	4,388	-	-	-	-
1966-1970	10,472	1,410	-	-	-	-
1971-1975	6,297	2,866	-	-	-	-
1976-1980 <sup>e/</sup>	6,506	3,194	2,950	1,527	1,467	583
1981-1985 <sup>f/</sup>	4,560	1,942	3,373	1,929	1,287	389
1986-1990 <sup>g/</sup>	2,403	318	4,010	1,512	3,361	537
1991-1995	1,891	184	3,779	568	3,086	376
1991	716	10	2,019	146	1,337	143
1992	520	66	1,873	965	778	547
1993	1,341	85	5,035	265	3,077	456
1994	3,363	1,840	2,358	505	3,216	277
1995	12,816	695	11,198	3,279	4,140	1,335
1996	1,404	46	11,952	145	5,189	274
1997	1,667	334	8,284	277	5,783	217
1998	2,466	76	3,061	266	1,337	116
1999	1,296	1,901	3,021	563	670	110
2000	11,025	1,271	5,729	524	1,544	228
2001	8,452	2,641	5,398	744	2,607	743
2002	6,432	386	4,261	47	2,669	78
2003	4,134	155	11,988	65	3,302	73
2004	833	129	445	22	282	51
2005	2,018	37	698	58	401	105
2006	789	1,395	3,007	1,953	1,278	791
2007	2,009	27	4,494	11	1,377	55
2008	2,741	3,621	3,445	1,228	1,749	650
2009	6,145	151	2,167	44	2,204	516
2010 <sup>h/</sup>	1,259	87	2,113	394	2,478	356

a/ From 1930-1937, 1957-1987 and 1991-1995, Shasta counts were made near the river mouth. From 1938-1955, they were made 6.5 miles upstream from the mouth; considerable spawning occurred downstream from the racks in these years. From 1988-1990, escapements were estimated from mark-recapture data (spawning surveys). 1991- 2008 estimates were generated from weir counts.

b/ In 1991, estimates were generated from weir counts. In 1992-2007, estimates were generated from carcass surveys. In 2008, estimates were generated from a combination of video weir counts and carcass surveys

c/ In 2005 and 2007, redd counts were used in lieu of carcass surveys.

d/ Commercial fishing in lower Klamath River closed by the state after the 1933 season.

e/ Gillnetting resumed in lower 20 miles of Klamath River by Hoopa Valley Indian Reservation fishers in 1976.

f/ Shasta adults include 276 females taken to Iron Gate Hatchery in 1981.

g/ Low water conditions appeared to hinder entry into the Shasta River in 1988.

h/ Preliminary.

TABLE B-7. Summary of California North Coast salmon spawning stock surveys in numbers of fish or redd counts.

Year	C añon Creek <sup>a/b/c/</sup> (Mad River)		S prowl Creek <sup>a/b/d/</sup> (Eel River)		Tomki Creek <sup>e/</sup> (Eel River)	Russian <sup>f/</sup> River	Lagunitas <sup>g/</sup> Watershed
	Chinook	Coho	Chinook	Coho	Chinook	Chinook	Coho Redds
1978-1979	-	-	534	23	-	-	-
1979-1980	-	-	572	0	2, 410	-	-
1980-1981	-	-	164	4	317	-	-
1981-1982	23	0	121	0	1, 153	-	-
1982-1983	68	0	169	1	1, 807	-	-
1983-1984	137	0	82	0	-	-	-
1984-1985 <sup>h/</sup>	16	0	67	13	1, 292	-	-
1985-1986	514	14	320	0	3, 558	-	-
1986-1987 <sup>h/</sup>	90	3	307	13	2, 173	-	-
1987-1988	117	29	2,187	4	3, 666	-	-
1988-1989	69	7	339	12	556	-	-
1989-1990 <sup>h/</sup>	9	9	89	14	-	-	-
1990-1991	0	3	0	0	-	-	-
1991-1992 <sup>h/</sup>	8	0	159	0	3	-	-
1992-1993 <sup>h/</sup>	57	1	142	2	15	-	-
1993-1994	20	0	171	36	5	-	-
1994-1995	33	3	52	0	21	-	-
1995-1996 <sup>h/</sup>	93	4	136	8	69	-	86
1996-1997	129	4	106	8	84	-	254
1997-1998	55	1	97	0	39	-	253
1998-1999	66	0	79	11	45	-	184
1999-2000 <sup>h/</sup>	162	1	34	1	24	-	203
2000-2001 <sup>h/</sup>	79	3	12	0	50	1,445	204
2001-2002	45	6	136	25	162	1,383	286
2002-2003	402	1	267	17	5	5,474	158
2003-2004 <sup>h/</sup>	79	1	106	8	137	6,103	383
2004-2005 <sup>h/</sup>	86	0	199	36	115	4,788	496
2005-2006	270	0	201	13	77	2,572	190
2006-2007 <sup>i/</sup>	152	2	37	9	20	3,410	338
2007-2008 <sup>i/</sup>	99	1	70	19	69	1,963	148
2008-2009 <sup>i/</sup>	65	0	158	40	17	1,125	26
2009-2010 <sup>i/</sup>	36	0	314	2	15	1,801	51
2010-2011 <sup>i/j/</sup>	104	2	256	43	150	2,414	78 <sup>k/</sup>

a/ Survey frequency variable from year to year (between 1 and 10 surveys annually).

b/ Numbers reflect maximum annual counts of live fish and carcasses with adults and jacks combined. Counts are not shown in years where visibility is too poor to conduct surveys.

c/ Survey area was from mouth to falls (2 miles).

d/ Survey area was the mainstem and West Fork (4.5 miles).

e/ Total run size estimate including jacks and adults. Survey methodology changed in 2000-2001 to using index sites, and subsequent estimates are not comparable to previous estimates.

f/ Video counts of combined adults and jacks made at Mirabel Dam. Image quality is affected by turbidity.

g/ Numbers reported are redd counts. Olema Creek is excluded.

h/ Low flows appeared to increase mainstem spawning and decrease tributary spawning for Cañon, Sprowl, and Tomki creeks.

i/ Cañon and Sproul creek totals exclude salmonids that were unidentifiable to species due to poor visibility or advanced decomposition.

j/ Preliminary data.

k/ Redd counts as of January 13, 2011.

TABLE B-8. Peak spawning counts in index areas for selected south/local migrating Oregon coastal fall Chinook stocks.

Year or Avg.	Deep Creek (Pistol River) (0.4 mile)		Big Emily Creek (Chetco River) (1.0 mile)		Bear Creek (Winchuck River) (0.8 mile)		Index (fish per mile)	
	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks
1961-1965	6	1	-	-	22	1	-	-
1966-1970	31	3	-	-	36	2	-	-
1971-1975	5	0	211	12	25	2	130	7
1976-1980	2	1	124	32	18	1	65	14
1981-1985	24	2	62	10	13	1	45	6
1986-1990	9 <sup>a/</sup>	1 <sup>a/</sup>	58	12	10	2	35	7
1991-1995	12	9	74	10	16	2	46	10
1996	81	9	79	7	27	5	85	10
1997	17	1	60	5	14	1	41	3
1998	46	11	52	3	19	2	53	7
1999	58	3	12	1	10	0	36	2
2000	26	3	63	6	11	1	45	5
2001	25	2	49	2	9	3	38	3
2002	62	7	70	3	15	9	67	9
2003	20	7	28	5	12	1	27	6
2004	97	19	29	4	11	1	62	11
2005	15	2	16	3	1	0	15	2
2006	22	3	24	2	5	1	23	3
2007	44	0	14	4	6	1	29	2
2008	10	1	15	29	3	5	13	16
2009	20	1	91	11	35	9	66	10
2010 <sup>b/</sup>	14	2	75	5	26	2	52	4

a/ Pistol River was subject to several "slope failures" in 1986 resulting in severe short-term alterations in gravel bars and spawning index areas. Considerable debris and siltation severely limited Chinook surveys resulting in "0" counts in Deep Creek index areas through December.

b/ Preliminary.

TABLE B-9. Counts of natural and hatchery spring Chinook salmon at Gold Ray Dam on the Rogue River and at Winchester Dam on the North Umpqua River in thousands of fish.

Year or Avg.	Gold Ray Dam, Rogue River <sup>a/</sup>				Winchester Dam, Umpqua River <sup>a/</sup>			
	Natural	Hatchery	Total	Jacks <sup>b/</sup>	Natural	Hatchery	Total	Jacks <sup>b/</sup>
1942-1945	35.1	-	35.1	4.9	-	-	-	-
1946-1950	24.7	-	24.7	3.0	2.7	-	2.7	0.5
1951-1955	21.4	-	21.4	4.2	4.2	0.9	4.9	1.0
1956-1960	19.8	-	19.8	3.4	4.4	0.9	5.4	0.7
1961-1965	37.7	-	37.7	6.4	6.4	1.8	8.2	1.8
1966-1970	33.9	-	33.9	5.5	7.2	4.5	11.8	3.2
1971-1975	26.0	0.8	26.8	5.0	7.3	6.2	13.5	3.8
1976-1980	25.8	6.3	32.1	7.0	5.8	3.9	9.7	3.2
1981-1985	16.4	6.2	22.6	7.3	5.2	3.5	8.7	2.5
1986-1990	28.5	39.2	67.7	14.9	7.5	4.1	11.6	2.5
1991-1995	9.7	18.4	28.0	3.9	3.5	2.5	6.0	1.1
1996	10.3	26.3	36.6	3.4	4.3	2.2	6.5	1.0
1997	9.6	32.2	41.8	2.8	3.3	2.5	5.8	16.0
1998	3.7	12.3	16.0	2.8	4.0	2.9	6.9	1.5
1999	6.0	15.0	21.0	1.9	2.8	4.6	7.4	3.1
2000	3.4	26.8	30.2	3.1	3.4	9.2	12.6	4.6
2001	9.3	23.9	33.2	2.3	6.1	14.6	20.7	4.7
2002	7.0	40.8	47.8	3.2	6.8	17.4	24.2	3.1
2003	19.3	22.6	41.9	3.0	7.9	12.3	20.2	4.1
2004	13.3	26.0	39.3	3.8	5.4	10.1	15.4	2.5
2005	5.8	12.3	18.1	1.3	3.6	5.5	9.0	1.3
2006	4.8	7.0	11.7	2.2	2.6	3.5	6.1	1.7
2007	3.5	7.7	11.2	1.6	2.4	4.2	6.6	1.7
2008	4.0	8.6	12.5	3.8	2.6	5.1	7.7	2.7
2009	5.2	8.3	13.6	2.3	5.3	9.0	14.3	4.8
2010 <sup>c/</sup>	9.6	11.5	21.1	1.9	6.1	7.8	13.9	3.8

a/ Jacks included in natural, hatchery, and total counts.

b/ Jacks include all Chinook less than 20 inches prior to 1978 and all Chinook less than 24 inches beginning in 1978.

c/ Preliminary.



TABLE B-10. Rogue River fall Chinook carcass counts in numbers of fish.

Year or Avg.	Carcass Counts		
	Adults	Jacks	Total
1977-1980	5,256	1,004	6,259
1981-1985	3,906	1,009	4,915
1986-1990	16,797	1,527	18,324
1990-1995	4,387	316	4,703
1996	2,448	121	2,569
1997	1,643	68	1,711
1998	3,601	40	3,641
1999	2,493	157	2,650
2000	3,366	226	3,592
2001	6,380	772	7,152
2002	11,836	905	12,741
2003	14,620	983	15,603
2004	5,326 <sup>a/</sup>	250	5,576
2005 <sup>b/</sup>	-	-	-
2006 <sup>b/</sup>	-	-	-
2007 <sup>b/</sup>	-	-	-
2008 <sup>b/</sup>	-	-	-
2009 <sup>b/</sup>	-	-	-
2010 <sup>b/</sup>	-	-	-

a/ In 2004, one of the standard survey sections was not sampled. In the previous two years, this section accounted for 33 percent of the total adult carcass counts.

b/ Surveys were not conducted.

TABLE B-11. Peak counts for north migrating Oregon coastal Chinook stocks on selected fall Chinook spawning index stream surveys.

Year or Average	River Tributaries																			
	Humbug (Nehalem) (1.0 mile)		Tillamook (1.8 mile)		Niagara (Nestucca) (0.4 mile)		Sunshine (Siletz) (1.2 mile)		Grant (Yaquina) (1.7 mile)		Buck (Alsea) (1.0 mile)		Siuslaw (Lake) (0.8 mile)		W.F. Millicoma (Coos) (0.5 mile)		Salmon (Coquille) (0.8 mile)		Index Fish Per Mile	
	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks
1961-1965	95	22	116	25	72	5	59	13	43	13	28	9	61	15	2	1	23	13	54	13
1966-1970	57	3	93	27	47	6	30	5	61	13	26	16	134	40	6	1	26	9	52	13
1971-1975	101	26	55	5	55	4	40	5	64	8	17	3	94	49	18	13	15	5	50	14
1976-1980	143	12	61	6	32	2	47	5	127	23	22	3	166	39	31	28	31	10	72	14
1981-1985	163	18	95	9	78	6	55	2	178	24	47	6	149	31	6	2	45	7	89	11
1986-1990	136	4	154	8	118	3	54	2	240	24	100	6	427	44	15	5	49	6	141	11
1991-1995	65	2	92	6	103	3	60	2	153	10	44	4	395	18	49	7	86	5	116	6
1996	86	2	60	0	40	0	122	0	a/	a/	62	2	614	29	92	3	29	3	147	5
1997	162	1	47	1	24	1	60	0	a/	a/	49	3	325	9	12	0	108	3	105	2
1998	93	2	42	1	42	0	83	3	a/	a/	78	0	176	2	33	10	193	7	99	3
1999	116	3	38	1	60	2	36	3	a/	a/	55	5	478	14	14	3	136	8	124	5
2000	175	3	40	3	32	2	63	1	a/	a/	38	3	205	18	5	0	83	9	85	5
2001	220	4	62	6	53	7	195	3	a/	a/	95	6	711	49	30	5	153	22	203	14
2002	311	1	137	3	124	1	221	1	a/	a/	118	6	834	22	51	12	218	9	269	7
2003	215	6	135	5	27	1	120	3	341	7	145	1	1,230	37	209	31	147	2	279	10
2004	196	3	71	2	76	1	19	0	238	11	91	5	988	16	40	4	101	5	198	5
2005	124	3	a/	a/	74	2	54	1	a/	a/	40	1	302	5	17	2	61	2	118	3
2006	31	0	65	0	67	0	82	0	a/	a/	22	0	165	0	7	1	129	8	100	1
2007	91	1	34	2	20	0	6	0	a/	a/	17	1	132	2	14	3	2	0	42	1
2008	73	1	15	2	13	0	8	0	a/	a/	11	2	135	15	20	5	28	8	40	4
2009	92	13	17	0	2	0	32	2	a/	a/	50	0	179	26	34	9	a/	a/	61	7
2010 <sup>b/</sup>	57	0	24	1	27	2	56	3	a/	a/	75	6	301	7	46	14	a/	a/	87	5

a/ Surveys were not conducted.

b/ Preliminary.

TABLE B-12. Estimates of minimum inriver run size, catch, and escapement in numbers of Columbia River adult spring Chinook destined for areas below Bonneville Dam.

Year or Average	Minimum Inriver Run Size	Tributary Runs									
		Lower River Catch <sup>a/</sup>		Willamette			Sandy	Cowlitz <sup>c/</sup>	Lewis <sup>c/</sup>	Kalama	Hatchery Escapement <sup>d/</sup>
				Run Size	L. Willamette Sport Catch	Will. Falls Escapement <sup>b/</sup>					
1971-1975	84,000	13,800	3,700	53,300	17,000	34,300	--	11,900	200	1,100	20,000
1976-1980	92,160	6,160	2,720	51,240	14,380	31,420	975	19,680	2,980	2,020	26,580
1981-1985	130,000	6,680	1,840	67,700	15,620	35,580	1,940	19,960	4,220	3,740	28,840
1986-1990	175,563	11,980	4,330	103,100	21,140	58,760	2,425	10,691	11,340	1,877	32,460
1991-1995	119,498	3,680	2,875	66,039	18,180	32,580	4,951	6,801	5,870	1,976	23,700
1996	54,437	149	-	33,358	6,100	20,400	3,997	1,787	1,730	627	15,900
1997	53,560	300	-	34,536	1,900	26,200	4,625	1,877	2,196	505	18,100
1998	52,651	100	49	43,497	2,800	33,100	3,768	1,055	1,611	407	22,900
1999	63,348	349	-	52,584	5,500	38,900	3,985	2,069	1,753	977	25,900
2000	72,192	1,149	249	55,788	9,000	37,594	3,641	2,199	2,515	1,418	24,100
2001	100,666	3,700	4,300	78,436	7,600	52,700	5,329	1,609	3,777	1,796	29,000
2002	149,970	7,900	5,800	120,164	10,800	83,100	5,903	5,208	3,520	2,924	58,300
2003	163,329	1,900	8,200	123,352	13,500	87,600	5,600	15,972	5,057	4,565	45,626
2004	195,839	8,500	7,500	143,242	12,000	95,200	12,675	16,514	7,426	4,339	67,791
2005	85,969	3,400	4,400	59,495	5,800	35,453	7,668	9,353	3,511	3,389	33,102
2006	91,034	3,000	2,900	59,311	7,200	36,851	4,382	6,967	7,311	5,482	34,428
2007	69,330	1,900	2,600	39,943	5,700	22,818	2,813	3,974	7,596	8,036	29,375
2008	43,904	100	700	27,016	4,600	14,151	5,447	2,986	2,252	1,617	15,757
2009 <sup>e/</sup>	54,285	349	2,000	39,400	4,500	25,795	2,921	5,977	1,428	402	18,805
2010 <sup>e/</sup>	153,034	3,349	6,200	107,675	22,700	65,293	8,057	8,849	2,797	764	43,063

a/ Includes some upriver origin spring Chinook through 1980. Beginning in 1981, the lower river catch of lower river spring Chinook is based on mark recoveries rather than the timing of the catch, as in previous years. Since 1986, GSI and VSI techniques have been used for stock composition analysis. Commercial catch includes Select Area fisheries. Sport catch is mainstem Columbia River, does not include tributaries. Catch may include small numbers of jacks. Sport fishery closed in 1995 to 1997.

b/ Prior to 1988, the escapement goal at Willamette Falls was 30,000 to 35,000. Beginning in 1988, the goal was dependent on run size under the Willamette Basin Fish Management Plan. Since 2001, hatchery escapement targets are set in the Fisheries Management and Evaluation Plan developed by ODFW. Lower Willamette sport catch may include small numbers of jacks.

c/ Includes hatchery escapement, tributary recreational catch, and natural spawning escapement for 1975 to present. The years 1971-1973 are based on using the 1975-1976 Cowlitz River recreational fishery adult harvest rates.

d/ Includes hatcheries operated by all agencies. Values are included in the totals for the tributary runs.

e/ Preliminary.

TABLE B-13. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult spring Chinook destined for areas above Bonneville Dam.<sup>a/</sup> This table includes Snake River summer Chinook.

Year or Avg.	Inriver Run Size	Lower River Catch <sup>b/</sup>		Bonneville Dam Count	Zone 6 Sport	Mainstem Treaty Indian Catch		Zone 6 Escapement <sup>d/</sup>	Snake River Escapement <sup>e/</sup>		Up. Col. River Escapement <sup>f/</sup>		Hatchery Escapement <sup>g/</sup>
		Commercial	Sport			Commercial <sup>c/</sup>	Ceremonial/ Subsistence		Hatchery	Wild	Hatchery	Wild	
1976-1980	55,897	185	0	55,712	-	259	1,714	53,740	2,903	6,413	2,800	2,241	2,500
1981-1985	70,328	1,706	393	68,229	-	1,024	2,545	64,660	7,508	10,787	4,831	3,239	10,058
1986-1990	107,959	2,378	1,356	104,225	-	186	6,771	97,268	19,648	10,192	5,881	3,089	16,842
1991-1995	63,355	511	710	62,134	-	15	3,730	58,389	7,097	7,015	5,698	1,546	9,979
1996	55,559	46	17	55,496	0	0	2,911	52,585	3,179	3,788	1,959	371	4,861
1997	123,824	53	13	123,758	0	14	8,309	115,435	39,521	5,310	4,767	697	23,432
1998	43,512	27	14	43,471	0	1	2,224	41,246	6,918	7,587	2,735	377	7,806
1999	43,072	28	21	43,023	0	1	1,983	41,039	3,703	2,856	3,239	369	4,601
2000	186,707	251	116	186,340	0	1,379	9,973	174,988	29,568	8,255	13,840	829	18,810
2001	439,885	2,538	22,719	414,628	168	43,790	10,985	359,686	141,121	45,318	30,813	4,305	40,391
2002	334,543	10,151	16,268	308,180	1,684	24,257	9,208	273,031	67,312	30,248	19,628	1,622	27,768
2003	242,638	3,493	9,611	229,499	1,860	9,205	9,090	209,344	54,951	32,365	11,676	1,174	18,234
2004	221,606	6,233	17,146	198,325	1,616	8,370	9,114	179,225	58,624	21,401	7,573	1,649	17,022
2005	106,920	2,289	7,235	97,397	317	1	6,163	90,916	22,932	10,127	8,865	1,705	11,069
2006	132,583	2,238	4,187	126,158	1,288	0	8,401	116,469	20,248	9,490	9,716	967	12,288
2007	86,247	1,491	3,927	80,829	1,462	3	5,624	73,740	23,308	7,100	8,341	653	10,961
2008 <sup>h/</sup>	178,629	6,292	19,612	151,895	1,853	12,314	8,247	129,481	55,587	17,586	12,851	1,211	20,888
2009 <sup>h/</sup>	169,296	4,543	15,246	147,489	290	0	11,083	136,116	49,836	14,974	16,025	1,861	18,079
2010 <sup>h/</sup>	315,345	9,281	23,535	277,389	3,512	25,008	12,807	236,062	97,770	26,639	22,235	2,003	39,986
GOAL				115,000					35,000 <sup>h/</sup>	25,000 <sup>h/</sup>			

a/ Spring Chinook accounting ends on June 15. Chinook formerly managed separately as Snake River summer Chinook are now grouped with all upriver spring Chinook because of overlap in run timing. Snake River summer Chinook have been moved from Table B-14 to this table.

b/ Includes some lower river origin spring Chinook through 1980. Beginning in 1981, the lower river catch of upriver spring Chinook is based on mark recoveries rather than timing of the catch as in previous years. Since 1986, GSI techniques have been used for stock composition analysis. Commercial catch includes estimated miscellaneous fishery-related impacts from test fisheries, commercial shad fisheries, and Select Area commercial gillnet fisheries beginning in 1979 and catch and release mortalities from selective fisheries beginning in 2001. Sport catch includes mainstem fisheries between Buoy 10 and Bonneville Dam.

c/ Spring season fishery closed in 1975, 1976, and from 1978 to 2000. Spring Chinook landed during those years were from the winter season fishery.

d/ Bonneville Dam count minus Zone 6 sport, mainstem commercial and ceremonial/subsistence treaty Indian harvest.

e/ Upper Columbia escapement at Rock Island Dam. Does not include Wenatchee, Entiat, and Methow.

f/ Hatchery rack and trap returns above Lower Granite Dam plus Tucannon and hatchery returns above Priest Rapids Dam (Wenatchee, Entiat, and Methow) plus Ringold. Does not include Leavenworth or East Bank.

g/ Preliminary.

TABLE B-14. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult summer Chinook destined for areas above Bonneville Dam.<sup>a/</sup> This table does not include Snake River summer Chinook.

Year or Avg.	Inriver Run Size	Lower River Catch <sup>b/</sup>		Bonneville Dam Count	Zone 6 Sport	Mainstem Treaty Indian Catch		Zone 6 Escapement <sup>e/</sup>	U. Columbia River Escapement <sup>f/</sup>
		Commercial <sup>c/</sup>	Sport			Commercial <sup>d/</sup>	Ceremonial/ Subsistence		
1976-1980	22,566	81	-	22,485	-	38	1,047	21,401	18,161
1981-1985	16,822	55	-	16,767	-	304	669	15,793	12,202
1986-1990	21,244	71	8	21,166	-	708	194	20,264	15,785
1991-1995	13,032	30	15	12,988	-	-	227	12,761	13,347
1996	12,080	15	34	12,031	0	0	374	11,657	10,995
1997	18,274	6	16	18,252	0	0	270	17,982	13,107
1998	16,332	1	27	16,304	0	0	335	15,969	13,387
1999	21,867	1	51	21,815	0	0	411	21,404	20,898
2000	22,595	0	17	22,578	0	0	209	22,369	22,306
2001	52,960	1	64	52,895	0	150	542	52,203	53,170
2002	89,548	8	1,471	88,069	98	74	2,019	85,878	96,326
2003	83,120	36	2,007	81,077	361	3,587	710	76,419	83,004
2004	65,498	236	1,107	63,970	226	8,004	390	55,350	67,060
2005	60,445	2,787	1,794	55,864	450	6,415	1,227	47,772	61,227
2006	77,896	4,828	5,249	67,819	346	15,771	548	51,154	52,236
2007	37,017	1,122	2,196	33,699	194	4,564	811	28,130	30,644
2008 <sup>g/</sup>	55,532	1,429	2,140	51,963	1,072	8,317	712	41,862	39,305
2009 <sup>g/</sup>	53,878	2,546	2,341	48,994	193	10,441	1,209	37,151	49,417
2010 <sup>g/</sup>	72,346	4,740	2,738	64,638	145	15,569	h/	48,924	49,265
GOAL	29,300 <sup>i/</sup>								

a/ Summer Chinook accounting begins on June 16. Chinook managed as Snake River summer Chinook prior to 2004 are now grouped with all upriver spring Chinook because of overlap in run timing. As of 2004, they have been moved from this table to Table B-13.

b/ Includes estimated miscellaneous fishery-related impacts from mainstem recreational fisheries, test fisheries, commercial shad fisheries, and terminal area commercial gillnet fisheries beginning in 1979. Includes catch and release mortality in selective fisheries beginning in 2002.

c/ No directed commercial summer Chinook fishery from 1964 to 2003. Landings during those years are bycatch from commercial shad and sockeye fisheries.

d/ No directed commercial summer Chinook fishery from 1965 to 2003. Landings during those years are bycatch from commercial sockeye fishery.

e/ Bonneville Dam count minus Zone 6 mainstem sport, and treaty Indian commercial, and ceremonial/subsistence harvest.

f/ Priest Rapids Dam count.

g/ Preliminary.

h/ No ceremonial and subsistence permits issued, sales of platform and hook & line subsistence catch allowed and included in commercial catch.

i/ Comanager goal established in 2004 associated with regrouping Snake River summer Chinook with Snake River spring Chinook.

TABLE B-15. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult Spring Creek Hatchery (SCH) stock fall Chinook.<sup>a/</sup>

Year or Average	Inriver Run Size	Harvest					
		Bonneville Dam Count	Treaty Indian Commercial and Subsistence	Non-Indian		Escapement	
				Commercial <sup>b/</sup>	Sport	Natural	Hatchery <sup>c/</sup>
1971-1975	105,700	67,600	29,000	37,900	300	2,900	17,000
1976-1980	116,522	83,000	32,533	31,794	131	3,884	21,972
1981-1985	63,342	49,780	24,637	9,747	580	2,711	15,955
1986-1990	16,673	10,200	6,080	2,920	820	1,500	4,600
1991-1995	30,192	25,564	11,360	2,067	1,280	1,460	9,700
1996	33,137	30,300	21,100	1,700	900	1,300	7,700
1997	27,377	23,300	10,329	0	2,981	4,612	8,688
1998	20,158	17,100	6,592	197	2,556	2,731	3,224
1999	50,189	46,800	28,197	258	2,617	3,338	14,488
2000	20,527	18,400	7,903	1,141	897	4,085	6,257
2001	124,951	115,800	52,124	3,693	3,302	5,063	36,663
2002	158,299	145,200	48,350	11,485	6,654	8,069	67,436
2003	180,592	161,735	48,204	9,850	7,659	27,894	56,935
2004	175,245	164,482	59,941	3,690	5,614	14,084	68,932
2005	103,526	98,322	49,471	3,981	3,049	4,667	31,977
2006	27,917	21,197	13,400	1,774	654	1,931	9,889
2007	14,549	13,072	5,034	474	306	2,870	5,899
2008	93,860	82,331	43,933	7,100	3,526	2,765	33,722
2009	48,970	40,268	21,622	5,262	1,523	4,103	13,680
2010 <sup>d/</sup>	123,037	115,993	78,581	5,402	1,642	6,672	30,740
GOAL							7,000 <sup>e/</sup>

a/ Based on Columbia River fall Chinook database, WDFW, unpublished.

b/ Includes Select Area fisheries.

c/ Does not include strays to hatcheries below Bonneville Dam. Includes fall Chinook tules trapped at Bonneville Dam, 1986-1994 and 1998.

d/ Preliminary estimates based on inseason run updates.

e/ Escapement goal was changed from 8,200 fish to 7,000 fish, or 4,000 females, in 1994.

TABLE B-16. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult lower river hatchery (LRH) stock fall Chinook.<sup>a/</sup>

TABLE D-16. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult lower river hatchery (LRFH) stock fall chinook.						
Year or Average	Inriver Run Size	Harvest			Escapement	
		Treaty Indian Commercial and Subsistence	Non-Indian		Natural	Hatchery <sup>d/</sup>
			Commercial <sup>b/</sup>	Sport <sup>c/</sup>		
1971-1975	175,900	0	78,100	5,400	49,200	43,200
1976-1980	145,377	20	59,400	4,380	36,940	44,620
1981-1985	107,163	851	25,604	4,486	37,755	36,846
1986-1990	199,938	655	93,794	17,420	38,774	48,821
1991-1995	55,519	238	2,871	4,998	19,915	27,419
1996	75,495	360	3,899	4,641	23,909	42,662
1997	57,393	0	2,369	7,704	22,663	24,657
1998	45,265	0	844	4,519	16,713	23,035
1999	39,933	0	2,234	6,118	12,551	19,030
2000	26,997	0	860	3,212	10,714	12,211
2001	94,331	0	4,428	7,443	39,434	42,996
2002	156,444	279	9,928	15,353	80,670	50,138
2003	154,983	0	9,216	14,213	97,089	34,465
2004	109,055	475	13,122	11,870	53,399	30,103
2005	78,293	186	9,219	10,140	33,598	25,042
2006	58,319	237	5,919	9,449	26,633	15,957
2007	32,689	0	1,308	6,123	10,208	15,050
2008	61,559	502	5,701	6,543	21,528	27,265
2009	76,738	0	10,259	11,295	23,746	31,436
2010 <sup>e/</sup>	86,245	0	8,914	15,430	26,958	34,943
GOAL						Hatchery Production

a/ Based on Columbia River fall Chinook database, WDFW, unpublished.

b/ Includes Select Area fisheries.

c/ Includes tributary catches.

d/ Does not include strays to hatcheries above Bonneville Dam or fish trapped at Bonneville Dam.

e/ Preliminary estimates based on inseason run updates.

TABLE B-17. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult lower river wild (LRW) stock fall Chinook.<sup>a/</sup>

Year or Average	Inriver Run Size	Harvest				Escapement	
		Treaty Indian Commercial and Subsistence	Non-Indian			Natural	Hatchery
			Commercial	Sport <sup>b/</sup>			
1971-1975	59,700	0	27,900	2,100		29,400	100
1976-1980	26,963	20	11,720	1,220		13,720	240
1981-1985	16,287	0	1,940	1,320		12,480	480
1986-1990	32,600	60	10,689	3,251		18,383	181
1991-1995	14,761	0	2,159	2,433		10,101	68
1996	14,566	0	325	234		13,914	93
1997	12,323	0	0	1,082		11,241	0
1998	7,253	0	0	667		6,493	93
1999	3,349	0	18	0		3,257	74
2000	10,234	0	604	0		9,422	208
2001	15,721	0	1,382	729		13,610	0
2002	25,171	161	1,801	3,245		19,654	50
2003	26,021	0	3,391	4,962		17,668	0
2004	22,327	0	2,343	3,638		16,346	0
2005	16,767	0	2,240	2,632		11,725	170
2006	18,105	0	2,546	2,801		12,758	0
2007	4,276	0	258	138		3,857	23
2008	7,120	0	0	937		6,183	0
2009 <sup>c/</sup>	7,533	0	293	347		6,893	0
2010 <sup>c/</sup>	9,971	0	163	1,134		8,674	0
GOAL						5,700 <sup>d/</sup>	

a/ Based on Columbia River fall Chinook database, WDFW, unpublished.

b/ Includes tributary catches.

c/ Preliminary estimates based on inseason run updates.

d/ Escapement objective is for North Lewis River, but escapement numbers include other fish. The escapement objective for the North Lewis River was met for all years except 1998, 1999, 2007, 2008, and 2009.



TABLE B-18. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult upriver bright (URB) stock fall Chinook destined for areas above McNary Dam and the Deschutes River.<sup>a/</sup>

Year or Average	Inriver Run Size	Bonneville Dam Count	Harvest			Escapement						
			Treaty Indian Commercial and Subsistence	Non-Indian		Natural <sup>c/</sup>	Hatchery	Deschutes above/below Sheares Falls <sup>d/</sup>	McNary Dam Count	Ice Harbor Dam Count	Total Lower Granite Count	SRW L. Granite Dam Count <sup>e/</sup>
				Commercial	Sport <sup>b/</sup>							
1971-1975	110,500	80,400	35,100	29,300	3,100	36,800	2,600	NA	39,500	5,600	-	-
1976-1980	92,301	72,360	32,160	19,180	980	29,480	1,980	NA	31,080	1,160	532	532
1981-1985	111,873	94,120	26,700	13,880	3,020	46,060	8,100	NA	51,042	1,583	586	450
1986-1990	291,407	222,337	100,379	61,499	13,613	90,709	13,231	7,081	107,252	4,369	691	289
1991-1995	105,302	99,028	20,813	5,000	5,095	51,424	9,419	7,342	61,362	3,352	903	473
1996	143,155	135,499	29,868	3,717	8,918	59,598	15,905	10,233	73,929	3,810	1,308	639
1997	161,735	152,941	42,637	1,429	11,506	68,889	13,114	20,208	67,192	2,752	1,451	797
1998	141,575	137,509	33,760	770	8,137	54,297	18,798	15,908	63,791	4,220	1,909	306
1999	165,889	155,756	38,822	2,133	15,173	48,372	30,272	7,389	78,356	6,586	3,381	905
2000	156,595	145,104	36,501	5,551	10,545	66,512	10,841	4,985	66,378	6,509	3,602	1,148
2001	232,366	219,801	35,422	8,151	12,648	92,194	21,143	12,817	110,517	13,635	8,915	5,163
2002	279,548	257,711	57,405	6,881	25,651	123,446	17,299	11,907	141,682	15,319	12,351	2,116
2003	374,154	341,208	49,060	15,930	25,918	176,865	12,356	13,413	179,970	20,903	11,732	3,856
2004	362,804	336,585	46,566	19,760	22,276	148,028	23,137	10,197	170,648	21,100	14,960	2,983
2005	278,539	256,119	45,776	8,464	23,980	115,612	23,299	14,937	131,550	14,677	11,170	2,602
2006	230,390	132,632	44,565	8,757	14,515	79,852	15,197	14,223	89,081	10,272	8,048	2,483
2007	114,065	105,626	18,878	2,833	10,860	51,004	7,267	12,721	57,268	13,408	10,195	2,016
2008	197,295	183,242	39,988	7,574	14,323	75,421	23,468	6,908	101,869	21,896	16,628	2,222
2009 <sup>f/</sup>	212,047	190,695	58,616	11,601	17,310	87,585	15,762	6,429	104,544	24,824	15,167	2,126
2010 <sup>f/</sup>	255,492	247,620	81,625	15,741	19,869	78,256	35,000	NA	146,924	46,541	41,815	NA
GOAL									40,000 <sup>g/</sup>			

a/ Based on Columbia River fall Chinook database, WDFW, unpublished. Does not include hatchery URB Chinook reared and released below McNary Dam.

b/ Includes tributary and mainstem catches between Bonneville and Priest Rapids dams.

c/ Includes Deschutes, Yakima, Upper Columbia, and Snake River escapements.

d/ Entire time series of Deschutes escapement revised in 2010 to match Deschutes River Chinook Spawner Escapement Goal using U.S. v. Oregon Technical Advisory Committee Data (Sharma et al. 2009).

e/ Snake River wild; adjusted for stray hatchery fish. Includes wild fish hauled to Lyons Ferry Hatchery.

f/ Preliminary based on inseason run update.

g/ FMP goal. The U.S. v. Oregon parties managed for a McNary Dam escapement of 45,000 beginning in 1990 to account for increased hatchery brood stock needs and concern for the Snake River wild fall Chinook stock; 46,000 beginning in 1994 to account for the Hanford Reach sport fishery; 60,000 beginning in 2008 for increased production in the Snake basin. However, starting in 1994 inriver fisheries were managed primarily for ESA consultation standards.

TABLE B-19. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult mid-Columbia bright (MCB) stock fall Chinook destined for areas below McNary Dam, not including the Deschutes River.<sup>a/</sup>

Year or Average	Inriver Run Size	Bonneville Dam Count	Treaty Indian Commercial and Subsistence	Harvest		Escapement	
				Non-Indian		Natural	Hatchery <sup>c/</sup>
				Commercial	Sport <sup>b/</sup>		
1982-1985	10,275	4,925	1,875	1,675	100	0	3,450
1986-1990	60,894	24,780	16,288	26,547	2,277	4,253	9,194
1991-1995	32,352	19,360	6,014	4,151	1,622	7,327	10,631
1996	59,698	38,100	12,443	5,306	3,387	15,618	15,868
1997	58,932	36,600	11,596	3,320	6,517	15,916	15,808
1998	37,328	29,900	5,570	1,063	5,697	11,380	8,401
1999	50,788	40,400	10,581	1,543	5,927	17,213	7,334
2000	37,191	25,600	7,186	3,739	3,507	10,135	7,884
2001	76,504	48,100	16,821	7,023	9,580	14,600	13,701
2002	108,198	57,600	24,358	9,437	12,737	27,005	21,946
2003	150,042	97,179	27,830	20,432	12,804	38,204	24,175
2004	122,496	79,866	23,392	9,178	11,167	27,779	26,210
2005	100,333	60,464	23,158	6,590	10,727	14,271	30,991
2006	80,470	31,402	22,705	4,577	3,567	12,501	19,745
2007	47,556	29,029	13,369	6,665	2,528	5,559	13,053
2008	76,297	44,210	23,260	10,349	5,648	6,813	21,409
2009	73,069	41,298	21,213	8,508	7,433	9,320	22,003
2010 <sup>d/</sup>	68,765	50,878	24,749	5,759	3,173	16,453	18,631
GOAL							Hatchery Production

a/ Based on Columbia River fall Chinook database, WDFW, unpublished. Does not include URB Chinook destined for areas above McNary Dam or the Deschutes River.

b/ Includes tributary and mainstem catches.

c/ Little White Salmon and Bonneville Hatcheries.

d/ Preliminary based on inseason run updates.

TABLE B-20. Estimates of minimum inriver run size and catch in numbers of adult spring, summer, and fall Chinook from the Columbia River. (Page 1 of 3)

Table B-20: Estimates of minimum inriver run size and catch in numbers of adult spring, summer, and fall chinook from the Columbia River. (Page 1 of 3)															
Year	Minimum Inriver Run Size	Below Bonneville Dam						Above Bonneville Dam						Total Treaty Indian & Non-Indian	
		Non-Indian Sport			Non-Indian Commercial			Non-Indian Sport		Treaty Indian			Non-Indian Total		
		Tributary <sup>a/</sup>	Buoy 10	Mainstem <sup>b/</sup>	Select Area <sup>c/</sup>	Mainstem	Bonneville Dam Counts	Mainstem	Tributary <sup>d/</sup>	Ticketed Commercial <sup>e/</sup>	Non-Ticketed Public Sales	Ceremonial & Subsistence <sup>f/</sup>	Sport		Commercial
Spring Chinook <sup>g/</sup>															
'79-'80	146,497	11,427	h/	1,150	-	2,900	55,712	-	-	259	--	1,714	12,653	2,900	17,525
'81-'85	200,328	19,568	h/	2,233	-	8,197	68,229	-	925	1,024	--	2,545	22,726	8,197	34,492
'86-'90	283,523	39,688	h/	5,686	-	14,138	104,225	-	3,366	186	--	6,771	48,740	14,138	69,835
'91-'95	182,853	33,232	h/	3,010	376	4,042	62,134	-	1,227	15	--	3,730	37,469	4,343	45,557
1996	109,996	13,206	h/	17	789	154	55,496	-	40	0	--	2,911	13,263	943	17,117
1997	177,384	8,270	h/	13	1,821	309	123,758	-	7,387	14	--	8,309	15,670	2,130	26,123
1998	96,163	10,350	h/	63	2,313	100	43,471	-	1,679	1	--	2,224	12,092	2,413	16,730
1999	106,420	14,940	h/	21	1,980	351	43,023	-	211	1	--	1,983	15,172	2,331	19,487
2000	258,899	17,582	h/	351	6,631	1,237	186,340	-	11,497	1,379	--	9,973	29,430	7,868	48,650
2001	540,551	17,419	h/	27,014	9,719	5,279	414,628	168	56,684	22,019	21,696	10,985	101,285	14,998	170,983
2002	484,513	28,588	h/	22,045	12,251	17,407	308,180	1,684	25,839	17,930	6,324	9,208	78,157	29,658	141,276
2003	405,967	31,924	h/	17,781	8,783	4,658	229,499	1,860	21,117	6,363	2,842	9,090	72,683	13,441	104,419
2004	417,445	35,584	h/	24,638	11,643	14,489	198,325	1,616	22,471	5,256	3,114	9,114	84,310	26,132	127,926
2005	192,889	15,755	h/	11,635	2,553	5,647	97,397	317	6,545	1	--	6,163	34,252	8,200	48,616
2006	223,617	18,826	h/	7,087	7,581	5,106	126,158	1,288	3,686	0	--	8,401	30,887	12,687	51,975
2007	155,577	14,549	h/	6,527	6,968	3,336	80,829	1,462	5,075	3	--	5,624	27,613	10,304	43,544
2008	222,533	7,574	h/	20,312	4,586	6,007	151,895	1,853	19,341	12,314	--	8,247	49,080	10,593	80,234
2009 <sup>j/</sup>	223,581	7,727	h/	17,246	4,275	4,521	147,489	290	17,455	0	--	11,083	42,717	8,796	62,596
2010 <sup>j/</sup>	468,379	27,492	h/	29,735	26,142	10,807	277,389	3,512	38,023	25,008	--	12,807	98,762	36,949	173,526
Summer Chinook <sup>g/j/</sup>															
'79-'80	22,566	-	-	-	-	81	22,485	-	-	38	--	1,047	0	81	1,165
'81-'85	16,822	-	-	-	-	55	16,767	-	-	304	--	669	0	55	1,028
'86-'90	21,244	-	-	8	-	71	21,166	-	-	1,180	--	194	8	71	980
'91-'95	13,032	-	-	15	-	30	12,988	-	-	-	--	227	15	30	271
1996	12,080	-	-	34	-	15	12,031	-	-	-	-	374	34	15	423
1997	18,274	-	-	16	-	6	18,252	-	-	-	-	270	16	6	292
1998	16,332	-	-	27	-	1	16,304	-	-	-	-	335	27	1	363
1999	21,867	-	-	51	-	1	21,815	-	-	-	-	411	51	1	463
2000	22,595	-	-	17	-	0	22,578	-	39	-	-	209	56	0	265
2001	52,960	-	-	64	-	1	52,895	-	82	150	--	542	146	1	839
2002	89,548	-	-	1,471	-	8	88,069	98	197	74	--	2,019	1,766	8	3,872
2003	83,120	-	-	2,007	36	0	81,077	361	223	3,587	--	710	2,591	36	6,959
2004	65,498	-	-	1,107	3	233	63,970	226	157	8,004	--	390	1,490	236	10,151
2005	60,445	-	-	1,794	0	2,787	55,864	450	338	6,415	--	1,227	2,582	2,787	13,205
2006	77,896	-	-	5,249	9	4,819	67,819	346	216	15,771	--	548	5,811	4,828	26,987
2007	37,017	-	-	2,196	0	1,122	33,699	194	294	4,564	--	811	2,685	1,122	9,194
2008	55,532	-	-	2,140	59	1,370	51,963	1,072	188	8,317	--	712	3,400	1,429	13,586
2009 <sup>j/</sup>	53,878	-	0	2,341	22	2,524	48,994	193	185	10,441	--	1,209	2,719	2,546	16,915
2010 <sup>j/</sup>	72,346	-	0	2,738	20	4,720	64,638	145	48	15,569	--	k/	2,931	4,740	23,240

TABLE B-20. Estimates of minimum inriver run size and catch in numbers of adult spring, summer, and fall Chinook from the Columbia River. (Page 2 of 3)

Year	Minimum Inriver Run Size	Below Bonneville Dam						Above Bonneville Dam						Total Treaty Indian & Non-Indian		
		Non-Indian Sport			Non-Indian Commercial			Non-Indian Sport			Treaty Indian					
		Tributary <sup>a/</sup>	Buoy 10	Mainstem <sup>b/</sup>	Select Area <sup>c/</sup>	Mainstem	Bonneville Dam Counts	Mainstem	Tributary <sup>d/</sup>	Ticketed Commercial <sup>e/</sup>	Non-Ticketed Public Sales	Ceremonial & Subsistence <sup>f/</sup>	Non-Indian Total			
													Sport		Commercial	
Fall Chinook <sup>h/</sup>																
'79-'80	337,608	3,651	-	1,155	20,800	73,253	135,878	500	--	32,568	--	--	5,306	113,253	151,127	
'81-'85	307,206	4,158	7,176	1,528	8,560	45,490	150,768	2,795	--	48,888	--	5,025	10,234	54,050	118,196	
'86-'90	603,713	6,383	20,641	4,119	16,059	181,817	258,807	5,825	442	118,864	4,765	5,692	37,056	197,876	360,441	
'91-'95	240,267	3,541	6,224	2,633	1,230	14,693	145,489	4,150	584	33,408	4,732	658	15,887	15,923	70,476	
1996	332,051	1,474	1,322	9,178	4,879	11,937	205,358	5,125	1,479	41,718	21,533	504	18,578	16,816	99,149	
1997	322,460	2,615	13,048	8,447	4,002	5,130	214,779	4,300	2,100	40,878	23,757	341	30,510	9,132	104,618	
1998	255,379	120	5,441	10,232	1,700	2,350	189,085	4,297	2,324	28,096	16,923	--	22,414	4,050	71,483	
1999	313,648	2,462	10,170	8,551	2,009	5,774	242,143	7,375	1,720	43,780	32,883	1,310	30,278	7,783	116,034	
2000	254,445	320	4,549	7,422	2,007	11,539	192,815	4,324	1,988	37,514	13,635	269	18,603	13,546	83,567	
2001	548,736	2,971	12,287	8,683	4,200	22,938	400,410	7,922	2,800	79,959	31,397	365	34,663	27,138	173,522	
2002	733,340	7,789	18,273	21,235	7,899	34,428	474,648	11,171	5,940	96,277	33,918	457	64,408	42,327	237,387	
2003	893,926	11,999	14,873	25,931	9,360	54,620	610,336	9,267	4,490	94,822	31,107	683	66,560	63,980	257,152	
2004	799,024	8,379	15,201	16,968	12,400	40,373	583,269	10,297	4,215	111,833	15,379	416	55,060	52,773	235,461	
2005	584,009	7,810	9,983	20,111	8,677	26,231	417,057	9,110	4,307	92,463	22,058	570	51,321	34,908	201,320	
2006	422,433	7,052	1,620	13,447	4,822	23,144	299,161	5,136	3,969	58,842	18,849	391	31,224	27,966	137,272	
2007	219,628	2,700	3,389	7,888	3,650	11,685	159,815	4,914	2,019	34,001	11,085	270	20,910	15,335	81,601	
2008	448,985	3,499	7,764	10,881	12,495	27,678	314,995	7,022	2,647	90,968	18,055	40	31,813	40,173	181,049	
2009 <sup>i/</sup>	428,981	7,616	4,218	14,954	10,973	32,668	351,920	8,124	3,330	63,498	12,008	15	38,242	43,641	157,404	
2010 <sup>j/</sup>	556,191	7,576	6,393	16,600	12,712	32,681	468,284	11,209	NA	118,447	13,029	27	41,778	45,393	218,675	
Total Chinook																
'79-'80	506,672	13,253	-	1,728	20,800	39,608	214,075	500	--	16,581	--	2,760	15,306	59,608	94,254	
'81-'85	524,355	23,726	7,176	3,761	8,560	53,742	235,764	1,677	925	50,216	--	8,239	32,959	62,302	153,716	
'86-'90	908,480	46,071	20,641	9,813	16,059	196,025	384,197	5,825	3,454	119,758	4,765	12,656	85,804	212,085	431,256	
'91-'95	436,153	36,773	6,224	5,658	1,531	18,765	220,611	4,150	1,811	33,424	4,732	4,482	53,371	20,295	116,304	
1996	454,128	14,680	1,322	9,229	5,668	12,106	272,885	5,125	1,519	41,718	21,533	3,789	31,875	17,774	116,689	
1997	518,117	10,885	13,048	8,476	5,823	5,445	356,789	4,300	9,487	40,892	23,757	8,920	46,196	11,268	131,033	
1998	367,874	10,470	5,441	10,322	4,013	2,451	248,860	4,297	4,003	28,097	16,923	2,559	34,533	6,464	88,576	
1999	441,935	17,402	10,170	8,623	3,989	6,126	306,981	7,375	1,931	43,781	32,883	3,704	45,500	10,115	135,983	
2000	535,939	17,902	4,549	7,790	8,638	12,776	401,733	4,324	13,524	38,893	13,635	10,451	48,089	21,414	132,482	
2001	1,142,247	20,390	12,287	35,761	13,919	28,218	867,933	8,090	59,566	102,128	53,093	11,892	136,094	42,137	345,344	
2002	1,307,401	36,377	18,273	44,751	20,150	51,843	870,897	12,953	31,976	114,281	40,242	11,684	144,331	71,993	382,535	
2003	1,383,013	43,923	14,873	45,719	18,179	59,278	920,912	11,488	25,830	104,772	33,949	10,483	141,834	77,457	368,530	
2004	1,281,967	43,963	15,201	42,713	24,046	55,095	845,564	12,139	26,843	125,093	18,493	9,920	140,860	79,141	373,538	
2005	837,343	23,565	9,983	33,540	11,230	34,665	570,318	9,877	11,190	98,879	22,058	7,960	88,155	45,895	263,141	
2006	723,946	25,878	1,620	25,783	12,412	33,069	493,138	6,770	7,871	74,613	18,849	9,340	67,922	45,481	216,234	
2007	412,222	17,249	3,389	16,611	10,618	16,143	274,343	6,570	7,388	38,568	11,085	6,705	51,207	26,761	134,339	
2008	727,050	11,073	7,764	33,333	17,140	35,055	518,853	9,947	22,176	111,599	18,055	8,999	84,293	52,195	274,869	
2009 <sup>i/</sup>	706,440	15,343	4,218	34,541	15,270	39,713	548,403	8,607	20,970	73,939	12,008	12,307	83,678	54,983	236,915	
2010 <sup>j/</sup>	1,096,916	35,068	6,393	49,074	38,874	48,208	810,311	14,865	38,071	159,024	13,029	12,834	143,472	87,082	415,441	

TABLE B-20. Estimates of minimum inriver run size and catch in numbers of adult spring, summer, and fall Chinook from the Columbia River. (Page 3 of 3)

a/ For spring Chinook: includes lower and upper Willamette, Clackamas, Cowlitz, Kalama, Lewis, and Sandy Rivers. Sandy River harvest not available before 1990. Catch estimates may include small numbers of Jacks. Does not include SAFE sport. For summer Chinook: all tributaries are closed. For fall Chinook: all tributaries downstream from Bonneville Dam.

b/ Includes Select Area catch.

c/ Youngs Bay Select Area began in 1992. Tongue Point and Blind Slough began in 1998. Select Area test fisheries began in 1991. Other Select Areas include Knappa in Oregon and Deep River in Washington.

d/ Includes tributaries between Bonneville and McNary Dams, the Snake and Yakima rivers, Icicle and Ringold creeks. For Spring Chinook, this is Ringold creeks and tributaries above Lower Granite Dam. For summer Chinook, this is Wanapum and Hanford Reach.

e/ Primarily mainstem fisheries between Bonneville and McNary dams, but also includes fish caught in miscellaneous commercial Indian fisheries such as Klickitat dip net and mainstem fisheries upstream from McNary Dam. Spring season fishery closed in 1975, 1976, and from 1978 to 2000. Spring Chinook landed during those years were from the winter season fishery. Summer season fishery closed from 1974 to 1982, 1989 to 2000. Summer Chinook landed during those years are bycatch from shad and sockeye fishery.

f/ Primarily mainstem fisheries between Bonneville and McNary dams. Significant subsistence fisheries also occur in tributaries throughout the Columbia and Snake River basin, especially for spring Chinook, which are not included in these estimates.

g/ Upriver spring Chinook accounting ends on June 15 and summer Chinook accounting begins on June 16.

h/ Spring Chinook Buoy 10 area catch is included in mainstem sport.

i/ Preliminary. Fall Chinook estimates are from inseason run updates.

j/ Summer Chinook retention was prohibited for all mainstem non-Indian and treaty Indian fisheries until 2003. Small non-Indian incidental mortalities prior to 2003 are associated with recreational Steelhead fisheries and commercial shad and Sockeye fisheries. A few stray summer Chinook are caught in Select Area (terminal) fisheries that are open for late returning spring Chinook and early returning fall Chinook. Prior to 2003, Treaty Indians could retain summer Chinook for subsistence purposes.

k/ No ceremonial and subsistence permits issued, sales of platform and hook & line subsistence catch allowed and included in commercial catch or non-ticked public sales.

l/ Fall Chinook minimum run size includes LRH, LRW, SCH, URB, MCB, and SAB.

TABLE B-21. Estimates of minimum inriver run size, catch, and escapement in thousands of adult coho entering the Columbia River.<sup>a</sup>

Year or Average	Minimum Inriver Run Size	Below Bonneville Dam					Above Bonneville Dam			
		Lower River Catch			Lower River Escapement		Bonneville Dam Counts <sup>e/</sup>	Mainstem Commercial Treaty Catch	Zone 6 Escapement <sup>f/</sup>	Hatchery Escapement
		Commercial	Recreational		Hatchery <sup>c/</sup>	Tributary Dam Counts <sup>d/</sup>				
			Buoy 10	Mainstem <sup>b/</sup>						
1971-1975	373.4	199.4	-	11.8	117.1	9.5	35.7	9.1	26.6	11.6
1976-1980	263.3	123.6	-	10.1	102.2	3.6	23.8	2.6	21.2	7.0
1981-1985	305.3	132.1	30.6	11.4	101.0	4.6	31.9	2.6	29.2	12.5
1986-1990	688.4	392.2	82.3	13.9	147.6	5.8	46.3	5.5	40.7	11.5
1991-1995	305.9	115.8	55.9	10.7	96.0	3.7	23.6	2.0	21.6	6.1
1996	113.0	26.2	4.5	3.8	62.2	0.6	15.7	0.7	15.0	1.4
1997	148.1	19.4	20.4	11.6	69.7	2.8	24.2	0.6	23.6	4.4
1998	168.4	23.0	3.2	6.7	87.9	1.3	46.3	1.5	44.8	11.3
1999	274.1	79.0	9.0	19.9	124.5	1.0	40.7	2.3	38.4	10.0
2000	547.6	168.4	21.5	37.7	288.6	5.6	85.8	6.3	79.5	26.6
2001	1,108.3	253.1	132.0	78.0	377.3	8.2	259.8	5.4	254.4	80.6
2002	499.9	163.0	6.2	27.4	211.1	3.6	88.6	1.6	86.9	2.9
2003	677.3	257.3	54.4	23.3	205.4	11.2	125.7	5.8	120.0	3.9
2004	442.5	119.6	15.2	13.5	173.5	5.6	115.0	10.3	104.8	6.2
2005	341.0	94.8	6.9	10.5	142.3	3.3	83.3	4.9	78.5	2.3
2006	386.4	63.4	3.7	16.7	191.1	9.5	102.1	8.1	94.1	0.7
2007	331.1	40.3	8.4	24.0	161.0	4.9	92.5	8.0	84.5	2.0
2008	493.8	60.4	8.6	42.3	240.9	6.2	135.5	21.6	113.9	1.1
2009	729.8	124.2	48.1	39.9	260.4	32.3	244.9	8.9	236.0	2.4
2010 <sup>g/</sup>	441.1	76.3	8.0	26.7	187.3	22.1	102.7	7.1	95.6	0.6
GOAL		Hatchery Production					Hatchery Production			

a/ These numbers match OPI databases. Adjustments were made to the escapement figures and catches.

b/ Mainstem recreational catches listed in this table include tributary catches and catches in the Chinook/Hammond area of 3,195 in 1989, 28 in 1990, and 1,151 in 1991.

c/ Includes hatcheries operated by all agencies.

d/ Willamette Falls, Clackamas River (North Fork Dam) and Sandy River (Marmot Dam).

e/ Includes additional small adults counted as jacks for 1983-1984 and 1986-1989.

f/ Bonneville Dam count minus Zone 6 mainstem commercial treaty Indian harvest.

g/ Preliminary.

TABLE B-22. Estimated catch and effort in the Buoy 10 fishery.<sup>a/</sup>

Year	Angler Trips	Catch		Catch Per Trip
		Chinook	Coho	
1982-1985	30,996	4,040	30,547	0.97
1986-1990 <sup>b/c/</sup>	130,633	22,107	82,910	0.78
1991-1995 <sup>d/</sup>	79,475	5,689	55,895	0.50
1996	18,034	1,409	4,537	0.33
1997	55,725	13,153	20,357	0.60
1998	29,998	5,784	3,175	0.30
1999	49,581	9,850	8,861	0.38
2000	72,518	6,085	21,478	0.38
2001	125,884	12,709	132,038	1.15
2002	84,457	19,441	6,233	0.30
2003	88,827	16,316	54,440	0.80
2004	68,818	16,016	15,169	0.45
2005	55,182	9,286	6,878	0.29
2006	40,688	1,706	3,687	0.13
2007	36,064	3,776	8,356	0.34
2008	32,467	8,349	8,573	0.52
2009	72,803	5,940	48,127	0.74
2010 <sup>e/</sup>	52,300	6,807	7,980	0.28

a/ Prior to 1982, Buoy 10 area catches were not estimated separately and are included in the Columbia River marine area (Cape Falcon to Leadbetter Pt.) recreational catches. Estimates include bank anglers fishing from Clatsop Spit in Oregon and from the North Jetty in Washington. Effort and catch for the North Jetty fishery applied to the ocean quota for the Columbia River area until the ocean fishery closed. Beginning in 2000, includes catch and effort from the Astoria-Megler Bridge upstream to the new boundary from Tongue Point, Oregon to Rocky Point, Washington.

b/ 1989 includes catch and effort data for the Chinook/Hammond fishery occurring during weeks 32 and 33. A total of 7,922 angler trips produced catches of 492 Chinook, 3,195 coho, and a catch rate of 0.47 fish per trip. Catches in this fishery were counted against the Buoy 10

c/ 1990 includes catch and effort data for the Chinook/Hammond fishery occurring during weeks 31 and 32. A total of 3,225 angler trips produced catches of 54 Chinook, 28 coho, and a catch rate of 0.03 fish per trip.

d/ 1991 includes catch and effort data for the Chinook/Hammond fishery occurring during weeks 31 and 32. A total of 2,759 angler trips produced catches of 39 Chinook, 1,151 coho, and a catch rate of 0.43 fish per trip.

e/ Preliminary.

TABLE B-23. Willapa Bay fall Chinook terminal run size, catch, and spawning escapement in numbers of fish.

Year or Average	Non-local Stocks	Terminal Catch		Spawning Escapement		Terminal Run Size <sup>d/</sup>
	Gillnet Catch <sup>a/</sup>	Gillnet	Sport <sup>b/</sup>	Natural <sup>c/</sup>	Hatchery	
1976-1980	8,660	14,496	419	1,995	4,529	21,439
1981-1985	1,011	7,331	589	1,588	5,398	14,906
1986-1990	2,521	18,173	1,578	5,596	22,458	47,805
1991-1995	1,162	28,082	2,823	2,818	17,086	50,809
1996	-	37,065	3,024	2,153	12,079	54,321
1997	-	12,311	2,404	3,852	13,729	32,296
1998	-	6,765	2,178	3,114	8,658	20,715
1999	-	265	1,906	1,360	6,966	10,497
2000	-	5,902	1,399	2,303	10,455	20,059
2001	-	5,444	2,121	2,161	10,099	19,825
2002	36	9,452	2,537	1,729	13,680	27,398
2003	220	7,488	3,242	2,732	14,628	28,090
2004 <sup>e/</sup>	-	4,349	3,851	2,838	21,444	32,482
2005 <sup>e/</sup>	-	6,523	6,630	1,978	18,514	33,645
2006 <sup>e/</sup>	-	12,334	6,442	3,739	24,569	47,084
2007 <sup>e/</sup>	-	4,112	2,579	1,907	13,839	22,437
2008 <sup>e/</sup>	-	3,595	2,904	1,507	15,241	23,247
2009 <sup>e/</sup>	-	6,868	4,552	2,251	20,333	34,004
2010 <sup>e/</sup>	-	6,903	NA	NA	NA	NA
GOAL				4,350 <sup>f/</sup>	9,800 <sup>f/</sup>	

a/ Non-local gillnet is catch in Area 2G prior to Aug. 16.

b/ Adults. Sport catch since 1991 includes marine areas within Willapa Bay (e.g., Washaway Beach).

c/ Escapement estimates after 1984 are based on revised spawning habitat estimates. Natural = adult returns assumed to be from natural origin parents.

d/ Does not include catch of non-local stocks.

e/ Preliminary.

f/ WDFW goal; not an FMP goal.



TABLE B-24. Willapa Bay coho terminal run size, catch, and spawning escapement in numbers of fish.

Year or Average	Terminal Catch		Spawning Escapement		Terminal Run Size <sup>d/</sup>
	Gillnet	Sport <sup>a/</sup>	Natural <sup>b/</sup>	Hatchery <sup>c/</sup>	
1976-1980	15,011	2,842	5,800	14,328	37,981
1981-1985	39,007	2,181	3,567	26,640	69,968
1986-1990	69,199	2,591	NA	35,811	107,601
1991-1995	34,287	2,802	4,582	27,205	65,211
1996	38,316	4,052	15,711	48,854	106,933
1997	1,550	806	4,934	6,691	13,981
1998	13,140	852	13,807	6,902	34,701
1999	5,467	2,836	9,628	22,823	40,754
2000	10,193	1,780	23,031	29,387	64,391
2001	31,837	5,689	48,414	54,359	140,299
2002	59,435	5,683	58,703	48,871	172,692
2003	66,460	5,881	49,398	66,115	187,854
2004 <sup>e/</sup>	16,533	2,325	38,672	19,216	76,746
2005 <sup>e/</sup>	50,031	3,867	26,493	40,679	121,070
2006 <sup>e/</sup>	19,948	811	12,563	7,831	41,153
2007 <sup>e/</sup>	8,218	955	13,723	9,002	31,898
2008 <sup>e/</sup>	16,699	1,221	18,474	9,743	46,137
2009 <sup>e/</sup>	75,417	6,257	48,774	20,306	150,754
2010 <sup>e/</sup>	28,568	NA	NA	NA	NA
GOAL			13,090 <sup>f/</sup>	6,100 <sup>g/</sup>	

a/ Adults. Sport catch since 1991 includes marine areas within Willapa Bay (e.g., Washaway Beach).

b/ Natural spawning escapement estimates were not made in 1984-1994; estimates in 1996, 1997, and 1998 do not include adult fish released upstream of

c/ Hatchery rack number includes fish released upstream.

d/ Does not include natural spawning escapement between 1984 and 1994.

e/ Preliminary.

f/ WDFW goal; not an FMP goal.

TABLE B-25. Grays Harbor Chinook terminal catch, spawning escapement, and run size in numbers of fish. (Page 1 of 2)

Year or Average	Early Non-local Catch	Terminal Catch				Spawning Escapement		Terminal Run Size <sup>d/</sup>
		Non-Indian Gillnet	Treaty Indian Gillnet	Chehalis Tribal Gillnet	Sport <sup>a/</sup>	Natural <sup>b/</sup>	Hatchery <sup>c/</sup>	
SPRING Chinook								
1976-1980	-	-	-	587	e/	600	-	1,187
1981-1985	-	-	-	57	5	924	-	963
1986-1990	-	-	e/	143	6	1,875	-	2,024
1991-1995	-	-	0	94	15	1,566	-	1,675
1996	-	-	104	127	52	4,462 <sup>f/</sup>	-	4,745
1997	-	-	52	172	160	4,460 <sup>f/</sup>	-	4,844
1998	-	-	6	164	121	2,388	-	2,679
1999	-	-	3	187	76	1,285	-	1,551
2000	-	-	17	174	91	3,135	-	3,417
2001	-	-	4	210	252	2,860	-	3,326
2002	-	-	76	419	124	2,598	-	3,217
2003	-	-	68	0	131	1,904	-	2,103
2004	-	-	54	177	65	5,034	-	5,330
2005	-	-	26	439	88	2,129	-	2,682
2006	-	-	5	249	128	2,481	-	2,863
2007 <sup>g/</sup>	-	-	5	205	54	651	-	915
2008 <sup>g/</sup>	-	-	2	0	0	995	-	997
2009 <sup>g/</sup>	-	-	18	0	0	1,132	-	1,150
2010 <sup>g/</sup>	-	-	0	0	NA	NA	-	NA
GOAL						1,400		

TABLE B-25. Grays Harbor Chinook terminal catch, spawning escapement, and run size in numbers of fish. (Page 2 of 2)

Year or Average	Early Non-local Catch	Terminal Catch				Spawning Escapement		Terminal Run Size <sup>d/</sup>
		Non-Indian Gillnet	Treaty Indian Gillnet	Chehalis Tribal Gillnet	Sport <sup>a/</sup>	Natural <sup>b/</sup>	Hatchery <sup>c/</sup>	
FALL Chinook								
1976-1980	4,433	3,642	3,108	1,006	1,128	7	413	9,303
1981-1985	602	964	3,524	465	268	10	742	5,973
1986-1990	694	4,122	10,414	597	1,340	20,474	1,319	38,266 <sup>h/</sup>
1991-1995	206	5,000	7,750	901	3,794	12,044	3,006	32,496 <sup>h/</sup>
1996	148	1,441	4,068	49	7,456	16,988	4,307	34,309 <sup>h/</sup>
1997	24	2,796	6,630	311	2,687	16,342	2,416	31,183 <sup>h/</sup>
1998	5	267	4,135	0	2,912	11,476	1,921	20,711 <sup>h/</sup>
1999	0	87	1,926	1	114	9,196	1,990	13,315 <sup>h/</sup>
2000	671	647	3,289	0	1,714	8,081	1,450	15,182
2001	0	2,523	3,885	0	3,210	8,340	1,121	19,079
2002	40	26	963	0	2,955	10,621	2,006	16,570
2003	0	295	851	0	1,031	17,808	2,858	22,842
2004	0	183	3,498	476	6,158	29,461	3,584	43,360
2005	0	379	2,260	3	465	17,040	3,536	23,683
2006	0	195	3,738	0	1,635	15,955	2,845	24,368
2007 <sup>g/</sup>	0	514	2,472	19	1,719	11,264	1,072	17,060
2008 <sup>g/</sup>	0	717	1,878	72	313	13,570	1,631	18,181
2009 <sup>g/</sup>	0	1,193	2,485	0	0	7,215	1,125	12,018
2010 <sup>g/</sup>	0	1,495	3,403	0	NA	NA	NA	NA
GOAL						14,600		

a/ Age-3 and older.

b/ Age-3 and older, including hatchery fish spawning naturally.

c/ Includes naturally spawning fish taken for broodstock.

d/ Minimum estimate due to incomplete estimates of river recreational catch. Does not include non-local catch.

e/ Fewer than 50 fish.

f/ WDFW is not able to differentiate spawning time and believes this includes fall Chinook.

g/ Preliminary.

h/ Recreational catch estimates by WDFW reflect application of catch record card bias correction factor of 0.833. Quinault Indian Nation does not believe this factor is appropriate for this fishery. Unadjusted catch estimates are 1,000 for 1987; 2,400 for 1988; 2,500 for 1989; 2,400 for 1990; 4,500 for 1991; 2,600 for 1992; 4,200 for 1993; 4,300 for 1994; 6,500 for 1995; 6,800 for 1996; 3,400 for 1997; 3,500 for 1998; and 100 for 1999; terminal run sizes would be adjusted accordingly.

TABLE B-26. Grays Harbor coho terminal catch, spawning escapement, and run size estimates in numbers of fish.

Year or Average	Terminal Catch				Spawning Escapement <sup>b/</sup>		Terminal Run Size <sup>c/</sup>		
	Non-Indian	Treaty Indian	Chehalis	Sport <sup>a/</sup>	Natural	Hatchery	Natural	Hatchery	Total <sup>d/</sup>
	Gillnet	Gillnet	Tribal Gillnet						
1976-1980	5,231	9,675	3,500	2,021	29,510	10,207	44,430	17,933	61,088
1981-1985	5,299	15,614	2,863	5,012	36,847	17,565	40,374	42,013	82,388
1986-1990	7,715	30,109	1,817	5,355	44,836	30,767	51,553	69,041	120,595
1991-1995	12,502	29,745	2,716	10,503	36,516	31,654	51,384	72,082	123,466
1996	10,096	51,812	2,915	20,846	63,572	49,378	87,869	110,161	198,030
1997	115	5,548	125	1,547	22,469	12,710	19,258	22,958	42,216
1998	795	13,586	361	2,123	35,551	16,228	40,398	28,702	69,100
1999	1,674	12,212	797	4,507	33,346	29,655	37,987	44,342	82,329
2000	4,995	10,947	331	5,122	38,054	29,127	43,355	40,268	83,623
2001	3,152	15,671	533	20,868	80,100	90,411	76,401	118,595	194,996
2002	6,853	14,518	666	13,083	110,066	45,300	110,969	76,108	187,077
2003	6,623	12,041	1,000	12,026	84,952	65,114	94,759	87,383	182,142
2004	5,231	17,431	4,483	9,847	60,690	47,418	64,371	80,736	145,107
2005	3,073	23,232	2,286	11,043	38,585	47,784	43,665	82,716	126,381
2006 <sup>e/</sup>	649	8,680	127	2,185	17,767	16,729	20,440	24,902	45,342
2007 <sup>e/</sup>	1,687	8,922	1,108	4,456	25,121	14,345	32,472	23,284	55,756
2008 <sup>e/</sup>	7,783	10,204	385	3,210	34,054	12,774	47,060	19,990	67,050
2009 <sup>e/</sup>	561	28,513	858	16,053	69,733	45,174	88,405	56,792	145,197
2010 <sup>e/</sup>	3,990	25,314	2,519	NA	NA	NA	NA	NA	NA
GOAL					35,400				

a/ Beginning in 1987, estimates provided by WDFW for recreational catch reflect punch card bias correction factor.

b/ "Natural" includes hatchery fish spawning in wild. "Hatchery" includes wild fish taken for broodstock.

c/ Terminal run size numbers from 1981 to present are under co-manager review.

d/ The combined natural and hatchery run size total may not add to the sum of the catch and escapements due to hatchery total run size including on-station and off-station escapements.

e/ Preliminary.

TABLE B-27. Treaty Indian gillnet catch of Chinook, chum, and sockeye salmon in the Quinault River in numbers of fish.

Year or Average	Spring/Summer Chinook <sup>a/</sup>	Fall Chinook <sup>a/</sup>	Chum	Sockeye
1976-1980	149	4,320	7,960	17,560
1981-1985	114	5,100	4,720	12,600
1986-1990	338	8,822	4,686	11,218
1991-1995	98	6,293	2,505	9,523
1996	41	5,221	594	1,244
1997	19	2,625	1,033	2,532
1998	75	6,124	4,699	3,440
1999	10	4,840	599	73
2000	0	3,421	755	0
2001	5	4,047	2,009	0
2002	36	4,542	1,151	16,939
2003	92	7,343	3,742	37,130
2004	142	10,662	2,916	6,990
2005	24	7,648	1,283	116
2006	16	7,044	862	8
2007	<20	2,126	1,173	1
2008	10	3,682	1,171	0
2009 <sup>b/</sup>	43	5,455	1,156	1,441
2010 <sup>b/</sup>	8	4,521	2,037	1,856

a/ Stock separation under review.

b/ Preliminary.

TABLE B-28. Estimated inriver run size, catch and escapement for Quinault River coho in numbers of fish.

Year or Average	Terminal Catch <sup>a/</sup>			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence	River Sport	Natural	Hatchery	Natural	Hatchery	Total
1977-1980	9,750	--	--	3,425	3,107	8,465	7,750	16,215
1981-1985	10,700	--	--	3,237	6,239	7,809	12,657	20,466
1986-1990	13,777	--	--	3,185	4,239	8,024	13,200	21,224
1991-1995	7,963	--	--	4,319	8,046	6,205	13,472	19,678
1996	10,087	--	--	13,327	9,521	18,849	13,865	32,714
1997	365	--	--	3,150	1,054	3,339	1,118	4,457
1998	5,946	--	--	3,770	3,158	7,156	5,581	12,737
1999	15,491	--	--	12,666	14,617	19,138	23,101	42,239
2000	16,194	--	--	7,421	9,481	14,559	18,099	32,658
2001	25,348	--	--	21,565	30,689	30,016	47,115	77,131
2002	19,197	--	--	12,213	16,841	16,847	30,196	47,043
2003	22,546	--	--	4,710	16,841	9,546	34,132	43,678
2004	17,055	--	--	1,404	10,321	3,377	24,821	28,198
2005	23,852	--	--	6,418	10,034	15,951	25,574	41,525
2006	9,785	336	325	1,110	3,207	3,432	11,032	14,464
2007	11,770	578	650	6,193	15,069	9,778	24,395	34,173
2008	25,227	961	978	14,920	14,959	26,544	29,774	56,318
2009 <sup>b/</sup>	54,882	2,036	2,047	33,140	23,353	48,324	66,095	114,419
2010 <sup>b/</sup>	41,806	NA	NA	NA	NA	NA	NA	NA
GOAL				Hatchery Production				

a/ Includes dip-in fish destined for other river systems.

b/ Preliminary.

TABLE B-29. Estimated inriver run size, catch, and escapement of Queets River spring/summer Chinook in numbers of fish.

Year or Average	Terminal Catch			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence	River Sport <sup>a/</sup>	Natural <sup>b/</sup>	Hatchery	Natural	Hatchery	Total
1976-1980	267	18	53	851	24	1,176	37	1,078
1981-1985	243	20	27	890	52	956	74	1,209
1986-1990	646	46	67	1,527	-	2,287	-	2,287
1991-1995	64	5	10	610	-	689	-	688
1996	43	3	69	776	-	891	-	891
1997	72	10	71	540	-	693	-	693
1998	18	27	-	492	-	537	-	537
1999	12	41	-	373	-	426	-	426
2000	-	2	-	248	-	250	-	250
2001	-	17	-	548	-	565	-	565
2002	-	17	-	738	-	755	-	755
2003	-	6	-	189	-	195	-	195
2004	-	15	-	604	-	619	-	619
2005	-	8	-	298	-	306	-	306
2006	-	6	-	330	-	336	-	336
2007	-	6	-	352	-	358	-	358
2008	-	3	-	305	-	305	-	305
2009 <sup>c/</sup>	-	0	-	495	-	495	-	495
2010 <sup>c/</sup>	-	0	-	N/A	-	N/A	-	N/A
GOAL				700 <sup>d/</sup>				

a/ River catch of adults.

b/ Natural escapement includes hatchery strays.

c/ Preliminary.

d/ Minimum. Terminal run managed at 30 percent exploitation rate of inriver run size.

TABLE B-30. Estimated inriver run size, catch, and escapement of Queets River fall Chinook in numbers of fish.

Average	Terminal Catch		Escapement	Terminal Run Size			Total
	Gillnet	Ceremonial & Subsistence		Natural <sup>b/</sup>	Natural <sup>c/</sup>	Indicator <sup>d/</sup>	
1976-1980	1,540	100	36	2,820	4,320	-	4,320
1981-1985	2,104	20	135	3,930	5,691	591	6,282
1986-1990	2,430	20	214	8,768	10,677	861	11,538
1991-1995	1,860	20	109	4,106	5,511	708	6,219
1996	1,307	20	238	4,218	4,693	1,234	5,927
1997	1,708	20	210	2,872	4,122	823	4,945
1998	804	20	347	3,859	5,009	164	5,173
1999	947	20	93	1,918	2,885	220	3,105
2000	262	20	50	3,755	3,752	395	4,147
2001	1,366	64	285	3,099	3,604	1,204	4,808
2002	2,887	69	20	2,589	4,377	1,184	5,561
2003	1,322	93	278	4,979	5,203	1,415	6,618
2004	1,228	93	370	5,105	4,778	2,019	6,797
2005	1,648	90	441	4,557	4,521	2,213	6,734
2006	1,079	57	71	3,051	3,255	1,003	4,258
2007	634	20	74	878	1,293	307	1,600
2008	1,020	41	0	3,082	3,465	692	4,157
2009 <sup>e/</sup>	1,522	65	209	NA	NA	NA	NA
2010 <sup>e/</sup>	1,723	NA	NA	NA	NA	NA	NA
GOAL				2,500 <sup>f/</sup>			

a/ River sport catch of age-3 and older fish. The 2000 sport fishery was closed to retention of unmarked Chinook. The 2002 sport fishery was closed to Chinook retention on October 18 due to unusually low water conditions. The 2008 sport fishery was closed to the retention of Chinook. The 2009 sport fishery was closed to retention of unmarked Chinook in Queets and Salmon Rivers within Olympic National Park.

b/ Includes Indicator Stock. Estimates for years prior to 2001 assume a broodstock take of 150 as a placeholder until individual run reconstructions are complete.

c/ Includes from 100 to 200 wild Chinook captured each season near spawning grounds to be used as Indicator broodstock.

d/ This is an integrated wild/hatchery program. Broodstock are unmarked wild fish collected from river.

e/ Preliminary.

f/ Minimum. Terminal run managed at 40 percent exploitation rate of terminal run size.



TABLE B-31. Estimated terminal run size, catch, and escapement for Queets River coho in numbers of fish.

Year or Average	Terminal Catch <sup>a/</sup>			Escapement <sup>c/</sup>			Terminal Run Size <sup>c/</sup>			Total <sup>d/</sup>
	Gillnet	Ceremonial & Subsistence	River Sport <sup>b/</sup>	Natural	Supplemental	Hatchery	Natural	Supplemental	Hatchery	
1976-1980	2,440	60	140	3,460	-	1,000	5,100	-	1,640	6,740
1981-1985	2,385	20	104	5,397	-	2,654	6,411	-	3,794	10,205
1986-1990	8,455	18	241	4,826	996	3,700	6,343	1,825	9,685	17,123
1991-1995 <sup>e/</sup>	4,423	285	273	4,943	1,024	3,455	5,967	1,167	6,927	13,828
1996	16,035	920	279	8,926	3,575	5,189	10,722	4,502	13,078	28,302
1997	3,087	222	106	1,712	e/	2,137	1,970	e/	5,029	6,999
1998	7,411	452	135	4,134	1,387	3,503	4,661	1,536	9,545	15,742
1999	3,974	381	119	4,799	519	3,551	5,054	529	7,388	12,971
2000	5,066	479	223	8,104	682	2,032	8,715	701	5,366	14,782
2001	13,722	1,287	1,554	23,871	1,082	6,508	28,368	2,293	14,193	44,854
2002	23,712	1,009	399	13,968	1,065	2,240	16,123	1,311	21,514	38,948
2003	12,693	921	743	9,846	1,081	7,002	13,224	1,343	15,544	30,111
2004 <sup>f/</sup>	8,189	657	1,287	7,484	1,225	3,985	10,030	1,673	10,395	22,098
2005 <sup>f/</sup>	20,810	989	873	6,539	432	7,843	9,658	542	26,304	36,504
2006 <sup>f/</sup>	6,190	353	52	5,626	0	2,931	6,400	0	7,101	13,501
2007	2,261	304	153	4,680	0	1,874	6,066	0	2,779	8,845
2008	4,671	356	562	4,629	0	3,461	6,221	0	5,667	11,888
2009 <sup>g/</sup>	25,003	1,697	865	9,200	0	NA	NA	0	NA	NA
2010 <sup>g/</sup>	21,107	NA	NA	NA	0	NA	NA	0	NA	NA
GOAL				5,800-14,500						

a/ Includes dip-in fish from other river systems.

b/ Recreational catch of adults (coho over 20 inches).

c/ Natural escapement and run size estimates include fish taken for hatchery brood stock.

d/ Queets stock only; does not include non-local, dip-in fish.

e/ 1991 and 1997 supplemental was included in natural escapement and run size.

f/ Poor conditions during the coho spawner survey season precluded conduct of an independent spawner escapement estimate.

g/ Preliminary. In-season effort model used to scale run size to observed catch and effort, natural escapement, and actual hatchery rack escapement.

TABLE B-32. Estimated inriver run size, catch, and escapement for Hoh River spring/summer Chinook in numbers of fish.

Year or Average	Terminal Catch <sup>a/</sup>											
	Gillnet			Ceremonial & Subsistence			River Sport <sup>b/</sup>	Escapement		Terminal Run Size		
	Natural	Hatchery	Total	Natural	Hatchery	Total		Natural	Hatchery	Natural	Hatchery	Total
1976-1980	NA	NA	640	--	--	52	84	1,040	0	1,835	0	1,835
1981-1985	NA	NA	448	--	--	30	124	1,431	50	1,944	128	2,073
1986-1990	NA	NA	1,072	--	--	33	315	2,829	34	4,043	257	4,300
1991-1995	NA	NA	432	--	--	22	273	1,268	0	1,852	156	2,008
1996	NA	NA	471	--	--	30	267	1,371	16	2,083	114	2,197
1997	NA	NA	416	--	--	57	331	1,826	0	2,582	53	2,635
1998	NA	NA	294	--	--	20	288	1,287	0	1,880	28	1,908
1999 <sup>c/</sup>	NA	NA	155	--	--	20	52	928	99	1,081	171	1,252
2000 <sup>d/</sup>	NA	NA	87	--	--	38	21	492	0	529	116	645
2001 <sup>d/</sup>	NA	NA	134	--	--	39	43	1,159	0	1,231	101	1,332
2002 <sup>e/</sup>	NA	NA	587	--	--	37	372	2,464	0	3,375	85	3,460
2003 <sup>e/</sup>	NA	NA	296	--	--	20	206	1,228	0	1,646	104	1,750
2004 <sup>e/</sup>	NA	NA	401	--	--	20	102	1,786	0	2,239	70	2,309
2005 <sup>e/</sup>	NA	NA	323	--	--	36	73	1,193	0	1,389	217	1,606
2006 <sup>e/</sup>	NA	NA	576	--	--	37	109	904	0	1,061	571	1,632
2007 <sup>e/</sup>	NA	NA	760	--	--	68	136	810	0	1,023	592	1,615
2008 <sup>d/e/</sup>	22	227	249	10	40	50	7	671	0	717	274	991
2009 <sup>d/e/f/</sup>	30	106	136	3	2	5	12	880	2	913	110	1,023
2010 <sup>d/e/f/</sup>	24	83	107	0	0	0	NA	NA	0	NA	83	NA
GOAL	900 <sup>g/</sup>											

a/ Beginning in 1981, catch breakouts recalculated to account for Solduc hatchery yearling release dip-in fish.

b/ Recreational catch of adults (at least 24 inches total length); beginning in 2008, all Chinook must be marked with a healed adipose fin clip.

c/ Sport fishery closed until July 14.

d/ Sport fishery closed through August 31 to retention of wild adult spring/summer Chinook.

e/ Sport fishery open May 16 through August 31 from mouth to Willoughby Creek.

f/ Preliminary.

g/ Minimum. Terminal run managed at 31 percent harvest rate of inriver run size.

TABLE B-33. Estimated inriver run size, catch, and escapement for Hoh River fall Chinook in numbers of fish.

Year or Average	Terminal Catch			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence	River Sport <sup>a/</sup>	Natural <sup>b/</sup>	Hatchery	Natural <sup>b/</sup>	Hatchery	Total
1976-1980	760	36	37	2,080	-	2,960	-	2,960
1981-1985	849	36	59	2,745	20	3,684	100	3,764
1986-1990	2,000	32	213	4,500	33	6,819	88	6,907
1991-1995	871	27	233	2,774	0	3,590	65	3,655
1996	836	30	192	3,022	0	4,061	19	4,080
1997	1,114	35	164	1,773	0	3,034	52	3,086
1998	846	30	268	4,257	0	5,388	13	5,401
1999	596	30	413	1,924	0	2,941	22	2,963
2000	404	20	479	1,749	0	2,632	20	2,652
2001	946	40	600	2,560	0	4,116	120	4,236
2002 <sup>c/</sup>	1,461	30	134	4,415	82	5,716	406	6,122
2003	517	30	216	1,649	32	2,345	99	2,444
2004	815	30	400	3,211	26	4,410	72	4,482
2005	970	21	229	4,180	14	5,337	77	5,414
2006	586	30	204	1,535	0	2,324	19	2,343
2007 <sup>d/</sup>	660	30	192	1,556	0	2,427	11	2,438
2008 <sup>d/</sup>	659	0	278	2,849	0	3,761	25	3,786
2009 <sup>d/</sup>	651	0	140	2,081	0	2,851	21	2,872
2010 <sup>d/</sup>	342	0	NA	2,347	0	NA	0	NA
GOAL				1,200 <sup>e/</sup>				

a/ Recreational catch of age-3 and older fish.

b/ Includes fish taken for hatchery brood stock.

c/ Low water in October and early November delayed upstream migration, prompting closure of the sport fishery to Chinook retention on October 19 for the remainder of season. Tribal gillnet fishery closed weeks 44 and 45.

d/ Preliminary.

e/ Minimum. Terminal run managed for a maximum 40 percent harvest rate of inriver run size.

TABLE B-34. Estimated inriver run size, catch, and escapement for Hoh River coho in numbers of fish.

Year or Average	Terminal Catch <sup>a/</sup>			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence	River Sport <sup>b/</sup>	Natural <sup>c/</sup>	Hatchery	Natural <sup>c/</sup>	Hatchery	Total
1976-1980	1,960	74	28	2,700	39	4,683	259	4,942
1981-1985	1,604	48	22	3,371	92	4,655	452	5,107
1986-1990	2,507	30	165	3,145	238	5,221	760	5,981
1991-1995	801	26	168	3,078	122	3,816	379	4,195
1996	972	50	101	4,858	0	5,835	146	5,981
1997 <sup>d/</sup>	85	25	4	1,386	0	1,449	51	1,500
1998	650	20	213	4,418	0	5,184	118	5,302
1999	1,706	25	256	4,594	0	6,293	308	6,601
2000	1,932	20	280	6,772	0	8,831	173	9,004
2001	3,909	40	786	10,773	840	14,801	1,547	16,348
2002 <sup>e/</sup>	3,114	30	401	9,009	1,922	11,254	3,222	14,476
2003	1,872	20	350	6,273	645	8,118	1,021	9,139
2004	1,255	20	437	4,702	14	6,291	137	6,428
2005	3,830	30	280	4,711	732	8,294	1,259	9,553
2006	1,313	30	108	1,282	0	2,267	466	2,733
2007 <sup>f/</sup>	1,764	30	305	3,072	0	5,120	51	5,171
2008 <sup>f/</sup>	1,788	4	204	2,461	67	4,308	220	4,528
2009 <sup>f/</sup>	4,294	0	505	4,615	0	8,224	685	8,909
2010 <sup>f/</sup>	2,638	0	NA	NA	0	NA	468	NA
GOAL	2,000 to 5,000							

a/ Includes dip-in fish from other river systems.

b/ Recreational catch of adults (coho over 20 inches).

c/ Natural escapement and run sizes estimates include fish taken for hatchery brood stock.

d/ Recreational fishermen were limited to Chinook only. Release of adult coho required. Tribal net fishery used large mesh to minimize coho impacts.

e/ Sport and tribal gillnet seasons reduced inseason in response to delayed upriver movement of coho caused by extreme low water conditions in October and early November. Closures were for two weeks.

f/ Preliminary.

TABLE B-35. Estimated inriver run size, catch, and escapement for Quillayute River spring/summer Chinook in numbers of fish.

Year or Average	Terminal Catch			Escapement		Terminal Run Size		Total
	Gillnet	Ceremonial & Subsistence <sup>a/</sup>	River Sport <sup>b/</sup>	Natural <sup>c/</sup>	Hatchery <sup>d/</sup>	Natural <sup>c/</sup>	Hatchery <sup>d/</sup>	
1976-1980	2,520	20	380	2,093	800	-	-	3,698
1981-1985	700	20	48	731	260	-	-	1,164
1986-1990	1,631	22	258	1,602	1,003	3,085	2,503	4,341
1991-1995	893	25	293	1,159	832	1,444	1,758	3,202
1996	136	50	257	1,170	226	1,388	426	1,814
1997	106	50	263	890	198	1,177	305	1,482
1998	199	50	128	1,599	247	1,829	369	2,198
1999	368	50	238	713	596	818	1,147	1,965
2000	254	50	307	989	227	1,149	678	1,827
2001	330	50	353	1,225	973	1,399	1,515	2,914
2002	419	50	367	1,002	836	1,100	1,573	2,673
2003	184	50	343	1,219	1,250	1,308	1,738	3,046
2004	217	50	341	1,093	763	1,259	1,195	2,454
2005	332	3	479	876	801	1,033	1,467	2,500
2006	688	0	318	553	1,032	604	1,987	2,591
2007	800	0	180	502	1,007	568	1,921	2,489
2008	993	40	223	949	796	1,081	1,920	3,001
2009 <sup>e/</sup>	483	30	192	555	722	682	1,300	1,982
2010 <sup>e/f/</sup>	564	0	NA	702	880	828	1,318	2,146
GOAL				1,200 <sup>g/</sup>				

a/ Beginning in 2005, ceremonial and subsistence catch taken during scheduled gillnet fishery is reported as gillnet catch. Catch during designated ceremonial and subsistence fisheries is listed separately.

b/ Recreational catch of adults; mark selective for adipose fin clipped coho beginning in 2003.

c/ Natural escapement includes hatchery strays and broodstock fish.

d/ Hatchery escapement and terminal run size exclude hatchery strays.

e/ Preliminary.

f/ Terminal run size estimates incomplete because inriver sport catch estimates are unavailable.

g/ FMP goal is adults; WDFW goal of 1,200 includes age-3 males (jacks).

TABLE B-36. Estimated inriver run size, catch, and escapement for Quillayute River fall Chinook in numbers of fish.

Year or Average	Terminal Catch			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence <sup>a/</sup>	River Sport <sup>b/</sup>	Natural <sup>c/</sup>	Hatchery <sup>d/</sup>	Natural <sup>c/</sup>	Hatchery <sup>d/</sup>	Total
1976-1980	2,640	20	220	4,220	144	6,540	640	7,180
1981-1985	2,075	50	131	6,282	77	8,219	305	8,525
1986-1990	5,475	50	564	12,238	112	18,004	379	18,383
1991-1995	713	50	289	5,670	11	6,705	29	6,733
1996	1,377	100	500	7,316	0	9,293	0	9,293
1997	282	50	310	5,405	0	6,047	0	6,047
1998	762	100	326	6,752	0	7,940	0	7,940
1999	1,129	100	195	3,334	0	4,758	0	4,758
2000	604	100	360	3,730	0	4,794	0	4,794
2001	1,650	100	659	5,136	0	7,545	0	7,545
2002	3,074	100	271	6,067	0	9,512	0	9,512
2003	1,345	100	626	7,398	0	9,469	23	9,492
2004	527	100	681	3,831	0	6,133	12	6,145
2005	1,414	0	499	6,406	0	8,319	32	8,351
2006	1,969	0	35	5,642	0	7,656	15	7,671
2007	905	0	166	3,066	0	4,137	0	4,137
2008	1,426	0	217	3,612	0	5,250	5	5,255
2009 <sup>e/</sup>	2,434	0	352	3,130	0	5,874	42	5,916
2010 <sup>e/f/</sup>	1,814	0	NA	4,386	0	6,182	18	6,200
GOAL				3,000 <sup>g/</sup>				

a/ Beginning in 2005, ceremonial and subsistence catch taken during scheduled gillnet fishery is reported as gillnet catch.

b/ River recreational catch of age-3 and older fish.

c/ Includes fish taken for hatchery brood stock and hatchery strays.

d/ Hatchery escapement and terminal run size exclude hatchery strays.

e/ Preliminary.

f/ Terminal run size estimates incomplete since inriver sport catch estimates are unavailable.

g/ Minimum. Terminal run managed at 40 percent harvest rate.

TABLE B-37. Estimated inriver run size, catch, and escapement for Quillayute River coho stocks in numbers of fish. (Page 1 of 2)

Year or Average	Terminal Catch <sup>a/</sup>			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence <sup>b/</sup>	River Sport <sup>c/</sup>	Natural <sup>d/</sup>	Hatchery <sup>e/</sup>	Natural <sup>d/</sup>	Hatchery <sup>e/</sup>	Total
				SUMMER COHO				
1976-1980	5,038	56	266	1,192	4,565	1,962	9,154	11,116
1981-1985	4,062	50	105	946	2,744	2,106	5,802	7,908
1986-1990	3,204	50	94	723	4,001	1,643	6,430	8,072
1991-1995	1,286	50	191	784	6,501	989	7,823	8,812
1996	2,552	50	189	465	3,400	801	5,855	6,656
1997	70	50	14	753	1,509	798	1,598	2,396
1998	1,310	50	93	346	1,688	593	2,894	3,487
1999	945	50	292	624	7,527	723	8,715	9,438
2000	1,188	50	278	1,001	3,745	1,237	5,025	6,262
2001	2,196	50	590	961	12,993	1,841	14,949	16,790
2002	3,982	50	150	1,012	3,939	2,099	7,034	9,133
2003	2,412	50	326	505	6,539	1,472	8,360	9,832
2004	1,337	50	343	1,269	6,527	1,874	7,652	9,526
2005	10,273	0	487	1,218	7,182	2,197	16,963	19,160
2006	2,413	0	141	604	1,832	1,620	3,222	4,842
2007	645	0	200	792	4,778	1,029	5,399	6,428
2008 <sup>f/</sup>	1,376	0	198	706	6,419	1,010	7,689	8,699
2009 <sup>f/</sup>	3,645	0	233	1,337	8,085	2,355	10,945	13,300
2010 <sup>f/g/</sup>	1,378	0	NA	276	1,644	737	2,561	3,298
GOAL				Hatchery Production				

TABLE B-37. Estimated inriver run size, catch, and escapement for Quillayute River coho stocks in numbers of fish. (Page 2 of 2)

Year or Average	Terminal Catch <sup>a/</sup>			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence <sup>b/</sup>	River Sport <sup>c/</sup>	Natural <sup>d/</sup>	Hatchery <sup>e/</sup>	Natural <sup>d/</sup>	Hatchery <sup>e/</sup>	Total
<b>FALL COHO</b>								
1976-1980	5,985	53	70	9,002	2,435	13,959	3,587	17,546
1981-1985	3,789	49	164	7,464	2,102	10,988	2,580	13,568
1986-1990	5,794	100	385	8,766	1,771	14,119	2,695	16,815
1991-1995	3,598	100	565	7,357	4,736	9,930	6,426	16,356
1996	8,419	100	1,336	11,009	11,515	14,596	17,783	32,379
1997	456	50	38 <sup>h/</sup>	4,623	2,645	5,021	2,791	7,812
1998	4,606	50	1,340	13,866	12,834	16,980	15,716	32,696
1999	22,946	50	1,054	9,365	13,528	19,524	27,515	47,039
2000	5,606	50	1,059	13,343	13,118	17,706	15,470	33,176
2001	23,991	50	2,620	18,876	23,892	36,714	32,715	69,429
2002	22,214	50	2,002	23,016	30,656	34,695	43,243	77,938
2003	13,949	50	2,533	14,756	13,799	25,188	19,899	45,087
2004	19,321	50	2,831	13,354	21,248	25,118	31,687	56,805
2005	29,530	0	3,420	11,501	24,137	22,125	46,463	68,588
2006	9,643	0	291	5,210	4,450	12,195	7,433	19,628
2007	10,152	0	826	6,232	5,423	10,942	11,711	22,653
2008 <sup>f/</sup>	15,659	10	478	6,947	12,098	12,866	22,326	35,192
2009 <sup>f/</sup>	36,693	0	4,620	7,863	23,373	24,508	48,041	72,549
2010 <sup>f/g/</sup>	26,639	10	NA	9,322	23,325	21,699	37,597	59,296
GOAL				6,300-15,800				

a/ Includes dip-in fish from other systems.

b/ Beginning in 2005, ceremonial and subsistence catch taken during scheduled gillnet fishery is reported as gillnet catch. Catch during designated ceremonial and subsistence fisheries is listed separately.

c/ Recreational catch of adults (coho over 20 inches).

d/ Natural escapement and run size estimates include fish taken for hatchery brood stock.

e/ Hatchery escapement and terminal run size exclude hatchery strays.

f/ Preliminary.

g/ Terminal run size estimates incomplete since inriver sport catch estimates are unavailable.

h/ Regulations required nonretention of coho.



TABLE B-38. Puget Sound commercial net and troll fishery salmon catches in numbers of fish.<sup>a/</sup> (Page 1 of 2)

Year or Average	Fishery	Chinook	Coho	Pink <sup>b/</sup>	Chum	Sockeye
1971-1975	Non-Indian	105,332	525,867	1,172,614	331,029	2,158,784
	Treaty Indian	57,672	224,743	61,818	78,266	38,225
	Total	163,005	750,610	1,234,433	409,295	2,197,009
1976-1980	Non-Indian	103,546	413,583	1,050,560	407,859	1,095,603
	Treaty Indian	135,592	492,549	185,831	296,057	277,771
	Total	239,138	906,132	1,236,391	703,916	1,373,374
1981-1985	Non-Indian	72,934	346,125	1,154,851	368,762	928,477
	Treaty Indian	155,966	608,241	829,340	387,951	912,408
	Total	228,899	954,366	1,984,191	756,713	1,840,885
1986-1990	Non-Indian	57,550	470,494	509,445	540,843	964,690
	Treaty Indian	176,966	812,712	590,138	662,215	1,028,361
	Total	234,516	1,283,206	1,099,583	1,203,058	1,993,051
1991-1995	Non-Indian	17,519	74,371	784,067	523,396	735,834
	Treaty Indian	82,513	316,784	832,948	607,028	741,058
	Total	100,033	391,155	1,617,015	1,130,424	1,476,892
1996	Non-Indian	9,046	19,218	2	530,372	50,474
	Treaty Indian	67,061	153,748	58	264,486	286,187
	Total	76,107	172,966	60	794,858	336,661
1997	Non-Indian	21,894	10,454	869,345	229,261	690,236
	Treaty Indian	56,638	133,150	1,007,380	188,850	678,489
	Total	78,532	143,604	1,876,725	418,111	1,368,725
1998	Non-Indian	12,428	12,538	352	505,349	229,313
	Treaty Indian	43,273	148,441	512	320,122	308,446
	Total	55,701	160,979	864	825,471	537,759
1999	Non-Indian	9,512	11,902	1,109	133,404	37
	Treaty Indian	83,686	102,278	51,432	117,763	20,495
	Total	93,198	114,180	52,541	251,167	20,532
2000	Non-Indian	11,468	21,910	9	140,611	230,379
	Treaty Indian	71,551	386,714	346	159,477	315,628
	Total	83,019	408,624	355	300,088	546,007
2001	Non-Indian	18,029	28,299	463,083	824,328	85,112
	Treaty Indian	109,865	366,011	319,553	777,019	170,309
	Total	127,894	394,310	782,636	1,601,347	255,421

TABLE B-38. Puget Sound commercial net and troll fishery salmon catches in numbers of fish.<sup>a/</sup> (Page 2 of 2)

Year or Average	Fishery	Chinook	Coho	Pink <sup>b/</sup>	Chum	Sockeye
2002 <sup>c/</sup>	Non-Indian	17,628	24,459	7	1,117,666	141,456
	Treaty Indian	98,251	286,500	327	833,497	339,773
	Total	115,879	310,959	334	1,951,163	481,229
2003 <sup>c/</sup>	Non-Indian	8,567	18,105	683,393	764,132	90,618
	Treaty Indian	84,680	244,091	556,943	814,212	183,670
	Total	93,247	262,196	1,240,336	1,578,344	274,288
2004 <sup>c/</sup>	Non-Indian	5,042	39,481	4	1,174,295	81,031
	Treaty Indian	99,741	529,668	712	934,155	137,699
	Total	104,783	569,149	716	2,108,450	218,730
2005 <sup>c/</sup>	Non-Indian	6,236	19,694	144,567	383,127	65,931
	Treaty Indian	86,071	296,637	243,012	351,416	141,747
	Total	92,307	316,331	387,579	734,543	207,678
2006 <sup>c/</sup>	Non-Indian	13,300	9,827	6	877,791	223,908
	Treaty Indian	134,604	292,448	613	628,271	543,546
	Total	147,904	302,275	619	1,506,062	767,454
2007 <sup>c/</sup>	Non-Indian	6,785	13,435	200,687	680,385	6,266
	Treaty Indian	120,255	209,677	301,846	782,678	6,327
	Total	127,040	223,112	502,533	1,463,063	12,593
2008 <sup>c/</sup>	Non-Indian	6,103	6,464	14	449,348	16,319
	Treaty Indian	103,293	227,459	744	575,727	44,865
	Total	109,396	233,923	758	1,025,075	61,184
2009 <sup>c/</sup>	Non-Indian	2,753	20,091	2,789,870	294,841	1,605
	Treaty Indian	87,395	259,451	1,947,946	355,780	2,949
	Total	90,148	279,542	4,737,816	650,621	4,554
2010 <sup>c/</sup>	Non-Indian	7,922	18,220	309	416,252	749,668
	Treaty Indian	85,278	152,937	1,754	520,975	1,225,316
	Total	93,200	171,157	2,063	937,227	1,974,984

a/ Data does not reflect treaty Indian allocations. Includes U.S. and Canadian-origin salmon and fish caught in test fisheries.

b/ Odd-year averages for pink salmon.

c/ Preliminary.

TABLE B-39. Summary of Puget Sound marine recreational salmon catch estimates in numbers of fish from catch record cards.<sup>a/</sup>

Year or Average	Chinook	Coho	Pink <sup>b/</sup>
1971-1975	225,650	119,301	14,855
1976-1980	253,763	202,983	47,029
1981-1985 <sup>c/</sup>	156,183	196,632	14,910
1986-1990 <sup>c/d/e/</sup>	127,860	251,087	40,884
1991-1995 <sup>e/f/</sup>	77,310	137,637	71,030
1996 <sup>e/</sup>	72,069	85,139	50
1997 <sup>e/</sup>	60,425	137,571	35,197
1998 <sup>e/</sup>	26,114	89,520	201
1999 <sup>e/</sup>	28,739	22,055	23,780
2000 <sup>e/</sup>	23,679	74,934	17
2001 <sup>e/</sup>	44,422	193,454	117,367
2002 <sup>e/g/</sup>	30,743	66,576	31
2003 <sup>e/g/</sup>	30,859	101,561	148,965
2004 <sup>e/g/</sup>	27,121	88,036	213
2005 <sup>e/g/</sup>	22,758	62,110	68,166
2006 <sup>e/g/</sup>	29,512	29,726	23
2007 <sup>e/g/</sup>	50,357	77,475	105,831
2008 <sup>e/g/</sup>	29,788	23,794	12
2009 <sup>e/g/</sup>	34,377	96,309	177,255
2010 <sup>e/g/</sup>	NA	NA	NA

a/ WDFW Statistical Areas 5 through 13, which include the Strait of Juan de Fuca, San Juan Islands, and inner Puget Sound.

b/ Odd-year averages for pink salmon.

c/ 1981-1987: Adjusted all Puget Sound and freshwater estimates by 0.833, due to previous estimates being 20% too high.

d/ 1988: Area 5, no adjustment. Areas 6-13 adjusted by 0.633, due to estimates being 58% too high.

e/ 1989-Present: Area 5, no adjustment. Areas 6-13 adjusted by 0.685, due to estimates being 46% too high.

f/ 1991, 1992, and 1993 catch record card estimates adjusted for results of 1987-1990 WDFW/tribal sports emphasis study.

g/ Preliminary.

TABLE B-40. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound Chinook stocks.<sup>a/</sup>  
(Page 1 of 3)

Year or Average	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size <sup>c/</sup>		
	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total
<b>Strait of Juan de Fuca</b>									
1981-1985	57	126	183	811	1,450	2,261	868	1,576	2,444
1986-1990	136	456	591	1,276	4,755	6,031	1,411	5,211	6,622
1991-1995	69	109	178	979	2,390	3,369	1,048	2,499	3,547
1996-2000	8	16	24	1,193	2,236	3,429	1,201	2,252	3,453
2001 <sup>d/</sup>	4	5	9	1,660	1,947	3,607	1,664	1,952	3,616
2002 <sup>d/</sup>	5	7	12	1,558	2,182	3,740	1,563	2,189	3,752
2003 <sup>d/</sup>	7	16	23	1,258	2,787	4,045	1,265	2,803	4,068
2004 <sup>d/</sup>	6	17	23	1,364	4,033	5,397	1,370	4,050	5,420
2005 <sup>d/</sup>	6	9	15	1,401	2,083	3,484	1,407	2,092	3,499
2006 <sup>d/</sup>	8	15	23	1,234	3,145	4,379	1,242	3,160	4,402
2007 <sup>d/</sup>	3	4	7	769	1,353	2,122	772	1,357	2,129
2008 <sup>d/</sup>	12	23	35	683	1,182	1,865	695	1,205	1,900
2009 <sup>d/</sup>	1	10	11	1,530	1,254	2,784	1,531	1,264	2,795
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL						5,300			
<b>Nooksack-Samish</b>									
1981-1985	54,054	33,567	87,621	16,083	6,541	22,623	70,137	40,107	110,244
1986-1990	38,058	26,273	64,330	10,729	4,127	14,856	48,786	30,400	79,186
1991-1995	18,245	2,302	20,548	8,646	740	9,386	26,891	3,042	29,933
1996-2000	20,298	4,662	24,960	8,263	2,611	10,874	28,561	7,274	35,834
2001 <sup>d/</sup>	21,205	28,241	49,446	6,306	9,876	16,182	27,511	38,117	65,628
2002 <sup>d/</sup>	10,313	28,421	38,734	4,325	13,593	17,918	14,638	42,014	56,652
2003 <sup>d/</sup>	6,660	12,200	18,860	3,356	7,864	11,220	10,016	20,064	30,080
2004 <sup>d/</sup>	4,822	5,814	10,636	3,097	4,325	7,422	7,919	10,139	18,058
2005 <sup>d/</sup>	8,398	3,973	12,371	2,461	1,655	4,116	10,859	5,628	16,487
2006 <sup>d/</sup>	16,193	9,189	25,382	3,857	2,699	6,556	20,050	11,888	31,938
2007 <sup>d/</sup>	9,870	7,679	17,549	4,453	4,535	8,988	14,323	12,214	26,537
2008 <sup>d/</sup>	13,577	5,772	19,349	6,271	3,516	9,787	19,848	9,288	29,136
2009 <sup>d/</sup>	4,974	6,377	11,351	3,494	6,054	9,548	8,468	12,431	20,899
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL				1,800					

TABLE B-40. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound Chinook stocks.<sup>a/</sup> (Page 2 of 3)

Year or Average	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size <sup>c/</sup>		
	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total
<b>Skagit</b>									
1981-1985	595	9,162	9,757	787	11,109	11,896	1,382	20,271	21,653
1986-1990	251	4,043	4,294	815	12,452	13,267	1,066	16,495	17,561
1991-1995	463	1,583	2,046	2,402	6,280	8,682	2,865	7,863	10,728
1996-2000	10	445	455	316	10,390	10,705	326	10,835	11,161
2001 <sup>d/</sup>	3	249	252	150	13,793	13,943	153	14,042	14,195
2002 <sup>d/</sup>	2	324	326	101	19,591	19,692	103	19,915	20,018
2003 <sup>d/</sup>	10	323	333	298	9,777	10,075	308	10,100	10,408
2004 <sup>d/</sup>	5	557	562	226	23,553	23,779	231	24,110	24,341
2005 <sup>d/</sup>	41	2,576	2,617	331	20,803	21,134	372	23,379	23,751
2006 <sup>d/</sup>	30	1,696	1,726	368	20,768	21,136	398	22,464	22,862
2007 <sup>d/</sup>	54	1,658	1,712	370	11,281	11,651	424	12,939	13,363
2008 <sup>d/</sup>	47	3,315	3,362	164	11,664	11,828	211	14,979	15,190
2009 <sup>d/</sup>	57	5,142	5,199	77	6,955	7,032	134	12,097	12,231
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					14,900				
<b>Hood Canal</b>									
1981-1985	4,918	3,649	8,567	3,787	2,038	5,824	8,705	5,686	14,391
1986-1990	10,493	4,938	15,432	6,189	2,006	8,195	16,682	6,944	23,626
1991-1995	1,830	1,021	2,851	3,946	1,408	5,355	5,776	2,430	8,206
1996-2000	3,626	82	3,708	11,002	1,606	12,608	14,629	1,688	16,317
2001 <sup>d/</sup>	9,135	913	10,048	13,042	3,002	16,044	22,177	3,915	26,092
2002 <sup>d/</sup>	14,851	220	15,071	13,451	1,725	15,176	28,302	1,945	30,247
2003 <sup>d/</sup>	17,656	207	17,863	13,643	1,512	15,155	31,299	1,719	33,018
2004 <sup>d/</sup>	14,082	910	14,992	15,666	3,663	19,329	29,748	4,573	34,321
2005 <sup>d/</sup>	31,048	1,041	32,089	19,782	2,875	22,657	50,830	3,916	54,746
2006 <sup>d/</sup>	22,475	894	23,369	15,750	1,549	17,299	38,225	2,443	40,668
2007 <sup>d/</sup>	15,265	384	15,649	16,232	663	16,895	31,497	1,047	32,544
2008 <sup>d/</sup>	15,932	881	16,813	14,814	1,439	16,253	30,746	2,320	33,066
2009 <sup>d/</sup>	20,521	984	21,505	15,271	1,224	16,495	35,792	2,208	38,000
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL				3,400					

TABLE B-40. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound Chinook stocks.<sup>a/</sup> (Page 3 of 3)

Year or Average	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size <sup>c/</sup>		
	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total
<b>Stillaguamish-Snohomish<sup>e/</sup></b>									
1981-1985	3,894	6,917	10,811	1,990	4,901	6,891	5,884	11,818	17,702
1986-1990	3,370	4,241	7,612	1,148	5,210	6,358	4,519	9,451	13,970
1991-1995	3,688	1,966	5,654	2,253	4,371	6,624	5,941	6,337	12,278
1996-2000	10,193	54	10,247	5,543	6,813	12,357	15,737	6,867	22,603
2001 <sup>d/</sup>	5,115	293	5,408	872	9,513	10,385	5,987	9,806	15,793
2002 <sup>d/</sup>	5,193	58	5,251	2,542	8,808	11,350	7,735	8,866	16,601
2003 <sup>d/</sup>	8,796	145	8,941	5,655	6,435	12,090	14,451	6,580	21,031
2004 <sup>d/</sup>	5,747	103	5,850	6,124	12,112	18,236	11,871	12,215	24,086
2005 <sup>d/</sup>	7,370	241	7,611	3,592	5,447	9,039	10,962	5,688	16,650
2006 <sup>d/</sup>	4,016	194	4,210	4,017	9,562	13,579	8,033	9,756	17,789
2007 <sup>d/</sup>	3,380	28	3,408	6,222	4,769	10,991	9,602	4,797	14,399
2008 <sup>d/</sup>	1,518	144	1,662	5,720	10,155	15,875	7,238	10,299	17,537
2009 <sup>d/</sup>	1,309	173	1,482	2,422	3,291	5,713	3,731	3,464	7,195
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					7,300				
<b>South Puget Sound</b>									
1981-1985	25,101	9,101	34,201	23,341	6,371	29,712	48,442	15,472	63,913
1986-1990	25,697	20,036	45,733	36,998	18,108	55,106	62,695	38,144	100,839
1991-1995	19,388	13,071	32,460	30,556	14,488	45,044	49,944	27,559	77,504
1996-2000	14,208	10,049	24,257	37,032	27,268	64,301	51,241	37,317	88,558
2001 <sup>d/</sup>	21,603	18,557	40,160	55,026	42,069	97,095	76,629	60,626	137,255
2002 <sup>d/</sup>	22,549	15,845	38,394	46,744	41,135	87,879	69,293	56,980	126,273
2003 <sup>d/</sup>	23,916	13,122	37,038	33,234	25,457	58,691	57,150	38,579	95,729
2004 <sup>d/</sup>	20,860	15,403	36,263	45,760	26,864	72,624	66,620	42,267	108,887
2005 <sup>d/</sup>	21,825	6,496	28,321	52,049	12,540	64,589	73,874	19,036	92,910
2006 <sup>d/</sup>	40,430	14,284	54,714	63,541	22,691	86,232	103,971	36,975	140,946
2007 <sup>d/</sup>	64,716	13,720	78,436	75,549	16,389	91,938	140,265	30,109	170,374
2008 <sup>d/</sup>	43,567	16,559	60,126	47,042	15,659	62,701	90,609	32,218	122,827
2009 <sup>d/</sup>	33,348	5,302	38,650	39,336	7,955	47,291	72,684	13,257	85,941
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL						34,900			

a/ Includes treaty Indian and non-Indian net commercial catches during the adult accounting period. Source: Puget Sound run reconstruction model.

b/ Includes estimated off-station returns.

c/ Puget Sound run size is defined as the run available to Puget Sound net fisheries; spawning escapement plus Puget Sound net fishery catch. Does not include fish caught by troll and recreational fisheries inside Puget Sound.

d/ Preliminary.

e/ Since 1999, numbers include Tulalip hatchery returns, which are not added into escapement since no broodstock is taken at the hatchery.

TABLE B-41. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound coho stocks.<sup>a/</sup> (Page 1 of 4)

Year or Average	Commercial Net Catches <sup>c/</sup>			Spawning Escapement			Terminal Run Size <sup>c/</sup>		
	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total
<b>Strait of Juan de Fuca</b>									
1981-1985	15,822	2,907	18,729	9,300	5,960	15,260	25,122	8,867	33,989
1986-1990	5,956	2,301	8,258	2,913	6,920	9,833	8,869	9,221	18,091
1991-1995	1,872	286	2,158	4,316	4,810	9,126	6,188	5,096	11,284
1996-2000 <sup>d/</sup>	4,117	811	4,928	10,276	12,951	23,227	15,355	13,999	29,354
2001 <sup>d/</sup>	10,694	2,727	13,421	24,768	35,274	60,042	41,381	39,552	80,933
2002 <sup>d/</sup>	7,680	1,882	9,562	10,398	22,375	32,773	19,894	24,663	44,557
2003 <sup>d/</sup>	2,908	1,100	4,008	15,004	20,992	35,996	18,742	22,311	41,053
2004 <sup>d/</sup>	3,612	862	4,474	5,461	20,986	26,447	9,956	22,194	32,150
2005 <sup>d/</sup>	3,295	762	4,057	4,123	11,102	15,225	8,195	12,052	20,247
2006 <sup>d/</sup>	845	220	1,065	596	3,940	4,536	1,665	4,224	5,889
2007 <sup>d/</sup>	2,589	887	3,476	2,026	8,045	10,071	5,148	9,099	14,247
2008 <sup>d/</sup>	663	169	832	692	3,339	4,031	1,373	3,511	4,884
2009 <sup>d/</sup>	5,242	1,634	6,876	9,838	14,064	23,902	15,822	15,893	31,715
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL						7,008-10,978			
<b>Nooksack-Samish</b>									
1981-1985	122,433	17,539	139,972	27,720	7,700	35,420	150,153	25,239	175,392
1986-1990	140,733	21,839	162,572	23,087	8,020	31,107	163,821	29,859	193,680
1991-1995	48,056	13,878	61,934	19,793	10,835	30,629	67,849	24,713	92,563
1996-2000 <sup>d/</sup>	36,169	5,272	41,441	36,920	7,611	44,530	75,056	13,577	88,633
2001 <sup>d/</sup>	49,326	25,816	75,142	49,788	27,512	77,300	102,822	55,103	157,925
2002 <sup>d/</sup>	34,705	16,746	51,451	45,161	20,313	65,474	81,534	38,996	120,530
2003 <sup>d/</sup>	34,084	9,281	43,365	35,482	14,168	49,650	71,216	23,914	95,130
2004 <sup>d/</sup>	70,851	18,771	89,622	27,625	11,591	39,216	99,330	30,671	130,001
2005 <sup>d/</sup>	20,080	15,496	35,576	25,211	2,187	27,398	46,014	17,934	63,948
2006 <sup>d/</sup>	16,932	4,846	21,778	8,533	845	9,378	25,644	5,966	31,610
2007 <sup>d/</sup>	19,724	15,123	34,847	14,782	11,205	25,987	35,274	26,578	61,852
2008 <sup>d/</sup>	26,260	2,858	29,118	6,067	990	7,057	32,612	4,055	36,667
2009 <sup>d/</sup>	39,194	5,038	44,232	12,000	2,085	14,085	51,519	7,302	58,821
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL				17,900					

Year or Average	Commercial Net Catches <sup>c/</sup>			Spawning Escapement			Terminal Run Size <sup>c/</sup>		
	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total
Skagit									
1981-1985	6,619	8,858	15,477	21,740	19,800	41,540	28,359	28,658	57,017
1986-1990	5,309	11,448	16,757	13,861	25,800	39,661	19,170	37,248	56,418
1991-1995	1,338	1,739	3,077	11,082	14,240	25,322	12,420	15,979	28,399
1996-2000 <sup>d/</sup>	738	5,909	6,647	10,166	42,139	52,306	11,251	50,571	61,822
2001 <sup>d/</sup>	1,658	17,933	19,591	16,852	87,017	103,869	20,390	115,647	136,037
2002 <sup>d/</sup>	2,204	11,742	13,946	19,098	55,968	75,066	22,241	70,754	92,995
2003 <sup>d/</sup>	3,803	19,034	22,837	8,587	88,712	97,299	13,098	114,384	127,482
2004 <sup>d/</sup>	7,493	27,884	35,377	11,822	118,490	130,312	19,844	151,013	170,857
2005 <sup>d/</sup>	3,249	16,054	19,303	12,139	34,713	46,852	16,086	53,080	69,166
2006 <sup>d/</sup>	1,148	4,288	5,436	1,927	7,702	9,629	3,276	12,797	16,073
2007 <sup>d/</sup>	1,833	15,098	16,931	11,536	51,972	63,508	14,276	71,159	85,435
2008 <sup>d/</sup>	1,781	6,856	8,637	11,062	24,093	35,155	13,342	32,036	45,378
2009 <sup>d/</sup>	1,947	7,572	9,519	11,018	60,798	71,816	13,720	72,677	86,397
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL	14,857-25,000								
Hood Canal									
1981-1985	36,470	21,180	57,650	19,020	23,589	42,609	55,490	44,769	100,259
1986-1990	42,838	21,862	64,699	14,711	18,328	33,039	57,549	40,190	97,738
1991-1995	13,334	673	14,007	14,792	30,048	44,840	28,126	30,721	58,847
1996-2000 <sup>d/</sup>	5,969	6,841	12,810	23,067	55,411	78,478	30,110	62,967	93,077
2001 <sup>d/</sup>	10,320	10,342	20,662	39,237	94,579	133,816	68,478	110,005	178,483
2002 <sup>d/</sup>	9,759	8,382	18,141	39,330	69,296	108,626	58,795	81,031	139,826
2003 <sup>d/</sup>	9,625	23,788	33,413	33,221	172,345	205,566	51,243	199,871	251,114
2004 <sup>d/</sup>	19,381	67,307	86,688	27,171	146,873	174,044	55,851	219,694	275,545
2005 <sup>d/</sup>	34,877	26,835	61,712	33,991	38,066	72,057	77,655	68,303	145,958
2006 <sup>d/</sup>	24,542	34,126	58,668	3,883	13,665	17,548	32,106	49,718	81,824
2007 <sup>d/</sup>	19,357	29,356	48,713	8,540	46,658	55,198	30,222	78,586	108,808
2008 <sup>d/</sup>	27,332	12,720	40,052	8,044	11,756	19,800	38,492	25,814	64,306
2009 <sup>d/</sup>	43,391	14,167	57,558	11,421	26,927	38,348	59,148	42,418	101,566
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL	10,750-14,350								



TABLE B-41. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound coho stocks.<sup>a/</sup>  
(Page 3 of 4)

Year or Average	Commercial Net Catches <sup>c/</sup>			Spawning Escapement			Terminal Run Size <sup>c/</sup>		
	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total
<b>Stillaguamish</b>									
1981-1985	0	9,492	9,492	0	13,592	13,592	0	23,572	23,572
1986-1990	0	20,495	20,495	0	15,886	15,886	0	36,983	36,983
1991-1995	27	5,132	5,159	94	15,717	15,811	124	21,231	21,355
1996-2000 <sup>d/</sup>	18	1,286	1,303	35	16,770	16,806	62	19,273	19,335
2001 <sup>d/</sup>	21	3,728	3,749	100	74,773	74,873	129	81,839	81,968
2002 <sup>d/</sup>	5	2,622	2,627	60	27,305	27,365	67	30,395	30,462
2003 <sup>d/</sup>	1	1,454	1,455	24	45,691	45,715	26	49,817	49,843
2004 <sup>d/</sup>	14	7,391	7,405	128	65,228	65,356	145	73,861	74,006
2005 <sup>d/</sup>	5	2,702	2,707	44	25,141	25,185	51	29,146	29,197
2006 <sup>d/</sup>	0	2,845	2,845	0	8,549	8,549	0	11,780	11,780
2007 <sup>d/</sup>	15	3,637	3,652	160	38,732	38,892	187	45,181	45,368
2008 <sup>d/</sup>	1	2,243	2,244	5	12,938	12,943	6	15,346	15,352
2009 <sup>d/</sup>	0	2,284	2,284	0	22,179	22,179	0	27,380	27,380
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					6,100-10,000				
<b>Snohomish</b>									
1981-1985	25,601	31,346	56,947	11,767	83,460	95,227	37,914	117,513	155,426
1986-1990	48,719	75,429	124,148	26,350	94,156	120,507	75,971	173,208	249,179
1991-1995	36,652	26,247	62,900	23,634	84,503	108,137	61,054	114,178	175,232
1996-2000 <sup>d/</sup>	31,493	4,900	36,393	21,206	83,292	104,498	55,392	97,133	152,525
2001 <sup>d/</sup>	58,354	13,409	71,763	37,222	261,550	298,772	100,574	294,379	394,953
2002 <sup>d/</sup>	49,482	15,733	65,215	11,798	161,441	173,239	64,069	185,092	249,161
2003 <sup>d/</sup>	1,996	5,836	7,832	14,901	182,599	197,500	18,311	199,906	218,217
2004 <sup>d/</sup>	52,032	29,168	81,200	13,856	252,767	266,623	66,966	291,458	358,424
2005 <sup>d/</sup>	21,867	11,856	33,723	13,583	109,020	122,603	36,676	127,890	164,566
2006 <sup>d/</sup>	4,898	24,081	28,979	6,136	75,630	81,766	11,224	102,050	113,274
2007 <sup>d/</sup>	15,248	10,984	26,232	7,126	117,736	124,862	23,207	136,680	159,887
2008 <sup>d/</sup>	31,224	6,521	37,745	3,329	36,015	39,344	34,744	44,603	79,347
2009 <sup>d/</sup>	19,495	8,855	28,350	11,472	98,945	110,417	33,161	115,650	148,811
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					31,000-50,000				

TABLE B-41. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound coho stocks.<sup>a/</sup>  
(Page 4 of 4)

Year or Average	Commercial Net Catches <sup>c/</sup>			Spawning Escapement			Terminal Run Size <sup>c/</sup>		
	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total
<b>South Puget Sound</b>									
1981-1985	328,516	141,229	469,745	76,560	38,510	115,070	405,076	179,738	584,815
1986-1990	509,525	211,476	721,001	69,198	28,882	98,080	578,723	240,358	819,081
1991-1995	137,961	56,462	194,423	97,002	23,945	120,947	234,963	80,407	315,370
1996-2000 <sup>d/</sup>	57,648	29,324	86,972	73,685	28,337	102,022	140,763	62,893	203,656
2001 <sup>d/</sup>	110,328	60,548	170,876	127,179	37,688	164,867	261,942	107,969	369,911
2002 <sup>d/</sup>	96,471	34,214	130,685	115,145	18,296	133,441	223,889	55,536	279,425
2003 <sup>d/</sup>	95,300	32,510	127,810	94,890	51,654	146,544	210,062	94,350	304,412
2004 <sup>d/</sup>	172,372	48,095	220,467	133,614	43,147	176,761	317,083	98,809	415,892
2005 <sup>d/</sup>	109,652	32,146	141,798	83,761	33,620	117,381	206,249	72,449	278,698
2006 <sup>d/</sup>	114,496	29,436	143,932	47,625	21,449	69,074	166,886	55,795	222,681
2007 <sup>d/</sup>	61,483	24,192	85,675	55,407	31,224	86,631	126,413	63,775	190,188
2008 <sup>d/</sup>	98,520	13,830	112,350	52,340	17,797	70,137	156,906	35,642	192,548
2009 <sup>d/</sup>	82,117	23,638	105,755	53,969	25,997	79,966	156,534	65,754	222,288
2010 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL				52,000					

a/ Includes treaty Indian and non-Indian net commercial catches during the adult accounting period. Source: Puget Sound run reconstruction model.

b/ Includes estimated off-station returns.

c/ Terminal run size is defined as the run to terminal marine areas; spawning escapement plus sport and commercial net catch (inriver and terminal fishery catch). Prior to 1996, estimates are Puget Sound run size, which is defined as the run available to Puget Sound net fisheries; spawning escapement plus commercial net catch (inriver, terminal, and pre-terminal Puget Sound net fishery catch), but not including fish caught in Puget Sound troll and recreational fisheries.

d/ Preliminary.

Year or Average	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size <sup>c/</sup>		
	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total
Strait of Juan de Fuca									
1981	0	295	295	0	3,100	3,100	0	3,395	3,395
1983	0	144	144	0	5,088	5,088	0	5,232	5,232
1985	0	58	58	0	4,830	4,830	0	4,888	4,888
1987	3	158	161	47	1,956	2,003	50	2,114	2,164
1989	0	1,053	1,053	0	10,903	10,903	0	11,956	11,956
1991	0	1,129	1,129	0	9,896	9,896	0	11,025	11,025
1993	0	91	91	0	1,696	1,696	0	1,787	1,787
1995	4	262	266	100	8,254	8,354	104	8,516	8,620
1997	8	538	546	71	4,953	5,024	79	5,491	5,570
1999	0	6	6	0	7,306	7,306	0	7,312	7,312
2001	3	578	581	469	80,949	81,418	472	81,527	81,999
2003	0	282	282	0	15,148	15,148	0	15,430	15,430
2005 <sup>d/</sup>	0	241	241	0	8,688	8,688	0	8,929	8,929
2007 <sup>d/</sup>	0	147	147	0	6,251	6,251	0	6,398	6,398
2009 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL	Not Agreed Upon								
Nooksack-Samish									
1981	0	21,659	21,659	0	26,814	26,814	0	48,473	48,473
1983	0	13,321	13,321	0	66,966	66,966	0	80,287	80,287
1985	0	6,204	6,204	0	24,914	24,914	0	31,118	31,118
1987	0	5,069	5,069	0	32,685	32,685	0	37,754	37,754
1989	237	24,727	24,964	1,200	126,006	127,206	1,437	150,733	152,170
1991	0	21,852	21,852	0	21,304	21,304	0	43,156	43,156
1993	0	4,323	4,323	0	51,680	51,680	0	56,003	56,003
1995	0	13,532	13,532	0	207,112	207,112	0	220,644	220,644
1997	0	4,152	4,152	0	26,000	26,000	0	30,152	30,152
1999	0	2,478	2,478	0	95,000	95,000	0	97,478	97,478
2001	215	13,735	13,950	3,714	226,000	229,714	3,929	239,735	243,664
2003	338	2,400	2,738	7,264	51,011	58,275	7,602	53,411	61,013
2005 <sup>d/</sup>	259	1,975	2,234	1,791	13,627	15,418	2,050	15,602	17,652
2007 <sup>d/</sup>	17	1,124	1,141	276	18,992	19,268	293	20,116	20,409
2009 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL	50,000								

TABLE B-42. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound pink stocks.<sup>a/</sup>  
(Page 2 of 4)

Year or Average	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size <sup>c/</sup>		
	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total
<b>Skagit</b>									
1981	403	150,626	151,029	268	100,268	100,536	671	250,894	251,565
1983	4	19,023	19,027	128	470,128	470,256	132	489,151	489,283
1985	9	229,993	230,002	30	710,030	710,060	39	940,023	940,062
1987	1,090	421,176	422,266	1,535	593,535	595,070	2,625	1,014,711	1,017,336
1989	8	661,061	661,069	5	401,300	401,305	13	1,062,361	1,062,374
1991	0	188,927	188,927	0	351,000	351,000	0	539,927	539,927
1993	0	180,088	180,088	0	530,000	530,000	0	710,088	710,088
1995	0	568,561	568,561	0	857,000	857,000	0	1,425,561	1,425,561
1997	0	57,710	57,710	0	60,000	60,000	0	117,710	117,710
1999	0	32,626	32,626	0	320,000	320,000	0	352,626	352,626
2001	0	206,533	206,533	0	894,061	894,061	0	1,100,594	1,100,594
2003	0	232,732	232,732	0	567,080	567,080	0	799,812	799,812
2005 <sup>d/</sup>	0	20,147	20,147	0	60,000	60,000	0	80,147	80,147
2007 <sup>d/</sup>	0	13,154	13,154	0	300,000	300,000	0	313,154	313,154
2009 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					330,000				
<b>Hood Canal</b>									
1981	380	1,241	1,621	1,557	6,551	8,108	1,937	7,792	9,729
1983	50	831	881	503	25,201	25,704	553	26,032	26,585
1985	138	2,854	2,992	1,456	64,101	65,557	1,594	66,955	68,549
1987	1,855	6,942	8,797	8,056	62,220	70,276	9,911	69,162	79,073
1989	7,799	26,946	34,745	2,500	60,970	63,470	10,299	87,916	98,215
1991	409	13,518	13,927	3,300	118,450	121,750	3,709	131,968	135,677
1993	623	1,917	2,540	11,497	35,647	47,144	12,120	37,564	49,684
1995	1,565	994	2,559	24,665	31,306	55,971	26,230	32,300	58,530
1997	2,436	910	3,346	21,493	8,363	29,856	23,929	9,273	33,202
1999	18	10	28	7,617	12,667	20,284	7,635	12,677	20,312
2001	713	703	1,416	71,539	98,338	169,877	72,252	99,041	171,293
2003	464	691	1,155	25,217	37,531	62,748	25,681	38,222	63,903
2005 <sup>d/</sup>	98	121	219	14,116	17,481	31,597	14,214	17,602	31,816
2007 <sup>d/</sup>	101	677	778	4,306	29,001	33,307	4,407	29,678	34,085
2009 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL				Not Agreed Upon					

TABLE B-42. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound pink stocks.<sup>a/</sup>  
(Page 3 of 4)

Year or Average	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size <sup>c/</sup>		
	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total	Hatchery <sup>b/</sup>	Natural	Total
<b>Stillaguamish-Snohomish</b>									
1981	40	49,480	49,520	96	108,096	108,192	136	157,576	157,712
1983	51	57,452	57,503	283	324,383	324,666	334	381,835	382,169
1985	63	175,095	175,158	192	502,192	502,384	255	677,287	677,542
1987	173	111,881	112,054	418	271,418	271,836	591	383,299	383,890
1989	33	354,805	354,838	16	150,549	150,565	49	505,354	505,403
1991	139	82,150	82,289	447	260,000	260,447	586	342,150	342,736
1993	13	21,444	21,457	135	210,000	210,135	148	231,444	231,592
1995	5	33,871	33,876	26	309,600	309,626	31	343,471	343,502
1997	0	59,173	59,173	0	192,109	192,109	0	251,282	251,282
1999	0	13,443	13,443	0	461,543	461,543	0	474,986	474,986
2001	0	100,015	100,015	0	1,847,648	1,847,648	0	1,947,663	1,947,663
2003	0	187,286	187,286	0	1,577,001	1,577,001	0	1,764,287	1,764,287
2005 <sup>d/</sup>	0	19,193	19,193	0	600,124	600,124	0	619,317	619,317
2007 <sup>d/</sup>	0	54,082	54,082	0	1,383,591	1,383,591	0	1,437,673	1,437,673
2009 <sup>d/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL - Stillaguamish					155,000				
GOAL - Snohomish					120,000				
<b>South Puget Sound</b>									
1981	1,569	9,818	11,387	791	12,715	13,506	2,360	22,533	24,893
1983	492	11,265	11,757	149	12,200	12,349	641	23,465	24,106
1985	119	5,335	5,454	13	34,700	34,713	132	40,035	40,167
1987	15	9,386	9,401	3	42,200	42,203	18	51,586	51,604
1989	361	36,999	37,360	452	62,220	62,672	813	99,219	100,032
1991	357	5,037	5,394	346	15,950	16,296	703	20,987	21,690
1993 <sup>e/</sup>	3	2,330	2,333	21	10,619	10,640	24	12,949	12,973
1995 <sup>e/</sup>	13	5,163	5,176	84	18,278	18,362	97	23,441	23,538
1997 <sup>e/</sup>	0	449	449	0	2,965	2,965	0	3,414	3,414
1999 <sup>e/</sup>	0	80	80	12	4,670	4,682	12	4,750	4,762
2001 <sup>e/f/</sup>	5	735	740	48	16,173	16,221	53	16,908	16,961
2003 <sup>e/f/</sup>	1	5,393	5,394	68	185,277	185,345	69	190,670	190,739
2005 <sup>d/e/f/</sup>	0	3,964	3,964	0	466,435	466,435	0	470,399	470,399
2007 <sup>d/e/f/</sup>	0	19,162	19,162	0	615,678	615,678	0	634,840	634,840
2009 <sup>d/e/f/</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					25,000				

TABLE B-42. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound pink stocks.<sup>a/</sup>  
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a/ Includes treaty Indian and non-Indian net commercial catches during the adult accounting period. Source: Puget Sound run reconstruction model.

b/ Includes estimated off-station returns.

c/ Puget Sound run size is defined as the run available to Puget Sound net fisheries; spawning escapement plus Puget Sound net fishery catch. Does not include fish caught by troll and recreational fisheries inside Puget Sound.

d/ Preliminary.

e/ Nisqually escapement estimate incomplete.

f/ Large runs of pinks have returned to Green River in 2001, 2003, 2005, and 2007; however, no formal escapement methodology exists, and Green River pinks are not included in the run reconstruction model. When the model is revised, pre-terminal catch estimates for all stocks will be affected.

TABLE B-43. Puget Sound spring Chinook spawning escapement estimates in numbers of adult fish.

Year or Average	Stock						
	Skagit		NF Nooksack		SF Nooksack	White River	Quilcene
	Hatchery <sup>a/</sup>	Natural	Hatchery <sup>a/</sup>	Natural <sup>b/</sup>	Hatchery/ Natural	Hatchery <sup>c/</sup>	Hatchery <sup>d/</sup>
1981-1985	15	1,408	0	152	317	70	149
1986-1990	155	1,826	0	235	280	408	125
1991-1995	815	907	770	266	222	1,065	19
1996	856	1,051	1,070	534	203	1,625	12
1997	1,220	1,041	1,663	520	180	1,609	16
1998	1,054	1,086	1,370	368	157	2,710	5
1999	3,171	471	2,873	823	166	1,550	4
2000	1,102	1,021	1,204	1,245	284	2,363	0
2001	1,566	1,856	1,006	2,185	267	5,690	0
2002 <sup>e/</sup>	1,606	1,065	5,649	3,741	289	1,780	0
2003 <sup>e/</sup>	1,537	844	6,250	2,857	204	2,760	0
2004 <sup>e/</sup>	3,107	1,622	3,533	1,746	130	1,115	0
2005 <sup>e/</sup>	2,254	1,305	1,569	2,167	120	2,061	0
2006 <sup>e/</sup>	1,487	1,896	732	1,184	355	4,321	0
2007 <sup>e/</sup>	1,931	613	505	1,438	182	8,417	0
2008 <sup>e/</sup>	2,040	1,474	1,194	1,266	443	3,821	0
2009 <sup>e/</sup>	1,215	983	769	1,903	45	2,327	0
2010 <sup>e/</sup>	580	1,361	NA	NA	NA	2,353	0
GOAL		3,000					

a/ Hatchery escapement estimates include all rack returns (retained and released)

b/ Natural escapement estimates based on carcass counts expanded by a 3.48 multiplier developed from 5 years of redd count based estimates. Most natural spawners are hatchery fish spawning in the wild.

c/ This estimate includes adult Chinook returns to Hupp Springs, White River Hatchery and to the Buckley Trap.

d/ Program has been discontinued.

e/ Preliminary.

## APPENDIX C

### HISTORICAL RECORD OF OCEAN SALMON FISHERY REGULATIONS AND A CHRONOLOGY OF 2010 EVENTS

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TABLE C-1. Summary of actual California commercial salmon seasons in state and federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 1 of 3)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho	
2001	OR/CA Border to Humboldt South Jett	Sept. 1-30	-	30	-	26	-	8,000 Chinook quota, includes 2,000 guideline for CA/OR border to Humboldt Mt.; 30 Chinook per vessel per day landing limit. 3,000 Chinook quota.
	Horse Mt. to Pt. Arena	May 1-21	-	21	-	26	-	
		Sept. 1-30	-	30	-	26	-	
	Pt. Arena to Pt. Reyes	June 24-30	-	7	-	26	-	
		July 1-Sept. 30	-	92	-	27	-	
	Pt. Reyes to Pt. San Pedro	May 24-June 30	-	38	-	26	-	
		July 1-Sept. 30	-	92	-	27	-	
		Oct. 1-5, 8-12	-	10	-	27	-	
	Pt. San Pedro to Pt. Sur	May 1-June 30	-	61	-	26	-	
		July 1-Aug. 14	-	45	-	27	-	
	Pt. Sur to U.S./Mexico Border	May 1-June 30	-	61	-	26	-	
		July 1-Aug. 14	-	45	-	27	-	
		Sept. 11-30	-	20	-	27	-	
2002	OR/CA Border to Humboldt South Jett	Aug. 16-30	-	15	-	26	-	3,000 Chinook quota; 40 Chinook per vessel per day landing limit. 10,000 Chinook quota; 40 Chinook per vessel per day landing limit. 10,000 Chinook quota.
		Sept. 1-20; 26-27	-	22	-	26	-	
	Horse Mt. to Pt. Arena	July 20-23	-	4	-	26	-	
		Aug. 1-30	-	30	-	26	-	
		Sept. 1-30	-	30	-	26	-	
	Pt. Arena to U.S./Mexico Border	May 1-Sept. 30	-	153	-	26	-	
	Pt. Reyes to Pt. San Pedro	Oct. 1-4, 7-11, 14-18	-	14	-	26	-	
2003	OR/CA Border to Humboldt South Jett	Sept. 1-30	-	30	-	26	-	10,000 Chinook quota; 40 Chinook per vessel per day landing limit.
	Horse Mt. to Pt. Arena	May 1-31	-	31	-	26	-	150 Chinook per vessel per day landing limit.
		July 3-14	-	12	-	26	-	
		July 18-Sept. 30	-	75	-	26	-	
	Pt. Arena to U.S./Mexico Border	May 1-Sept. 30	-	153	-	26	-	
	Pt. Reyes to Pt. San Pedro	Oct. 1-3, 6-10, 13-17	-	13	-	26	-	

TABLE C-1. Summary of actual California commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 2 of 3)

TABLE C-1. Summary of actual California commercial salmon seasons in State and Federal (ELZ) waters, 2001-2010. (Page 2 of 3)									
Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions	
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho		
2004	OR/CA Border to Humboldt South Jett	Sept. 1-17	-	17	-	28	-	6,000 Chinook quota; 30 Chinook per vessel per day landing limit.	
	Horse Mt. to Pt. Arena	July 10-Aug. 29	-	51	-	27	-		
		Sept. 1-30	-	30	-	28	-		
	Pt. Arena to U.S./Mexico Border	May 1-June 30	-	61	-	26	-		
		July 1-Aug. 29	-	60	-	27	-		
		Sept. 1-30	-	30	-	27	-		
	Pt. Reyes to Pt. San Pedro	Oct. 1, 4-8, 11-15	-	11	-	26	-		
2005	OR/CA Border to Humboldt South Jett	Sept. 3-16	-	14	-	28	-	6,000 Chinook quota; 30 Chinook per vessel per day landing limit.	
	Horse Mt. to Pt. Arena	Sept. 1-30	-	30	-	27	-		
	Pt. Arena to Pigeon Pt.	July 4-Aug. 29	-	57	-	28	-		
		Sept. 1-30	-	30	-	27	-		
	Pt. Reyes to Pt. San Pedro	Oct. 3-7, 10-14	-	10	-	26	-		
	Pigeon Pt. to Pt. Sur	May 1-31	-	31	-	27	-		
		July 4-Aug. 29	-	57	-	28	-		
		Sept. 1-30	-	30	-	27	-		
	Pt. Sur to U.S./Mexico Border	May 1-June 30	-	61	-	27	-		
		July 1-Aug. 31	-	62	-	28	-		
		Sept. 1-30	-	30	-	27	-		
	2006	OR/CA Border to Humboldt South Jett	Closed	-	-	-	-	-	4,000 Chinook quota; 30 Chinook per vessel per day landing limit.
		Horse Mt. to Pt. Arena	Sept. 1-5	-	5	-	27	-	
Pt. Arena to Pigeon Pt.		July 26-Aug. 31	-	37	-	28	-		
		Sept. 1-30	-	30	-	27	-		
Pt. Reyes to Pt. San Pedro		Oct. 2-6, 9-13	-	10	-	26	-	75 Chinook per vessel per week landing limit.	
Pigeon Pt. to Pt. Sur		May 1-31	-	31	-	27	-		
		July 26-Aug. 31	-	37	-	28	-		
		Sept. 1-30	-	30	-	27	-		
Pt. Sur to U.S./Mexico Border		May 1-June 30	-	61	-	27	-	75 Chinook per vessel per week landing limit.	
		July 1-Aug. 31	-	62	-	28	-		
		Sept. 1-30	-	30	-	27	-		

TABLE C-1. Summary of actual California commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 3 of 3)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho	
<b>2007</b>	OR/CA Border to Humboldt South Jett	Sept. 10-12	-	3	-	28	-	6,000 Chinook quota; 30 Chinook per vessel per day landing limit.
	Horse Mt. to Pt. Arena	April 9-13, 16-20, 23-27	-	15	-	27	-	2,000 Chinook quota; 20 Chinook per vessel per day Apr 9-13, Apr 16-20; 30 Chinook per vessel per day Apr 23-27.
		Aug. 1-29	-	29	-	28	-	
		Sept. 1-30	-	30	-	27	-	
	Pt. Arena to Pigeon Pt.	May 9-31	-	23	-	27	-	
		July 1-Aug. 29	-	60	-	28	-	
		Sept. 1-30	-	30	-	27	-	
	Pt. Reyes to Pt. San Pedro	Oct. 1-5, 8-12	-	10	-	27	-	
	Pigeon Pt. to Pt. Sur	May 1-31	-	31	-	27	-	
		July 1-Aug. 29	-	60	-	28	-	
		Sept. 1-30	-	30	-	27	-	
	Pt. Sur to U.S./Mexico Border	May 1-June 30	-	61	-	27	-	
		July 1-Aug. 31	-	62	-	28	-	
		Sept. 1-30	-	30	-	27	-	
<b>2008</b>	OR/CA Border to U.S./Mexico Border	Closed	-	-	-	-	-	
<b>2009</b>	OR/CA Border to U.S./Mexico Border	Closed	-	-	-	-	-	
<b>2010<sup>b/</sup></b>	OR/CA Border to Humboldt South Jett	Closed	-	-	-	-	-	
	Horse Mt. to Pt. Arena	July 1-4, 8-11	-	8	-	27	-	
		July 15-29	-	15	-	27	-	18,000 Chinook quota.
		Aug. 1-31	-	31	-	27	-	9,375 Chinook quota.
	Pt. Arena to U.S./Mexico Border	July 1-4, 8-11	-	8	-	27	-	

a/ For earlier years see Review of 2004 Ocean Salmon Fisheries, Appendix C, Table C-1.

b/ For detailed regulations see TABLE I-1.

TABLE C-2. Summary of actual California recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 1 of 3)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions
					Chinook	Coho	
2001	OR/CA Border to Horse Mt.	May 17-July 8	53	2	20	-	No more than 4 salmon in 7 days
		July 24-Sept. 3	42	2	20	-	No more than 6 salmon in 7 days
	Horse Mt. to Pt. Arena	Feb. 17-May 31	104	2	24	-	
		June 1-Nov. 18	171	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 14-June 30	78	2	24	-	
		July 1-Nov. 13	136	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	Mar. 31-June 30	92	2	24	-	
		July 1-Sept. 30	92	2	20	-	
	OR/CA Border to Horse Mt.	May 15-June 30; July 3-4; Aug. 1- Sept. 15	95	2	20	-	No more than 6 salmon in 7 days
2002	Horse Mt. to Pt. Arena	Feb. 16-Apr. 30	74	2	24	-	
		May 1-July 7; July 20-Nov. 17	189	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 13-30	18	2	24	-	
		May 1-Nov. 10	194	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	Mar. 30-Apr. 30	32	2	24	-	
		May 1-Sept. 29	152	2	20	-	
	OR/CA Border to Horse Mt.	May 17-Sept. 14	121	2	20	-	
	Horse Mt. to Pt. Arena	Feb. 15-Apr. 30	75	2	24	-	
		May 1-Nov. 16	200	2	20	-	
2003	Pt. Arena to Pigeon Pt.	Apr. 12-30	19	2	24	-	
		May 1-Nov. 9	193	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	Mar. 29-Apr. 30	33	2	24	-	
		May 1-Sept. 28	151	2	20	-	
	OR/CA Border to Horse Mt.	May 17-Sept. 14	121	2	20	-	

TABLE C-2. Summary of actual California recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 2 of 3)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions
					Chinook	Coho	
<b>2004</b>	OR/CA Border to Horse Mt.	May 15-Sept. 12	121	2	20	-	
	Horse Mt. to Pt. Arena	Feb. 14-Apr. 30	77	2	24	-	
		May 1-Nov. 14	198	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 17-30	14	2	24	-	
		May 1-Nov. 14	198	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	Apr. 3-30	28	2	24	-	
		May 1-Oct. 3	156	2	20	-	
<b>2005</b>	OR/CA Border to Horse Mt.	May 21-July 4; Aug. 14-Sept. 11	74	2	24	-	
	Horse Mt. to Pt. Arena	Feb. 12-July 10; July 16-17; July 23-Nov. 13	265	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 2-Nov. 13	226	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	Apr. 2-Sept. 25	177	2	20	-	
<b>2006</b>	OR/CA Border to Horse Mt.	May 15-July 4; Sept. 1-6	57	2	24	-	
	Horse Mt. to Pt. Arena	Feb. 18-May 31; June 1-4, 7-11, 14-18, 21-25, 28-30; July 1-9, 15-16, 22-23; July 26 - Nov. 12	248	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 1-June 11; June 14-July 9; July 12-Nov. 12	222	2	20	-	April 1-30 open only inside 3nm (State waters)
	Pigeon Pt. to Pt. Sur	Apr. 1-Sept. 24	177	2	20	-	April 1-30 open only inside 3nm (State waters)
	Pt. Sur to U.S./Mexico Border	Apr. 1-Sept. 24	177	2	20	-	

TABLE C-2. Summary of actual California recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 3 of 3)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions
					Chinook	Coho	
<b>2007</b>	OR/CA Border to Horse Mt.	May 5-Sept. 4	123	2	24	-	
	Horse Mt. to Pt. Arena	Feb. 17-Nov. 11	268	2	20	-	
	Pt. Arena to Pigeon Pt.	April 7-Nov. 11	219	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	April 7-Oct. 7	184	2	20	-	
<b>2008</b>	OR/CA Border to Horse Mt.	Closed	-	-	-	-	
	Horse Mt. to Pt. Arena	Feb. 16-Mar. 31	45	2	20	-	
	Pt. Arena to U.S. Mexico Border	Closed	-	-	-	-	
<b>2009</b>	OR/CA Border to Horse Mt.	Aug. 29-Sept 7	10	2	24	-	
	Horse Mt. to U.S. Mexico Border	Closed	-	-	-	-	
<b>2010<sup>b/</sup></b>	OR/CA Border to Horse Mt.	May 29-Sept. 6	101	2	24	-	
	Horse Mt. to Pt. Arena	Apr. 3-30	28	2	20	-	
		May 1-Sept. 6	129	2	24	-	
	Pt. Arena to U.S./Mexico Border	Apr. 3-30	28	2	20	-	
		May 1-Sept 6	93	2	24	-	Thur.-Mon.

a/ For earlier years see Review of 2004 Ocean Salmon Fisheries, Appendix C, Table C-2.

b/ For detailed regulations see TABLE I-3.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 1 of 13)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
2001	WA/OR Border to Cape Falcon	May 1-June 15	-	46	-	28	-	
			July 20-23, 27-30	-	8	28	16	65 Chinook per open period vessel limit.
			Aug. 3-12	-	10	28	16	100 Chinook per open period vessel limit.
			Aug. 17-27	-	11	28	16	150 Chinook per open period vessel limit.
			Aug. 31-Sept. 30	-	31	28	16	No vessel landing limits.
	Cape Falcon to Florence South Jetty	Apr. 1-July 18; July 27-Aug. 29; Sept. 1- Oct. 31	-	204	-	26	-	
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	-	15	-	26	-	Chinook only.
	Florence South Jetty to Humbug Mt.	Apr. 1-July 9; July 18-Aug. 29; Sept. 1- Oct. 31	-	204	-	26	-	
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-Dec. 15	-	45	-	26	-	Chinook only.
	Humbug Mt. to OR/CA Border	May 1-31	-	31	-	26	-	
		June 3-4, 7-8, 11-12, 15-30; Aug. 1-31; Sept. 1-30	-	94	-	26	-	30 fish per day per vessel limit.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 13-31	-	19	-	26	-	20 fish per day per vessel limit; Chinook only.



TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 2 of 13)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
2002	WA/OR Border to Cape Falcon	May 1-June 7	-	38	-	28	-	
		July 1-8	-	8	-	28	-	250 Chinook per open period vessel limit.
		July 12-22	-	11	-	28	-	400 Chinook per open period vessel limit.
		July 26-31	Aug. 1-5	6	5	28	16	500 Chinook per open period vessel limit.
			Aug. 9-18	-	10	28	16	400 Chinook per open period vessel limit.
	Cape Falcon to Florence South Jetty	Mar. 20-July 15; Aug. 1-29; Sept. 1- Oct. 31	Aug. 22-28	-	7	28	16	250 Chinook per open period vessel limit.
			-	208	-	26	-	
			-	14	-	26	-	Chinook only.
			-	208	-	26	-	
			-	45	-	26	-	
256	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-Dec. 15	-	45	-	26	-	
			-	73	-	26	-	
	Humbug Mt. to OR/CA Border	Mar. 20-May 31 June 1-30; July 1-26; Aug. 1-29; Sept. 1-9	-	94	-	26	-	50 fish per trip per vessel limit.
			-	21	-	26	-	25 fish per day per vessel limit; Chinook only.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 3 of 13)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
2003	WA/OR Border to Cape Falcon	May 1-June 6; June 26-30	-	42	-	28	-	
			July 3-7	-	5	28	16	75 Chinook per open period vessel limit.
			July 10-14, 17-21, 24-28; July 31- Aug. 4; Aug. 7-11, 14-18, 21-25; Aug. 27-Sept. 1; Sept. 4-8, 11-14	-	49	28	16	150 Chinook per open period vessel limit.
	Cape Falcon to Florence South Jetty	Mar. 15-Apr. 30	-	47	-	26	-	
		May 1-July 16; Aug. 1-19; Sept. 1-30 Oct. 1-31	-	126	-	27	-	
				31	-	28	-	
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-14	-	14	-	26	-	Chinook only.
	Florence South Jetty to Humbug Mt.	Mar. 15-Apr. 30	-	47	-	26	-	
		May 1-June 30; July 17-31; Aug. 11-29; Sept. 1-30 Oct. 1-31	-	125	-	27	-	
			-	31	-	28	-	
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-Dec. 15	-	45	-	28	-	
	Humbug Mt. to OR/CA Border	Mar. 15-May 31	-	47	-	26	-	
		June 1-30; July 1-31; Aug. 1-29 Sept. 1-30	-	90	-	26	-	50 fish per trip per vessel limit.
			-	30	-	28	-	65 fish per trip per vessel limit.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 13-Nov. 3	-	22	-	26	-	25 fish per day per vessel limit; Chinook only.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 4 of 13)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
2004	WA/OR Border to Cape Falcon	May 1-5	-	5	-	28	-	
		May 15-18	-	4	-	28	-	125 Chinook per open period vessel limit.
		May 24-26	-	3	-	28	-	70 Chinook per open period vessel limit.
		June 26-30	-	5	-	28	-	50 Chinook per open period vessel limit.
			July 8-12	-	5	28	16	100 Chinook per open period vessel limit.
			July 16-19, 22-26; July 29-Aug. 2; Aug. 5-9, 11-15, 18-22, 25-29	-	34	28	16	125 Chinook per open period vessel limit.
			Sept. 1-5	-	5	28	16	125 Chinook per open period vessel limit; no coho mark restriction.
	Cape Falcon to Florence South Jetty	Mar. 15-Apr. 30	-	47	-	26	-	
		May 1-June 30;	-	126	-	27	-	
		July 7-12, 19-27;	-					
		Aug. 1-14, 19-24;	-					
		Sept. 1-30	-					
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Oct. 1-31	-	31	-	28	-	
		Nov. 1-14	-	14	-	26	-	Chinook only.
	Florence South Jetty to Humbug Mt.	Mar. 15-Apr. 30	-	47	-	26	-	
		May 1-July 6;	-	127	-	27	-	
		July 13-18, 26-29;	-					
		Aug. 1-8, 15-22, 26-29; Sept. 1-30	-					
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Oct. 1-31	-	31	-	28	-	
		Nov. 1-Dec. 15	-	45	-	28	-	
	Humbug Mt. to OR/CA Border	Mar. 15-Apr. 30	-	47	-	26	-	
		May 1-31	-	31	-	27	-	
		June 1-19;	-	42	-	27	-	50 fish per trip per vessel limit.
		July 1-19; Aug. 1-4	-					
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Sept. 1-3, 8-10, 15-30	-	22	-	28	-	65 fish per trip per vessel limit.
		Oct. 13-Nov. 3	-	22	-	26	-	25 fish per day per vessel limit; Chinook only.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 5 of 13)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
2005	WA/OR Border to Cape Falcon	May 1-3	-	3	-	28	-	75 Chinook per open period vessel limit.
		May 6-9	-	4	-	28	-	100 Chinook per open period vessel limit.
		May 13-16; 20-26	-	11	-	28	-	125 Chinook per open period vessel limit.
		June 3-6	-	4	-	28	-	60 Chinook per open period vessel limit.
		June 26-30	-	5	-	28	-	30 Chinook per open period vessel limit.
			July 7-11;14-18		10	28	16	75 Chinook per open period vessel limit.
	Cape Falcon to Florence South Jetty		July 21-25; July 28-Aug. 1; Aug. 3-7, 10-14, 17-22		26	28	16	100 Chinook per open period vessel limit.
		Mar. 15-25; Apr. 1-15	-	26	-	27	-	
		May 1-3, 8-10, 15-17, 22-24, 29-30; June 1-30; Sept. 1-23; Oct. 1-31	-	98	-	28	-	
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	-	15	-	26	-	Chinook only.
	Florence South Jetty to Humbug Mt.	Mar. 15-25; Apr. 1-15	-	26	-	27	-	
		May 1-30; Sept. 1-23; Oct. 1-31	-	84	-	28	-	
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-Dec. 15	-	45	-	28	-	
	Humbug Mt. to OR/CA Border	Mar. 15-25; Apr. 1-15	-	26	-	27	-	
		Sept. 3-30	-	28	-	28	-	45 fish per day per vessel limit.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 13-Nov. 3	-	22	-	26	-	25 fish per day per vessel limit; Chinook only.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 6 of 13)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
2006	WA/OR Border to Cape Falcon	May 1-2	-	2	-	28	-	75 Chinook per open period vessel limit.
		May 6-9, 13-16, 20-23, 27-30, June 3-6, 10-13	-	24	-	28	-	80 Chinook per open period vessel limit.
		June 27-30	-	4	-	28	-	20 Chinook per open period vessel limit.
			July 15-18, 22-25		8	28	16	35 Chinook and 35 coho per open period vessel limit.
			July 29-Aug. 1		4	28	16	60 Chinook and 35 coho per open period vessel limit.
			Aug. 5-7, 12-14		6	28	16	60 Chinook and 40 coho per open period vessel limit.
			Aug. 19-22, 26-29; Sept. 2-5		12	28	16	80 Chinook and 40 coho per open period vessel limit.
			Sept. 8-15		8	28	16	160 Chinook and 40 coho per open period vessel limit.
	Cape Falcon to Florence South Jetty	June 4-7, 11-14, 18-21, 25-28; July 9-11, 16-18, 23-25; Aug. 1-3	-	28	-	28	-	75 Chinook per calendar week vessel limit.
		Sept. 17-30; Oct. 17-31	-	29	-	28	-	50 Chinook per calendar week vessel limit.
	Cape Falcon to Pyramid Rock Inside 3 nm (Tillamook/Nehalem)	Sept. 1-16; Oct. 1-16	-	32	-	28	-	Chinook only; 50 per calendar week vessel limit.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	-	15	-	28	-	Chinook only.
	Cape Kiwanda to Neskowin Creek Inside 3 nm (Nestucca Area)	Sept. 1-16; Oct. 1-16	-	32	-	28	-	Chinook only; 50 per calendar week vessel limit.
	Yaquina Head to 44°33'00" Inside 3 nm (Yaquina Area)	Sept. 1-16; Oct. 1-16	-	32	-	28	-	Chinook only; 50 per calendar week vessel limit.
	44°29'00" to 44°23'00" Inside 3 nm (Alsea Area)	Sept. 1-16; Oct. 1-16	-	32	-	28	-	Chinook only; 50 per calendar week vessel limit.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 7 of 13)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon- Except-Coho	All Salmon	All-Salmon- Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
<b>2006</b>	Florence South Jetty to Humbug Mt.	Closed	-	-	-	-	-	
Cont'd	Heceta Head to 44°00'00" Inside 3 nm (Siuslaw Area)	Sept. 1-16; Oct. 1-16	-	32	-	28	-	Chinook only; 50 per calendar week vessel limit.
	Tahkenitch Creek to 43°37'00" Inside 30 fathoms (Umpqua Area)	Sept. 1-30	-	30	-	28	-	Chinook only; 50 per calendar week vessel limit.
	43°31'00" to Cape Arago Inside 30 fathoms (Coos Area)	Sept. 1-Oct. 16	-	46	-	28	-	Chinook only; 50 per calendar week vessel limit.
	Nesika Reef to Cape Sebastian Inside 3 nm (Rogue Area)	Sept. 1-15	-	15	-	28	-	Chinook only; 50 per calendar week vessel limit.
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Sept. 15-Dec. 15	-	92	-	28	-	
	Humbug Mt. to OR/CA Border	Closed	-	-	-	-	-	
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 13-Nov. 3	-	22	-	28	-	25 fish per day per vessel limit; Chinook only.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 8 of 13)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
2007	WA/OR Border to Cape Falcon	May 1-2, 5-8	-	6	-	28	-	Per open period vessel limit of 40 Chinook.
		May 12-15, 19-22, 26-29; June 2-5, 9-12, 16-19	-	24	-	28	-	Per open period vessel limit of 30 Chinook.
		June 23-26	-	4	-	28	-	Per open period vessel limit of 30 Chinook.
			July 1-3, 7-10, 14-17, 21-24, 28-31;		27	28	16	Per open period vessel limit of 20 Chinook.
			Aug. 4-7, 11-14					
			Aug. 18-21, 25-28; Sep. 1-4, 8-11, 15-16		18	28	16	20 Chinook and 140 coho per open period vessel limit.
	Cape Falcon to Humbug Mt.	April 10-29	-	20	-	28	-	100 Chinook per calendar week vessel limit.
		May 1-June 30; July 11-30; Aug. 4-14, 21-24	-	96	-	28	-	
		Oct. 1-31	-	31	-	28	-	75 Chinook per calendar week vessel limit. Bandon High Spot Control Zone closed.
			Aug. 15-20, 25-28	-	10	28	16	50 coho per calendar week vessel limit. 10,000 coho quota, no coho mark restriction.
			Sept. 10-13	-	4	28	16	150 Chinook and 50 coho per calendar week vessel limit. Remainder of 10,000 coho quota. Bandon High Spot Control Zone closed.
	Cape Falcon to Pyramid Rock Inside 3 nm (Tillamook/Nehalem Area)	Sept. 1-8, 17-30	-	22	-	28	-	Chinook only; 50 per calendar week vessel limit. 2,000 quota. Landings restricted to Garibaldi or Nehalem.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	-	15	-	28	-	Chinook only.
	Cape Lookout to Neskowin Creek Inside 3 nm (Nestucca Area)	Sept. 1-8, 17-30	-	22	-	28	-	Chinook only; 50 per calendar week vessel limit. 1,000 quota. Landings restricted to Pacific City or Garibaldi.
	Yaquina Head to 44°33'00" Inside 3 nm (Yaquina Area)	Sept. 1-8, 17-30	-	22	-	28	-	Chinook only; 50 per calendar week vessel limit. 1,000 quota. Landings restricted to Newport or Depoe Bay.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 9 of 13)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
<b>2007</b>	44°29'00" to 44°23'00"	Sept. 1-8, 17-30	-	22	-	28	-	Chinook only; 50 per calendar week vessel limit. 2,000 quota. Landings restricted to Newport or Depoe Bay.
Cont'd	Inside 3 nm (Alsea Area)							
	Heceta Head to 44°00'00" Inside 3 nm (Siuslaw Area)	Sept. 1-8, 17-30	-	22	-	28	-	Chinook only; 50 per calendar week vessel limit. 2,000 quota. Landings restricted to Newport, Florence, Winchester Bay or Coos Bay.
	Tahkenitch Creek to 43°37'00" Inside 30 fathoms (Umpqua Area)	Sept. 1-8, 17-30	-	22	-	28	-	Chinook only; 50 per calendar week vessel limit. 500 quota. Landings restricted to Winchester Bay or Coos Bay.
	43°31'00" to Cape Arago Inside 30 fathoms (Coos Area)	Sept. 1-8, 17-30	-	22	-	28	-	Chinook only; 50 per calendar week vessel limit. 1,000 quota. Landings restricted to Coos Bay.
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Sept. 17-30; Nov. 1-Dec. 15	-	59	-	28	-	Landings restricted to Port Orford.
	Humbug Mt. to OR/CA Border	Apr. 10-29	-	20	-	28	-	100 fish per calendar week vessel limit.
		May 1-31	-	31	-	28	-	
		June 1-30	-	30	-	28	-	30 Chinook per day and 100 per calendar week vessel limit; 1,600 quota. Landings in Gold Beach, Port Orford, or Brookings only.
		July 11-31	-	21	-	28	-	30 Chinook per day and 100 per calendar week vessel limit; 1,600 quota. Landings in Gold Beach, Port Orford, or Brookings only.
		Aug. 1-14	-	14	-	28	-	30 Chinook per day and 100 per calendar week vessel limit; 1,800 quota. Landings in Gold Beach, Port Orford, or Brookings only.
		Sept. 6-30	-	25	-	28	-	30 Chinook per day and 100 per calendar week vessel limit; 1,000 quota. Landings in Gold Beach, Port Orford, or Brookings only.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 15-Nov. 5	-	22	-	28	-	25 fish per day per vessel limit. Landings restricted to Brookings.



TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 10 of 13)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
2008	WA/OR Border to Cape Falcon	May 3-6, 10-13, 17-20, 24-27; May 31-June 3; June 7-10, 14-17	-	28	-	28	-	Per open period vessel limit of 50 Chinook.
		June 21-24	-	4	-	28	-	Per open period vessel limit of 35 Chinook.
			July 1-2, 5-8, 12-15, 19-22, 26-29;	-	18	28	16	Per open period vessel limit of 35 Chinook and 25 coho.
			Aug. 2-5, 9-12, 16-19, 23-26; Aug. 30-Sept. 2; Sept. 6-9, 13-16	-	28	28	16	Per open period vessel limit of 50 Chinook and 25 coho.
2009	Cape Falcon to OR/CA Border	Sept. 1-Nov. 15	-	76	-	28	-	500 quota; 25 Chinook per calendar week per vessel landing limit.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)							
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-30	-	30	-	28	-	250 quota; 10 Chinook per day per vessel landing limit; landings restricted to Port Orford.
2010	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 5-8, 12	-	5	-	28	-	250 quota; 10 Chinook per day per vessel limit Oct. 5-8, 5 Chinook Oct. 12. Landings restricted to Brookings.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 11 of 13)

Year	Area	Seasons			Number of Days	Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	Except-Chinook		Chinook	Coho <sup>b/</sup>	
2009	WA/OR Border to Cape Falcon	May 1-5, 8-12, 16-19, 23-26; May 30-June 2; June 6-9, 13-16, 20-23, 27-30	-	-	38	28	-	Per open period vessel limit of 75 Chinook.
		-	July 1-7, 11-14	-	11	28	16	Per open period vessel limit of 40 Chinook and 200 marked coho.
		-	July 18-21, 25-28; Aug. 1-4, 8-11, 15-18, 22-25; Aug. 29-Sept. 1	-	28	28	16	Per open period vessel limit of 75 Chinook and 200 marked coho.
		-	Sept. 5-8, 12-15		8	28	16	Per open period vessel limit of 75 Chinook and 100 marked coho.
	Cape Falcon to Humbug Mt.	-	-	Sept. 1-30	30	-	16	21,240 quota (non-mark-selective); 100 coho per calendar week per vessel landing limit.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Sept. 1-Oct. 31	-	-	61	28	-	300 quota; 25 Chinook per calendar week per vessel landing limit; landings restricted to Garibaldi.
	Cape Blanco to Tichenor Rock (Elk River Area) Inside of a line from Cape Blanco to Black Rock to Best Rock to 42°43'48" N Lat 124°32'08" W Long to Tichenor Rock	Oct. 15-19	-	-	5	28	-	300 quota; 20 Chinook per day per vessel landing limit; landings restricted to Port Orford.
	Humbug Mt. to OR/CA Border	Closed	-	-	-	-	-	

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 12 of 13)

Year	Area	Seasons			Number of Days	Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	Except-Chinook		Chinook	Coho <sup>b/</sup>	
2010 <sup>c/</sup>	WA/OR Border to Cape Falcon	May 1-June 12;	-	-	43	28	-	Seven days per week, no landing limits.
		June 18-22;	-	-	5	28	-	Per open period vessel limit of 75 Chinook.
		June 25-29	-	-	5	28	-	Per open period vessel limit of 25 Chinook.
		-	July 1-6, 9-13; □	-	11	28	16	Per open period vessel limit of 40 Chinook and 30 marked coho.
		-	July 16-20, 23-27;	-	10	28	16	Per open period vessel limit of 60 Chinook and 50 marked coho.
			July 30-Aug. 3;		5	28	16	Per open period vessel limit of 75 Chinook and 50 marked coho.
			Aug. 6-10, 13-17, 20-24, 27-31, Sept. 3-7		25	28	16	Per open period vessel limit of 30 Chinook and 50 marked coho.
2010 <sup>c/</sup>	Cape Falcon to Humbug Mt.	May 1-July 6; July 9-13, 16-20, 23-27; Aug. 1-25	-	-	107	28	-	
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Sept. 1-Oct. 31	-	-	61	28	-	600 quota; 25 Chinook per calendar week per vessel landing limit; mandatory phone or email trip reports.
	Cape Blanco to Humbug Mt. (Elk River Area) Inside of a line from Cape Blanco to Black Rock to Best Rock to 42°40'30" N Lat 124°29'00" W Long to Humbug Mt.	Oct. 15-29	-	-	15	28	-	1,250 quota; 20 Chinook per day per vessel landing limit; mandatory phone or email trip reports.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 13 of 13)

Year	Area	Seasons			Number of Days	Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	Except-Chinook		Chinook	Coho <sup>b/</sup>	
2010 <sup>c/</sup>	Humbug Mt. to OR/CA Border Con't	May 1-31	-	-	31	28	-	100 fish per calendar week vessel limit. Landings restricted to Gold Beach, Port Orford, or Brookings.
		July 1-31	-	-	31	28	-	1,500 quota; 30 Chinook per day and 90 per calendar week vessel limit. Landings restricted to Gold Beach, Port Orford, or Brookings; mandatory phone or email trip reports.
		Aug. 1-31	-	-	31	28	-	1,500 quota; 30 Chinook per day and 90 per calendar week vessel limit. Landings restricted to Gold Beach, Port Orford, or Brookings; mandatory phone or email trip reports.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)							
		Oct. 13-15, 20	-	-	4	28	-	500 quota; 20 Chinook per day per vessel landing limit Oct 13-15, 10 per day October 20; landings restricted to Brookings; mandatory phone or email trip reports.

a/ For earlier years see Review of 2004 Ocean Salmon Fisheries, Appendix C, Table C-3.

b/ Mark selective coho fishery except for WA/OR Border to Cape Falcon in Sept. 2004, Cape Falcon to Humbug Mt. in 2007, and Cape Falcon to Humbug Mt. in 2009; otherwise all retained coho must be marked with a healed adipose fin clip.

c/ For detailed regulations see TABLE I-1.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 1 of 9)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions <sup>c/</sup>
					Chinook	Coho <sup>b/</sup>	
2001	WA/OR Border to Cape Falcon	July 1-Sept. 3	47	2	24	16	Sun.-Thurs.; no more than one Chinook.
	Closed south of Tillamook Head	Sept. 4-30	27	2	24	16	No more than one Chinook.
	Beginning Aug. 1						
	Cape Falcon to Humbug Mt.	Apr. 1-June 21; July 20-Oct. 31	186	2	20	-	All salmon except coho.
		June 22-July 19	28	2	20	16	55,000 marked coho quota.
	Marker on shore at 45°35'00" N. Lat. to #1 Green Buoy to Marker on shore at 45°32'50"N. (Tillamook Triangular Control Zone)	Apr. 1-July 31	122	2	20	-	All retained Chinook must have a healed adipose fin clip.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	15	2	20	-	Chinook only. Up to five jacks allowed before adult bag retained. No more than four adults in seven consecutive days and 10 adults per season.
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-Dec. 15	45	2	20	-	Chinook only.
	Humbug Mt. to OR/CA Border	May 17-July 8; July 24-Sept. 3	95	1	20	-	All salmon except coho.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-12	12	1	20	-	Chinook only. No more than four Chinook per season.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 2 of 9)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions <sup>c/</sup>
					Chinook	Coho <sup>b/</sup>	
2002	WA/OR Border to Cape Falcon	May 25-June 16	23	2	24	-	Chinook only.
		July 7-20	10	2	24	16	Sun.-Thurs.
		July 21-Aug. 7	14	2	26	16	Sun.-Thurs.
	Closed south of Tillamook Head Beginning Aug. 1	Aug. 8-15	6	2	-	16	Sun.-Thurs.; all salmon except Chinook.
		Aug. 16-Sept. 2; Sept. 6-15	28	2	-	16	All salmon except Chinook.
	Cape Falcon to Humbug Mt.	Apr. 1-July 6; Aug. 2-Oct. 31	188	2	20	-	All salmon except coho.
		July 7-Aug. 1	26	2	20	16	22,500 marked coho quota.
	Marker on shore at 45°35'00" N. Lat. to #1 Green Buoy to Marker on shore at 45°32'50" N. Lat. (Tillamook Triangular Control Zone)	Apr. 1-July 31	122	2	20	-	All retained Chinook must have a healed adipose fin clip.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	15	2	20	-	Chinook only. Up to five jacks allowed before adult bag retained. No more than four adults in seven consecutive days and 10 adults per season.
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-Dec. 15	45	2	20	-	Chinook only.
	Humbug Mt. to OR/CA Border	May 15-June 30; July 3-4; Aug. 1-Sept. 15	95	2	20	-	All salmon except coho.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-13	13	1	20	-	Chinook only. No more than four Chinook per season.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 3 of 9)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions <sup>c/</sup>
					Chinook	Coho <sup>b/</sup>	
2003	WA/OR Border to Cape Falcon	June 29-July 24	20	2	26	16	Sun.-Thurs.; no more than one Chinook.
	Closed south of Tillamook Head	July 25-Sept. 30	68	2	26	16	No more than one Chinook.
	Beginning Aug. 1						
	Cape Falcon to Humbug Mt.	Mar. 15-June 20; Aug. 20-Oct. 31	171	2	20	-	88,000 marked coho quota.
		June 21-Aug. 19	60	2	20	16	
	Marker on shore at 45°35'00" N. Lat. to #1 Green Buoy to Marker on shore at 45°32'50"N. (Tillamook Triangular Control Zone)	Mar. 15-July 31	139	2	20	-	All retained Chinook must have a healed adipose fin clip.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	15	2	20	-	Chinook only. Up to five jacks allowed before adult bag retained. No more than four adults in seven consecutive days and 10 adults per season.
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-Dec. 15	45	2	20	-	Chinook only.
2004	Humbug Mt. to OR/CA Border	May 17-Sept. 14	121	2	20	-	All salmon except coho.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-12	12	1	20	-	Chinook only. No more than four Chinook per season.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 4 of 9)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions <sup>c/</sup>
					Chinook	Coho <sup>b/</sup>	
<b>2004</b>	WA/OR Border to Cape Falcon	June 27-July 22	19	2	26	16	Sun.-Thurs.; no more than one Chinook.
	Closed south of Tillamook Head	July 23-Aug. 12	21	2	26	16	Two Chinook allowed.
	Aug. 1-Sept. 3	Aug. 13-Sept. 30	49	2	24	16	
	Cape Falcon to Humbug Mt.	Mar. 15-June 18; Sept. 1-Oct. 31	157	2	20	-	
		June 19-Aug. 31	74	2	20	16	75,000 marked coho quota for Cape Falcon to OR/CA border.
	Twin Rocks to #1 Green Buoy to Pyramid Rock (Tillamook Triangular Control Zone)	Mar. 15-July 31	139	2	20	-	All retained Chinook must have a healed adipose fin clip.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	15	2	20	-	Chinook only. Up to five jacks allowed before adult bag retained. No more than four adults in seven consecutive days and 10 adults per season.
	Humbug Mt. to OR/CA Border	May 15-June 18; Sept. 1-12	47	2	20	-	All salmon except coho.
		June 19-Aug. 31	74	2	20	16	75,000 marked coho quota for Cape Falcon to OR/CA border.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-12	12	1	20	-	Chinook only. No more than four Chinook per season.



TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 5 of 9)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions <sup>c/</sup>
					Chinook	Coho <sup>b/</sup>	
2005	WA/OR Border to Cape Falcon	July 3-28	20	2	24	16	Sun.-Thurs.; no more than one Chinook.
	Closed south of Tillamook Head Beginning Aug. 1	July 29-Sept. 8; Sept. 17-30	56	2	24	16	Two Chinook allowed.
		Sept. 9-16	8	2	-	16	All salmon except Chinook.
	Cape Falcon to Humbug Mt.	Mar. 15-June 17; Aug. 1-Oct. 31	188	2	20	-	
		June 18-July 31	44	2	20	16	All salmon except coho. 40,000 marked coho quota for Cape Falcon to OR/CA border.
	Twin Rocks to #1 Green Buoy to Pyramid Rock (Tillamook Triangular Control Zone)	Mar. 15-July 31	139	2	20	-	All retained Chinook must have a healed adipose fin clip.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	15	2	20	-	Chinook only. No more than four adults in seven consecutive days and 10 adults per season.
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-Dec. 15	45	2	20	-	Chinook only.
	Humbug Mt. to OR/CA Border	May 21-June 17; Aug. 14-Sept. 11	57	2	24	-	All salmon except coho.
		June 18-July 4	17	2	20	16	40,000 marked coho quota for Cape Falcon to OR/CA border.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-12	12	1	20	-	Chinook only. No more than four Chinook per season.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 6 of 9)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions <sup>c/</sup>
					Chinook	Coho <sup>b/</sup>	
2006	WA/OR Border to Cape Falcon	July 3-Aug. 10	29	2	24	16	Sun.-Thurs.; no more than one Chinook; closed south of Tillamook Head Aug. 1-10.
		Aug. 11-Sept. 30	51	2	24	16	Two Chinook allowed; closed south of Tillamook Head Aug. 11-25.
	Cape Falcon to Humbug Mt.	Mar. 15-June 16; Aug. 1-31; Sept. 7-Oct. 31	180	2	20	-	All salmon except coho.
		June 17-July 31; Sept. 1-6	51	2	20	16	20,000 marked coho quota for Cape Falcon to OR/CA border.
	Twin Rocks to #1 Green Buoy to Pyramid Rock (Tillamook Triangular Control Zone)	Mar. 15-July 31	139	2	20	-	All retained Chinook must have a healed adipose fin clip.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	15	2	20	-	Chinook only. No more than four adults in seven consecutive days and 10 adults per season.
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-Dec. 15	45	2	20	-	Chinook only.
	Humbug Mt. to OR/CA Border	May 15-June 16	33	2	24	-	All salmon except coho.
		June 17-July 4; Sept. 1-6	24	2	20	16	20,000 marked coho quota for Cape Falcon to OR/CA border.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-12	12	1	20	-	Chinook only. No more than four Chinook per season.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 7 of 9)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions <sup>c/</sup>
					Chinook	Coho <sup>b/</sup>	
2007	WA/OR Border to Cape Falcon	July 1 - Aug. 25; Sept. 2 - 30	85	2	24	16	No more than one Chinook.
	Cape Falcon to Humbug Mt.	Mar. 15-June 22; Sept. 17-Oct. 31	145	2	24	-	All salmon except coho.
		June 23-Sept 16	86	2	24	16	50,000 marked coho quota for Cape Falcon to OR/CA Border.
	Twin Rocks to Pyramid Rock Inside 15 fathom curve (Tillamook Area)	Mar. 15-July 31	139	2	24	-	All retained Chinook must have a healed adipose fin clip.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Nov. 1-15	15	2	24	-	Chinook only. No more than four adults in seven consecutive days and 10 adults per season.
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-Dec. 15	45	2	24	-	All salmon except coho.
	Humbug Mt. to OR/CA Border	May 15-June 22 June 23-Sept. 4	39 74	2 2	24 24	- 16	All salmon except coho. 50,000 marked coho quota for Cape Falcon to OR/CA Border.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-14	14	1	24	-	Chinook only. No more than four Chinook per season.
2008	WA/OR Border to Cape Falcon	June 1-20 June 21-28 June 29 - Aug. 17	20 8 36	1 2 2	24 24 24	- - 16	Chinook only. Chinook only. Sun.-Thurs.
	Cape Falcon to OR/CA Border	June 22-Aug. 14	54	2	-	16	quota.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Sept. 1-Nov. 15	76	2	24	-	Chinook only, only one of which can be unmarked. No more than five unmarked Chinook per season.
	Cape Blanco to Humbug Mt. Inside 3 nm (Elk River Area)	Nov. 1-30	30	2	24	-	Chinook only, only one of which can be unmarked. No more than five unmarked Chinook per season.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-4, 11	5	1	24	-	Chinook only. No more than four Chinook per season.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 8 of 9)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions <sup>c/</sup>
					Chinook	Coho <sup>b/</sup>	
2009	WA/OR Border to Cape Falcon	June 28 - July 31	34	2	24	16	No more than one Chinook.
		Aug. 1-31; Sept 7-30	55	2	24	16	Two Chinook allowed.
	Cape Falcon to Humbug Mt.	June 20-Aug. 31	73	3	-	16	All salmon except Chinook; Cape Falcon to OR/CA Border June 20-Aug. 31 110,000 marked coho quota.
	Humbug Mt. to OR/CA Border	June 20-Aug. 28	70	2	-	16	Border June 20-Aug. 31; 110,000 marked coho quota.
		Aug.29- 31	3	2	24	16	All salmon; Cape Falcon to OR/CA Border June 20-Aug. 31; remainder of 110,000 marked coho quota.
		Sept. 1-7	7	2	24	-	All salmon except coho; Cape Falcon to OR/CA Border June 20-Aug. 31.
	Cape Falcon to Humbug Mt.	Sept. 1-30	30	2	-	16	All salmon except Chinook; 9,560 marked coho quota.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Sept. 1-30	30	2	24	16	Barbless hooks required through Sept. 30. Two salmon daily, only one of which can be an unmarked Chinook. No more than five unmarked Chinook per season in the Tillamook and Elk River Zones combined.
		Oct. 1-31	31	2		-	
	Cape Blanco to Tichenor Rock: Inside of a line from Cape Blanco to Black Rock to Best Rock to 42°43'48" N. Lat. 124°32'08" W. Long to Tichenor Rock (Elk River Area)	Oct. 15-Nov. 30	47	2	20	-	Chinook only; two daily, only one of which can be unmarked. No more than five unmarked Chinook per season in the Tillamook and Elk River Zones combined

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 9 of 9)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions <sup>c/</sup>
					Chinook	Coho <sup>b/</sup>	
<b>2010<sup>d/</sup></b>	WA/OR Border to Cape Falcon	June 12-30	19	2	24	-	12,000 marked Chinook quota north of Cape Falcon to U.S./Canada border.
		July 1-7	7	2	24	16	No more than one Chinook.
		July 8-Sept 30	85	2	24	16	Two Chinook allowed.
	Cape Falcon to OR/CA Border	May 29-June 25	28	2	24	-	All salmon except coho.
		June 26-Sept. 6	73	2	24	16	All salmon; 26,000 marked coho quota.
	Twin Rocks to Pyramid Rock Inside 15 fm (Tillamook Area)	May 29-July 31	64	2	24	16	Same regulations as ocean fishery above except that all retained Chinook must be marked.
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Sept. 1-6 Sept. 7- Oct. 31	6	2	24	16	Barbless hooks required through Sept. 6. Two salmon daily, only one of which can be an unmarked Chinook. No more than 10 unmarked Chinook per season.
	Cape Blanco to Humbug Mt.: Inside a line from Cape Blanco to Black Rock to Best Rock to 42°40'30" N. Lat. 124°29'00" W. Long. to Humbug Mt. (Elk River Area)	Oct. 15-Nov. 30	47	2	24	-	
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-12	12	1	24	-	No more than five Chinook per season.

a/ For earlier years see Review of 2004 Ocean Salmon Fisheries, Appendix C, Table C-4.

b/ Mark selective coho fishery; all retained coho must be marked with a healed adipose fin clip.

c/ All seasons are seven days per week unless otherwise indicated.

d/ For detailed regulations see TABLE I-3.

TABLE C-5. Summary of actual Washington commercial salmon seasons in state and federal (EEZ) waters, 2001-2010. <sup>a/</sup> (Page 1 of 4)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
<b>2001</b>	U.S./Canada Border to WA/OR Border	May 1-June 15	-	46	-	28	-	
		-	July 20-23, 27-30	-	8	28	16	65 Chinook per open period vessel limit.
		-	Aug. 3-12	-	10	28	16	100 Chinook per open period vessel limit.
		-	Aug. 17-27	-	11	28	16	150 Chinook per open period vessel limit.
		-	Aug. 31-Sept. 30	-	31	28	16	No Chinook limit.
<b>2002</b>	U.S./Canada Border to WA/OR Border	May 1-June 7	-	38	-	28	-	
		July 1-8	-	8	-	28	-	250 Chinook per open period vessel limit.
		July 12-22	-	11	-	28	-	400 Chinook per open period vessel limit.
		July 26-31	Aug. 1-5	6	5	28	16	450 Chinook per open period vessel limit; No coho north of Leadbetter Point
		-	Aug. 9-18	-	10	28	16	400 Chinook per open period vessel limit; No coho north of Leadbetter Point.
		-	Aug. 22-28	-	7	28	16	250 Chinook per open period vessel limit; No coho north of Leadbetter Point.
<b>2003</b>	U.S./Canada Border to WA/OR Border	May 1-June 6;	-	37	-	28	-	
		June 26-30	-	5	-	28	-	50 Chinook per open period vessel limit.
		-	July 3-7	-	5	28	16	75 Chinook per open period vessel limit.
		-	July 10-14, 17-21, 24-28; July 31-Aug. 4; Aug. 7-11, 14-18, 21-25; Aug. 27-Sept. 1; Sept. 4-8, 11-14	-	49	28	16	150 Chinook per open period vessel limit.
<b>2004</b>	U.S./Canada Border to WA/OR Border	May 1-5	-	5	-	28	-	
		May 15-18	-	4	-	28	-	125 Chinook per open period vessel limit.
		May 24-26	-	3	-	28	-	70 Chinook per open period vessel limit.
		June 26-30	-	5	-	28	-	50 Chinook per open period vessel limit.
		-	July 8-12	-	5	28	16	100 Chinook per open period vessel limit.
		-	July 16-19, 22-26; July 29-Aug. 2; Aug. 5-9, 11-15, 18-22, 25-29	-	34	28	16	125 Chinook per open period vessel limit; No chum beginning Aug. 1.
		-	Sept. 1-5	-	5	28	16	125 Chinook per open period vessel limit; no coho mark restriction.

TABLE C-5. Summary of actual Washington commercial salmon seasons in state and federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 2 of 4)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
2005	U.S./Canada Border to WA/OR Border	May 1-3	-	3	-	28	-	75 Chinook per open period vessel limit.
		May 6-9	-	4	-	28	-	100 Chinook per open period vessel limit.
		May 13-16, 20-26	-	11	-	28	-	125 Chinook per open period vessel limit.
		June 3-6	-	4	-	28	-	60 Chinook per open period vessel limit.
		June 26-30	-	5	-	28	-	30 Chinook per open period vessel limit.
		-	July 7-11; 14-18	-	10	28	16	75 Chinook per open period vessel limit.
		-	July 21-25; July 28-Aug. 1; Aug. 3-7, 10-14, 17-22	-	36	28	16	100 Chinook per open period vessel limit.
2006	U.S./Canada Border to WA/OR Border	May 1-2	-	2	-	28	-	75 Chinook per open period vessel limit.
		May 6-9, 13-16, 20-23, 27-30; June 3-6, 10-13	-	24	-	28	-	80 Chinook per open period vessel limit.
		June 27-30	-	4	-	28	-	20 Chinook per open period vessel limit.
			July 15-18, 22-25		8	28	16	35 Chinook and 35 coho per open period vessel limit.
			July 29-Aug. 1		4	28	16	60 Chinook and 35 coho per open period vessel limit.
			Aug. 5-7, 12-14		6	28	16	60 Chinook and 40 coho per open period vessel limit.
			Aug. 19-22, 26-29, Sept. 2-5		12	28	16	80 Chinook and 40 coho per open period vessel limit.
			Sept. 8-15		8	28	16	160 Chinook and 80 coho per open period vessel limit.
2007	U.S./Canada Border to WA/OR Border	May 1-2, 5-8	-	6	-	28	-	Per open period vessel limit: 60 Chinook north of Leadbetter Pt; 40 Chinook south.
		May 12-15, 19-22, 26-29; June 2-5, 9-12, 16-19	-	24	-	28	-	Per open period vessel limit: 60 Chinook north of Leadbetter Pt; 30 Chinook south.
		June 23-26	-	4	-	28	-	Per open period vessel limit: 50 Chinook north of Leadbetter Pt; 30 Chinook south.
			July 1-3, 7-10, 14-17, 21-24		15	28	16	Per open period vessel limit: 40 Chinook north of Leadbetter Pt; 20 Chinook south.
			July 28-31;		12	28	16	Per open period vessel limit: 20 Chinook north of Leadbetter Pt; 20 Chinook south.
			Aug. 4-7, 11-14					
			Aug. 18-21, 25-28; Sep. 1-4, 8-11, 15-16		18	28	16	20 Chinook and 140 coho per open period vessel limit

TABLE C-5. Summary of actual Washington commercial salmon seasons in state and federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 3 of 4)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
2008	U.S./Canada Border to WA/OR Border	May 3-6, 10-13, 17-20, 24-27; May 31-June 3; June 7-10, 14-17 June 21-24	-	28	-	28	-	Per open period vessel limit of 50 Chinook north or 50 Chinook south of Leadbetter Point.
			-	4	-	28	-	Per open period vessel limit of 35 Chinook north or 35 Chinook south of Leadbetter Point.
			July 1-2, 5-8, 12-15, 19-22, 26-29;	-	18	28	16	Per open period vessel limit of 35 Chinook and 25 coho north or 35 Chinook and 25 coho south of Leadbetter Point. Plugs >6 in. only.
			Aug. 2-5, 9-12, 16-19, 23-26, Aug. 30-Sept. 2; Sept. 6-9, 13-16	-	28	28	16	Per open period vessel limit of 50 Chinook and 25 coho north or 50 Chinook and 25 coho south of Leadbetter Point. Plugs >6 in. only prior to Aug. 16.
2009	U.S./Canada Border to WA/OR Border	May 1-5, 8-12, 16-19, 23-26; May 30-June 2; June 6-9, 13-16, 20-23, 27-30	-	-	38	28	-	Per open period vessel limit of 75 Chinook north of Leadbetter Point or 75 Chinook south of Leadbetter Point.
		-	July 1-7, 11-14;	-	11	28	16	Per open period vessel limit of 40 Chinook and 200 marked coho north of Leadbetter Point or the same south of Leadbetter Point.
		-	July 18-21, 25-28; Aug. 1-4, 8-11, 15-18, 22-25; Aug. 29-Sept. 1;	-	28	28	16	Per open period vessel limit of 75 Chinook and 200 marked coho north of Leadbetter Point or the same south of Leadbetter Point.
		-	Sept. 5-8, 12-15		8	28	16	Per open period vessel limit of 75 Chinook and 100 marked coho north of Leadbetter Point or the same south of Leadbetter Point.



TABLE C-5. Summary of actual Washington commercial salmon seasons in state and federal (EEZ) waters, 2001-2010.<sup>a/</sup> (Page 4 of 4)

Year	Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho <sup>b/</sup>	
<b>2010<sup>c/</sup></b>	U.S./Canada Border to WA/OR Border	May 1-June 12;	-	43	-	28	-	Seven days per week, no landing limits.
		June 18-22	-	5	-	28	-	Per open period vessel limit of 75 Chinook.
		June 25-29	-	5	-	28	-	Per open period vessel limit of 25 Chinook.
		-	July 1-6, 9-13	-	11	28	16	Per open period vessel limit of 40 Chinook and 30 marked coho North of Leadbetter Pt. or the same south of Leadbetter Pt.
		-	July 16-20, 23-27	-	10	28	16	Per open period vessel limit of 60 Chinook and 50 marked coho North of Leadbetter Pt. or the same south of Leadbetter Pt.
			July 30-Aug. 3		5	28	16	Per open period vessel limit of 75 Chinook and 50 marked coho North of Leadbetter Pt. or the same south of Leadbetter Pt.
			Aug 6-10, 13-17, 20-24, 27-31; Sept. 3-7		25	28	16	Per open period vessel limit of 30 Chinook and 50 marked coho North of Leadbetter Pt. or the same south of Leadbetter Pt.

a/ For earlier years see Review of 2004 Ocean Salmon Fisheries, Appendix C, Table C-5.

b/ Mark selective coho fishery; all retained coho must be marked with a healed adipose fin clip.

c/ For detailed regulations see TABLE I-1.

TABLE C-6. Summary of actual Washington recreational ocean salmon regulations, 2001-2010. <sup>a/</sup> (Page 1 of 6)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions
					Chinook	Coho <sup>b/</sup>	
2001	U.S./Canada Border to Cape Alava	July 1-Sept. 30	92	2	24	16	No more than one Chinook
	Cape Alava to Queets River	July 1-Sept. 23	85	2	24	16	No more than one Chinook
	Cake Rock-Q Buoy-Teahwhit Head	Sept. 24-Oct. 21	28	2	24	16	No more than one Chinook
	Queets River to Leadbetter Point	July 1-Sept. 6	69	2	24	16	Sun.-Thurs.; No more than one Chinook
		Sept. 7-30	24	2	24	16	Seven days per week; No more than one Chinook
	Leadbetter Point to WA/OR Border Closed Leadbetter Pt. to N. Head Lighthouse Sept. 4-6; Closed N. Head Lighthouse to Klipsan Beach Sept. 7-30	July 1-Sept. 3	47	2	24	16	Sun.-Thurs.; No more than one Chinook
		Sept. 4-30	27	2	24	16	Seven days per week; No more than one Chinook
2002	U.S./Canada Border to Cape Alava	May 25-June 16	23	2	24	-	Chinook only
		July 7-20	14	2	24	16	
		July 21-31	11	2	28	16	
		Aug. 1-7	7	2	28	16	No chum
		Aug. 8-Sept. 8	32	2	-	16	No Chinook or chum
	Cape Alava to Queets River	May 25-June 16	23	2	24	-	Chinook only
		July 7-20	14	2	24	16	
		July 21-Aug. 7	18	2	28	16	
		Aug. 8-Sept. 8	32	2	-	16	No Chinook
		Sept. 21-Oct. 6	16	2	24	16	No more than one Chinook
	Queets River to Leadbetter Point	May 25-June 16	23	2	24	-	Chinook only
		June 30-July 20	15	2	24	16	Sun.-Thurs.
		July 21-Aug. 17	20	2	28	16	Sun.-Thurs.
		Aug. 18-19	2	2	-	16	Sun.-Thurs.; no Chinook
	Leadbetter Point to WA/OR Border	May 25-June 16	23	2	24	-	Chinook only
		July 7-20	10	2	24	16	Sun.-Thurs.
		July 21-Aug. 7	14	2	26	16	Sun.-Thurs.
		Aug. 8-15	6	2	-	16	Sun.-Thurs.; no Chinook
		Aug. 16-Sept. 2; Sept. 6-15	28	2	-	16	Seven days per week; no Chinook

TABLE C-6. Summary of actual Washington recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 2 of 6)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions
					Chinook	Coho <sup>b/</sup>	
2003	U.S./Canada Border to Cape Alava	June 22-July 31	40	2 <sup>d/</sup>	26	16	No more than one Chinook
		Aug. 1-Sept. 14	45	2 <sup>d/</sup>	26	16	No more than one Chinook; no chum
	Cape Alava to Queets River Cake Rock-Q Buoy-Teahwhit Head	June 22-Sept. 19	90	2 <sup>d/</sup>	26	16	No more than one Chinook
		Sept. 20-Oct. 5	16	2 <sup>d/</sup>	26	16	No more than one Chinook
	Queets River to Leadbetter Point	June 22-July 24	25	2	26	16	Sun.-Thurs.; no more than one Chinook
		July 25-Sept. 14	52	2	26	16	Seven days per week; no more than one Chinook
	Leadbetter Point to WA/OR Border	June 29-July 24	20	2	26	16	Sun.-Thurs.; no more than one Chinook
		July 25-Sept. 30	68	2	26	16	Seven days per week; no more than one Chinook
	U.S./Canada Border to Cape Alava	June 27-July 31	35	2	26	16	No more than one Chinook
		Aug. 1-Sept. 2; Sept. 10-19	43	2	24	16	Two Chinook allowed; no chum
2004	Cape Alava to Queets River	June 27-Aug. 12	47	2	26	16	No more than one Chinook
		Aug. 13-Sept. 19	38	2	24	16	Two Chinook allowed
	47°58' N. Lat. to 47°50' N. Lat. Inside 3 nm	Sept. 25-Oct. 10	16	2	24	16	Two Chinook allowed
	Queets River to Leadbetter Point	June 27-July 22	19	2	26	16	Sun.-Thurs.; no more than one Chinook
		July 23-Aug. 12	21	2	26	16	Seven days per week
		Aug. 13-28	16	2	24	16	
		Aug. 29-Sept. 6	9	2	24	16	No coho mark restriction
	Leadbetter Point to WA/OR Border	June 27-July 22	19	2	26	16	Sun.-Thurs.; no more than one Chinook
		July 23-Aug. 12	21	2	26	16	Seven days per week
		Aug. 13-Sept. 30	49	2	24	16	

TABLE C-6. Summary of actual Washington recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 3 of 6)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions
					Chinook	Coho <sup>b/</sup>	
2005	U.S./Canada Border to Cape Alava	July 1-July 31	22	2	24	16	Tues.-Sat.; no more than one Chinook
		Aug. 1-15	10	2	24	16	Tues.-Sat.; no more than one Chinook; no chum
		Aug. 16-29	10	2	24	16	Tues.-Sat.; two Chinook allowed; no chum
		Aug. 30-Sept. 18	20	2	24	16	Seven days per week; two Chinook allowed; no chum
	Cape Alava to Queets River	July 1-28	20	2	24	16	Tues.-Sat.; no more than one Chinook
		July 29-Sept. 18	52	2	24	16	Seven days per week; two Chinook allowed
		48°00' N. Lat. to 47°50' N. Lat.	16	2	24	16	Seven days per week; two Chinook allowed
	Queets River to Leadbetter Point	June 26-July 28	25	2	24	16	Sun.-Thurs; no more than one Chinook
		July 29-Sept. 18	52	2	24	16	Seven days per week; two Chinook allowed
	Leadbetter Point to WA/OR Border	July 3-28	20	2	24	16	Sun.-Thurs; no more than one Chinook
		July 29-Sept. 8; Sept. 17-30	56	2	24	16	Seven days per week; two Chinook allowed
		Sept. 9-16	8	2	-	16	Seven days per week; no Chinook
2006	U.S./Canada Border to Cape Alava	June 30-Aug. 10	30	2	24	16	Tues.-Sat.; no more than one Chinook
		Aug. 11-Sept. 17	38	2	24	16	Seven days per week; two Chinook allowed
	Cape Alava to Queets River	June 30-Aug. 10	30	2	24	16	Tues.-Sat.; no more than one Chinook
		Aug. 11-Sept. 17	38	2	24	16	Seven days per week; two Chinook allowed
		48°00' N. Lat. to 47°50' N. Lat.	16	2	24	16	Seven days per week; two Chinook allowed
	Queets River to Leadbetter Point	July 3-Aug. 10	29	2	24	16	Sun.-Thurs.; no more than one Chinook
		Aug. 11-Sept. 17	38	2	24	16	Seven days per week; two Chinook allowed
	Leadbetter Point to WA/OR Border	July 3-Aug. 10	29	2	24	16	Sun.-Thurs.; no more than one Chinook
		Aug. 11-Sept. 30	51	2	24	16	Seven days per week; two Chinook allowed

TABLE C-6. Summary of actual Washington recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 4 of 6)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions
					Chinook	Coho <sup>b/</sup>	
2007	U.S./Canada Border to Cape Alava	July 3 - Aug. 16	33	2 <sup>e/</sup>	24	16	Tues.-Sat.; no more than one Chinook
		Aug. 17 - Sept. 15	30	2 <sup>e/</sup>	24	16	Seven days per week; no more than one Chinook
	Cape Alava to Queets River	July 3 - Aug. 16	33	2 <sup>e/</sup>	24	16	Tues.-Sat.; no more than one Chinook
		Aug. 17 - Sept. 15	30	2 <sup>e/</sup>	24	16	Seven days per week; no more than one Chinook
	48°00' N. Lat. to 47°50' N. Lat.	Sept. 22 - Oct. 7	16	2 <sup>e/</sup>	24	16	Seven days per week; no more than one Chinook
	Queets River to Leadbetter Point	July 1 - Aug. 16	35	2	24	16	Sun.-Thurs.; no more than one Chinook
		Aug. 17 - Sept. 16	31	2	24	16	Seven days per week; no more than one Chinook
	Leadbetter Point to WA/OR Border	July 1 - Aug. 25	56	2	24	16	Seven days per week; no more than one Chinook
		Sept. 2 - 30	29	2	24	16	Seven days per week; no more than one Chinook
2008	U.S./Canada Border to Cape Alava	June 3-20	14	1	24	-	Tues.-Sat.; Chinook only
		June 21-28	6	2	24	-	Tues.-Sat.; Chinook only
		July 1 - Aug. 23	40	2	24	16	Tues.-Sat.; no Chinook retention East of Bonilla-Tatoosh line in August
		Aug. 26 - Sept. 13	19	2	-	16	Seven days per week; closed west of Bonilla-Tatoosh line; no chinook retention
	Cape Alava to Queets River	June 3-20	14	1	24	-	Tues.-Sat.; Chinook only
		June 21-28	6	2	24	-	Tues.-Sat.; Chinook only
		July 1 - Aug. 23	40	2	24	16	Tues.-Sat.
		Aug. 26 - Sept. 13	19	2	24	16	Seven days per week
	48°00' N. Lat. to 47°50' N. Lat.	Sept. 20 - Oct. 5	16	2	24	16	Seven days per week
	Queets River to Leadbetter Point	June 1-19	15	1	24	-	Sun.-Thurs.; Chinook only
		June 22-26	5	2	24	-	Sun.-Thurs.; Chinook only
		June 29 - Aug. 25	42	2	24	16	Sun.-Thurs.
		Aug. 26 - Sept. 13	19	2	24	16	Seven days per week
	Leadbetter Point to WA/OR Border	June 1-20	20	1	24	-	Seven days per week; Chinook only
		June 21-28	8	2	24	-	Seven days per week; Chinook only
		June 29 - Aug. 17	36	2	24	16	Sun.-Thurs.

TABLE C-6. Summary of actual Washington recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 5 of 6)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.)		Other Restrictions
					Chinook	Coho <sup>b/</sup>	
2009	U.S./Canada Border to Cape Alava	June 27 - July 17	15	2 <sup>f/</sup>	24	16	Tue.-Sat.; no more than one Chinook
		July 18-31	14	2 <sup>f/</sup>	24	16	Seven days per week; no more than one Chinook
		Aug. 1-Sept. 20	51	2 <sup>f/</sup>	24	16	Seven days per week
	Cape Alava to Queets River	June 27 - July 17	15	2 <sup>f/</sup>	24	16	Tue.-Sat.; no more than one Chinook
		July 18-31	14	2 <sup>f/</sup>	24	16	Seven days per week; no more than one Chinook
		Aug. 1-Sept. 20	51	2 <sup>f/</sup>	24	16	Seven days per week
	48°00' N. Lat. to 47°50' N. Lat.	Sept. 26 - Oct. 11	16	2 <sup>f/</sup>	24	16	Seven days per week
		June 28 - July 23	20	2 <sup>d/</sup>	24	16	Sun.-Thurs.; no more than one Chinook
		July 24-31	8	2 <sup>d/</sup>	24	16	Seven days per week; no more than one Chinook
	Queets River to Leadbetter Point	Aug. 1-Sept. 20	51	2 <sup>d/</sup>	24	16	Seven days per week
		June 28 - July 31	34	2	24	16	Seven days per week; no more than one Chinook
		Aug. 1-Aug. 31	31	2	24	16	Seven days per week
	Leadbetter Point to WA/OR Border	Sept. 7-30	24	2	24	16	Seven days per week
		June 12-30	19	2	24	-	12,000 marked Chinook quota NOF
		July 1-7	5	2	24	16	Tue.-Sat.; no more than one Chinook
	Cape Alava to Queets River	July 8-22	11	2	24	16	Tue.-Sat.; two Chinook allowed
		July 23-Sept. 19	59	2	24	16	Seven days per week
2010 <sup>c/</sup>	U.S./Canada Border to Cape Alava	June 12-30	19	2	24	-	12,000 marked Chinook quota NOF
		July 1-7	5	2	24	16	Tue.-Sat.; no more than one Chinook
		July 8-22	11	2	24	16	Tue.-Sat.; two Chinook allowed
	Cape Alava to Queets River	July 23-Sept. 19	59	2	24	16	Seven days per week
		June 12-30	19	2	24	-	12,000 marked Chinook quota NOF
		July 1-7	5	2	24	16	Tue.-Sat.; no more than one Chinook
	48°00' N. Lat. to 47°50' N. Lat.	July 8-22	11	2	24	16	Tue.-Sat.; two Chinook allowed
		July 23-Sept. 19	59	2	24	16	Seven days per week
		Sept. 25 - Oct. 10	16	2	24	16	Seven days per week
	Queets River to Leadbetter Point	June 12-30	19	2	24	-	12,000 marked Chinook quota NOF
		July 4-7	4	2	24	16	Sun.-Thurs.; no more than one Chinook
		July 8-22	11	2	24	16	Sun.-Thurs.; two Chinook allowed
	Leadbetter Point to WA/OR Border	July 23-Sept. 19	59	2	24	16	Seven days per week
		June 12-30	19	2	24	-	12,000 marked Chinook quota NOF
		July 1-7	7	2	24	16	No more than one Chinook
	Leadbetter Point to WA/OR Border	July 8-Sept. 30	85	2	24	16	Two Chinook allowed

TABLE C-6. Summary of actual Washington recreational ocean salmon regulations, 2001-2010.<sup>a/</sup> (Page 6 of 6)

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a/ For earlier years see Review of 2004 Ocean Salmon Fisheries, Appendix C, Table C-6.

b/ Mark selective coho fishery; all retained coho must be marked with a healed adipose fin clip except Aug. 29-Sept. 6, 2004 Queets River to Leadbetter Point.

c/ For detailed regulations see TABLE I-3.

d/ Plus one additional pink salmon.

e/ Plus one additional pink salmon beginning August 1.

f/ Plus two additional pink salmon.

TABLE C-7. Summary of actual Washington treaty Indian ocean and Area 4B troll salmon seasons, 2001-2010.<sup>a/</sup> (Page 1 of 7)

Year	Tribe/Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-	All Salmon	Chinook	Coho	
2001	<b>Quinault, Quileute, and Hoh</b> Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	<b>Makah</b> Ocean waters north of 48°02'15" N. Lat. and east of 125°44'00" W. Long.	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Area 4B inside waters	Jan. 1-Apr. 15	-	105	-	22	-	
		May 1-June 30	-	61	-	24	-	
		-	July 2-Sept. 15	-	76	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	
	<b>S'Klallam</b> Area 4B inside waters	-	Jan. 1-Apr. 15	-	105	22	16	
		May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
		Nov. 1-Dec. 31	-	61	-	22	-	
2002	<b>Quinault, Quileute, and Hoh</b> Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	<b>Makah</b> Ocean waters north of 48°02'15" N. Lat. and east of 125°44'00" W. Long.	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Area 4B inside waters	Jan. 1-Apr. 15	-	105	-	22	-	
		May 1-June 30	-	61	-	24	-	
		-	July 2-Sept. 15	-	76	24	16	
		Sept. 16-Oct. 31	-	46	-	24	-	
		Nov. 1-Dec. 31	-	61	-	22	-	
	<b>S'Klallam</b> Area 4B inside waters	-	Jan. 1-Apr. 15	-	105	22	16	
		May 1-June 30	-	61	-	24	-	
		-	July 1-Oct. 31	-	123	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	



TABLE C-7. Summary of actual Washington treaty Indian ocean and Area 4B troll salmon seasons, 2001-2010.<sup>a/</sup> (Page 2 of 7)

Year	Tribe/Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-	All Salmon	Chinook	Coho	
2003	<b>Quinault, Quileute, and Hoh</b>							
	Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	No size limits for ceremonial and subsistence
		-	July 1-Sept. 15	-	77	24	16	No size limits for ceremonial and subsistence
	Sand Point to Queets River (Quileute only)	-	Sept. 16-Oct. 15	-	30	None	None	Ceremonial and subsistence only
	<b>Makah</b>							
	Ocean waters north of 48°02'15" N. Lat. and east of 125°44'00" W. Long.	May 1-June 30	-	61	-	24	-	No size limits for ceremonial and subsistence
		-	July 1-Sept. 15	-	77	24	16	No size limits for ceremonial and subsistence
	Area 4B inside waters	Jan. 1-Apr. 15	-	105	-	22	-	No size limits for ceremonial and subsistence
		May 1-June 30	-	61	-	24	-	No size limits for ceremonial and subsistence
		-	July 1-Sept. 15	-	77	24	16	No size limits for ceremonial and subsistence
		Sept. 16-Oct. 31	-	46	-	24	-	No size limits for ceremonial and subsistence
		Nov. 1-Dec. 31	-	61	-	22	-	No size limits for ceremonial and subsistence
	<b>S'Klallam</b>							
	Area 4B inside waters	-	Jan. 1-Apr. 15	-	105	22	16	No size limits for ceremonial and subsistence
		May 1-June 30	-	61	-	24	-	No size limits for ceremonial and subsistence
		-	July 1-Oct. 31	-	123	24	16	No size limits for ceremonial and subsistence
		-	Nov. 1-Dec. 31	-	61	22	16	No size limits for ceremonial and subsistence
2004	<b>Quinault, Quileute, and Hoh</b>							
	Sand Point to Point Chehalis	May 1-June 17	-	48	-	24	-	
		-	July 1-Sept. 10	-	72	24	16	
	Sand Point to Queets River (Quileute only)	-	Sept. 16-Oct. 15	-	30	24	16	Ceremonial and subsistence only
	<b>Makah</b>							
	Ocean waters north of 48°02'15" N. Lat. and east of 125°44'00" W. Long.	May 1-June 17	-	48	-	24	-	
		-	July 1-Sept. 10	-	72	24	16	
	Area 4B inside waters	Jan. 1-Apr. 15	-	106	-	22	-	
		May 1-June 17	-	48	-	24	-	
		-	July 1-Sept. 10	-	72	24	16	
		Sept. 16-Oct. 31	-	46	-	24	-	
		Nov. 1-Dec. 31	-	61	-	22	-	
	<b>S'Klallam</b>							
	Area 4B inside waters	-	Jan. 1-Apr. 15	-	106	22	16	
		May 1-June 17	-	48	-	24	-	
		-	July 1-Sept. 10; Sept. 16-Oct. 31	-	118	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	

TABLE C-7. Summary of actual Washington treaty Indian ocean and Area 4B troll salmon seasons, 2001-2010.<sup>a/</sup> (Page 3 of 7)

Year	Tribe/Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-	All Salmon	Chinook	Coho	
2005	<b>Quinault, Quileute, and Hoh</b>							
	Sand Point to Point Chehalis	May 1-June 23	-	54	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Sand Point to Queets River (Quileute only)		Sept. 16-Oct. 15	-	30	24	16	Ceremonial and subsistence only
	<b>Makah</b>							
	Ocean waters north of 48°02'15" N. Lat. and east of 125°44'00" W. Long.	May 1-June 23	-	54	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Area 4B inside waters	-	Jan. 1-Feb. 3	-	34	22	16	
		May 1-June 23	-	54	-	24	-	
		-	July 1-July 3	-	55	24	16	
			July 19-23; 26-30; Aug. 2-6; 9-13; Aug. 15-Sept. 15	-				
		-	Nov. 1-Dec. 31	-	61	22	16	
	<b>S'Klallam</b>							
	Area 4B inside waters	-	Jan. 1-Apr. 15	-	105	22	16	
		May 1-June 23	-	54	-	24	-	
		-	July 1-Sept. 15; Sept. 16-Oct. 31	-	123	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	

TABLE C-7. Summary of actual Washington treaty Indian ocean and Area 4B troll salmon seasons, 2001-2010.<sup>a/</sup> (Page 4 of 7)

Year	Tribe/Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-	All Salmon	Chinook	Coho	
2006	<b>Quinault, Quileute, and Hoh</b>							
	Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Sand Point to Queets River (Quileute only)		Sept. 16-Oct. 15	-	30	24	16	Ceremonial and subsistence only
	<b>Makah</b>							
	Ocean waters north of 48°02'15" N. Lat. and east of 125°44'00" W. Long.	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Area 4B inside waters							
		-	Jan. 1-Apr. 15	-	105	22	16	
		May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	
	<b>S'Klallam</b>							
	Area 4B inside waters	-	Jan. 1-Apr. 15	-	105	22	16	
		May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15; Sept. 16-Oct. 31	-	123	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	
2007	<b>Quinault, Quileute, and Hoh</b>							
	Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 4	-	66	24	16	
	Sand Point to Queets River (Quileute only)		Sept. 16-Oct. 15		30	24	16	Ceremonial and subsistence only
	<b>Makah</b>							
	Ocean waters north of 48°02'15" N. Lat. and east of 125°44'00" W. Long.	May 1-June 30	-	61	-	24	-	
		-	July 1-Aug. 31	-	62	24	16	
	Area 4B inside waters							
		-	Jan. 1-Apr. 15	-	105	22	16	
		May 1-June 30	-	61	-	24	-	
		-	July 1-Aug. 31	-	62	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	
	<b>S'Klallam</b>							
	Area 4B inside waters	-	Jan. 1-Apr. 15	-	105	22	16	
		May 1-June 30	-	61	-	24	-	
		-	July 1-Oct. 31	-	123	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	

TABLE C-7. Summary of actual Washington treaty Indian ocean and Area 4B troll salmon seasons, 2001-2010.<sup>a/</sup> (Page 5 of 7)

Year	Tribe/Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-	All Salmon	Chinook	Coho	
2008	<b>Quinault, Quileute, and Hoh</b>							
	Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Sand Point to Queets River (Quileute only)	-	Sept. 16-Oct. 15	-	30	24	16	Ceremonial and subsistence only
	<b>Makah</b>							
	Ocean waters north of 48°02'15" N. Lat. and east of 125°44'00" W. Long.	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Area 4B inside waters	-	Jan. 1-Apr. 15	-	106	22	16	
		May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	
	<b>S'Klallam</b>							
	Area 4B inside waters	-	Jan. 1-Apr. 15	-	106	22	16	
		May 1-June 30	-	61	-	24	-	
		-	July 1-Oct. 31	-	123	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	

TABLE C-7. Summary of actual Washington treaty Indian ocean and Area 4B troll salmon seasons, 2001-2010.<sup>a/</sup> (Page 6 of 7)

Year	Tribe/Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-	All Salmon	Chinook	Coho	
2009	<b>Quinault, Quileute, and Hoh</b>							
	Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	
		-	July 1-Aug. 18;	-	48	24	16	
			Aug. 19-21;		3	24	16	Quinault only 50 coho landing limit
			Sept. 8-Sept. 11		4	24	16	Quinault only 68 coho landing limit
	(Quileute only)	-	Sept. 16-Oct. 15	-	30	24	16	Ceremonial and subsistence only
	<b>Makah</b>							
	Ocean waters north of 48°02'15" N. Lat. and east of 125°44'00" W. Long.	May 1-June 30	-	61	-	24	-	
		-	July 1-Aug. 17	-	48	24	16	
			Aug. 18-20		3	24	16	25 coho landing limit
			Sept. 9-Sept. 15		7	24	16	5 coho landing limit
		-	Nov. 1-Dec. 31	-	61	22	16	
		-	Jan. 1-Apr. 15	-	105	22	16	
	Area 4B inside waters	May 1-June 30	-	61	-	24	-	
		-	July 1-Aug. 17		48	24	16	
			Aug. 18-20	-	3	24	16	25 coho landing limit
			Sept. 9-Sept. 15	-	7	24	16	5 coho landing limit
			Nov. 1-Dec. 31	-	61	22	16	
			Jan. 1-Apr. 15	-	105	22	16	
	<b>S'Klallam</b>							
	Area 4B inside waters	-						
		May 1-June 30	-	61	-	24	-	
		-	July 1-Oct. 31	-	123	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	

TABLE C-7. Summary of actual Washington treaty Indian ocean and Area 4B troll salmon seasons, 2001-2010.<sup>a/</sup> (Page 7 of 7)

Year	Tribe/Area	Seasons		Number of Days		Minimum Size Limit (in.)		Other Restrictions
		All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-	All Salmon	Chinook	Coho	
2010 <sup>b/</sup>	<b>Quinault, Quileute, and Hoh</b>							
	Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	(Quileute only)	-	Sept. 16-Oct. 15	-	30	24	16	Ceremonial and subsistence only
	<b>Makah</b>							
	Ocean waters north of 48°02'15" N. Lat. and east of 125°44'00" W. Long.	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Area 4B inside waters	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15		77	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	
		-	Jan. 1-Apr. 15		105	22	16	
	<b>S'Klallam</b>							
	Area 4B inside waters	-						
		May 1-June 30	-	61	-	24	-	
		-	July 1-Oct. 31	-	123	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	

a/ For earlier years see Review of 2004 Ocean Salmon Fisheries, Appendix C, Table C-7.

b/ For detailed regulations see TABLE I-2.

TABLE C-8. Council preseason adopted catch quotas (thousands of fish) for ocean fisheries north of Cape Falcon and critical stocks driving management. (Page 1 of 2)

Year	Critical Stocks	Chinook			Critical Stocks	Coho		
		Catch Quota				Catch Quota		
		Treaty Indian	Non-Indian Commercial	Sport		Treaty Indian	Non-Indian Commercial	Sport
1979	None	-	-	-	None	-	-	-
1980	None	-	-	-	Washington coastal coho	-	-	-
1981	None	-	-	-	Hoh and Skagit <sup>a/</sup>	-	372.0	248.0
1982	None	-	-	-	Washington coastal coho	-	293.0	215.0
1983	Columbia River hatchery and depressed upriver stocks	-	114.0	88.0	Queets and Skagit <sup>b/</sup>	-	164.0	318.0
1984	Columbia River Lower River and Spring Creek Hatchery tules	8.3	16.7	10.3	Grays Harbor	38.5	24.8	50.2
1985	Columbia River Spring Creek Hatchery tules	10.5	47.5 <sup>c/</sup>	37.2	Skagit	75.0	91.5	198.4
1986	Columbia River Spring Creek Hatchery tules	12.5	51.0	37.1	Quillayute and Queets	86.0	140.6	207.5
1987	Columbia River Spring Creek Hatchery tules	15.8	58.2 <sup>d/</sup>	44.6	Skagit	86.0	141.2	200.9
1988	Columbia River upriver stocks	60.0	73.7	29.8	Washington coastal and Puget Sound	68.0	0.0 <sup>e/</sup>	100.0
1989	Columbia River upriver stocks	32.0	47.5	47.5	Queets and Skagit	77.0	75.0	225.0
1990	Columbia River Lower River Hatchery tules	31.2	37.5	37.5	Queets and Skagit	90.0	105.0	245.0
1991	Columbia River Lower River Hatchery tules	33.0	40.0	40.0	Hood Canal and Skagit	80.0	87.0	233.0
1992	Columbia River Lower River and Spring Creek Hatchery tules, and Snake River falls	33.0	47.0	33.0	Hood Canal and Stillaguamish	68.0	19.0	141.0
1993	Columbia River Lower River and Spring Creek Hatchery tules, and Snake River falls	33.0	35.0	25.0	Skagit	90.0	47.5	202.5
1994	Columbia River Lower River Hatchery tules and Snake River falls	16.4	0.0	0.0	Washington coastal and Puget Sound	0.0	0.0	0.0
1995	Columbia River Lower River Hatchery tules and Snake River falls	12.0	0.0	0.0	Washington coastal and Puget Sound	30.0	25.0	75.0
1996	Columbia River Lower River Hatchery tules and Snake River falls	11.0	0.0	0.0	Washington coastal and Puget Sound	30.0	20.8	62.2
1997	Snake River falls	15.0	11.5	5.2	Washington coastal and Puget Sound	12.4	0.0	32.3 <sup>f/</sup>
1998	Columbia River Lower River Hatchery tules	15.0	6.5	3.5	Washington coastal and Oregon Coast Natural	10.0	0.0	16.0
1999	Columbia River Lower River Wild (Lewis River)	30.0	28.5	21.5	Queets, Strait of Juan de Fuca, and Oregon Coast Natural	38.5	20.0	110 <sup>g/</sup>
2000	Columbia River Lower River Wild (Lewis River)	25.5	12.5	12.5	Strait of Juan de Fuca, and Oregon Coast Natural	20.0	25.0 <sup>g/</sup>	75.0 <sup>g/</sup>
2001	Columbia River natural tules (Coweeman)	37.0	30.0	30.0	Oregon Coast Natural	90.0	75.0 <sup>g/</sup>	225.0 <sup>g/</sup>
2002	Columbia River natural tules (Coweeman)	60.0	82.5	67.5	Oregon Coast Natural	60.0	5.0 <sup>g/i/</sup>	115.0 <sup>g/i/</sup>

TABLE C-8. Council preseason adopted catch quotas (thousands of fish) for ocean fisheries north of Cape Falcon and critical stocks driving management. (Page 2 of 2)

Year	Chinook				Coho			
	Critical Stocks	Catch Quota			Critical Stocks	Catch Quota		
		Treaty Indian	Non-Indian Commercial	Sport		Treaty Indian	Non-Indian Commercial	Sport
2003	Columbia River natural tules (Coweeman) and Snake River falls	60.0	64.4	59.6	Oregon Coast Natural	90.0	75.0 <sup>g/</sup>	225.0 <sup>g/</sup>
2004	Snake River falls and Columbia River natural tules (Coweeman)	49.0	44.5	44.5	Interior Fraser (B.C.), Oregon Coast Natural, and upper Columbia River escapement	75.0	67.5 <sup>g/</sup>	202.5 <sup>g/</sup>
2005	Snake River falls	48.0	43.3	43.3	Interior Fraser (B.C.) and Skagit River	50.0	23.2 <sup>g/</sup>	121.8 <sup>g/</sup>
2006	Columbia River natural tules (Coweeman) <sup>h/</sup>	42.2	34.0	31.0	Lower Columbia River natural and Interior Fraser (B.C.)	37.5	6.8 <sup>g/</sup>	73.2 <sup>g/</sup>
2007	Columbia River natural tules (Coweeman) <sup>h/</sup>	35.0	16.3	16.3	Lower Columbia River natural and Interior Fraser (B.C.)	38.0	22.4 <sup>g/</sup>	117.6 <sup>g/</sup>
2008	Lower River wild (Lewis River) <sup>h/</sup> and Columbia River natural tules (Coweeman)	37.5	20.0	20.0	Lower Columbia River natural and Hood Canal Natural	20.0	4.0 <sup>g/</sup>	20.35 <sup>g/</sup>
2009	Columbia River natural tules (Coweeman)	39.0	20.5	20.5	Lower Columbia River, Skagit, Stillaguamish, and Interior Fraser Natural	60.0	33.6 <sup>g/</sup>	176.4 <sup>g/</sup>
2010	Columbia River natural tules (Coweeman)	55.0	56.0	61.0 <sup>j/</sup>	Lower Columbia River, Strait of Juan de Fuca, and Interior Fraser Natural	41.5	12.8 <sup>g/</sup>	67.2 <sup>g/</sup>

a/ Although the Skagit River escapement goal would not be achieved, management was based on meeting WDFW's escapement goal for Hoh River coho and allocation based on aggregation to Washington coastal tribes.

b/ The Council management regime was not expected to meet equitable adjustment requirements for Skagit River coho.

c/ Plus 7,430 hooking mortality for pink fishery.

d/ Plus 3,250 hooking mortality for pink fishery.

e/ Hooking mortality of 2,800 coho for June 1-15 fishery not included.

f/ Plus 1,200 hook-and-release mortality for the Neah Bay all-salmon-except-coho fishery.

g/ Marked hatchery coho only (healed adipose fin clip). Except 2004 non-Indian troll Sept. 1-5 between Queets River and Cape Falcon, and sport Aug. 29-Sept. 6 between Queets River and Leadbetter Point.

h/ Sharing of impacts on ESA listed Puget Sound Chinook also affected the shaping of ocean and inside fisheries.

i/ For 2002, the Council elected to constrain fishing so that the OCN exploitation rate would not exceed 12.5 percent per ODFW's recommendation to provide additional protection for lower Columbia River natural coho, which are listed as endangered under the Oregon State-ESA. The FMP objective for OCN coho was 15 percent.

j/ Included 12,000 mark selective fishery quota (equivalent to 5,000 non-mark selective quota).



TABLE C-9. Sequence of events in ocean salmon fishery management, 2010.<sup>ai</sup> (Page 1 of 5)

<b>GENERAL MANAGEMENT ACTIONS AND INSEASON CONFERENCES</b>	
Mar. 2	National Marine Fisheries Service (NMFS) provides the Council with a letter outlining the 2010 management guidance for stocks listed under the Endangered Species Act (ESA) and stocks of concern.
Mar. 10	Based on Council recommendations, NMFS takes inseason action to: <ol style="list-style-type: none"> <li>1) Cancel the opening for the commercial salmon fishery between Cape Falcon, Oregon and the OR/CA border scheduled for March 15 to April 30;</li> <li>2) Cancel the opening for the recreational salmon fishery between Cape Falcon, Oregon and Humbug Mt., Oregon scheduled for March 15 to April 30.</li> </ol> New regulations to take effect May 1, 2010.
Mar. 11	Council adopts three commercial, tribal, and recreational ocean salmon fishery management options for public review.
Mar. 17-18	North of Cape Falcon Salmon Forum meets in Lacey, Washington to initiate consideration of recommendations for treaty Indian and non-Indian salmon management options.
Mar. 29-30	Council holds public hearings on proposed 2010 management options in Westport, Washington; Coos Bay, Oregon; and Eureka, California.
Apr. 6-8	North of Cape Falcon Salmon Forum meets in Lynnwood, Washington to further consider recommendations for treaty Indian and non-Indian salmon management options.
Apr. 15	Council adopts final ocean salmon fishery management recommendations for approval and implementation by the U.S. Secretary of Commerce. The proposed measures comply with the salmon fishery management plan (FMP) and the current biological opinions for listed species.
May 5	Ocean salmon seasons implemented as recommended by the Council and published in the <i>Federal Register</i> on May 5 (75 FR 24482), with an effective date of May 1, 2010.
June 10	NMFS inseason conference number two for the U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon-except-coho fishery results in closing the fishery effective June 12.
June 15	NMFS inseason conference number three results in: <ol style="list-style-type: none"> <li>1) Reopening the U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon-except-coho fishery June 18 through 22, and June 25 through June 29 with a landing and possession limit of 75 Chinook salmon per vessel per open period;</li> <li>2) Prohibition retention of Pacific halibut incidentally caught while trolling for salmon in Pacific halibut Area 2A (the coasts of Washington, Oregon, and California) effective Wednesday, June 16, through the remainder of 2010.</li> </ol>
June 24	NMFS inseason conference number four results in: <ol style="list-style-type: none"> <li>1) Changing the landing and possession limit to 25 Chinook for the final June 25 through June 29 open period for the U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon-except-coho fishery;</li> <li>2) Changing the open period landing and possession limit to 40 Chinook and 30 marked coho per vessel north of Leadbetter Point or 40 Chinook and 30 marked coho south of Leadbetter Point for the U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon fishery effective July 1.</li> </ol>
July 6	NMFS inseason conference number five for the U.S./Canada border to Cape Falcon, recreational all-salmon fishery results in changing the bag limit to allow retention of two Chinook, effective July 8.
July 15	NMFS inseason conference number six for the U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon fishery results in changing the landing and possession limit to 60 Chinook and 50 marked coho per vessel per open period north of Leadbetter Point or 60 Chinook and 50 marked coho per vessel per open period south of Leadbetter Point, effective July 16.

TABLE C-9. Sequence of events in ocean salmon fishery management, 2010.<sup>a/</sup> (Page 2 of 5)

<b>GENERAL MANAGEMENT ACTIONS AND INSEASON CONFERENCES (continued)</b>	
July 20	NMFS inseason conference number seven for the U.S./Canada border to Leadbetter Point, recreational all-salmon fishery results in opening the fisheries seven days per week effective July 23.
July 29	NMFS inseason conference number eight results in: <ol style="list-style-type: none"> <li>1) Transferring 4,000 Chinook remaining from the May/June U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon-except-coho fishery quota resulting in increasing the July-September U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon fishery Chinook quota by 2,700 (impact neutral basis);</li> <li>2) Changing the U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon fishery openings to Friday through Tuesday of each week and changing with open period landing and possession limits to 75 Chinook and 50 marked coho per vessel north of Leadbetter Point or 75 Chinook and 50 marked coho per vessel south of Leadbetter Point, effective July 30.</li> </ol>
Aug. 5	NMFS inseason conference number nine results in: <ol style="list-style-type: none"> <li>1) A trade of 5,700 marked coho from the U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon fishery quota resulting in increasing the Leadbetter Point to Cape Falcon recreational all-salmon fishery quota by 7,000 marked coho (impact neutral basis);</li> <li>2) A trade of 2,500 Chinook from the U.S./Canada border to Cape Falcon recreational all-salmon fishery quota resulting in increasing the U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon fishery quota by 1,650 Chinook (impact neutral basis);</li> <li>3) Changing the landing and possession limit to 30 Chinook and 50 marked coho per vessel per open period north of Leadbetter Point or 30 Chinook and 50 marked coho per vessel per open period south of Leadbetter Point, effective August 6, 2010.</li> </ol>
Sept 2.	NMFS inseason conference number ten results in a trade of 1,500 Chinook from the U.S./Canada border to Cape Falcon recreational all-salmon fishery quota resulting in increasing the U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon fishery quota by 1,000 Chinook (impact neutral basis).
<b>NON-INDIAN COMMERCIAL TROLL SEASONS</b>	
May 1-June 29	U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon-except-coho fishery opens May 1 through the earlier of June 30 or a 42,000 Chinook quota. <ol style="list-style-type: none"> <li>1) May 1-June 12: Seven days per week, no landing and possession limit.</li> <li>2) June 18-22: landing and possession limit of 75 Chinook per vessel per open period.</li> <li>3) June 18-22 landing and possession limit of 25 Chinook per vessel per open period.</li> </ol>
May 1	Cape Falcon to Humbug Mt. non-Indian commercial all-salmon-except-coho fishery opens May 1-July 6; July 9-13, 16-20, 23-27; and August 1-25.
May 1	Humbug Mt. to OR/CA border non-Indian commercial all-salmon-except-coho fishery opens through May 31.
May 31	Humbug Mt. to OR/CA border non-Indian commercial all-salmon-except-coho fishery closes.
June 29	U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon-except-coho fishery closes as quota is approached.

TABLE C-9. Sequence of events in ocean salmon fishery management, 2010.<sup>a/</sup> (Page 3 of 5)

<b>NON-INDIAN COMMERCIAL TROLL SEASONS (continued)</b>	
July 1	<p>U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon fishery opens through the earlier of September 14 or quotas of 19,350 Chinook (14,000 preseason plus transfers of 2,700 from the May-June commercial fishery, 1,650 and 1,000 from the recreational fishery) and 6,100 marked coho (11,800 preseason minus transfer of 5,700 to the recreational fishery).</p> <ol style="list-style-type: none"> <li>1) July 1-6, 9-13: landing and possession limit of 40 Chinook and 30 marked coho north of Leadbetter Point or 40 Chinook and 30 marked coho south of Leadbetter Point, per vessel per open period;</li> <li>2) July 16-27: Friday to Tuesday, with a landing and possession limit of 60 Chinook and 50 marked coho north of Leadbetter Point or 60 Chinook and 50 marked coho south of Leadbetter Point, per vessel per open period;</li> <li>3) July 30-August 3: landing and possession limit of 75 Chinook and 50 marked coho north of Leadbetter Point or 75 Chinook and 50 marked coho south of Leadbetter Point, per vessel per open period;</li> <li>4) August 6-September 7: Friday to Tuesday with a landing and possession limit of 30 Chinook and 50 marked coho north of Leadbetter Point or 30 Chinook and 50 marked coho south of Leadbetter Point, per vessel per open period.</li> </ol> <p>Humbug Mt. to OR/CA border non-Indian commercial all-salmon-except-coho fishery opens through the earlier of July 31 or a 1,500 Chinook quota.</p> <p>Horse Mt. to U.S./Mexico border non-Indian commercial all-salmon-except-coho fishery opens July 1-4 and 8-11.</p>
July 11	Horse Mt. to U.S./Mexico border non-Indian commercial all-salmon-except-coho fishery closes.
July 15	Horse Mt. to Pt. Arena non-Indian commercial all-salmon-except-coho fishery opens through the earlier of July 29 or an 18,000 Chinook quota.
July 29	Horse Mt. to Pt. Arena non-Indian commercial all-salmon-except-coho fishery closes as scheduled.
July 31	Humbug Mt. to OR/CA border non-Indian commercial all-salmon-except-coho fishery closes as scheduled.
Aug. 1	<p>Humbug Mt. to OR/CA border non-Indian commercial all-salmon-except-coho fishery opens through the earlier of July 31 or a 1,500 Chinook quota.</p> <p>Horse Mt. to Pt. Arena non-Indian commercial all-salmon-except-coho fishery opens through the earlier of August 31 or a 9,375 Chinook quota.</p>
Aug. 25	Cape Falcon to Humbug Mt. non-Indian commercial all-salmon-except-coho fishery closes.
Aug. 31	<p>Humbug Mt. to OR/CA border non-Indian commercial all-salmon-except-coho fishery closes as scheduled.</p> <p>Horse Mt. to Pt. Arena non-Indian commercial all-salmon-except-coho fishery closes as scheduled.</p>
Sept. 7	U.S./Canada border to Cape Falcon, non-Indian commercial all-salmon fishery closes as the Chinook quota of 19,350 (14,000 preseason plus roll-over of 2,700 from the May-June commercial fishery and transfers of 1,650 and 1,000 from the Recreational fishery) is approached.

TABLE C-9. Sequence of events in ocean salmon fishery management, 2010.<sup>a/</sup> (Page 4 of 5)

<b>TREATY INDIAN COMMERCIAL TROLL SEASONS</b>	
May 1	All-salmon-except-coho fisheries open through the earlier of June 30 or a 27,500 Chinook quota.
June 30	All-salmon-except-coho fisheries close as scheduled.
July 1	All-salmon fisheries open through the earlier of September 15, a 27,500 Chinook quota, or a 41,500 non-mark-selective coho quota.
Sept. 15	All-salmon fisheries close as scheduled.
<b>RECREATIONAL SEASONS</b>	
Apr. 3	Horse Mt. to U.S./Mexico border all-salmon-except-coho fishery opens through April 30. Fishery is open seven days per week with a 20 inch minimum size limit for Chinook.
Apr. 30	Horse Mt. to U.S./Mexico border all-salmon-except-coho fishery closes.
May 1	Horse Mt. to Pt. Arena all-salmon-except-coho fishery opens through September 6. Fishery is open seven days per week with a 24 inch minimum size limit for Chinook.  Pt. Arena to U.S./Mexico border all-salmon-except-coho fishery opens through September 6. Fishery is open Thursday through Monday with a 24 inch minimum size limit for Chinook.
May 29	Cape Falcon to OR/CA border all-salmon-except-coho fishery opens through June 25. Fishery is open seven days per week with a 24 inch minimum size limit for Chinook.  OR/CA border to Horse Mt. all-salmon-except-coho fishery opens through September 6. Fishery is open seven days per week with a 24 inch minimum size limit for Chinook.
June 12	U.S./Canada border to Cape Falcon all-salmon-except-coho mark-selective Chinook fishery opens through the earlier of June 30 or a quota of 12,000 marked Chinook. Fishery is open seven days per week with a 24 inch minimum size limit for Chinook.
June 25	Cape Falcon to OR/CA border all-salmon-except-coho fishery closes.
June 26	Cape Falcon to OR/CA border all-salmon mark-selective-coho fishery opens through earlier of September 6 or a 26,000 marked coho quota. Fishery is open seven days per week with a 24 inch minimum size limit for Chinook.
June 30	U.S./Canada border to Cape Falcon all-salmon-except-coho mark-selective Chinook fishery closes as scheduled.
July 1	U.S./Canada border to Cape Alava, all-salmon mark-selective coho fishery opens through the earlier of September 19 or a 6,990 marked coho quota, with a 5,400 Chinook guideline. Fishery is open Tuesday to Saturday through July 23 and seven days per week thereafter. Bag-limit is two fish per day; only one Chinook per day prior to July 8 and no Chinook restriction thereafter. No chum retention in August and September.  Cape Alava to Queets River, all-salmon mark-selective coho fishery opens through the earlier of September 19 or a 1,700 marked coho quota, with a 2,450 Chinook guideline. Fishery is open Tuesday to Saturday through July 23 and seven days per week thereafter. Bag-limit is two fish per day; only one Chinook per day prior to July 8 and no Chinook restriction thereafter.  Leadbetter Pt. to Cape Falcon, all-salmon mark-selective coho fishery opens through the earlier of September 30 or a 40,600 marked coho quota (33,600 preseason plus 7,000 transfer from the commercial fishery), with a 9,100 Chinook guideline (13,100 preseason minus transfers of 2,500 and 1,500 to the commercial fishery). Fishery is open seven days per week. Bag-limit is two fish per day; only one Chinook per day prior to July 8 and no Chinook restriction thereafter.

TABLE C-9. Sequence of events in ocean salmon fishery management, 2010.<sup>a/</sup> (Page 5 of 5)

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<b>RECREATIONAL SEASONS, (continued)</b>	
July 4	Queets River to Leadbetter Pt., all-salmon mark-selective coho fishery opens though the earlier of September 19 or a 24,860 marked coho quota, with a 28,000 Chinook guideline. Fishery is open Sunday to Thursday through July 23 and seven days per week thereafter. Bag-limit is two fish per day; only one Chinook per day prior to July 8 and no Chinook restriction thereafter. Grays Harbor Control Zone closed beginning August 1.
Sept. 6	Cape Falcon to OR/CA border all-salmon mark-selective-coho fishery closes as scheduled.  OR/CA border to Horse Mt. all-salmon-except-coho fishery closes.  Horse Mt. to Point Arena all-salmon-except-coho fishery closes.  Point Arena to U.S./Mexico border all-salmon-except-coho fishery closes.
Sept. 19	U.S./Canada border to Cape Alava, all-salmon mark-selective coho fishery closes as scheduled.  Cape Alava to Queets River, all-salmon mark-selective coho fishery closes as scheduled.  Queets River to Leadbetter Point, all-salmon mark-selective coho fishery closes as scheduled.
Sep. 25	La Push area (48 00'00" N. Lat. to 47 50'00" N. Lat.), all-salmon mark-selective coho fishery opens through the earlier of October 11 or a 50 Chinook quota or a 50 coho quota.
Sept 30	Leadbetter Point to Cape Falcon all-salmon mark-selective coho fishery closes as scheduled.
Oct. 10	La Push area, all-salmon mark-selective coho fishery closes as scheduled.

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a/ Unless stated otherwise, season openings or modifications of restrictions are effective at 0001 hours of the listed date. Closures are effective at 2359 hours of the listed date.

## APPENDIX D HISTORICAL ECONOMIC DATA

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TABLE D-1. California monthly troll Chinook and coho average dressed weights (pounds) by area of landing. (Page 1 of 3)

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TABLE D-1. California monthly troll Chinook and coho average dressed weights (pounds) by area of landing. (Page 2 of 3)

Year	Apr.	May	June	July	Aug.	Sept.	Oct.	Season <sup>a/</sup>	May	June	July	Aug.	Sept.	Season
CHINOOK									COHO					
<u>Fort Bragg</u>														
1976-1980	7.7	8.5	7.8	10.5	10.1	10.1	-	10.0	4.1	4.7	6.8	7.0	8.8	5.9
1981-1985	7.6	9.0	10.4	9.6	10.3	10.1	-	9.8	5.3	6.0	6.3	6.6	7.2	6.2
1986-1990	-	9.3	10.2	9.3	10.1	10.1	-	9.6	-	5.3	5.8	6.4	6.2	5.7
1991-1995	-	8.2	-	-	10.5	10.4	-	10.7	-	-	-	6.4	-	6.4
1996-2000	-	-	-	-	11.0	11.4	-	11.3	-	-	-	-	-	-
2001	-	12.3	-	-	-	13.0	-	12.8	-	-	-	-	-	-
2002	-	-	-	11.7	13.8	15.3	-	13.4	-	-	-	-	-	-
2003	-	14.9	-	12.7	12.1	11.4	-	12.4	-	-	-	-	-	-
2004	-	-	-	12.0	11.7	13.1	-	12.0	-	-	-	-	-	-
2005	-	-	-	-	-	12.2	-	12.2	-	-	-	-	-	-
2006	-	-	-	-	-	15.9	-	15.9	-	-	-	-	-	-
2007	12.5	-	-	-	15.8	12.9	-	15.6	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	-	15.8	14.6	-	-	15.2	-	-	-	-	-	-
<u>San Francisco</u>														
1976-1980	8.5	8.9	7.8	10.7	11.3	11.7	-	9.9	4.6	5.2	7.1	6.8	8.4	6.1
1981-1985	6.8	8.6	9.4	10.5	10.5	10.1	-	9.7	5.3	5.9	6.7	6.6	7.8	6.3
1986-1990	-	9.2	10.2	10.9	12.4	12.1	-	10.1	-	5.6	6.1	6.7	6.2	5.9
1991-1995	-	8.6	9.3	10.2	11.3	11.8	-	10.0	-	5.3	5.9	5.6	-	5.2
1996-2000	9.9	9.4	9.8	11.0	12.5	12.9	-	10.6	-	-	-	-	-	-
2001	-	10.9	12.9	12.8	14.2	14.8	16.8	12.7	-	-	-	-	-	-
2002	-	11.4	12.9	12.7	14.7	15.1	14.9	12.6	-	-	-	-	-	-
2003	-	12.0	15.0	12.3	12.7	13.2	11.2	13.6	-	-	-	-	-	-
2004	-	13.4	11.8	12.0	14.9	13.8	12.9	12.4	-	-	-	-	-	-
2005	-	-	-	12.9	13.7	15.0	15.2	13.4	-	-	-	-	-	-
2006	-	-	-	15.1	14.4	16.8	18.0	15.3	-	-	-	-	-	-
2007	-	11.4	-	13.2	14.3	17.5	19.0	12.8	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	-	14.9	-	-	-	14.9	-	-	-	-	-	-

TABLE D-1. California monthly troll Chinook and coho average dressed weights (pounds) by area of landing. (Page 3 of 3)

Year	Apr.	May	June	July	Aug.	Sept.	Oct.	Season <sup>a/</sup>	May	June	July	Aug.	Sept.	Season
CHINOOK									COHO					
<u>Monterey</u>														
1976-1980	8.5	9.3	7.9	11.3	13.0	10.1	-	10.1	4.6	4.8	5.9	7.1	6.5	5.3
1981-1985	7.3	8.6	9.6	10.4	11.1	10.2	-	9.3	5.4	5.2	6.5	7.6	8.3	6.1
1986-1990	-	10.3	11.3	12.2	12.3	11.7	-	11.1	-	5.6	6.0	6.5	6.4	5.9
1991-1995	-	9.4	10.9	11.3	11.7	11.1	-	10.6	-	4.8	5.6	5.5	-	5.0
1996-2000	11.1	10.3	11.0	12.4	11.8	10.1	-	10.8	-	-	-	-	-	-
2001	-	11.5	11.9	12.6	11.0	14.7	-	11.6	-	-	-	-	-	-
2002	-	11.1	13.5	14.4	13.2	13.9	-	13.0	-	-	-	-	-	-
2003	-	13.0	14.4	14.0	14.7	13.8	-	13.8	-	-	-	-	-	-
2004	-	13.9	12.5	13.2	14.5	13.7	-	13.2	-	-	-	-	-	-
2005	-	10.9	13.1	14.1	16.5	13.1	-	12.1	-	-	-	-	-	-
2006	-	12.4	12.6	16.2	13.3	15.7	-	12.6	-	-	-	-	-	-
2007	-	14.1	13.2	13.6	14.1	17.6	-	14.0	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	-	14.2	-	-	-	14.2	-	-	-	-	-	-
<u>Total Statewide</u>														
1976-1980	8.3	8.6	9.3	10.1	10.7	10.4	-	9.5	3.9	4.6	6.4	6.9	7.4	5.5
1981-1985	7.1	8.5	9.7	10.0	10.2	10.0	-	9.5	5.2	5.6	6.3	6.6	7.0	6.2
1986-1990	-	9.5	10.2	10.3	11.1	10.8	9.6	10.1	-	5.2	5.9	6.5	6.0	5.6
1991-1995	-	9.0	9.9	10.5	11.1	11.2	17.7	10.1	-	4.8	5.6	5.6	6.2	5.1
1996-2000	10.3	10.0	10.4	11.5	12.3	12.1	-	10.7	-	-	-	-	-	-
2001	-	11.2	12.6	12.8	14.1	13.5	16.8	12.5	-	-	-	-	-	-
2002	-	11.3	13.1	12.8	13.9	13.8	13.0	12.8	-	-	-	-	-	-
2003	12.0	13.4	14.9	12.7	12.2	11.7	11.0	13.0	-	-	-	-	-	-
2004	10.1	13.5	11.9	12.1	12.5	12.7	12.9	12.4	-	-	-	-	-	-
2005	-	10.9	13.1	13.1	14.1	13.1	15.2	12.8	-	-	-	-	-	-
2006	-	12.4	12.6	15.1	14.4	16.4	18.0	15.0	-	-	-	-	-	-
2007	12.5	12.2	13.2	13.2	15.3	13.7	19.0	13.4	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010 <sup>b/</sup>	-	-	-	15.4	14.6	-	-	15.1	-	-	-	-	-	-

a/ Total statewide and season averages includes minor landings from Oregon prior to 2005.

b/ Preliminary.

TABLE D-2. Oregon monthly troll Chinook and coho average dressed weights (pounds) by area of landing.

Year	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
CHINOOK											
1971-1975	-	-	9.5	10.7	10.4	10.2	9.4	10.7	16.9	-	10.2
1976-1980	-	-	10.2	10.2	10.6	10.0	9.9	10.5	15.4	-	10.3
1981-1985	-	-	9.0	9.1	9.5	9.0	8.8	11.5	14.7	-	9.2
1986-1990	-	-	9.3	9.5	9.6	9.0	9.3	10.4	13.8	-	9.5
1991-1995	-	-	9.9	9.8	9.2	9.4	9.2	10.7	12.3	-	9.6
1996-2000	-	-	11.1	11.7	12.0	10.5	10.1	12.5	14.6	-	10.9
2001	-	10.3	10.8	10.3	10.5	10.7	9.8	10.3	13.8	13.2	10.5
2002	12.3	9.9	10.2	10.5	11.2	10.9	11.4	11.1	15.1	14.1	10.9
2003	10.3	9.9	11.6	11.2	11.8	11.3	10.5	10.4	15.6	15.0	10.9
2004	9.4	10.1	10.9	11.5	11.5	11.4	9.8	12.2	14.4	12.6	10.9
2005	8.6	8.9	9.9	10.5	10.7	10.9	11.9	11.4	15.4	13.9	10.7
2006	-	-	12.2	13.6	15.5	15.3	13.8	16.0	15.8	13.7	13.9
2007	-	13.4	13.7	13.9	13.7	11.9	12.6	15.4	13.5	14.3	13.1
2008	-	-	10.4	10.4	12.1	11.5	14.3	19.9	15.3	-	11.1
2009	-	-	11.3	13.3	12.5	12.6	12.3	15.0	-	-	13.3
2010 <sup>a/</sup>	-	-	12.1	12.1	12.9	14.1	13.9	15.7	-	-	12.8
COHO											
1971-1975	-	-	-	5.1	6.1	7.0	7.0	7.9	-	-	6.2
1976-1980	-	-	-	4.4	5.5	6.1	5.9	6.3	-	-	5.5
1981-1985	-	-	-	-	4.8	5.3	3.6	-	-	-	5.0
1986-1990	-	-	-	4.8	4.8	5.1	5.4	7.2	-	-	4.9
1991-1995	-	-	-	4.2	4.0	4.8	5.4	-	-	-	4.7
1996-2000	-	-	-	-	-	5.9	6.6	-	-	-	5.9
2001	-	-	-	-	5.0	6.2	6.0	-	-	-	5.6
2002	-	-	-	-	-	7.0	-	-	-	-	7.0
2003	-	-	-	-	5.2	6.7	6.7	-	-	-	6.4
2004	-	-	-	-	5.6	6.8	7.9	-	-	-	7.5
2005	-	-	-	-	5.4	7.7	8.3	-	-	-	7.5
2006	-	-	-	-	7.2	9.1	9.5	-	-	-	9.2
2007	-	-	-	-	4.9	6.0	7.0	-	-	-	5.9
2008	-	-	-	-	5.2	8.6	8.9	-	-	-	8.4
2009	-	-	-	-	4.8	6.2	7.1	-	-	-	6.0
2010 <sup>a/</sup>	-	-	-	-	5.8	7.6	10.5	-	-	-	6.8

a/ Preliminary.

TABLE D-3. Washington monthly troll Chinook and coho salmon average dressed weights (pounds).<sup>a/</sup>

Year	May		June		July		Aug.		Sept.		Oct.		Season	
	Treaty Indian	Non-Indian	Treaty Indian	Non-Indian	Treaty Indian	Non-Indian	Treaty Indian	Non-Indian	Treaty Indian	Non-Indian	Treaty Indian	Non-Indian	Treaty Indian <sup>b/</sup>	Non-Indian
CHINOOK														
1980	10.9	12.0	12.6	-	12.5	13.2	14.2	13.5	10.9	13.1	6.7	-	7.3	13.0
1981-1985	7.3	9.7	8.8	-	9.6	12.3	9.3	12.2	7.7	12.7	5.1	-	6.4	10.6
1986-1990	8.1	9.5	8.1	11.1	9.6	12.1	9.1	12.1	6.8	12.2	5.2	12.6	6.7	10.4
1991-1995 <sup>c/</sup>	7.1	10.7	7.8	10.8	8.7	12.1	8.3	11.2	6.6	11.2	6.4	8.3	6.9	10.2
1996-2000 <sup>c/</sup>	8.4	11.2	8.5	12.0	7.1	12.3	8.4	11.0	7.5	10.7	-	-	8.5	11.5
2001	7.4	10.3	9.5	11.7	12.1	12.6	9.7	10.9	8.7	10.1	-	-	9.5	11.4
2002	9.5	11.4	12.9	12.2	11.5	13.1	11.8	14.5	8.3	NA	-	-	11.3	12.6
2003	11.2	12.4	9.3	12.9	13.9	16.0	18.0	17.4	13.4	13.9	-	-	12.5	14.6
2004	10.2	11.6	12.1	14.4	13.7	16.2	13.0	16.5	17.3	16.8	5.0	-	11.8	14.2
2005	9.1	10.7	9.9	11.7	16.2	17.1	18.4	17.9	12.0	-	-	-	11.9	13.4
2006	8.5	11.9	9.8	12.3	13.3	15.6	10.4	15.4	7.2	14.4	-	-	10.2	13.2
2007	7.7	12.0	8.2	12.3	8.2	14.3	14.2	17.0	6.8	15.8	-	-	8.9	12.9
2008	7.8	11.1	7.7	11.3	8.5	12.5	7.5	12.3	7.1	11.2	-	-	7.5	11.6
2009	8.7	11.3	7.4	12.4	9.4	16.2	9.4	15.1	5.8	12.7	-	-	8.1	12.6
2010	7.2	10.4	7.5	11.6	9.6	13.2	10.3	13.1	10.2	12.3	-	-	8.7	11.9
COHO														
1980	2.5	-	3.4	-	4.3	4.8	5.7	6.0	6.9	5.7	-	-	3.7	5.2
1981-1985	2.3	-	3.2	-	3.8	4.6	4.9	4.6	5.6	5.4	6.5	5.8	4.6	4.5
1986-1990	-	-	2.8	-	4.0	4.9	4.2	4.4	4.9	5.5	5.3	7.0	4.1	4.5
1991-1995	-	-	2.7	-	3.7	3.7	4.4	4.7	3.9	5.4	5.9	-	4.3	4.6
1996-2000	-	-	4.0	-	5.0	4.2	4.4	5.2	5.0	6.3	-	-	4.8	5.1
2001	-	-	5.2	-	4.8	5.0	5.6	6.1	6.0	6.8	-	-	5.6	6.0
2002	12.0	-	5.0	-	5.4	10.0	6.6	5.9	5.4	-	-	-	5.8	6.0
2003	7.3	-	-	-	5.3	5.1	6.2	6.4	5.8	7.1	-	-	5.7	6.0
2004	5.0	-	5.0	-	5.5	5.9	6.0	6.7	7.9	7.3	7.4	-	6.2	6.8
2005	3.7	-	3.9	-	4.5	6.1	6.9	7.0	5.5	-	-	-	6.3	6.8
2006	5.5	-	4.3	-	5.6	5.9	6.4	7.1	6.3	10.1	-	-	6.1	7.7
2007	-	-	4.8	-	4.3	4.9	7.1	5.9	6.9	6.4	-	-	5.5	5.6
2008	-	-	3.4	-	6.5	6.2	7.3	8.6	9.3	9.7	-	-	8.6	8.4
2009	-	-	3.5	-	5.2	5.5	6.1	7.1	6.2	7.7	-	-	5.7	6.8
2010	-	-	-	-	6.3	6.5	6.3	7.7	8.8	9.0	-	-	7.0	7.1

a/ All values in this table are based on preliminary information available at the start of each year's review. Treaty Indian statistics include landings from Puget Sound.

b/ Season totals include additional winter treaty Indian troll.

c/ In 1994-1996 the non-Indian fishery for Chinook was closed north of Cape Falcon; however, Chinook were caught off Oregon and landed in Washington.

TABLE D-4. California troll combined Chinook and coho salmon landings in dressed weight, value of landings and number of registered vessels making commercial salmon landings.<sup>a/</sup>

Year	Dressed Pounds Landed (thousands)	Nominal Exvessel Value (\$ thousands)	Vessels Landing Salmon	Vessels with Permits	Nominal Average Exvessel Value/Vessel (dollars)	Real Average Exvessel Value/Vessel (2010 dollars)
1960	6,221	3,339	1,365	-	2,446	14,570
1961-1965	7,772	4,206	1,586	-	2,642	15,358
1966-1970	7,925	4,327	2,088	-	2,089	10,957
1971-1975	7,917	6,338	2,542	-	2,461	10,094
1976-1980	7,233	12,083	3,997	-	2,989	8,616
1981-1985	5,082	11,826	3,729	4,920	3,099	6,351
1986-1990	8,392	21,532	2,487	3,622	8,593	14,533
1991-1995	3,083	7,550	1,447	2,960	5,171	7,513
1996-2000	4,337	7,091	852	2,068	8,223	10,815
2001	2,409	4,773	689	1,650	6,927	8,465
2002	5,008	7,776	708	1,586	10,982	13,206
2003	6,392	12,181	584	1,521	20,858	24,552
2004	6,230	17,895	741	1,511	24,150	27,643
2005	4,347	12,913	680	1,477	18,990	21,034
2006	1,043	5,350	477	1,408	11,216	12,032
2007	1,525	7,902	601	1,390	13,149	14,105
2008	-	-	-	1,306	-	-
2009	-	-	-	1,281	-	-
2010 <sup>b/</sup>	228	1,246	216	1,218	5,769	5,769

a/ Derived from vessel registrations and fish landing tickets.

b/ Preliminary.

TABLE D-5. Oregon troll combined Chinook and coho salmon landings in dressed weight, value of landings and number of registered vessels making commercial salmon landings.<sup>a/</sup>

Year	Dressed Pounds Landed (thousands)	Nominal Exvessel Value (\$ thousands)	Vessels Landing Salmon	Vessels with Permits	Nominal Average Exvessel Value/Vessel (dollars)	Real Average Exvessel Value/Vessel (2010 dollars)
1974	-	7,937	2,253	-	3,523	12,725
1975	-	5,808	2,304	-	2,521	8,319
1976-1980 <sup>b/</sup>	6,679	8,185	3,875	4,314	2,112	4,900
1981-1985 <sup>c/d/</sup>	2,969	5,774	2,050	2,993	2,817	5,067
1986-1990	5,688	6,641	1,557	2,528	4,265	6,543
1991-1995 <sup>e/</sup>	1,265	3,294	476	1,465	6,920	9,401
1996-2000	1,428	3,063	399	1,062	7,677	9,592
2001 <sup>f/</sup>	2,949	4,721	449	1,175	10,515	12,848
2002 <sup>f/</sup>	3,498	5,391	468	1,175	11,519	13,851
2003 <sup>f/</sup>	3,681	7,222	494	1,178	14,620	17,209
2004 <sup>f/</sup>	2,920	9,919	595	1,181	16,670	19,081
2005 <sup>f/</sup>	2,691	8,503	565	1,168	15,050	16,670
2006 <sup>f/</sup>	499	2,701	357	1,127	7,565	8,115
2007	565	2,822	436	1,009	6,473	6,745
2008	70	494	138	1,092	3,579	3,729
2009	146	345	225	1,062	1,531	1,547
2010	513	2,790	369	1,019	7,560	7,560

a/ Derived from vessel registrations and fish landing tickets.

b/ In 1980, the establishment of a restricted vessel permit system drew a number of historically active vessels back into the fishery.

c/ In 1984, vessels were not required to land at least one salmon to be eligible for a permit in 1985. The Oregon Fish and Wildlife Commission waived this requirement because of the elimination of the coho fishery south of Cape Falcon.

d/ In 1985, vessels traditionally landing salmon south of Cape Blanco and north of Cape Falcon were not required to land at least one salmon to be eligible for a permit in 1986. The Oregon Fish and Wildlife Commission waived this requirement because of the complete closure of the coho season south of Cape Blanco and a limited one-day coho season between the Columbia River and Falcon.

e/ During the 1991 session of the Oregon Legislature, legislation passed waiving the requirement that troll permit holders must buy a 1991 permit to be able to renew for 1992. This was a one-time exemption for 1991 only.

f/ Permits were reissued in a lottery, because the total number of permits had fallen below 1,200.

g/ Preliminary

TABLE D-6. Washington non-Indian troll combined Chinook and coho salmon landings in dressed weight, value of landings and number of registered vessels making commercial salmon landings.<sup>a/</sup>

Year	Dressed Pounds Landed (thousands)	Nominal Exvessel Value (\$ thousands)	Vessels Landing Salmon	Vessels with Permits	Nominal Average Exvessel Value/Vessel (dollars)	Real Average Exvessel Value/Vessel (2010 dollars)
1978	4,746	10,025	3,041	3,291	3,297	9,038
1979	5,262	15,091	2,778	3,068	5,432	13,750
1980	3,398	7,114	2,626	2,797	2,709	6,284
1981-1985 <sup>b/c/</sup>	1,433	3,225	1,675	2,233	1,696	3,356
1986-1990	752	1,670	913	1,349	1,997	3,286
1991-1995 <sup>d/e/f/g/</sup>	345	834	397	586	1,607	2,298
1996-2000 <sup>h/i/j/</sup>	126	197	54	270	4,188	5,365
2001	290	383	57	169	6,718	8,208
2002	679	758	75	165	10,102	12,147
2003	875	991	82	163	12,087	14,228
2004	594	1,185	86	160	13,779	15,772
2005	481	1,290	91	158	14,170	15,696
2006	231	1,045	84	158	12,440	13,345
2007	217	953	79	158	12,062	12,569
2008	114	709	86	158	8,244	8,591
2009	291	1,169	97	158	12,051	12,178
2010	537	3,115	116	158	26,856	26,856

a/ Derived from vessel registrations and fish landing tickets. All values in this table are based on preliminary information available at the start of each year's salmon review.

b/ In 1984 312 licenses and delivery permits purchased by buyback program.

c/ In 1985 118 licenses and delivery permits purchased by buyback program.

d/ The 1994 season was closed north of Cape Falcon, but Chinook were caught off Oregon and landed in Puget Sound.

e/ Value information in 1994 is not provided in order to preserve confidentiality.

f/ Vessels were not required to purchase a permit in 1994 to maintain their eligibility for a permit in 1995.

g/ In 1995 190 licenses and delivery permits purchased by buyback program.

h/ 72 licenses and delivery permits purchased by buyback program at the end of 1996 and early 1997.

i/ 100 licenses and delivery permits purchased by buyback program at the end of 1997 and early 1998.

j/ 41 licenses purchased by buyback program at the end of 2000.

TABLE D-7. California salmon troll boat-size catch statistics in pounds of dressed salmon.<sup>a/</sup> (Page 1 of 5)

Year	Vessels			Catch <sup>c/</sup>		
	Length Category (feet)	Number <sup>b/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
2010 <sup>d/</sup>	<20	9	4%	419	3,772	2%
	21-25	46	21%	524	24,124	11%
	26-30	31	14%	1,164	36,099	16%
	31-35	47	22%	624	29,330	13%
	36-40	40	19%	1,360	54,414	24%
	41-45	30	14%	1,533	45,985	20%
	46-50	10	5%	2,066	20,656	9%
	51-55	3	1%	4,451	13,352	6%
	>56	e/	-	e/	e/	-
	TOTAL	216		1,054	227,732	
2009	<20	-	-	-	-	-
	21-25	-	-	-	-	-
	26-30	-	-	-	-	-
	31-35	-	-	-	-	-
	36-40	-	-	-	-	-
	41-45	-	-	-	-	-
	46-50	-	-	-	-	-
	51-55	-	-	-	-	-
	>56	-	-	-	-	-
	TOTAL	-		-	-	
2008	<20	-	-	-	-	-
	21-25	-	-	-	-	-
	26-30	-	-	-	-	-
	31-35	-	-	-	-	-
	36-40	-	-	-	-	-
	41-45	-	-	-	-	-
	46-50	-	-	-	-	-
	51-55	-	-	-	-	-
	>56	-	-	-	-	-
	TOTAL	-		-	-	
2007	<20	20	3%	275	5,506	0%
	21-25	95	16%	718	68,173	4%
	26-30	87	14%	1,417	123,280	8%
	31-35	119	20%	2,622	312,075	20%
	36-40	124	21%	3,312	410,698	27%
	41-45	79	13%	4,273	337,558	22%
	46-50	55	9%	3,633	199,821	13%
	51-55	12	2%	3,676	44,108	3%
	>56	10	2%	2,403	24,026	2%
	TOTAL	601		2,538	1,525,245	
2006	<20	19	4%	338	6,427	1%
	21-25	85	18%	944	80,260	8%
	26-30	80	17%	1,441	115,300	11%
	31-35	105	22%	2,288	240,201	23%
	36-40	88	18%	3,027	266,387	26%
	41-45	59	12%	3,723	219,638	21%
	46-50	30	6%	2,851	85,517	8%
	51-55	7	1%	3,356	23,492	2%
	>56	4	1%	1,533	6,131	1%
	TOTAL	477		2,187	1,043,353	



TABLE D-7. California salmon troll boat-size catch statistics in pounds of dressed salmon.<sup>a/</sup> (Page 2 of 5)

Year	Vessels			Catch <sup>c/</sup>		
	Length Category (feet)	Number <sup>b/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
2005	<20	34	5%	840	28,546	1%
	21-25	107	16%	2,249	240,668	6%
	26-30	107	16%	3,325	355,799	8%
	31-35	132	19%	6,127	808,775	19%
	36-40	130	19%	7,754	1,008,071	23%
	41-45	84	12%	10,779	905,449	21%
	46-50	62	9%	11,429	708,576	16%
	51-55	13	2%	15,821	205,679	5%
	>56	11	2%	7,802	85,827	2%
	TOTAL	680		6,393	4,347,390	
2004	<20	39	5%	1,121	43,706	1%
	21-25	118	16%	2,203	259,933	4%
	26-30	112	15%	3,288	368,224	6%
	31-35	144	19%	7,202	1,037,078	17%
	36-40	141	19%	9,880	1,393,035	22%
	41-45	84	11%	16,223	1,362,724	22%
	46-50	66	9%	17,814	1,175,700	19%
	51-55	18	2%	21,405	385,281	6%
	>56	19	3%	10,764	204,515	3%
	TOTAL	741		8,408	6,230,196	
2003	<20	22	4%	1,966	43,251	1%
	21-25	104	18%	2,665	277,192	4%
	26-30	94	16%	4,208	395,574	6%
	31-35	111	19%	8,288	919,974	14%
	36-40	113	19%	14,938	1,687,971	26%
	41-45	68	12%	20,592	1,400,250	22%
	46-50	48	8%	24,450	1,173,576	18%
	51-55	12	2%	24,685	296,220	5%
	>56	12	2%	16,468	197,613	3%
	TOTAL	584		10,945	6,391,621	
2002	<20	34	5%	1,314	44,687	1%
	21-25	123	17%	2,211	271,972	5%
	26-30	111	16%	3,137	348,249	7%
	31-35	122	17%	5,760	702,716	14%
	36-40	147	21%	9,090	1,336,204	27%
	41-45	79	11%	13,411	1,059,442	21%
	46-50	64	9%	11,734	750,989	15%
	51-55	15	2%	19,988	299,817	6%
	>56	13	2%	14,880	193,446	4%
	TOTAL	708		7,073	5,007,522	
2001	<20	26	4%	559	14,529	1%
	21-25	117	17%	1,117	130,707	5%
	26-30	105	15%	2,212	232,279	10%
	31-35	124	18%	3,308	410,150	17%
	36-40	145	21%	4,627	670,878	28%
	41-45	76	11%	6,087	462,586	19%
	46-50	64	9%	5,245	335,652	14%
	51-55	18	3%	5,324	95,824	4%
	>56	14	2%	4,000	56,006	2%
	TOTAL	689		3,496	2,408,611	

TABLE D-7. California salmon troll boat-size catch statistics in pounds of dressed salmon.<sup>a/</sup> (Page 3 of 5)

Year	Vessels			Catch <sup>c/</sup>		
	Length Category (feet)	Number <sup>b/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
2000	<20	41	5%	1,348	55,282	1%
	21-25	139	18%	2,502	347,743	7%
	26-30	116	15%	3,850	446,629	9%
	31-35	130	17%	6,389	830,573	16%
	36-40	165	22%	8,183	1,350,228	26%
	41-45	73	10%	11,447	835,622	16%
	46-50	66	9%	12,811	845,530	16%
	51-55	17	2%	17,942	305,017	6%
	>56	12	2%	9,512	114,139	2%
	TOTAL	759		6,760	5,130,763	
1999	<20	41	6%	891	36,524	1%
	21-25	125	19%	2,259	282,366	7%
	26-30	88	13%	3,712	326,697	8%
	31-35	131	20%	5,196	680,635	18%
	36-40	139	21%	7,867	1,093,568	28%
	41-45	65	10%	10,422	677,411	18%
	46-50	55	8%	10,202	561,119	15%
	51-55	15	2%	9,101	136,509	4%
	>56	7	1%	7,275	50,928	1%
	TOTAL	666		5,774	3,845,757	
1998	<20	45	7%	934	42,044	2%
	21-25	154	23%	1,406	216,593	12%
	26-30	101	15%	2,277	229,951	12%
	31-35	119	18%	2,604	309,870	17%
	36-40	129	19%	4,040	521,184	28%
	41-45	64	10%	4,514	288,916	16%
	46-50	40	6%	4,764	190,579	10%
	51-55	11	2%	3,256	35,821	2%
	>56	6	1%	2,018	12,105	1%
	TOTAL	669		2,761	1,847,063	
1997	<20	54	6%	1,482	80,022	2%
	21-25	197	24%	2,791	549,756	10%
	26-30	126	15%	4,462	562,213	11%
	31-35	144	17%	6,358	915,510	17%
	36-40	157	19%	8,500	1,334,555	25%
	41-45	78	9%	11,281	879,913	17%
	46-50	54	6%	13,156	710,418	14%
	51-55	13	2%	11,806	153,476	3%
	>56	12	1%	5,161	61,929	1%
	TOTAL	835		6,285	5,247,792	
1996	<20	66	7%	1,500	99,021	2%
	21-25	221	22%	1,793	396,205	10%
	26-30	163	17%	2,648	431,620	10%
	31-35	161	16%	4,315	694,793	17%
	36-40	176	18%	5,945	1,046,274	25%
	41-45	97	10%	7,311	709,120	17%
	46-50	73	7%	7,984	582,826	14%
	51-55	14	1%	7,751	108,511	3%
	>56	14	1%	3,217	45,032	1%
	TOTAL	985		4,176	4,113,402	

TABLE D-7. California salmon troll boat-size catch statistics in pounds of dressed salmon.<sup>a/</sup> (Page 4 of 5)

Year	Vessels			Catch <sup>c/</sup>		
	Length Category (feet)	Number <sup>b/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
1995	<20	88	7%	1,478	130,074	2%
	21-25	295	25%	2,905	856,987	13%
	26-30	188	16%	4,542	853,887	13%
	31-35	176	15%	6,636	1,167,899	18%
	36-40	210	18%	8,147	1,710,765	26%
	41-45	105	9%	8,748	918,546	14%
	46-50	82	7%	8,480	695,374	10%
	51-55	21	2%	10,708	224,861	3%
	>56	14	1%	5,362	75,068	1%
	TOTAL	1,179		5,626	6,633,461	
1994	<20	78	8%	584	45,530	1%
	21-25	254	25%	1,425	362,007	12%
	26-30	170	17%	2,085	354,515	11%
	31-35	151	15%	3,340	504,287	16%
	36-40	188	18%	4,719	887,232	29%
	41-45	94	9%	5,878	552,514	18%
	46-50	69	7%	4,001	276,100	9%
	51-55	13	1%	8,541	111,033	4%
	>56	7	1%	1,412	9,887	0%
	TOTAL	1,024		3,030	3,103,105	
1993	<20	101	8%	447	45,103	2%
	21-25	321	26%	1,028	330,110	13%
	26-30	218	18%	1,538	335,333	13%
	31-35	167	13%	2,467	411,989	16%
	36-40	216	17%	3,103	670,209	26%
	41-45	103	8%	3,859	397,525	16%
	46-50	78	6%	3,050	237,930	9%
	51-55	22	2%	4,205	92,500	4%
	>56	14	1%	1,156	16,185	1%
	TOTAL	1,240		2,046	2,536,884	
1992	<20	98	9%	347	33,962	2%
	21-25	279	26%	838	233,894	14%
	26-30	190	18%	1,178	223,847	14%
	31-35	158	15%	1,535	242,532	15%
	36-40	180	17%	2,579	464,288	28%
	41-45	87	8%	2,842	247,249	15%
	46-50	64	6%	1,720	110,058	7%
	51-55	19	2%	3,719	70,668	4%
	>56	10	1%	1,691	16,906	1%
	TOTAL	1,085		1,515	1,643,404	

TABLE D-7. California salmon troll boat-size catch statistics in pounds of dressed salmon.<sup>a/</sup> (Page 5 of 5)

Year	Vessels			Catch <sup>c/</sup>		
	Length Category (feet)	Number <sup>b/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
1991	<20	196	11%	540	105,895	3%
	21-25	427	24%	944	403,026	11%
	26-30	300	17%	1,489	446,841	12%
	31-35	219	12%	2,284	500,112	14%
	36-40	309	17%	3,194	987,011	27%
	41-45	148	8%	4,315	638,649	17%
	46-50	118	7%	3,814	450,025	12%
	51-55	27	2%	4,852	130,991	4%
	56-60	13	1%	1,514	19,681	1%
	>60	9	1%	1,594	14,349	0%
	Unknown	3	0%	226	677	0%
	TOTAL	1,769		2,090	3,697,257	

a/ Derived from vessel registrations and fish landing tickets.

b/ Number of boats includes only those recording pounds greater than 0.

c/ Excludes pink salmon landings.

d/ Preliminary.

e/ Fewer than three vessels. Values combined with nearest category to preserve confidentiality.

TABLE D-8. Oregon salmon troll boat-size catch statistics in pounds of dressed salmon. (Page 1 of 3)

Year	Vessels			Catch		
	Length Category (feet)	Number <sup>a/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
2010 <sup>b/</sup>	<20	4	1%	498	1,990	0%
	20-29	85	23%	627	53,268	10%
	30-39	124	34%	1,339	166,008	32%
	40-49	126	34%	1,991	250,837	49%
	>50	30	8%	1,351	40,527	8%
	TOTAL	369		1,389	512,630	
2009	<20	3	1%	269	808	1%
	20-29	94	42%	674	63,374	43%
	30-39	65	29%	693	45,040	31%
	40-49	53	24%	656	34,771	24%
	>50	9	4%	241	2,167	1%
	TOTAL	224		653	146,160	
2008	<20	3	2%	87	260	0%
	20-29	47	34%	250	11,738	17%
	30-39	43	31%	509	21,882	32%
	40-49	38	28%	828	31,473	46%
	>50	7	5%	500	3,498	5%
	TOTAL	138		499	68,851	
2007	<20	3	1%	246	739	0%
	20-29	90	21%	851	76,558	14%
	30-39	153	35%	1,426	218,197	39%
	40-49	146	33%	1,562	227,980	40%
	>50	44	10%	942	41,429	7%
	TOTAL	436		1,296	564,903	
2006	<20	3	1%	1,094	3,281	1%
	20-29	78	22%	662	51,607	10%
	30-39	124	35%	1,484	184,030	37%
	40-49	127	36%	1,672	212,290	43%
	>50	25	7%	1,898	47,462	10%
	TOTAL	357		1,397	498,670	
2005	<20	7	1%	335	2,343	0%
	20-29	122	22%	1,716	209,336	8%
	30-39	186	33%	4,878	907,312	34%
	40-49	188	33%	6,436	1,209,982	45%
	>50	62	11%	5,840	362,051	13%
	TOTAL	565		4,763	2,691,024	
2004	<20	4	1%	721	2,883	0%
	20-29	120	20%	2,266	271,944	9%
	30-39	205	34%	5,149	1,055,574	36%
	40-49	199	33%	6,360	1,265,683	44%
	>50	67	11%	4,668	312,752	11%
	TOTAL	595		4,889	2,908,836	

TABLE D-8. Oregon salmon troll boat-size catch statistics in pounds of dressed salmon. (Page 2 of 3)

Year	Vessels			Catch		
	Length Category (feet)	Number <sup>a/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
2003	<20	4	1%	957	3,829	0%
	20-29	120	24%	2,425	291,051	8%
	30-39	167	34%	7,702	1,286,218	35%
	40-49	152	31%	10,170	1,545,898	42%
	>50	48	10%	11,220	538,580	15%
	TOTAL	491		7,466	3,665,576	
2002	<20	3	1%	1,760	5,281	0%
	20-29	103	22%	3,488	359,299	10%
	30-39	179	38%	7,931	1,419,713	41%
	40-49	140	30%	10,092	1,412,864	40%
	>50	42	9%	7,173	301,280	9%
	TOTAL	467		7,491	3,498,437	
2001	<20	6	1%	1,271	7,626	0%
	20-29	102	23%	2,768	282,386	10%
	30-39	170	38%	6,894	1,172,058	40%
	40-49	141	31%	9,175	1,293,723	44%
	>50	30	7%	6,488	194,652	7%
	TOTAL	449		6,571	2,950,445	
2000	<20	3	1%	2,056	6,169	0%
	20-29	100	25%	1,933	193,346	12%
	30-39	157	39%	4,726	741,968	48%
	40-49	111	28%	4,594	509,986	33%
	>50	28	7%	3,606	100,965	7%
	TOTAL	399		3,891	1,552,434	
1999	<20	6	2%	1,131	6,783	1%
	20-29	68	21%	1,205	81,964	11%
	30-39	140	43%	2,517	352,355	49%
	40-49	93	28%	2,499	232,418	32%
	>50	21	6%	2,298	48,263	7%
	TOTAL	328		2,201	721,783	
1998	<20	5	1%	1,536	7,679	1%
	20-29	65	17%	1,036	67,332	5%
	30-39	163	44%	3,673	598,702	43%
	40-49	110	29%	5,395	593,433	42%
	>50	30	8%	4,351	130,537	9%
	TOTAL	373		3,747	1,397,683	
1997	<20	5	1%	1,149	5,743	0%
	20-29	98	23%	838	82,089	5%
	30-39	185	43%	3,976	735,478	48%
	40-49	114	26%	5,401	615,756	40%
	>50	31	7%	3,322	102,982	7%
	TOTAL	433		3,561	1,542,048	

TABLE D-8. Oregon salmon troll boat-size catch statistics in pounds of dressed salmon. (Page 3 of 3)

Year	Vessels			Catch		
	Length Category (feet)	Number <sup>a/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
1996	<20	6	1%	2,088	12,530	1%
	20-29	117	26%	1,009	118,069	6%
	30-39	186	41%	5,010	931,895	48%
	40-49	115	25%	6,466	743,584	39%
	>50	32	7%	3,720	119,048	6%
	TOTAL	456		4,222	1,925,126	
1995	<20	8	2%	1,561	12,486	1%
	20-29	142	30%	1,190	168,999	9%
	30-39	185	39%	4,571	845,647	44%
	40-49	111	23%	6,884	764,118	39%
	>50	30	6%	4,995	149,846	8%
	TOTAL	476		4,078	1,941,096	
1994	<20	7	2%	968	6,776	2%
	20-29	114	31%	435	49,573	17%
	30-39	153	41%	825	126,188	44%
	40-49	85	23%	1,080	91,834	32%
	>50	12	3%	1,032	12,382	4%
	TOTAL	371		773	286,753	
1993	<20	10	2%	662	6,619	1%
	20-29	206	34%	558	115,029	15%
	30-39	236	39%	1,549	365,597	47%
	40-49	128	21%	1,888	241,663	31%
	>50	32	5%	1,282	41,029	5%
	TOTAL	612		1,258	769,937	
1992	<20	7	1%	706	4,945	0%
	20-29	242	37%	849	205,466	17%
	30-39	245	38%	2,384	584,162	48%
	40-49	134	21%	2,911	390,040	32%
	>50	21	3%	1,630	34,231	3%
	TOTAL	649		1,878	1,218,844	
1991	<20	22	2%	621	13,672	1%
	20-29	568	47%	1,266	719,071	34%
	30-39	365	30%	2,138	780,386	37%
	40-49	209	17%	2,468	515,790	24%
	>50	53	4%	1,590	84,279	4%
	TOTAL	1,217		1,736	2,113,198	

a/ Number of boats includes only those with at least one landing containing troll caught salmon.

b/ Preliminary.

TABLE D-9. Washington non-Indian salmon troll boat-size catch statistics in pounds of dressed salmon.<sup>a/b/</sup> (Page 1 of 3)

Year	Vessels			Catch		
	Length Category (feet)	Number <sup>c/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
2010	<25	10	9%	1,490	14,902	3%
	25-36	31	27%	3,990	123,695	23%
	>36	72	62%	5,693	409,871	75%
	Unknown	3	3%	427	1,281	0%
	TOTAL	116		11,600	549,749	
2009	<25	5	5%	2,160	10,800	4%
	25-36	28	29%	3,553	99,475	34%
	>36	64	66%	2,842	181,911	62%
	Unknown	0	-	-	-	-
	TOTAL	97		8,555	292,186	
2008	<25	4	5%	1,341	5,364	5%
	25-36	27	31%	1,486	42,835	37%
	>36	55	64%	1,203	66,167	58%
	Unknown	0	-	-	-	-
	TOTAL	86		4,030	114,366	
2007	<25	3	4%	3,180	9,539	4%
	25-36	25	32%	2,610	65,240	30%
	>36	51	65%	2,807	143,155	66%
	Unknown	0	-	-	-	-
	TOTAL	79		8,596	217,934	
2006	<25	3	4%	2,398	7,194	3%
	25-36	24	29%	1,983	47,593	21%
	>36	56	67%	3,073	172,069	74%
	Unknown	1	1%	4,804	4,804	2%
	TOTAL	84		12,258	231,660	
2005	<25	6	7%	4,309	25,854	5%
	25-36	24	26%	4,801	115,228	24%
	>36	60	66%	5,540	332,400	69%
	Unknown	1	1%	7,088	7,088	1%
	TOTAL	91		21,738	480,570	
2004	<25	8	9%	4,463	35,700	6%
	25-36	20	23%	5,797	115,933	20%
	>36	56	65%	7,749	433,952	73%
	Unknown	2	2%	4,464	8,927	2%
	TOTAL	86		6,913	594,512	
2003	<25	10	12%	6,141	61,407	7%
	25-36	19	23%	7,433	141,235	16%
	>36	53	65%	12,715	673,876	77%
	Unknown	0	-	-	-	-
	TOTAL	82		10,689	876,518	



TABLE D-9. Washington non-Indian salmon troll boat-size catch statistics in pounds of dressed salmon.<sup>a/b/</sup> (Page 2 of 3)

Year	Vessels			Catch		
	Length Category (feet)	Number <sup>c/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
2002	<25	7	9%	7,326	51,283	8%
	25-36	17	23%	6,275	106,668	16%
	>36	50	67%	9,931	496,565	73%
	Unknown	1	1%	25,133	25,133	4%
	TOTAL	75		9,062	679,649	
2001	<25	3	5%	4,534	13,603	5%
	25-36	15	26%	3,960	59,403	20%
	>36	39	68%	5,576	217,467	75%
	Unknown	0	-	-	-	-
	TOTAL	57		5,096	290,473	
2000	<25	3	6%	873	2,620	2%
	25-36	13	27%	3,401	44,218	27%
	>36	29	59%	3,627	105,171	65%
	Unknown	4	8%	2,573	10,291	6%
	TOTAL	49		3,312	162,300	
1999	<25	5	9%	2,511	12,557	6%
	25-36	14	25%	3,731	52,237	24%
	>36	35	61%	4,333	151,638	69%
	Unknown	3	5%	1,220	3,661	2%
	TOTAL	57		3,861	220,093	
1998	<25	3	13%	545	1,634	2%
	25-36	6	26%	2,842	17,050	21%
	>36	13	57%	4,799	62,385	76%
	Unknown	1	4%	522	522	1%
	TOTAL	23		3,547	81,591	
1997	<25	7	14%	322	2,253	3%
	25-36	16	31%	1,468	23,491	29%
	>36	26	51%	2,096	54,500	67%
	Unknown	2	4%	352	703	1%
	TOTAL	51		1,587	80,947	
1996	<25	39	43%	709	27,664	31%
	25-36	24	27%	868	20,826	23%
	>36	20	22%	1,372	27,440	31%
	Unknown	7	8%	1,861	13,029	15%
	TOTAL	90		988	88,959	
1995	<25	45	47%	1,864	83,901	36%
	25-36	30	31%	2,936	88,083	38%
	>36	17	18%	2,950	50,144	22%
	Unknown	4	4%	2,351	9,403	4%
	TOTAL	96		2,412	231,531	

TABLE D-9. Washington non-Indian salmon troll boat-size catch statistics in pounds of dressed salmon.<sup>a/b/</sup> (Page 3 of 3)

Year	Vessels			Catch		
	Length Category (feet)	Number <sup>c/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
1994 <sup>d/</sup>	<25	0	-	-	-	-
	25-36	0	-	-	-	-
	>36	1	100%	7,263	7,263	100%
	Unknown	0	-	-	-	-
	TOTAL	1		7,263	7,263	
1993	<25	174	37%	235	40,879	10%
	25-36	134	28%	627	84,005	20%
	>36	145	31%	1,832	265,684	65%
	Unknown	21	4%	924	19,406	5%
	TOTAL	474		865	409,974	
1992	<25	241	40%	276	66,617	11%
	25-36	167	28%	727	121,416	21%
	>36	170	28%	2,175	369,833	63%
	Unknown	26	4%	956	24,848	4%
	TOTAL	604		965	582,714	
1991	<25	292	36%	426	124,397	16%
	25-36	204	25%	729	148,643	19%
	>36	212	26%	1,859	394,075	51%
	Unknown	103	13%	1,006	103,637	13%
	TOTAL	811		950	770,752	

a/ All values in this table are based on preliminary information available at the start of each year's review.

b/ Excludes pink salmon landings.

c/ Number of boats includes only those recording pounds greater than 0.

d/ The fishery was closed north of Cape Falcon, however, Chinook were caught off Oregon and landed in Puget Sound.

TABLE D-9. Washington non-Indian salmon troll boat-size catch statistics in pounds of dressed salmon.<sup>a/b/</sup> (Page 3 of 3)

Year	Vessels			Catch		
	Length Category (feet)	Number <sup>c/</sup>	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
1993	<25	174	37%	235	40,879	10%
	25-36	134	28%	627	84,005	20%
	>36	145	31%	1,832	265,684	65%
	Unknown	21	4%	924	19,406	5%
	TOTAL	474		865	409,974	
1992	<25	241	40%	276	66,617	11%
	25-36	167	28%	727	121,416	21%
	>36	170	28%	2,175	369,833	63%
	Unknown	26	4%	956	24,848	4%
	TOTAL	604		965	582,714	
1991	<25	292	36%	426	124,397	16%
	25-36	204	25%	729	148,643	19%
	>36	212	26%	1,859	394,075	51%
	Unknown	103	13%	1,006	103,637	13%
	TOTAL	811		950	770,752	

a/ All values in this table are based on preliminary information available at the start of each year's review.

b/ Excludes pink salmon landings.

c/ Number of boats includes only those recording pounds greater than 0.

d/ The fishery was closed north of Cape Falcon, however, Chinook were caught off Oregon and landed in Puget Sound.

TABLE D-10. Preliminary California salmon landings (in pounds of dressed salmon) and exvessel values by vessel size categories and port from Crescent City to Morro Bay South, 2010.

Port	Length Category (feet)	Number of Deliveries	Total Dressed Pounds Landed	Total Exvessel Value (dollars)	Percent Exvessel Value Landed in Port
Crescent City	<26	0	-	-	-
	26-36	-	-	-	-
	>36	-	-	-	-
	TOTAL	-	-	-	-
Eureka <sup>a/</sup>	<26	-	-	-	-
	26-36	b/	b/	b/	b/
	>36	9	4,467	20,397	100%
	TOTAL	9	4,467	20,397	
Shelter Cove	<26	120	14,460	72,659	100%
	26-36	b/	b/	b/	b/
	>36	0	-	-	-
	TOTAL	120	14,460	72,659	
Fort Bragg <sup>c/</sup>	<26	67	6,985	41,035	4%
	26-36	163	46,274	265,764	27%
	>36	279	119,021	675,611	69%
	TOTAL	509	172,280	982,410	
Bodega Bay	<26	12	297	1,707	3%
	26-36	24	6,548	27,482	44%
	>36	14	7,033	33,299	53%
	TOTAL	50	13,878	62,488	
San Francisco	<26	b/	b/	b/	b/
	26-36	4	122	736	49%
	>36	5	129	771	51%
	TOTAL	9	251	1,507	
Half Moon Bay	<26	0	0	0	-
	26-36	8	181	1,350	10%
	>36	22	1,882	11,595	90%
	TOTAL	30	2,063	12,945	
Santa Cruz	<26	21	3,077	15,929	37%
	26-36	31	5,082	24,612	57%
	>36	3	610	2,727	6%
	TOTAL	55	8,769	43,268	
Moss Landing	<26	44	4,243	17,885	58%
	26-36	18	3,213	13,214	42%
	>36	b/	b/	b/	b/
	TOTAL	62	7,456	31,099	
Monterey	<26	11	954	4,303	24%
	26-36	25	2,973	13,844	76%
	>36	b/	b/	b/	b/
	TOTAL	36	3,927	18,147	
Morro Bay south	<26	b/	b/	b/	b/
	26-36	b/	b/	b/	b/
	>36	7	181	1,189	100%
	TOTAL	7	181	1,189	

a/ Fish caught in the Fort Bragg management area and transported to Eureka.

b/ Fewer than three vessels. Values combined with nearest category to preserve confidentiality.

c/ Fort Bragg includes minor landings made in Mendocino County areas.

TABLE D-11. Preliminary 2010 Washington non-Indian troll salmon landings (in pounds of dressed salmon) and exvessel value by vessel size category and port area.<sup>a/b/</sup>

Port Area	Length Category (feet)	Number of Boats	Number of Boat Days Fished	Total Dressed Pounds Landed	Total Exvessel Value (dollars)	Percent Exvessel Value Landed in Port
Neah Bay	<25	5	18	1,830	6,950	1%
	25-36	11	131	20,772	97,784	19%
	>36	26	446	82,097	397,610	79%
	Unknown	0	-	-	-	-
	TOTAL	42	595	104,699	502,344	
La Push	<25	4	9	1,182	6,909	2%
	25-36	7	123	26,625	166,956	45%
	>36	6	131	34,610	196,000	53%
	Unknown	0	-	-	-	-
	TOTAL	17	263	62,417	369,865	
Westport	<25	7	105	13,171	67,861	3%
	25-36	22	423	74,728	409,726	19%
	>36	59	924	283,086	1,671,725	78%
	Unknown	0	-	-	-	-
	TOTAL	88	1,452	370,985	2,149,312	
Ilwaco	<25	0	-	-	-	-
	25-36	3	21	1,570	7,543	12%
	>36	10	73	10,078	53,904	88%
	Unknown	-	-	-	-	-
	TOTAL	13	94	11,648	61,447	
Puget Sound <sup>d/</sup>	<25	-	-	-	-	-
	25-36	-	-	-	-	-
	>36	-	-	-	-	-
	Unknown	-	-	-	-	-
	TOTAL	-	-	-	-	-

a/ Preliminary.

TABLE D-12. California number of vessels landing 50 percent and 90 percent of total pounds of salmon troll catch by year.

Year	Total Vessels	50 Percent of Pounds Landed		90 Percent of Pounds Landed	
		Number of Vessels	Percent of Fleet	Number of Vessels	Percent of Fleet
1978	4,919	542	11.0%	2,024	41.1%
1979	4,594	373	8.1%	1,641	35.7%
1980	4,738	431	9.1%	1,733	36.6%
1981	4,102	395	9.6%	1,599	39.0%
1982	4,013	438	10.9%	1,602	39.9%
1983	3,223	353	11.0%	1,268	39.3%
1984	2,569	213	8.3%	918	35.7%
1985	2,308	241	10.4%	898	38.9%
1986	2,582	302	11.7%	1,151	44.6%
1987	2,442	320	13.1%	1,080	44.2%
1988	2,571	409	15.9%	1,285	50.0%
1989	2,534	363	14.3%	1,244	49.1%
1990	2,115	295	13.9%	976	46.1%
1991	1,769	224	12.7%	791	44.7%
1992	1,085	131	12.1%	485	44.7%
1993	1,240	163	13.1%	554	44.7%
1994	1,024	141	13.8%	459	44.8%
1995	1,179	190	16.1%	581	49.3%
1996	985	128	13.0%	434	44.1%
1997	835	117	14.0%	377	45.1%
1998	670	90	13.4%	325	48.5%
1999	666	103	15.5%	316	47.4%
2000	759	117	15.4%	370	48.7%
2001	689	90	13.1%	328	47.6%
2002	708	89	12.6%	315	44.5%
2003	584	74	12.7%	237	40.6%
2004	741	108	14.6%	344	46.4%
2005	680	111	16.3%	341	50.1%
2006	477	80	16.8%	236	49.5%
2007	601	95	15.8%	293	48.8%
2008	-	-	-	-	-
2009	-	-	-	-	-
2010 <sup>a/</sup>	216	21	9.7%	84	38.9%

a/ Preliminary.

TABLE D-13. Oregon number of vessels landing 50 percent and 90 percent of total pounds of salmon troll catch by year.<sup>a/</sup>

Year	Total Vessels	50% of Pounds Landed		90% of Pounds Landed	
		Number of Vessels	Percent of Fleet	Number of Vessels	Percent of Fleet
1974	1,914	326	17.0%	1,032	53.9%
1975	1,979	329	16.6%	1,054	53.3%
1976	2,770	453	16.4%	1,460	52.7%
1977	3,108	473	15.2%	1,597	51.4%
1978	3,157	446	14.1%	1,576	49.9%
1979	3,114	423	13.6%	1,449	46.5%
1980	3,875	372	9.6%	1,375	35.5%
1981	3,615	420	11.6%	1,391	38.5%
1982	3,269	359	11.0%	1,249	38.2%
1983	2,951	294	10.0%	1,082	36.7%
1984	771	88	11.4%	333	43.2%
1985	2,050	132	6.4%	514	25.1%
1986	2,284	238	10.4%	851	37.3%
1987	2,111	292	13.8%	928	44.0%
1988	2,061	337	16.4%	1,069	51.9%
1989	1,937	303	15.6%	959	49.5%
1990	1,557	221	14.2%	709	45.5%
1991	1,217	206	16.9%	651	53.5%
1992	649	87	13.4%	286	44.1%
1993	612	67	10.9%	235	38.4%
1994	371	43	11.6%	152	41.0%
1995	476	52	10.9%	184	38.7%
1996	456	62	13.6%	202	44.3%
1997	433	60	13.9%	184	42.5%
1998	373	51	13.7%	165	44.2%
1999	328	47	14.3%	150	45.7%
2000	399	68	17.0%	197	49.4%
2001	449	68	15.1%	221	49.2%
2002	467	76	16.3%	230	49.3%
2003	491	83	16.9%	254	51.7%
2004	595	110	18.5%	318	53.4%
2005	565	103	18.2%	310	54.9%
2006	357	67	18.8%	200	56.0%
2007	436	69	15.8%	232	53.2%
2008	140	25	17.9%	75	53.6%
2009	224	27	12.1%	105	46.9%
2010 <sup>b/</sup>	369	43	11.7%	139	37.7%

a/ Includes licensed (permitted for 1980 on) and properly identified vessels only. Total poundage on which the numbers are based is not equal to total aggregate troll landings because of landings by unlicensed or misidentified vessels. Percentages of total pounds not credited to licensed (permitted) vessels were: 1974 - 19 percent, 1975 - 19 percent, 1976 - 9.4 percent, 1977 - 8 percent, 1978 - 1.4 percent, 1979 - 0.2 percent, 1980 - 1.7 percent, 1981 - 0.11 percent, 1982-2002 - less than 0.05 percent, 2003 - 0.06 percent, 2004 - 0.15 percent, 2005 - 0.32 percent, 2006 - 0.08 percent, 2007 - 0.7 percent, 2008 - 0.05 percent; 2009 - 0.05 percent and 2010 - 0.05 percent.

b/ Preliminary.

TABLE D-14. Washington number of vessels landing 50 percent and 90 percent (by numbers of fish) of non-Indian troll salmon catch.<sup>a/</sup>

Year	Total Vessels	50% of Fish Landed		90% of Fish Landed	
		Number of Vessels	Percent of Fleet	Number of Vessels	Percent of Fleet
1978	3,041	223	7.3%	1,040	34.2%
1979	2,778	253	9.1%	946	34.1%
1980	2,626	206	7.8%	883	33.6%
1981	2,439	214	8.8%	810	33.2%
1982	2,253	181	8.0%	703	31.2%
1983	2,056	75	3.6%	409	19.9%
1984	374	55	14.7%	180	48.1%
1985	1,259	104	8.3%	443	35.2%
1986	1,252	100	8.0%	387	30.9%
1987	883	97	11.0%	385	43.6%
1988	650	51	7.8%	239	36.8%
1989	883	70	7.9%	268	30.4%
1990	897	111	12.4%	373	41.6%
1991	811	84	10.4%	344	42.4%
1992	604	59	9.8%	193	32.0%
1993	474	47	9.9%	162	34.2%
1994 <sup>b/</sup>	1	NA	NA	NA	NA
1995	96	13	13.5%	41	42.7%
1996	90	14	15.6%	45	50.0%
1997	51	7	13.7%	23	45.1%
1998	23	5	21.7%	12	52.2%
1999	57	10	17.5%	32	56.1%
2000	49	11	22.4%	28	57.1%
2001	57	12	21.1%	34	59.6%
2002	75	15	20.0%	42	56.0%
2003	82	18	22.0%	47	57.3%
2004	86	18	20.9%	53	61.6%
2005	91	25	27.5%	63	69.2%
2006	84	17	20.2%	48	57.1%
2007	79	17	21.5%	49	62.0%
2008	86	18	20.9%	47	54.7%
2009	97	18	18.6%	61	62.9%
2010	116	29	25.0%	73	62.9%

a/ All values in this table are based on preliminary information available at the start of each year's review and are not updated in subsequent years.

b/ The fishery was closed north of Cape Falcon; however, Chinook were caught off Oregon and landed in Puget Sound. Values omitted to preserve confidentiality



TABLE D-15. Preliminary 2010 California, Oregon, and Washington troll fleet by home state and salmon landings and exvessel value.<sup>a/</sup>

Home State	Number of Vessels	Percent	Landings (Pounds)	Percent	Total Value (Dollars)	Percent
<b>CALIFORNIA</b>						
California	211	98%	223,042	98%	1,222,911	98%
Oregon	3	1%	803	0%	4,799	0%
Washington	0	0%	0	0%	0	0%
Unknown/Other	2	1%	3,887	2%	18,397	2%
TOTAL	216		227,732		1,246,107	
<b>OREGON</b>						
Oregon	296	80%	373,656	73%	N/A	N/A
California	36	10%	88,044	17%	N/A	N/A
Washington	34	9%	49,376	10%	N/A	N/A
Unknown/Other	3	1%	1,554	0%	N/A	N/A
TOTAL	369		512,630			
<b>WASHINGTON</b>						
Washington	106	91%	493,362	90%	2,733,380	89%
Oregon	6	5%	48,046	9%	297,871	10%
California	0	0%	0	0%	0	0%
Unknown/Other	4	3%	8,341	2%	51,717	2%
TOTAL	116		549,749		3,082,968	

a/ Pinks excluded, except Oregon.

TABLE D-16. Vessels landing salmon in California by vessel length and skipper's state of residence.

Fishing Landings Summary by Fish Length and Shipper State of Residence																	
Year	Home State <sup>a/</sup>																
	California (length)				Oregon (length)				Washington (length)				Total (length) <sup>b/</sup>				Grand Total <sup>c/</sup>
	<26	26-36	>36	Subtotal	<26	26-36	>36	Subtotal	<26	26-36	>36	Subtotal	<26	26-36	>36		
1978	2,325	1,165	1,006	4,496	97	176	262	535	5	16	85	106	2,462	1,365	1,378	4,919	
1979	2,243	1,152	980	4,375	68	158	210	436	3	20	59	82	2,338	1,338	1,266	4,594	
1980	2,069	1,248	1,138	4,455	97	163	228	488	6	25	90	121	2,189	1,447	1,478	4,738	
81-85 <sup>d/</sup>	1,209	906	744	2,860	39	79	135	253	2	11	43	56	1,277	1,024	939	3,243	
86-90	828	757	635	2,220	12	44	86	143	2	6	32	39	856	814	760	2,449	
91-95	420	415	346	1,180	3	19	30	52	0	3	7	11	424	438	384	1,259	
96-00	210	264	252	726	1	7	23	31	1	2	8	11	214	277	286	783	
2001	142	221	286	649	0	4	23	27	1	3	7	11	1443	229	317	689	
2002	153	229	285	667	1	3	28	32	2	0	4	6	157	233	318	708	
2003	126	201	230	557	0	2	16	18	0	0	5	5	126	205	253	584	
2004	155	250	288	693	1	3	28	32	0	2	11	13	157	256	328	741	
2005	139	233	271	643	1	2	25	28	0	2	3	5	141	239	300	680	
2006	103	181	180	464	0	1	5	6	0	1	1	2	104	185	188	477	
2007	112	200	255	567	1	3	22	26	0	1	1	2	115	206	280	601	
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010 <sup>e/</sup>	55	75	81	211	0	1	2	3	0	0	0	0	55	78	83	216	

a/ "Home state" refers to the declared state of residence of vessel skipper, who, in most cases, is also the vessel owner.

b/ Includes vessels with home states other than California, Oregon, and Washington.

c/ Includes vessels of unknown lengths.

d/ Length category for 1982 is &gt;36.

e/ Preliminary.

TABLE D-17. Percentages of vessels landing troll salmon in Oregon by license holder's state of residence.

Year	Oregon	California	Washington	Other/Unknown
1977	83.8%	6.9%	8.7%	0.6%
1978	83.6%	5.9%	10.0%	0.5%
1979	82.5%	6.5%	10.3%	0.7%
1980	80.4%	8.5%	9.6%	1.5%
1981	81.2%	7.4%	9.9%	1.6%
1982	82.1%	6.3%	10.2%	1.4%
1983	85.0%	3.9%	10.1%	1.0%
1984	85.2%	2.9%	11.0%	0.9%
1985	86.9%	4.0%	8.0%	1.1%
1986	84.5%	5.2%	9.1%	1.2%
1987	81.7%	6.8%	10.2%	1.2%
1988	78.7%	6.4%	13.5%	1.3%
1989	80.0%	5.6%	12.9%	1.4%
1990	81.1%	6.7%	10.7%	1.5%
1991	83.8%	2.5%	12.1%	1.6%
1992	83.4%	3.4%	12.5%	0.8%
1993	85.8%	2.5%	11.1%	0.6%
1994	86.5%	1.1%	12.1%	0.3%
1995	85.5%	2.7%	10.7%	1.1%
1996	83.5%	2.0%	13.8%	0.7%
1997	85.0%	1.2%	12.5%	1.4%
1998	82.3%	0.8%	16.6%	0.3%
1999	87.2%	0.9%	11.6%	0.3%
2000	84.4%	1.8%	13.3%	0.5%
2001	81.1%	4.0%	14.3%	0.6%
2002	79.7%	3.9%	15.6%	9.8%
2003	79.2%	3.7%	15.9%	1.2%
2004	72.3%	10.3%	15.8%	1.7%
2005	73.3%	10.8%	14.2%	1.8%
2006	81.0%	4.8%	13.4%	0.8%
2007	78.0%	10.3%	11.2%	0.5%
2008	83.6%	2.1%	13.6%	0.7%
2009	90.2%	1.3%	7.6%	0.9%
2010 <sup>a/</sup>	97.7%	1.0%	1.0%	0.3%

a/ Preliminary.

TABLE D-18. Percentages of vessels landing non-Indian troll salmon in Washington by license holder's state of residence.<sup>a/</sup>

Year	Washington	Oregon	California	Alaska	Other/Unknown
1978	90.8%	4.6%	0.3%	0.2%	4.1%
1979	90.9%	3.8%	0.3%	0.3%	4.7%
1980	93.7%	3.6%	0.3%	0.3%	2.1%
1981	92.6%	3.0%	0.4%	0.2%	3.8%
1982	92.6%	4.1%	0.6%	0.0%	2.8%
1983	92.7%	2.8%	0.2%	0.1%	4.2%
1984	94.8%	1.6%	0.0%	0.0%	3.7%
1985	92.7%	3.3%	0.2%	0.2%	3.6%
1986	93.1%	1.7%	0.0%	0.1%	5.1%
1987	90.4%	1.3%	0.0%	0.3%	8.0%
1988	88.0%	1.8%	0.2%	1.5%	8.5%
1989	92.2%	0.9%	0.0%	1.0%	5.9%
1990	92.7%	0.7%	0.0%	0.1%	6.5%
1991	85.8%	0.7%	0.0%	0.0%	13.5%
1992	92.7%	2.0%	0.7%	0.3%	4.3%
1993	93.3%	0.8%	0.8%	0.0%	5.1%
1994 <sup>b/</sup>	100.0%	0.0%	0.0%	0.0%	0.0%
1995	95.8%	0.0%	0.0%	0.0%	4.2%
1996	93.3%	0.0%	0.0%	0.0%	6.7%
1997	96.1%	0.0%	0.0%	0.0%	3.9%
1998	95.7%	0.0%	0.0%	0.0%	4.3%
1999	94.7%	0.0%	0.0%	0.0%	5.3%
2000	91.8%	0.0%	0.0%	0.0%	8.2%
2001	100.0%	0.0%	0.0%	0.0%	0.0%
2002	96.1%	0.0%	0.0%	0.0%	3.9%
2003	100.0%	0.0%	0.0%	0.0%	0.0%
2004	96.5%	1.2%	0.0%	0.0%	2.3%
2005	95.6%	3.3%	0.0%	0.0%	1.1%
2006	98.8%	1.2%	0.0%	0.0%	0.0%
2007	93.7%	6.3%	0.0%	0.0%	0.0%
2008	95.3%	3.5%	0.0%	1.2%	0.0%
2009	94.8%	4.1%	1.0%	0.0%	0.0%
2010	91.4%	5.2%	0.0%	0.0%	3.4%

a/ All values in this table are based on preliminary information available at the start of each year's review.

b/ The fishery was closed north of Cape Falcon; however, Chinook were caught off Oregon and landed in Washington.

TABLE D-19. Number of California charter boats participating in the ocean recreational salmon fishery, by port area and activity level.

Year	Activity Level <sup>a/</sup>	Port Area						Total
		Monterey	San Francisco	Fort Bragg	Eureka	Crescent City	Unknown <sup>b/</sup>	
2010 <sup>c/</sup>	Active	7	13	1	0	0	-	21
	Casual	15	36	7	7	0	-	65
	TOTAL	22	49	8	7	0	-	86
2009	Active	-	-	-	0	0	-	0
	Casual	-	-	-	14	0	-	14
	TOTAL	-	-	-	14	0	-	14
2008	Active	-	-	0	-	-	-	0
	Casual	-	-	3	-	-	-	3
	TOTAL	-	-	3	-	-	-	3
2007	Active	2	24	6	7	0	0	39
	Casual	21	25	6	4	0	0	56
	TOTAL	23	49	12	11	0	0	95
2006	Active	9	41	10	5	0	0	65
	Casual	15	17	1	4	0	0	37
	TOTAL	24	58	11	9	0	0	102
2005	Active	16	46	10	5	0	0	77
	Casual	9	17	1	3	0	0	30
	TOTAL	25	63	11	8	0	0	107
2004	Active	16	48	11	8	0	0	83
	Casual	7	12	1	1	1	0	22
	TOTAL	23	60	12	9	1	0	105
2003	Active	10	43	11	3	0	0	67
	Casual	14	10	2	4	0	0	30
	TOTAL	24	53	13	7	0	0	97
2002	Active	17	50	13	5	0	0	85
	Casual	23	6	4	2	0	0	35
	TOTAL	40	56	17	7	0	0	120
2001	Active	17	40	10	4	0	0	71
	Casual	6	21	2	1	1	0	31
	TOTAL	23	61	12	5	1	0	102
2000	Active	23	46	9	2	0	0	80
	Casual	2	15	0	2	1	0	20
	TOTAL	25	61	9	4	1	0	100
1999	Active	7	43	2	1	0	0	53
	Casual	14	28	11	3	0	0	56
	TOTAL	21	71	13	4	0	0	109
1998	Active	41	19	6	1	0	0	67
	Casual	16	38	2	3	0	0	59
	TOTAL	57	57	8	4	0	0	126
1997	Active	27	44	7	4	0	0	82
	Casual	18	15	2	3	0	0	38
	TOTAL	45	59	9	7	0	0	120

a/ Active vessels landed more than 100 salmon; casual vessels landed 100 salmon or less.

b/ Unknown vessels did not report port of landing or landed in two or more port areas during the season.

c/ Preliminary.

TABLE D-20. Number of charter boats licensed in Oregon.

Year	Total Number of Licensed Charter Boats <sup>a/</sup>	Oregon Resident License Holders	Washington Resident License Holders	Other State Resident License Holders
1980	194	192	2	0
1981	248	213	34	1
1982	253	212	40	1
1983	255	206	47	2
1984	218	185	31	2
1985	226	198	25	3
1986	247	216	26	5
1987	254	226	23	5
1988	313	266	42	5
1989	322	273	44	5
1990 <sup>b/</sup>	170	157	9	4
1991	171	161	7	3
1992	157	150	4	3
1993	148	144	2	2
1994	145	137	6	2
1995	134	NA	NA	NA
1996	127	121	6	0
1997	122	119	3	0
1998	129	125	4	0
1999	137	133	4	0
2000	143	139	4	0
2001	172	162	10	0
2002	181	172	9	0
2003	206	186	19	1
2004	203	184	18	1
2005	225	205	19	1
2006	228	203	24	1
2007	228	198	26	4
2008	237	192	41	4
2009	249	200	46	3
2010	238	196	39	3

a/ Legislation that created the license requirement expired in 1987. Annual license fees were between \$25 and \$100 from 1980-1987. The license requirement was reinstituted by rule in 1988 and 1989 with a \$10 fee.

b/ In 1990, responsibility for licensing of charter vessels was transferred to the Marine Board and fees for Oregon residents were increased from \$10 to between \$50 and \$100.

TABLE D-21. Number of salmon charter boats licensed in Washington (including Puget Sound).

Year	Number of Licenses Issued	Washington Resident	Other State Resident	Buyback
		License Holders	License Holders	
1975	404	351	53	-
1976	427	362	65	-
1977 <sup>a/</sup>	569	NA	NA	-
1978	535	483	52	-
1979	516	473	43	-
1980	510	465	45	16
1981	478	443	35	3
1982	415	387	28	25
1983	375	354	21	19
1984	334	313	21	21
1985	288	268	20	19
1986	308	286	22	15
1987	280	269	11	-
1988	281	268	13	-
1989	276	263	13	-
1990	273	258	15	-
1991	267	251	16	-
1992	269	252	17	-
1993	265	250	15	-
1994	260	245	15	-
1995	231	217	14	23
1996	210	199	9	18
1997	210	197	13	0
1998	198	188	10	20
1999	180	172	8	0
2000	143	139	4	37
2001	142	137	5	0
2002	138	134	4	0
2003	140	137	3	0
2004	143	140	3	0
2005	142	136	6	0
2006	142	138	4	0
2007	142	138	4	0
2008	142	138	4	0
2009 <sup>b/</sup>	141	137	4	0
2010 <sup>b/</sup>	141	137	4	0

a/ First year moratorium in effect.

b/ Preliminary.

TABLE D-22. Price index.<sup>a/</sup>

Year	Price Index
1960	16.8
1961	17.0
1962	17.2
1963	17.4
1964	17.7
1965	18.0
1966	18.5
1967	19.1
1968	19.9
1969	20.9
1970	22.0
1971	23.1
1972	24.0
1973	25.4
1974	27.7
1975	30.3
1976	32.0
1977	34.1
1978	36.5
1979	39.5
1980	43.1
1981	47.1
1982	50.0
1983	52.0
1984	54.0
1985	55.6
1986	56.8
1987	58.5
1988	60.5
1989	62.8
1990	65.2
1991	67.5
1992	69.1
1993	70.6
1994	72.1
1995	73.6
1996	75.0
1997	76.3
1998	77.2
1999	78.3
2000	80.0
2001	81.8
2002	83.2
2003	85.0
2004	87.4
2005	90.3
2006	93.2
2007	96.0
2008	98.1
2009	99.0
2010 <sup>b/</sup>	100.0

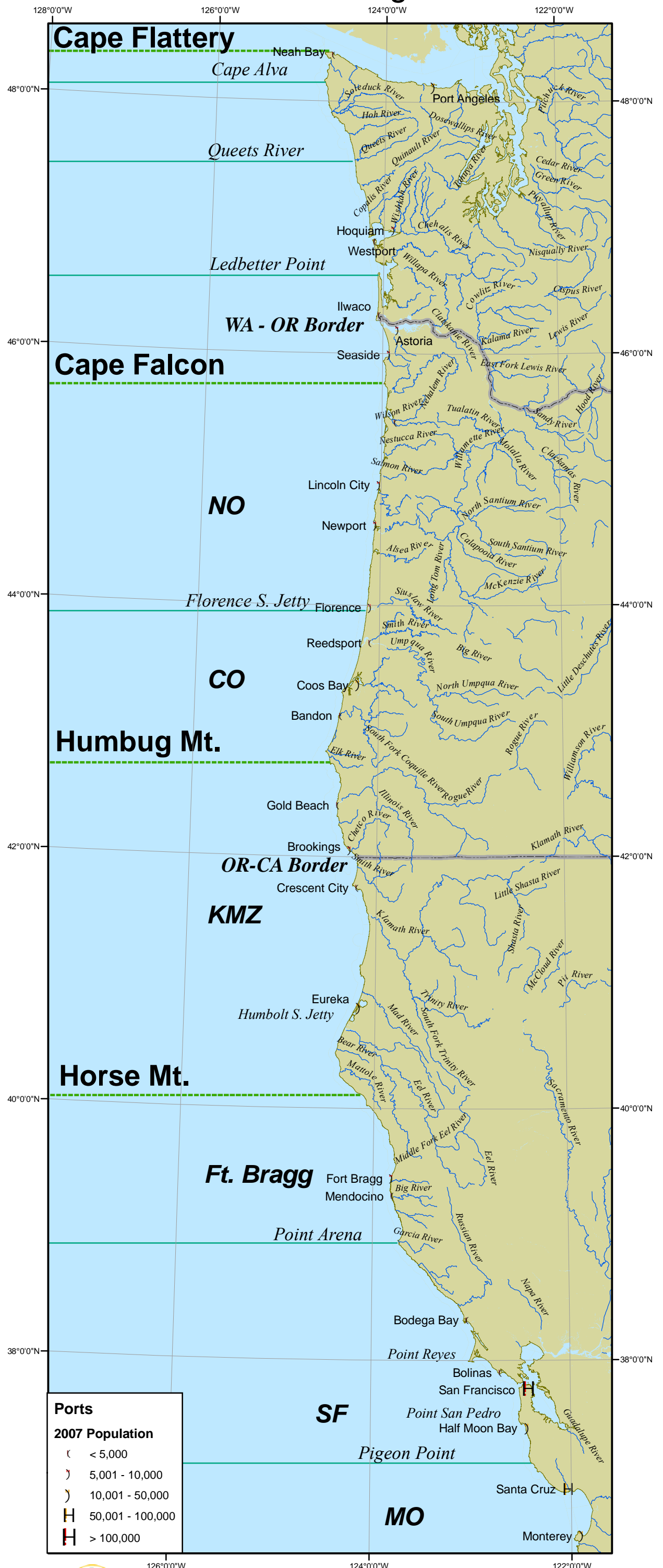
a/ Based on gross domestic product implicit price deflator.

b/ Preliminary estimate of annual change based on the second and third quarters of the year.





# Marine Fisheries Management Zones



0 25 50 100 km

Projection: UTM Zone 10, NAD83

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