REVIEW OF 2019
OCEAN SALMON FISHERIES

Stock Assessment and Fishery Evaluation Document
for the Pacific Coast Salmon Fishery Management Plan

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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)
CDFW	California Department of Fish and Wildlife
Council	Pacific Fishery Management Council
CVI	Central Valley Index
CWT	coded-wire tag
CYER	calendar year exploitation rate
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
F_{MSY}	maximum sustainable yield exploitation rate
FRAM	Fishery 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)
MFMT	maximum fishery mortality threshold
MOC	mid-Oregon coast
MSST	minimum stock size threshold
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

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
RER	rebuilding exploitation rate
RK	Rogue/Klamath (coho)
S_{ACL}	annual catch limit spawner abundance
SAFE	stock assessment and fishery evaluation (document)
SCH	Spring Creek Hatchery (tule fall Chinook returning to SCH)
SDC	status determination criteria
SEAK	Southeast Alaska
S_{MSY}	MSY spawning escapement
SONCC	southern Oregon/northern California coastal (coho)
SRFC	Sacramento River fall Chinook
SRFI	Snake River Fall Index
SRS	Stratified Random Sampling
SRW	Snake River Wild (Chinook)
SRWC	Sacramento River winter Chinook
STEP	Salmon Trout Enhancement Program
STT	Salmon Technical Team (formerly the Salmon Plan Development Team)
SUS	Southern United States
TAC	total allowable catch
URB	Upriver Bright (naturally spawning fall Chinook primarily 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 stock assessment and fishery evaluation (SAFE) document as a postseason review of the 2019 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. 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, determine annual catch limits, and will analyze the biological and economic impacts of the Council's proposed alternatives and adopted fishery management recommendations.

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 2020 ocean salmon management measures. Preseason Report I will constitute the first part of the EA for 2020 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 2020 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 status of managed stocks, impacts of past management actions, to determine how well management objectives are being met, and to improve regulations for the future. The Council will formally review this SAFE document 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 provides historical effort and 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 used to achieve the objectives, and summarize inside fisheries catch and spawner escapement data. Appendix B provides detailed 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-43.

In 2011, the Council also adopted status determination criteria (SDC) for overfishing, approaching an overfished condition, overfished, not overfished/rebuilding, and rebuilt under Salmon Fishery Management Plan (FMP) Amendment 16. These criteria, approved and implemented in December 2011, were:

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

All SDC rely on the most recent estimates available, which in some cases may be a year or more in the past due to incomplete broods or data availability. The above criteria for rebuilt status are the default criteria provided in the FMP; however, alternative criteria may be developed through a rebuilding plan if warranted by stock specific circumstances. Pertinent stocks are evaluated relative to these SDC as required by the FMP. In addition, new conservation objectives were adopted in 2011 for some stocks based on revised estimates of S_{MSY} and F_{MSY}, which are the reference points used to establish stock-specific SDC. Stock specific reference points, and recent year estimates for relevant stocks, are presented in Table II-6 and Table III-6.

Status determinations for overfishing, overfished, not overfished/rebuilding, and rebuilt are reported in this SAFE document; however, because approaching an overfished condition relies on a preseason forecast, that status determination is reported in Preseason Report III. In addition, some status determinations may be updated in Preseason Report I if more recent spawning escapement or exploitation rate estimates become available between the time this SAFE document and Preseason Report I are published.

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 2019 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 Pacific Fishery Management Council's (Council) 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 Pacific Salmon Commission (PSC).

COUNCIL-AREA REGULATIONS AND LANDINGS

Summaries of the 2019 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 2019 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 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-46: 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 following sections provide a brief outline of the regulatory objectives that shaped the 2019 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 Fishery Management Plan (FMP) - defined control rules for Sacramento River fall Chinook (SRFC), Klamath River fall Chinook (KRFC), and by National Marine Fisheries Service (NMFS) Endangered Species Act (ESA) consultation standards for Sacramento River winter Chinook (SRWC), California Coastal Chinook, Oregon Coast Natural (OCN) coho, and Southern Oregon/Northern California Coast (SONCC) coho. The Council structured 2019 Chinook salmon fisheries south of Horse Mountain (near Shelter Cove, California) to meet the following objectives (in order of most to least constraining):

1. A SRFC spawner escapement of no less than 160,000 hatchery and natural area adults (NMFS guidance), which is produced, in expectation, by a total exploitation rate of 57.9 percent.
2. The California Coastal Chinook ESA consultation standard requiring a forecast KRFC age-4 ocean harvest rate of no greater than 16.0 percent.
3. A Klamath basin natural area spawning escapement of no less than 40,700 fall Chinook adults which is produced, in expectation, by a spawner reduction rate of 53.7 percent, along with the allocation objective of 50 percent of the allowable adult harvest for federally-recognized tribal subsistence and commercial fisheries.
4. The SRWC ESA consultation standard requiring:
    a. A maximum forecast age-3 impact rate for the area south of Point Arena of 15.7 percent.
    b. 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.
    c. 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.
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 and 2 were the constraining factors for 2019 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 160,159 hatchery and natural area adults, a coastwide ocean fishery harvest rate of 16.0 percent on age-4 KRFC, a KRFC spawning escapement of 40,700 natural area adults, and a SRWC age-3 impact rate of 14.8 percent for the area south of Point Arena.

Coho Fisheries

Coho fishery management for 2019 in this area was guided by the ESA consultation standard for Central California Coast (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 Lower Columbia Natural (LCN), OCN, and RK coho were 0.1, 1.0, and 2.0 percent, respectively, in this area. Retention of coho has been prohibited south of the Oregon/California border since 1996. Coho are managed as a unit south of Cape Falcon, and details of the Council's management objectives shaping the 2019 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 FMP-defined control rules for KRFC, SRFC, and by NMFS ESA consultation standards for California Coastal Chinook, LCN coho, OCN coho, and SONCC coho. The Council structured 2019 Chinook salmon fisheries in the KMZ to meet the following objectives (in order of most to least constraining):

1. A SRFC spawner escapement of no less than 160,000 hatchery and natural area adults (NMFS guidance), which is produced, in expectation, by a total exploitation rate of 57.9 percent.
2. The California Coastal Chinook ESA consultation standard requiring a forecast KRFC age-4 ocean harvest rate of no greater than 16.0 percent.
3. A Klamath basin natural area spawning escapement of no less than 40,700 fall Chinook adults, which is produced, in expectation, by a spawner reduction rate of 53.7 percent, along with the allocation objective of 50 percent of the allowable adult harvest for federally-recognized tribal subsistence and commercial fisheries.
4. The LCN coho ESA consultation standard requirement of no greater than a 23.0 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 were the constraining factors for 2019 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 160,159 hatchery and natural area adults, a coastwide ocean fishery harvest rate of 16.0 percent on age-4 KRFC, and a KRFC spawning escapement of 40,700 natural area adults.

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 were 0.2, 0.9, and 2.8 percent, respectively, in this area. Coho are managed as a unit south of Cape Falcon, and details of the Council's management objectives shaping the 2019 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 FMP-defined control rules for SRFC, KRFC, and by NMFS ESA consultation standards for California Coastal Chinook, Lower Columbia River (LCR) natural tule Chinook, Snake River wild (SRW) Chinook, LCN coho, OCN coho, and SONCC coho. The Council structured 2019 Chinook salmon fisheries in this area to meet the following objectives (in order of most to least constraining):

1. A SRFC spawner escapement of no less than 160,000 hatchery and natural area adults which is produced, in expectation, by a total exploitation rate of 57.9 percent.
2. The California Coastal Chinook ESA consultation standard requiring a forecast KRFC age-4 ocean harvest rate of no greater than 16.0 percent.
3. A Klamath basin natural area spawning escapement of no less than 40,700 fall Chinook adults, which is produced, in expectation, by a spawner reduction rate of 53.7.9 percent, along with the allocation objective of 50 percent of the allowable adult harvest for federally-recognized tribal subsistence and commercial fisheries.
4. NMFS consultation standards and annual guidance for ESA-listed LCR natural tule Chinook, which required a total exploitation rate not to exceed 38.0 percent in marine and freshwater fisheries combined.
5. The LCN coho ESA consultation standard requirement of no greater than an 23.0 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 which was accepted by the Council as expert biological advice in November 2000.
7. The SONCC coho ESA consultation standard requirement of no greater than 13.0 percent marine exploitation rate on RK hatchery coho.

Objectives 1 and 2 were the constraining factors for 2019 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 160,159 hatchery and natural area adults, a coastwide ocean fishery harvest rate of 16.0 percent on age-4 KRFC, and a KRFC spawning escapement of 40,700 natural area adults.

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 2019 coho salmon fisheries in this area to meet the following objectives:

1. The LCN coho ESA consultation standard requirement of no greater than a 23.0 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 13.0 percent marine exploitation rate on RK hatchery coho.

Objective 1 was the most constraining factor on 2019 coho fisheries management in this area. The Council adopted seasons in this area with projected impacts of 4.1, 7.9, and 0.6 percent on LCN natural coho, OCN coho, and RK coho, respectively. In all relevant fisheries, projected exploitation rates were 18.0, 13.7, and 5.8 percent, respectively

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 fall Chinook, Lower Columbia River Wild (LRW) fall Chinook, Snake River Wild (SRW) fall Chinook and Puget Sound Chinook; meet treaty Indian sharing obligations, the allocation provisions in the Salmon FMP, and provisions of the Pacific Salmon Treaty (PST); and to the extent possible, provide for viable ocean and in-river 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 adult-equivalent (AEQ) exploitation rate from the 1988-1993 average.
3. For relevant Chinook stocks, adhere to the Individual Stock Based Management (ISBM) limits set forth in Attachment I of Chapter 3 of the 2019 Pacific Salmon Treaty.

Objective 1 above was the primary constraint for 2019 ocean fisheries in this area. Under the adopted regulations (Tables I-1, I-2, and I-3), fisheries were projected to have a 36.0 percent total AEQ exploitation rate on LCR natural tules (13.6 percent in Council-area fisheries), and be 58.7 percent of the 1988 to 1993 base period AEQ exploitation rate for SRW (a 41 percent reduction). Additionally, the 2019 ocean fisheries were shaped to limit impacts on ESA-listed Puget Sound natural Chinook stocks.

Coho Fisheries

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 23.0 percent.
2. An exploitation rate on Interior Fraser coho of no more than 10.0 percent in southern U.S. (SUS) fisheries in accordance with the provisions of the southern coho management plan adopted by the PSC in February 2002.
3. 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.

4. Meet FMP conservation objectives and obligations under the PST Southern Coho Management Plan for stocks originating on the Washington coast, Puget Sound, and British Columbia, and inside/outside and treaty Indian/non-Indian allocation objectives with special attention to meeting objectives for Washington Coastal natural coho.

5. Meet FMP objectives for allocation of impacts between commercial and recreational ocean fisheries, and among port areas for the recreational fishery.

Objective 4 above was the primary constraint for 2019 ocean fisheries in this area. The adopted regulations (Tables I-1, I-2, and I-3) were projected to have a total exploitation rate on LCN coho of 18.0 percent (13.5 percent in Council-area fisheries), an exploitation rate in SUS fisheries of 9.1 percent on Interior Fraser (Thompson River) coho (5.3 percent in Council-area fisheries), and a total exploitation rate of 13.7 percent on OCN coho (11.8 percent in Council-area fisheries). The adopted regulations were projected to meet all FMP objectives or objectives agreed to by Tribal and WDFW comanagers per the PST Southern Coho Management Plan for Grays Harbor, Queets, Hoh, and Quillayute natural coho when combined with scheduled in-river 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 south of Humbug Mountain, Oregon were based on expansion of dockside sampling data.

The Council assumed hook-and-release mortality rates 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 a hook-and-release mortality rate 16 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

No recreational fisheries selective for marked Chinook were planned for the four ocean subareas between Cape Falcon, Oregon, and the U.S./Canada border in 2019. Recreational fisheries in the Strait of Juan de Fuca operated under mark-selective retention restrictions for Chinook in Area 5 and the portion of Area 6 west of Port Angeles, from July 1 through August 15, 2019 (Figure I-1). The Area 5 mark-selective fishery was managed to a threshold of total legal-sized encounters for the fishery (8,294) and the Area 6 mark-selective fishery was managed as a season. After August 15, the fishery in Areas 5 and 6 converted to mark-selective for coho with Chinook non-retention until September 30. Catch and release estimates, derived from creel census programs conducted during the mark-selective fishery for Chinook in Area 5 from July 1 through August 15, are presented in Table I-8. No in-season estimate was made for Area 6, which was open from July 1 through August 15 for mark-selective Chinook fishing. The observed Chinook mark rates were lower than predicted preseason. Observed non-retention mortality was lower than anticipated, and the catch was slightly lower than expected for Chinook (Table I-8).

Mark-selective Chinook fisheries were also held in Puget Sound Area 7 from July 1 through 31, in Area 9 from July 25 through August 9, in Area 10 from July 25 through August 16, in Area 11 from July 1 through August 25, and in Area 12 from July 1 through September 30 (Figure I-1). Winter mark-selective fisheries are scheduled in Area 5 from March 1 through April 30, 2020, in Area 6 from March 1 through April 15, 2020, and in Area 7 from February 1 through April 15, 2020. Winter mark-selective Chinook fisheries are also scheduled in Areas 8-1 and 8-2 from February 1, 2020, through April 30, 2019, in Area 9 from February 1 through April 15, 2020, and in Area 10 from January 1, 2020 through March 31, 2020. Area 11 is

scheduled for mark-selective Chinook opportunity from January 1, 2020, through April 30, 2020, Area 12 is scheduled from October 1, 2019, through April 30, 2020, and Area 13 is open for mark-selective Chinook from May 1, 2019 until April 30, 2020.

Selective Coho Fisheries

Commercial troll fisheries selective for marked coho were planned for the area between the U.S./Canada border and Cape Falcon, Oregon. Recreational fisheries selective for marked coho were planned for the area between the U.S./Canada border and Humbug Mountain, Oregon, and the inside fishery at Buoy 10 (Figure I-1). Other inside and freshwater recreational fisheries in Washington and Oregon had mark-selective restrictions for coho. Preseason and postseason assessments of mark rates, catch, number 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, voluntary trip reports, and dockside interviews. The observed mark rates in all areas in ocean fisheries both north and south of Cape Falcon were lower than what was predicted preseason. Observed non-retention mortality was lower than expected in most mark-selective ocean fisheries.

PACIFIC SALMON COMMISSION

The PSC was established to implement the 1985 Pacific Salmon Treaty (PST) between the U.S. 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 catches result from inseason management of fisheries for compliance with aggregate abundance-based management (AABM; see below) under the PST. They do not include incidental mortality associated with regulation of these fisheries, except as noted.

Chinook Fisheries

Northern British Columbia (B.C.) and Southeast Alaska (SEAK) fisheries impact 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 recreational fisheries, in addition to recreational fisheries in Georgia Strait and the Strait of Juan de Fuca, impact far-north migrating stocks (including LRW) to a lesser degree, but can have a major impact on more southerly-distributed Columbia River tule and Puget Sound stocks.

In June 1999, the U.S. 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 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 catches for WCVI troll and outside recreational fisheries were determined by the Abundance Index (AI) 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 recreational fisheries by approximately 35 percent from levels observed during 1985 through 1996.

With the expiration of the 1999 agreement in 2008, another 10 year agreement was negotiated and implemented from 2009 through 2018 that included reductions to catch ceilings in SEAK and WCVI AABM fisheries of 15 percent and 30 percent, respectively, from those in the 1999 agreement. As this 2009 agreement expired at the end of 2018, a new 10 year agreement has been negotiated and went into effect beginning with the 2019 season. This new agreement includes further reductions to SEAK and WCVI AABM fisheries relative to the 2009 agreement. For SEAK, the reductions range from 1.5 percent in years

of high abundance to 7.5 percent in years of low abundance. For WCVI, the reductions range from 2.4 percent in years of high abundance to 12.5 percent in years of low abundance. Additionally, beginning with the 2019 Agreement, the allowable catches for SEAK fisheries will no longer be determined using the AI produced by the PST Chinook Model, rather, they will be set using a catch-per-unit-effort (CPUE) estimate from the early winter power troll fishery (see Tables 1 and 2 in Chapter 3 of the 2019 Agreement for specifics).

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 U.S. 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. However, relative to meeting the provisions of the PST, the ISBM indices are evaluated on a postseason basis only. Under the terms of the 2019 PST Agreement, these fisheries will be subject to a new set of ISBM fishery limits. These provisions require the calendar year exploitation rate (CYER) by all U.S. fisheries south of the U.S./Canada border on specific indicator stocks to be below some level of the average 2009 – 2015 CYER if they do not achieve their management objectives (see Attachment I in Chapter 3 of the 2019 Agreement for specifics). Similar to the previous ISBM obligations, these limits are taken into account during preseason planning processes, however, relative to meeting the provisions of the PST, the CYER limits are evaluated on a postseason basis only.

Beginning in 2019, AABM fisheries were conducted in accordance with the obligations set forth in the 2019 PST Agreement. The PSC reached agreement in 2019 on a calibration of the PST Chinook Model that produces the AI for the three AABM fisheries. The AI corresponds to a total allowable catch of "Treaty" Chinook per provisions in the PST. Treaty Chinook are those fish that are counted against the AABM catch ceiling; they represent total landed 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 AIs produced by the 2019 calibration of the PST Chinook Model were used to set the treaty catch limits for the Northern B.C. and WCVI AABM fisheries, however, the treaty catch limit for the SEAK AABM fishery was determined by the CPUE from the early winter power troll.

The 2019 SEAK early winter troll CPUE was 3.38, which corresponds to a catch ceiling of 140,323 Treaty Chinook. The preliminary estimate of total Chinook catch by SEAK fisheries in 2019 was 175,100, of which 140,300 were Treaty Chinook (Table I-10). These catches were slightly higher than the total catch of 164,700 Chinook in 2018, of which 127,800 were Treaty fish.

The 2019 AI for Northern B.C. was 0.96, corresponding to total allowable catch of 124,800 Chinook. The estimated catch in the Northern B.C. AABM fisheries (Northern B.C. troll plus Haida Gwaii [Queen Charlotte Islands] recreational) in 2019 was 88,000 Chinook (42,800 troll; 45,200 recreational). This was below the preseason catch ceiling and represents a considerable decrease from the previous year's total catch of 109,000. The Northern B.C. troll fishery in 2019 was conducted under a system of individual transferable quotas that was fully implemented beginning in 2008.

The 2019 AI for WCVI was 0.61, corresponding to a total allowable catch of 79,900 Chinook. In addition to the overall catch ceiling determined by the PST, Canada's principal management objectives for the 2019 WCVI Chinook fisheries were to meet domestic allocation objectives as well as address concerns for Lower Strait of Georgia Chinook, WCVI Chinook stocks, and Fraser River Chinook, in addition to Interior Fraser (Upper Fraser and Thompson) coho and steelhead populations. The estimated 2019 catch in WCVI AABM fisheries was 67,000 Chinook (8,400 First Nations, 23,200 troll, and 35,400 recreational; Table I-11). This

was below the preseason catch ceiling and represents a considerable decrease from the previous year's total AABM catch of 85,300 Chinook.

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, Lower Strait of Georgia, and early-run Fraser River Chinook stocks. During accounting year 2019 (October 2018 through September 2019), additional conservation measures were put in place to protect Fraser River Chinook by implementing a troll fishery closure through July 31. Troll catch for 2019 occurred over two openings from August 1 to 8 and August 29 to September 15. The fishery harvested 23,200 fish, slightly more than the 19,200 caught in 2018.

The WCVI outside recreational fishery (the area where non-local stocks predominate) operated under a 45 cm (17.7 inches) total length minimum size limit. In addition to existing domestic management measures to protect local WCVI Chinook, new actions were taken in 2019 to further protect Fraser River Chinook populations. These included Chinook non-retention from April 19 through July 14 in waters beyond 1 mile of shore and a maximum size limit of 80 cm (31.5 inches) from July 15 – 31 in these same areas. The fishery harvested 35,400 fish, considerably less than the 49,300 caught in 2018.

The reported Canadian ISBM Chinook catch for Northern B.C. in 2019 was approximately 35,400 (11,300 First Nations, 800 commercial gillnet, 23,300 recreational). These estimates are incomplete, however, and do not include First Nations catches from Areas 6 and 7 of the Central Coast or recreational tidal catches in Northern Areas 5 and 6. Southern B.C. ISBM fisheries in 2019 harvested approximately 200,700 Chinook (34,900 First Nations, 45,500 commercial, 120,300 recreational).

No direct management measures for Chinook salmon within the Council management area were specified under the 2019 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, and Strait of Georgia Vancouver Island) and nine from Washington (Skagit, Stillaguamish, Snohomish, Hood Canal, Strait of Juan de Fuca, Quillayute, Hoh, Queets, and Grays Harbor). Under the plan, the U.S. 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. A new 10 year agreement has been negotiated and went into effect beginning in 2019. Under the new plan the Strait of Georgia Mainland and Strait of Georgia Vancouver Island management units were combined into a single Strait of Georgia management unit. The status of the Interior Fraser management unit shall be managed at a low status until Canada establishes status determination methods that would provide the basis for a change.

The forecast of 2019 abundance indicated that the status of interior Fraser River coho remained depressed, but there are indications in recent years that their condition might be improving. In 2019, Canadian fisheries were managed for an exploitation rate of 3 percent on interior Fraser River coho, less than the 10 percent ceiling allowed under the PSC coho management plan. 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 2019, approximately 179,600 coho were retained in troll fisheries in Northern and Central B.C. Catches in Southern B.C. commercial fisheries were very minor, limited by the status of Interior Fraser coho. 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 2019 was 26,300. 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. harvested 5,500 coho.

TABLE I-1. Summary of actual ocean non-Indian commercial troll salmon fishing regulations for 2019. (Page 1 of 2)

Area and Season	Salmon Species	Actual Quota Chinook	Actual Quota Coho	Special Restrictions[a/]
U.S./Canada Border to Cape Falcon, OR				
May 6-June 28	All except coho	13,200 with sub-allocation by area [b/]	-	Chinook minimum size limit of 28 inches total length. Landing limits were adjusted inseason. Mandatory Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones closed. Vessels must land and deliver their fish within 24 hours of any closure of this fishery and landings were generally restricted to area of catch. Refer to complete 2019 ocean salmon regulations for detailed landing and notification requirements.
July 1-Sept. 30	All salmon	19,527 [c/]	30,400 [d/]	Chinook minimum size limit of 28 inches total length. Coho minimum size limit of 16 inches total length. All coho must be marked with a healed adipose fin clip. No chum retention north of Cape Alava in Aug. and Sept. Landing limits and quotas were adjusted inseason. Mandatory Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones, and beginning Aug. 12, Grays Harbor Control Zone Closed. Vessels must land and deliver their fish within 24 hours of any closure of this fishery and landings were generally restricted to area of catch. Refer to complete 2019 ocean salmon regulations for detailed landing and notification requirements.
Cape Falcon to Humbug Mt., OR Apr. 20-30, May 6-30, June 1-July 31, Aug. 1-29, Sept. 1-Oct. 31	All except coho	None	-	Chinook minimum size limit of 28 inches total length. All vessels fishing in the area must land their fish in the State of Oregon. Beginning September 1 no more than 75 Chinook per vessel per landing week
Humbug Mt. to OR/CA Border (Oregon KMZ)	All except coho	[e/]	-	Chinook minimum size limit of 28 inches total length. Landing limits and quotas in effect begining in June. Landing limits and quotas were adjusted inseason. Landing and possession limit per vessel per week (Thurs.-Wed.): 50 Chinook June 1- July 3, and 125 Chinook thereafter. Prior to June 1, fish caught in this area must be landed in Oregon. June - August: all vessels must land and deliver all salmon within this area, or into Port Orford within 24-hours. Refer to complete 2019 ocean salmon regulations for detailed landing and notification requirements.
Apr. 20-30, May 6-30		None		
June 1-30		3,200		
July 1-31		4,495		
Aug 1-29		4,330		

TABLE I-1. Summary of actual ocean non-Indian commercial troll salmon fishing regulations for 2019. (Page 2 of 2)

Area and Season	Salmon Species	Actual Quota Chinook	Actual Quota Coho	Special Restrictions[a/]
OR/CA Border to Humboldt South Jetty (California KMZ)	All except coho		-	Open five days per week (Fri-Tu). Chinook minimum size limit of 27 inches total length. Quotas, and daily landing and possession limits adjusted inseason. Chinook landing and possession limits per vessel per day: 20 through July 16, 50 July 19-Aug 5, and 15 Aug. 12-31. All salmon caught in this area (CA KMZ) must be landed within the area and within 24 hours of any closure of the fishery and prior to fishing outside the area.
June 1-30		2,500[f/]		
July 1-30		3,997		
Aug. 2-5, 12-31		4,293		
Humboldt South Jetty to Horse Mt. Closed	-	-	-	
Horse Mt. to Pt. Arena (Ft. Bragg Area) June 4-30, July 11-31, Aug. 1-28	All except coho	None	-	Chinook minimum size limit of 27 inches total length. All fish must be landed in California. All salmon caught prior to September 1 must be landed and offloaded no later than 11:59 p.m., August 30. When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours.
Pt. Arena to Pigeon Pt. (San Francisco Area) May 16-31, June 4-30, July 11-31, Aug. 1-28, Sept. 1-30	All except coho	None	-	Chinook minimum size limit of 27 inches total length. All fish must be landed in California. All salmon caught prior to September 1 must be landed and offloaded no later than 11:59 p.m., August 30. When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours.
Fall Area Target Zone Pt. Reyes to Pt. San Pedro Oct. 1-4, 7-11, 14-15	All except coho	None	-	Chinook minimum size limit of 27 inches total length. All salmon caught in this area must be landed between Point Arena and Pigeon Point.
Pigeon Pt. to U.S./Mexico Border (Monterey Area) May 1-31, June 4-30, July 11-31	All except coho	None	-	Chinook minimum size limit of 27 inches total length. All fish must be landed in California. All salmon must be landed and offloaded no later than 11:59 p.m., Aug. 5. When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain until the CA KMZ fishery has been closed for at least 24 hours.

a/ Single-point, single-shank barbless hooks required in all open areas coastwide. Limited to no more than 4 spreads per wire for all seasons between Cape Falcon and the OR/CA border and no more than 6 spreads per wire from the OR/CA border south to the U.S./Mexico border. From May 6- Dec. 31, 2019 and from Apr. 1-30, 2020, license holders may land or possess no more than one Pacific halibut per each two Chinook, except one Pacific halibut may be possessed or landed without meeting the ratio, and no more than 35 halibut may be possessed or landed per trip, unless modified by inseason action (see Appendix table C-9 for inseason action on halibut retention limits). See Appendix Tables C.1, C.3, C.5, and C.9 for additional details and inseason adjustments.

b/ No more than 5,000 from U.S./Canada border to Queets R. and 1,800 between Leadbetter Pt. and Cape Falcon. In-season actions included changes to weekly landing limits.

c/ Increased from 13,050 after impact-neutral roll over from spring quota; In-season actions included changes to weekly landing limits.

d/ No inseason changes.

e/ Preseason quotas includes 3,200 in June, 2,500 in July, and 1,200 in August.

f/ Preseason quotas includes 2,500 in June, 2,500 in July, and 2,000 in August. Preseason daily landing limit was 20 Chinook per vessel per day.

TABLE I-2. Summary of actual treaty Indian commercial ocean and Area 4B troll salmon seasons for 2019.

Tribe and Area	Seasons[a/] Salmon Species	Dates	Days	Minimum Size Limit (Inches) Chinook	Coho	Special Restrictions
Quinault						
Areas 2-3	All except coho	May 1-June 30	61	24	-	
	All	July 1-Aug 28	59	24	16	
		Aug 31-Sept 13	14	24	16	
Hoh						
Areas 2-3	All except coho	May 1-June 30	61	24	-	
	All	July 1- Sept. 15	77	24	16	
Quileute						
Area 3	All except coho	May 1-June 30	61	24	-	
	All	July 1-Aug 28	59	24	16	
		Aug 31-Sept 13	14	24	16	
Makah						
Areas 3, 4 and 4A	All except coho	May 1-June 30	61	24	-	
	All[b/]	July 1- Aug. 27	58	24	16	
	All[b/]	Aug. 31 - Sept. 6	7	24	16	125 coho per vessel per week
	All[b/]	Sept. 7-11	5	24	16	140 coho per vessel per week
	All[b/]	Sept. 12-13	2	24	16	50 coho per vessel per week
Area 4B	All[b/]	Jan. 1-Apr. 15	105	22	16	
	All except coho	May 1-June 30	61	24	-	
	All[b/]	July 1- Aug. 27	58	24	16	
	All[b/]	Aug. 31 - Sept. 6	7	24	16	125 coho per vessel per week
	All[b/]	Sept. 7-11	5	24	16	140 coho per vessel per week
	All[b/]	Sept. 12-13	2	24	16	50 coho per vessel per week
S'Klallam						
Area 4B	All[b/]	Jan. 1-Apr. 15	105	22	16	
	All except coho	May 1-June 30	61	24	-	
	All[b/]	July 1- Sept. 15	77	24	16	
	All[b/]	Nov. 1-Dec. 31	61	22	16	

a/ The overall quotas for these fisheries during the May 1-Sept. 15 ocean salmon management period were 35,000 Chinook and 55,000 coho. These quotas include troll catches by 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 17,500 Chinook for the May 1-June 30 Chinook-directed season and 17,500 Chinook for the July 1-Sept. 15 all-salmon season. The Quileute C&S fishery (September-October) did not operate in 2019. Single point, single shank barbless hooks were required in all ocean fisheries.

b/ Retention of steelhead prohibited; retention of chum prohibited beginning August 1.

TABLE I-3. Summary of actual ocean recreational salmon fishing regulations for 2019. (Page 1 of 2)

Area and Season	Salmon Species	Actual Quota Chinook	Actual Quota Coho[a/]	Daily Limit and Special Restrictions[b/]
U.S./Canada Border to Cape Falcon, OR				
U.S./Canada Border to Cape Alava, WA (Neah Bay subarea) June 22-Sept. 30	All salmon	5,200 [c/]	16,600	Two salmon daily, daily limit includes only one Chinook July 8-13. Chinook retention closed beginning July 14. No chum retention beginning Aug. 1.
Cape Alava to Queets R., WA (La Push subarea) June 22-Sept. 30, Oct. 1-13	All salmon	1,200 [c/]	4,150	Two salmon daily. Daily limit includes only one Chinook beginning July 15. Oct. Guidelines: 100 Chinook, 100 marked coho. October area restriction: north of 47°50'00 N. lat. and south of 48°00'00" N. lat.
Queets R. to Leadbetter Pt., WA (Westport subarea) June 22-Sept. 30	All salmon	12,700 [c/]	59,050	Two salmon daily, daily limit includes only one Chinook through Aug. 9. Grays Harbor Control Zone closed beginning Aug. 12.
Leadbetter Pt., WA to Cape Falcon, OR (Columbia River subarea) June 22-Sept. 30	All salmon	7,150 [c/]	79,800	Two salmon daily, only one may be a Chinook. Columbia River Control Zone closed.
Cape Falcon to Humbug Mt.				
Mar. 15-June 21, Aug. 26-30,Sept. 2-5, Sept. 9-12, 16-19	All except coho	-	-	Two salmon daily. Within a rectangular area approximately 1 mile long and half a mile wide from the mouth of Nehalem Bay no more than one non-clipped Chinook fron July 1-Sept. 15.
Aug. 31-Sept. 1, Sept. 6-8, Sept. 13-15, Sept. 20-29	All salmon		15,640 [d/]	Two salmon daily. Non-mark selective for coho.
Sept. 30- Oct.31	All except coho	-	-	Two salmon daily.
Cape Falcon to OR/CA Border				
June 22-Aug. 25	All salmon	-	90,000	Two salmon daily, all coho must be marked with a healed adipose fin clip. Fishing in the Stonewall Bank groundfish conservation area restricted to trolling only on days the all depth recreational halibut fishery is open.
Humbug Mt. to OR/CA Border (Oregon KMZ) May 25-June 21, Aug. 26-Sept. 2	All except coho	-	-	Two salmon daily.

TABLE I-3. Summary of actual ocean recreational salmon fishing regulations for 2019. (Page 2 of 2)

Area and Season	Salmon Species	Actual Quota: Chinook	Actual Quota: Coho[a/]	Daily Limit and Special Restrictions[b/]
OR/CA Border to Horse Mt. (California KMZ)				
May 25-Sept. 2	All except coho	None	-	Two salmon daily. Chinook min. size limit of 20 inches total length. Klamath Control Zone closed in August.
Horse Mt. to Pt. Arena (Fort Bragg)				
Apr. 13-30, May 18-Oct. 31	All except coho	None	-	Two salmon daily. Chinook min. size limit of 20 inches total length.
Pt. Arena to Pigeon Pt. (San Francisco)				
Apr. 13-30, May 18-Oct. 31	All except coho	None	-	Two salmon daily. Chinook min. size limit of 24 inches total length through April 30, 20-inches thereafter.
Pigeon Pt. to U.S./Mexico Border (Monterey)				
Apr. 6-Aug. 28	All except coho	None	-	Two salmon daily.

a/ All coho fisheries and quotas are mark-selective for coho with a healed adipose fin clip unless otherwise noted. Total coho quota for the North of Falcon area is 159,600 marked fish.

b/ Unless otherwise noted, minimum size limits are 24 inches for Chinook and 16 inches for coho. Seasons open 7 days per week. For a complete description of gear restrictions, see the annual ocean salmon regulations or the annual Preseason Report III, Table 2.

c/ Total preseason recreational Chinook quota for the North of Falcon area is 26,250 fish. Numbers presented for recreational Chinook are sub area guidelines (not quotas).

d/ Preseason coho quotas for South of Cape Falcon for the non-mark selective fishery was 9,000.

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 500 pounds may be shown as zero. (Page 1 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	
						WASHINGTON[a/]							
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	397,637	114,092	511,827	23,544	649,463	1.6
1981-85[b/]	12,782	71,326	217,754	149,974	944	744	358	163,344	54,662	172,399	5,915	232,976	1.4
1986-90	6,078	71,534	137,942	33,565	847	259	117	119,412	26,075	165,058	1,919	193,051	1.6
1991-95	4,156	42,477	76,334	32,072	453	111	112	104,949	11,156	131,364	2,484	145,003	1.4
1996-00	660	25,267	28,492	1,682	286	24	9	38,459	4,940	41,445	1,799	48,184	1.3
2001-05	1,721	79,452	41,007	1,122	1,123	41	4	109,947	35,251	109,200	6,862	151,312	1.4
2006	2,243	47,314	33,203	0	634	255	0	65,263	10,667	36,087	0	46,754	0.7
2007	1,864	37,211	45,924	731	526	257	3	72,683	8,944	83,788	4,670	97,402	1.3
2008	1,803	29,543	15,970	0	352	134	0	37,610	14,635	18,870	0	33,505	0.9
2009	2,818	24,542	80,718	935	316	548	3	101,560	12,351	138,493	7,627	158,471	1.6
2010	3,293	77,475	13,565	0	928	96	0	80,955	36,874	36,278	0	73,152	0.9
2011	2,664	58,726	16,617	1,289	740	93	5	73,596	29,203	39,582	10,828	79,613	1.1
2012	3,020	91,644	40,798	0	1,100	220	0	77,659	33,729	31,434	0	65,163	0.8
2013	3,904	91,250	54,309	350	1,049	280	1	80,014	28,918	46,140	7,668	82,726	1.0
2014	3,549	100,468	71,442	0	1,245	406	0	119,617	40,025	123,057	0	163,082	1.4
2015	4,103	114,252	6,882	190	1,328	37	1	97,114	39,431	74,737	8,631	122,799	1.3
2016	2,298	40,445	44	0	474	0	0	51,437	16,907	16,059	0	32,966	0.6
2017	3,336	57,347	14,718	528	596	96	2	61,453	20,037	36,087	732	56,856	0.9
2018	3,030	47,459	13,094	0	448	101	0	47,968	9,913	34,710	0	44,623	0.9
2019[c/]	2,636	41,097	59,502	824	256	309	3	65,667	9,583	64,425	1,775	75,783	1.2

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 500 pounds may be shown as zero. (Page 2 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	
						OREGON[d/]							
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	10,998	- -	2,427	4,252	139	387,743	39,974	289,189	- -	329,163	0.8
1981-85	10,117	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
1996-00	7,187	129,523	6,133	380	1,414	14	2	45,609	11,231	12,459	60	23,750	0.5
2001-05	12,019	282,567	5,749	124	3,109	39	0	118,845	39,942	66,017	0	105,959	0.9
2006	4,502	34,857	1,414	0	486	13	0	62,321	11,588	15,577	0	27,165	0.4
2007	5,217	35,487	17,109	80	464	101	0	88,264	6,941	60,653	0	67,594	0.8
2008	803	5,954	434	0	66	4	0	30,418	1,578	12,085	2	13,665	0.4
2009	1,234	1,149	21,962	18	15	131	0	84,518	1,585	89,606	0	91,191	1.1
2010	4,296	39,433	1,040	0	506	7	0	53,319	4,967	18,295	0	23,262	0.4
2011	3,752	32,081	464	49	402	3	0	48,756	5,164	18,832	0	23,996	0.5
2012	6,256	73,101	624	0	741	4	0	67,308	18,794	16,079	0	34,873	0.5
2013	8,986	112,757	452	0	1,291	2	0	85,535	30,234	14,536	0	44,770	0.5
2014	10,703	208,096	10,998	0	2,571	67	0	121,506	18,480	99,507	0	117,987	1.0
2015	8,729	104,259	2,213	0	1,189	11	0	66,039	9,442	28,282	0	37,724	0.6
2016	4,392	42,347	-	0	518	0	0	38,864	4,095	8,410	0	12,505	0.3
2017	2,052	21,845	470	0	265	2	0	42,309	4,594	21,235	2	25,831	0.6
2018	2,573	24,419	92	0	313	2	0	63,831	4,990	25,672	0	30,662	0.5
2019[c/]	2,634	28,913	1,409	0	0	7	0	94,236	6,606	66,313	0	72,919	0.8

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 500 pounds may be shown as zero. (Page 3 of 4)

Year or Average	COMMERCIAL TROLL							RECREATIONAL					
	Effort (boat days fished)	Catch: Numbers of Fish			Catch: Thousands of Pounds (Dressed Weight)			Effort (salmon angler trips)	Catch (numbers of fish)				Salmon Per Angler Trip
		Chinook	Coho	Pink	Chinook	Coho	Pink		Chinook	Coho	Pink	Total	
						CALIFORNIA[e/]							
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	5,743	22	247,400	169,600	48,300	0	217,900	0.9
1976-80	95,003	618,637	210,303	500	5,867	1,184	3	163,469	95,422	31,158	0	126,580	0.8
1981-85	59,765	462,652	58,726	2,400	4,454	345	14	146,950	109,097	19,866	0	128,963	0.9
1986-90	58,511	794,703	46,780	300	8,097	262	2	240,667	166,395	40,388	0	206,783	0.9
1991-95	25,700	341,928	42,475	0	3,429	94	0	215,996	170,296	22,399	0	192,695	0.9
1996-00	18,299	368,001	-	0	4,037	-	0	194,586	157,742	452	0	158,194	0.8
2001-05	17,187	383,921	-	0	4,877	-	0	180,127	147,974	979	0	148,953	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	1,975	15,088	-	0	228	-	0	48,667	14,809	175	0	14,984	0.3
2011	6,973	70,028	-	0	992	-	0	91,676	49,822	316	0	50,138	0.5
2012	14,522	215,585	-	0	2,530	-	0	148,007	123,926	101	0	124,027	0.8
2013	17,293	297,627	-	0	3,793	-	0	147,296	116,074	361	0	116,435	0.8
2014	14,394	168,283	-	0	2,253	-	0	120,307	74,840	479	0	75,319	0.6
2015	13,011	110,507	-	0	1,188	-	0	81,778	37,480	41	0	37,521	0.5
2016	7,198	55,185	-	0	615	-	0	70,099	38,012	70	0	38,082	0.5
2017	6,725	42,326	-	0	497	-	0	73,974	62,197	465	0	62,662	0.8
2018	7,577	78,416	-	0	930	-	0	96,625	87,314	195	0	87,509	0.9
2019[c/]	15,774	271,697	-	0	2,603	-	0	103,711	88,464	696	0	89,160	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 500 pounds may be shown as zero. (Page 4 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	
COUNCIL AREA[a/d/e/]													
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	16,559	170	730,300	380,000	615,700	6,100	1,001,800	1.4
1976-80	194,675	1,039,879	938,603	413,380	10,658	9,111	930	948,849	249,488	832,174	23,544	1,105,206	1.2
1981-85[b/]	82,664	679,481	577,980	154,474	6,830	2,626	489	543,838	196,845	357,658	8,615	563,117	1.0
1986-90	102,743	1,261,163	581,965	38,165	12,675	2,478	140	601,240	228,183	424,082	2,419	654,684	1.1
1991-95	38,873	485,349	238,176	32,452	4,821	530	114	420,491	190,686	256,764	2,544	449,993	1.1
1996-00	26,146	522,792	34,625	2,062	5,736	38	11	278,654	173,912	54,356	1,859	230,128	0.8
2001-05	30,927	745,940	46,757	1,246	9,109	80	4	408,920	223,168	176,195	6,862	406,224	1.0
2006	15,004	151,899	34,617	0	2,163	268	0	254,090	118,547	53,290	0	171,837	0.7
2007	17,752	186,839	63,033	811	2,516	358	3	266,836	63,589	145,187	4,670	213,446	0.8
2008	2,606	35,497	16,404	0	419	138	0	68,419	16,219	30,955	2	47,176	0.7
2009	4,052	25,691	102,680	953	331	678	3	191,437	14,608	228,107	7,627	250,342	1.3
2010	9,564	131,996	14,605	0	1,662	103	0	182,941	56,650	54,748	0	111,398	0.6
2011	13,389	160,835	17,081	1,338	2,133	96	5	214,028	84,189	58,730	10,828	153,747	0.7
2012	23,798	380,330	41,422	0	4,371	224	0	292,974	176,449	47,614	0	224,063	0.8
2013	30,183	501,634	54,761	350	6,134	282	1	312,845	175,226	61,037	7,668	243,931	0.8
2014	28,646	476,847	82,440	0	6,070	473	0	361,430	133,345	223,043	0	356,388	1.0
2015	25,843	329,018	9,095	190	3,705	48	1	244,931	86,353	103,060	8,631	198,044	0.8
2016	13,888	137,977	44	0	1,607	0	0	160,400	59,014	24,539	0	83,553	0.5
2017	12,113	121,518	15,188	528	1,358	98	2	177,736	86,828	57,787	734	145,349	0.8
2018	13,180	150,294	13,186	0	1,691	103	0	208,424	102,217	60,577	0	162,794	0.8
2019[c/]	21,044	341,707	60,911	824	2,859	316	3	263,614	104,653	131,434	1,775	237,862	0.9

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 WA-based effort and catch from OR state waters (July 26-Aug. 1) and Strait of Juan de Fuca after WDFW and NMFS ocean closures in 1982.

c/ Preliminary.

d/ OR commercial troll landings include small numbers of salmon caught in Alaska (prior to 1990), WA, and CA. 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 prior to 2005, which were relatively minor in all years except 2004 when 25,655 Chinook were landed and 227 days fished in Oregon waters.

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

	COMMERCIAL TROLL				RECREATIONAL					
	Effort[a/] (days	Catch (numbers of fish)			Effort (salmon	Catch (numbers of fish)				Salmon Per
Year	fished)	Chinook	Coho	Pink	angler trips)	Chinook	Coho	Pink	Total	Angler Trip
- - - - - U.S./CANADA BORDER TO CAPE FALCON - - - - -										
Treaty Indian (U.S./Canada Border to Leadbetter Point)[b/]:										
2011	600	31,824	13,564	1,074	-	-	-	-	-	-
2012	960	54,789	37,530	0	-	-	-	-	-	-
2013	1,596	51,160	48,268	209	-	-	-	-	-	-
2014	1,527	61,761	56,035	0	-	-	-	-	-	-
2015	1,458	58,939	4,010	122	-	-	-	-	-	-
2016	670	23,101	44	0	-	-	-	-	-	-
2017	963	24,414	13,350	195	-	-	-	-	-	-
2018	881	23,903	11,802	0	-	-	-	-	-	-
2019[c/]	898	18,321	55,505	513	-	-	-	-	-	-
Non-Indian:										
2011	2,353	29,738	3,517	215	48,852	23,607	18,947	10,828	53,382	1.1
2012	2,476	45,299	3,892	0	54,689	26,315	21,715	0	48,030	0.9
2013	2,595	42,035	6,493	141	55,518	22,289	29,681	7,668	59,638	1.1
2014	2,838	54,889	23,109	0	75,349	30,984	64,725	0	95,709	1.3
2015	3,463	66,195	5,085	68	63,725	30,017	39,027	8,631	77,675	1.2
2016	1,853	19,402	-	0	27,183	11,951	101	0	12,052	0.4
2017	2,715	35,560	1,838	0	38,688	14,374	21,032	732	36,138	0.9
2018	2,247	23,889	1,384	0	33,084	8,344	21,262	0	29,607	0.9
2019[c/]	1,931	23,334	5,406	309	35,758	6,841	28,174	1,775	36,790	1.0
- - - - - CAPE FALCON TO HUMBUG MOUNTAIN - - - - -										
2011	3,174	27,919	-	0	35,113	2,609	12,758	0	15,367	0.4
2012	5,458	59,213	-	0	43,649	7,767	14,198	0	21,965	0.5
2013	7,992	103,996	-	0	59,291	17,867	10,084	0	27,951	0.5
2014	9,117	175,768	3,296	0	92,183	9,355	82,200	0	91,555	1.0
2015	7,391	89,154	-	0	48,455	5,501	19,304	0	24,805	0.5
2016	4,040	39,891	-	0	30,344	2,552	5,704	0	8,256	0.3
2017	1,601	18,889	-	0	31,729	2,180	14,665	0	16,845	0.5
2018	2,000	20,187	-	0	49,132	2,708	18,526	0	21,234	0.4
2019[c/]	2,207	26,483	-	0	75,184	4,739	48,547	0	53,286	0.7
- - - - - HUMBUG MOUNTAIN TO HORSE MOUNTAIN (KMZ) - - - - -										
2011	490	3,717	-	0	21,209	10,923	126	0	11,049	0.5
2012	687	10,675	-	0	50,203	48,767	276	0	49,043	1.0
2013	1,368	16,994	-	0	49,936	44,430	676	0	45,106	0.9
2014	869	16,766	-	0	37,702	22,646	849	0	23,495	0.6
2015	552	4,269	-	0	17,894	4,874	150	0	5,024	0.3
2016	186	594	-	0	13,141	5,503	79	0	5,582	0.4
2017	109	329	-	0	2,012	506	-	0	506	0.3
2018	1,174	12,910	-	0	14,369	5,331	120	0	5,451	0.4
2019[c/]	538	7,729	-	0	12,069	5,529	697	0	6,226	0.5
- - - - - HORSE MOUNTAIN TO U.S./MEXICO BORDER - - - - -										
2011	6,772	67,637	-	0	76,727	39,835	218	0	40,053	0.5
2012	14,217	210,354	-	0	116,625	84,482	34	0	84,516	0.7
2013	16,632	287,449	-	0	117,468	82,093	124	0	82,217	0.7
2014	14,295	167,663	-	0	99,673	59,013	197	0	59,210	0.6
2015	12,979	110,461	-	0	72,839	33,790	29	0	33,819	0.5
2016	7,139	54,989	-	0	61,146	33,012	43	0	33,055	0.5
2017	6,725	42,326	-	0	73,974	62,197	465	0	62,662	0.8
2018	6,878	69,405	-	0	89,256	83,576	93	0	83,669	0.9
2019[c/]	15,470	265,840	-	0	95,999	83,507	541	0	84,048	0.9

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 2019 Council managed fisheries compared with actual harvest by management area and fishery.

	Chinook			Coho		
Fishery Governed by Quota or Guideline	Quota or Guideline[a/]	Catch	Catch/ Quota	Quota	Catch	Catch/ Quota
NORTH OF CAPE FALCON						
TREATY INDIAN COMMERCIAL TROLL						
May-June, All salmon except coho	17,500	2,919	0.17	-	-	-
July-September, All salmon	17,500	15,402	0.88	55,000	55,505	1.01
Subtotal Treaty Indian Commercial Troll	35,000	18,321	0.52	55,000	55,505	1.01
NON-INDIAN COMMERCIAL TROLL						
May-June, All salmon except coho	13,200 *	6,998	0.53	-	-	-
July-September, All salmon	19,257 *[b/c/]	16,336	0.85	30,400	5,406	0.18
Subtotal Non-Indian Commercial Troll	26,250	23,334	0.89	30,400	5,406	0.18
RECREATIONAL						
U.S./Canada Border to Cape Alava						
June 22-Sept. 30, All salmon, coho mark-selective[d/]	5,200 *	3,859	0.74	16,600	6,179	0.37
Cape Alava to Queets River						
June 22-Sept. 30, All salmon, coho mark-selective	1,200 *	613	0.51	4,150	1,767	0.43
Queets River to Leadbetter Pt.						
June 22-Sept. 30, All salmon, coho mark-selective	12,700 *	2,368	0.19	59,050	20,227	0.34
Leadbetter Pt. to Cape Falcon						
June 22-Sept. 30, All salmon, coho mark-selective	7,150 *	4,038	0.56	79,800	53,475	0.67
Subtotal Recreational	26,250	10,878	0.41	159,600	81,648	0.51
TOTAL NORTH OF CAPE FALCON	87,500	52,533	0.60	245,000	142,559	0.58
SOUTH OF CAPE FALCON						
COMMERCIAL TROLL (all except coho)						
Humbug Mt. to OR/CA Border (June)	3,200	70	0.02	-	-	-
Humbug Mt. to OR/CA Border (July)	4,495 [b/]	468	0.10	-	-	-
Humbug Mt. to OR/CA Border (August)	4,330 [b/]	1,306	0.30	-	-	-
OR/CA Border to Humboldt South Jetty (June)	2,500	737	0.29	-	-	-
OR/CA Border to Humboldt South Jetty (July)	3,997 [b/]	1,475	0.37	-	-	-
OR/CA Border to Humboldt South Jetty (August)	4,293 [b/]	3,645	0.85	-	-	-
Subtotal Troll	22,815	7,701	0.34	-	-	-
RECREATIONAL						
Cape Falcon to OR/CA Border coho mark-selective June 22-Aug. 25	-	-	-	90,000	39,073	0.43
Cape Falcon to Humbug Mt. coho non-mark-selective Aug 31-Sept. 1, 6-8, 13-15, 20-29	-	-	-	15,640 [b/]	9,963	0.64
TOTAL SOUTH OF CAPE FALCON	22,815	7,701	0.34	105,640 [b/]	49,036	0.46
GRAND TOTAL COUNCIL AREA	110,315 [b/]	60,234	0.55	350,640 [b/]	191,595	0.55

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

b/ Quotas do not match preseason quota/guidelines because inseason actions (i.e., trades, transferring quotas on an impact neutral basis, and converting to non-mark-selective fishery equivalence) resulted in increases or decreases to the overall quota. See Tables I-I, I-2, I-3, or Appendix Table C-9 for specifics of inseason adjustments.

c/ The remaining Chinook from the spring guideline (6,207) were rolled over to the summer Chinook guideline on a 1-1 basis. This action did not change the preseason adopted total commercial quota of 26,250 Chinook.

d/ Chinook retention was prohibited beginning July 14.

TABLE I-7. Estimated incidental mortality of Chinook and coho in 2019 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	2019 Catch Projection	2019 Bycatch Mortality[a/] Projection	2019 Bycatch Projection[b/]	Observed in 2019 Catch	Observed in 2019 Bycatch Mortality[a/]
			CHINOOK (thousands of fish)		
OCEAN FISHERIES:					
NORTH OF CAPE FALCON					
Treaty Indian Ocean Troll	35.0	3.6	9.0	18.3	1.9
Non-Indian Commercial Troll	26.3	10.8	38.5	23.3	9.6
Recreational	26.3	4.3	22.4	10.9	1.8
CAPE FALCON TO HUMBUG MT.[c/]					
Commercial Troll	61.8	21.0	63.6	26.5	9.0
Recreational	7.6	1.2	4.8	4.7	0.7
HUMBUG MT. TO OR/CA BORDER[c/]					
Commercial Troll	8.1	2.7	8.3	1.9	0.8 [e/]
Recreational	3.7	0.6	2.3	0.6	0.1 [e/]
OR/CA BORDER TO HORSE MT.[d/]					
Commercial Troll	7.0	2.4	7.2	5.9	2.5 [e/]
Recreational	8.5	1.3	5.4	5.0	0.8 [e/]
HORSE MT. TO PT. ARENA					
Commercial Troll	68.5	23.2	70.5	10.5	7.8 [e/]
Recreational	6.8	1.1	4.4	3.9	0.8 [e/]
PT. ARENA TO PIGEON PT.					
Commercial Troll	64.9	22.0	66.8	159.4	65.7 [e/]
Recreational	35.0	5.5	21.4	56.5	8.0 [e/]
SOUTH OF PIGEON PT.					
Commercial Troll	27.4	9.3	28.2	95.9	13.7 [e/]
Recreational	10.6	1.7	6.5	23.1	2.4 [e/]
TOTAL OCEAN FISHERIES					
Commercial Troll	299.0	95.0	292.1	341.7	110.9
Recreational	98.5	15.6	67.3	104.7	14.7
INSIDE FISHERIES:					
Area 4B	-	-	-	-	-
Buoy 10	10.7	1.9	9.0	11.3	3.5 [e/]
			COHO (thousands of fish)		
OCEAN FISHERIES:					
NORTH OF CAPE FALCON					
Treaty Indian Ocean Troll	55.0	3.4	5.4	55.5	3.4
Non-Indian Commercial Troll	30.4	10.4	32.3	5.4	1.6
Recreational	159.6	24.8	101.1	81.6	20.4
SOUTH OF CAPE FALCON					
Commercial Troll	-	11.4	43.8	-	1.9
Recreational	99.0	20.1	88.2	49.1	9.4
TOTAL OCEAN FISHERIES					
Commercial Troll	85.4	25.2	81.5	60.9	6.9
Recreational	258.6	44.9	189.3	130.7	29.8
INSIDE FISHERIES:					
Area 4B	-	-	-	-	-
Buoy 10	50.7	8.7	32.7	22.8	6.3 [e/]

a/ The bycatch mortality reported in this table consists of drop-off mortality (includes predation on hooked fish) plus hook-and-release mortality of Chinook and coho salmon in Council-area fisheries. Drop-off mortality for both Chinook and coho is assumed to be equal to 5% of total encounters. The hook-and-release mortality (HRM) rates used for both Chinook and coho are: Commercial: 26%, recreational north of Pt. Arena: 14%, recreational, south of Pt. Arena: 16% (based on the 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 drop-off mortality plus fish released.

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

d/ The commercial fishery in this area is closed between Humboldt South Jetty and Horse Mountain.

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

TABLE I-8. Summary of 2019 recreational fisheries selective for marked hatchery Chinook (preliminary data).

Area	Anticipated Mark Rate	Observed Mark Rate	Preseason Quota	Anticipated Nonretention Mortality[a/]	Landed Chinook Catch			Legal sized Chinook Released[b/]	Sub-legal Sized Chinook Released[b/]	Estimated Nonretention Mortality[a/]	Effort[c/]
					Total	Marked	Unmarked				
Recreational											
Ocean Fisheries (no mark-selective fisheries in 2019)											
Neah Bay/La Push	-	-	-	-	-	-	-	-	-	-	-
Westport	-	-	-	-	-	-	-	-	-	-	-
Columbia River	-	-	-	-	-	-	-	-	-	-	-
North of Cape Falcon Total	-	-	-	-	-	-	-	-	-	-	-
Inside Fisheries											
Strait of Juan de Fuca[d/]	65%	60%	4,666 [e/]	4,608	4,567	4,558	8	3,782	7,550	2,077	16,768
Grand Total	-	-	4,666	4,608	4,567	4,558	8	3,782	7,550	2,077	16,768

a/ Hook-and-release plus drop-off mortality of marked plus unmarked fish; computation of estimated nonretention mortality differs from 2010 and prior years.

b/ Calculated from dockside sampling.

c/ Recreational effort measured in angler trips.

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

e/ Expected catch; not a quota.

TABLE I-9. Summary of 2019 recreational and commercial fisheries selective for marked hatchery coho (preliminary data).

Area	Anticipated Mark Rate	Observed Mark Rate	Preseason Quota	Anticipated Nonretention Mortality[a/]	Landed Coho Catch			Unmarked Coho Released[b/]	Estimated Nonretention Mortality[a/]	Effort[c/]
					Total	Marked	Unmarked			
Recreational										
Ocean Fisheries										
Neah Bay	57%	37%	16,600	3,509	6,179	6,027	152	14,503	3,572	10,064
La Push	66%	41%	4,150	702	1,767	1,760	7	3,857	870	2,301
Westport	67%	47%	59,050	9,730	20,227	20,112	115	22,605	5,423	23,393
Columbia River	74%	57%	79,800	10,894	53,475	53,316	159	39,729	10,550	44,604
North of Cape Falcon Total	-	-	159,600	24,835	81,648	81,215	433	80,693	20,416	80,362
Cape Falcon to OR/CA Border	63%	39%	90,000	16,620	39,073	38,885	188	61,745	13,685	59,400
Ocean Fisheries Total	-	-	249,600	41,455	120,721	120,100	621	142,438	34,101	139,762
Inside Fisheries										
4B Add-on	-	-	-	-	-	-	-	-	-	-
Strait of Juan de Fuca[d/]	57%	33%	20,527 [e/]	3,410	12,254	12,128	125	28,134	7,034	23,327
Buoy 10	66%	52%	50,000 [e/]	8,708	22,775	22,738	37	24,353	6,253	76,977
Inside Fisheries Total	-	-	70,527	12,118	35,029	34,866	162	52,487	12,800	100,304
Commercial										
Neah Bay	57%	-	-	286	1,117	1,095	22	954	351	942
La Push	58%	-	-	2,225	1,290	1,282	8	1,076	398	429
Westport	59%	-	-	3,285	1,331	1,321	10	1,070	398	290
Columbia River	64%	-	-	2,967	1,668	1,668	0	1,074	416	270
Commercial Total	-	-	30,400	8,763	5,406	5,366	40	4,174	1,564	1,931
Grand Total	-	-	510,127	87,171	242,804	241,547	1,256	279,793	68,881	-

a/ Hook-and-release plus drop-off mortality of marked plus unmarked fish; computation of estimated nonretention mortality differs from 2010 and prior years; computation of North of Falcon recreational fisheries estimated nonretention mortality differs from 2011 and prior years.

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 selective fishery only (July 1-September 30).

e/ Expected catch; not a quota.

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

	Total Catches			Treaty Chinook			Additional Catch	
							Terminal	Hatchery
Year	Troll	Net	Sport	Troll	Net	Sport	Exclusion[a/]	Add-On[b/]
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	338.5	68.2	86.6	304.9	20.4	63.3	40.2	64.4
2006	282.3	67.4	85.8	264.0	26.7	69.4	27.0	48.4
2007	268.1	53.7	82.8	240.5	25.5	62.3	8.1	68.4
2008	151.9	43.1	49.3	126.4	14.0	32.6	5.3	66.1
2009	175.6	48.4	69.6	159.1	20.7	48.1	3.7	62.0
2010	195.6	30.6	58.5	178.0	8.3	44.3	0.5	53.6
2011	242.6	48.2	66.6	220.8	16.4	54.0	0.7	65.5
2012	209.1	39.7	46.5	191.6	13.5	37.7	1.1	51.4
2013	149.5	51.3	56.4	134.6	13.5	43.3	0.3	65.6
2014	355.6	50.0	86.9	340.0	21.2	74.0	0.7	56.6
2015	269.9	53.7	79.8	251.1	18.8	65.2	0.2	68.1
2016	276.4	42.3	68.3	266.0	25.2	59.4	0.7	35.7
2017	129.6	25.1	52.3	123.7	7.6	44.1	0.0	31.6
2018	107.6	30.8	26.4	101.5	5.1	21.2	0.0	37.0
2019[c/]	109.4	36.0	29.7	103.1	12.6	24.6	0.2	34.6

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. Troll	Northern B.C. Net	Central B.C. Troll	Central B.C. Net	North-Central B.C. Sport	WCVI NW Troll	WCVI SW Troll	WCVI Net	WCVI Outside Sport	Strait of Georgia Troll	Strait of Georgia Net[a/]	Strait of Georgia Sport[b/] North	Strait of Georgia Sport[b/] South	Juan de Fuca Troll	Juan de Fuca Net	Juan de Fuca 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	-	133.4	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	9.4	98.5	0.0	6.2	16.6
1996-2000	51.5	17.8	3.3	4.7	35.6	16.6	19.8	0.6	18.9	0.8	11.2	5.0	48.6	0.2	0.2	14.3
2001-2005	119.2	15.9	0.1	5.3	72.1	64.1	73.1	9.1	38.5	0.5	9.0	10.0	25.9	0.0	0.1	29.1
2006-2010	90.5	8.0	0.0	3.3	64.0	29.9	53.0	13.4	51.7	0.0	5.0	9.3	13.7	0.0	0.2	23.3
2011	74.7	4.6	-	4.8	70.1	70.0	54.0	21.8	78.4	0.0	0.5	11.9	21.7	-	0.0	13.6
2012	80.2	1.4	0.0	3.6	52.9	32.3	23.2	10.2	66.2	0.0	1.9	8.5	28.2	0.0	0.3	24.5
2013	69.3	2.7	0.0	5.3	61.4	8.2	26.9	8.7	67.3	0.0	0.4	8.9	45.8	0.0	0.0	34.7
2014	172.0	2.6	0.0	2.3	69.6	90.8	19.0	19.0	59.2	0.0	6.8	10.1	51.7	0.0	0.0	21.7
2015	106.7	3.2	0.0	5.3	75.6	40.0	14.3	10.0	50.5	0.0	0.2	13.5	76.7	0.0	0.0	47.1
2016	147.4	1.6	0.0	3.2	58.6	45.3	3.8	5.1	42.6	0.0	2.3	9.3	50.7	0.0	0.0	30.9
2017	97.7	2.0	0.0	3.1	62.3	42.7	4.8	30.5	57.1	0.0	2.1	14.1	68.2	0.0	0.0	37.6
2018	72.3	0.7	0.0	5.2	50.2	17.3	1.8	21.7	49.3	0.0	1.0	14.0	76.2	0.0	0.0	37.6
2019[c/]	42.8	0.0	0.0	6.1	53.4 [d/]	16.5	6.7	45.5	35.4	0.0	1.4	10.5	44.5	0.0	0.2	12.6
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
1996-2000	116.7	30.5	4.1	8.5	24.1	47.2	110.5	0.2	11.1	0.0	2.3	6.2	2.9	0.1	0.9	38.9
2001-2005	160.2	18.1	21.7	21.2	38.2	0.1	0.3	2.9	11.4	0.0	0.0	3.1	2.6	0.0	0.0	7.1
2006-2010	108.2	12.6	13.9	8.0	60.5	0.4	0.5	2.7	30.4	0.0	0.1	2.8	1.0	0.0	0.0	4.2
2011	280.7	11.2	15.9	0.0	97.5 [f/]	0.0	0.0	1.0	54.0	0.0	0.3	0.6	0.6	0.0	15.6	10.2
2012	215.5	0.0	0.0	0.5	6.0 [e/]	0.4	1.7	0.4	46.2	0.0	0.0	1.2	2.5	0.0	0.0	16.6
2013	378.2	21.0	21.1	24.5	NA	5.3	0.8	1.1	72.3	0.0	2.6	19.7 [g/]	4.6	0.0	0.0	19.7
2014	177.5	26.7	0.0	11.6	NA	2.2	32.8	0.6	23.4	0.0	1.9	13.0 [g/]	1.2	0.0	0.0	21.1
2015	255.7	20.2	0.0	1.0	96.7	3.1	3.1	0.3	29.3	0.0	0.0	0.8	1.9	0.0	0.0	10.7
2016	210.7	37.7	4.3	0.2	69.2	0.1	0.1	0.8	20.1	0.0	0.2	14.8	2.5	0.0	0.0	7.6
2017	333.2	13.4	6.5	0.0	93.8	0.9	6.4	1.5	15.1	0.0	0.3	6.6	3.3	0.0	0.0	8.2
2018	176.5	0.7	0.4	0.0	60.8	3.7	2.4	4.1	22.1	0.0	1.7	13.7	5.3	0.0	0.0	11.2
2019[c/]	177.2	0.0	2.4	0.0	76.2	NA	NA	2.9	9.5	0.0	0.1	4.3	2.2	0.0	0.0	10.3

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

b/ For Chinook, north represents Johnstone Strait and south represents Georgia Strait.

c/ Preliminary.

d/ Does not include catch from Northern Areas 5 and 6.

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

f/ Does not include catch from Area 6.

g/ Does not include areas 15 (North) and 16 (South).

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.[a/]	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	-	-	-	-	-	-	8,553	31,296	23,652	-	11,642	3,980	79,123
2010-2011	-	-	-	-	1,849	875	8,670	41,239	34,394	15,619	21,284	-	123,930
2011-2012	-	-	245	129	542	243	10,493	22,334	-	-	4,280	17,264	55,530
2012-2013	3,344	230	312	1,018	358	501	1,374	25,737	-	-	-	2,519	35,393
2013-2014	2,358	28	25	49	586	1,422	13,345	40,336	-	26,494	10,002	15,360	110,005
2014-2015	213	56	-	186	612	731	3,841	27,405	-	-	13,953	7,341	54,338
2015-2016[b/]	178	13	1	51	342	315	6,456	31,799	-	-	7,574	2,390	49,119
2016-2017[b/]	-	-	-	72	276	358	4,065	23,557	-	8,169	6,758	4,279	47,534
2017-2018[b/]	-	-	-	74	141	297	-	11,009	-	-	5,063	2,572	19,156
2018-2019[b/c/]	-	-	-	-	-	-	-	-	-	-	20,113	3,082	23,195

a/ Fishery restricted to plugs only.

b/ Includes commercial troll only.

c/ Preliminary.

TABLE I-13. Summary of 2019 coho catch and release in British Columbia commercial fisheries.

Gear/Area	Coho Kept	Coho Released
Northern Troll	177,189	200
Northern Net	0	1,875
North Central Troll	2,388	0
South Central Troll	0	0
Central Net	6	1,871
Johnstone Strait Troll	0	0
Johnstone Strait Net	110	544
Strait of Georgia Net	0	0
Strait of Georgia Troll	0	0
Fraser Gill Net	258	67
Northwest Vancouver Island Troll	0	3,065
Southwest Vancouver Island Troll	0	4,380
Northwest Vancouver Island Net	0	48
Southwest Vancouver Island Net	2,922	60

TABLE I-14. Summary of 2019 coho catch and release in British Columbia recreational fisheries.

Area	Kept	Released
Juan de Fuca Strait	10,274	32,319
Strait of Georgia	6,469	35,201
Johnstone Strait	1,974	4,257
WCVI[a/]	35,161	38,951
Total	53,878	110,728

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

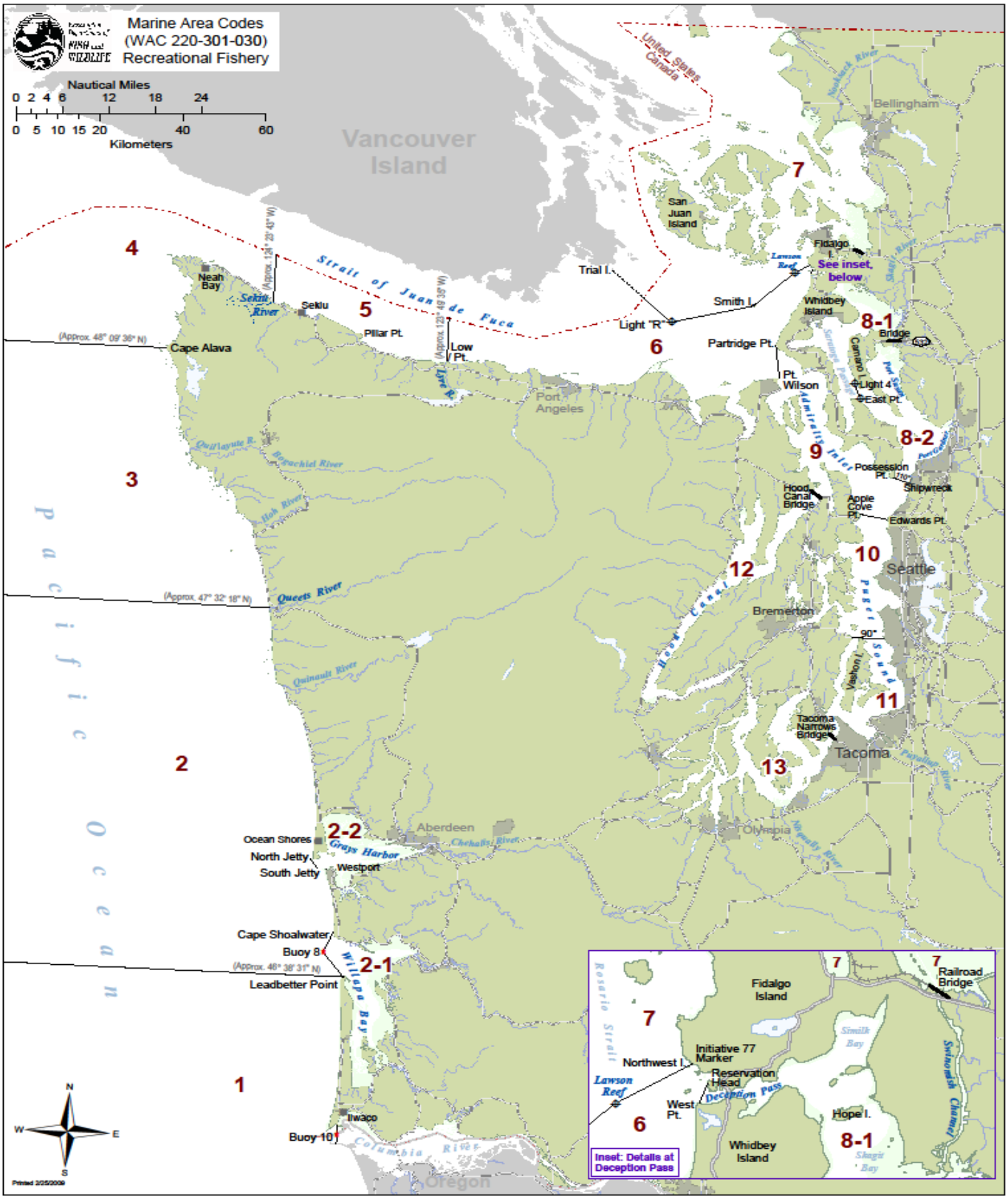

Figure I-1. Washington marine area code numbers and locations.

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 threatened in August 1989 and endangered in January 1994; and (2) Central Valley spring Chinook, listed as threatened in September 1999.

Management Objectives

The following objectives guided Council management of Central Valley Chinook salmon stocks in the 2019 fisheries: (1) for SRFC, which met the criteria for overfished status in 2018, NMFS provided guidance to target an escapement of at least 160,000 hatchery and natural area adults, which is greater than the S_{MSY} of 122,000 adults; and (2) for SRWC, the harvest control rule-specified a maximum allowable age-3 ocean impact rate of 15.7 percent in fisheries south of Point Arena, in addition to the ESA consultation standard restrictions concerning the duration, timing, and minimum size limits in the same ocean area. Harvest impacts on Central Valley Chinook were a primary management concern in fisheries south of Cape Falcon.

Regulations to Achieve Objectives

In 2019, fishing opportunity south of Cape Falcon was primarily constrained by the NMFS guidance for SRFC to target an escapement of at least 160,000 hatchery and natural area adults. Season and size limit details are presented in Tables I-1 and I-3.

Commercial

The fishery south of Pigeon Point (the Monterey management area) was open for all of May, most of June, and 21 days in the latter part of July. The area between Point Arena and Pigeon Point (the San Francisco management area) was open for the second half of May. The season was then open concurrently with the Monterey management area during the months of June and July as described above. The San Francisco management area then remained open for most of August and all of September. An October 1-15 fishery was open Monday through Friday between Point Reyes and Point San Pedro. The area between Horse Mountain and Point Arena (the Fort Bragg management area) was closed in May but had the same season structure as the San Francisco management area from June through August, after which the fishery closed.

The California portion of the KMZ had monthly quotas June through August. The fishery was open five days per week with daily landing and possession limits. The Oregon portion of the KMZ was open without a quota for portions of April and May, followed by monthly quotas June through August with weekly landing and possession limits. Quotas and landing/possession limits were adjusted in-season (see table C-9).

Oregon fisheries between Cape Falcon and Humbug Mountain were open for portions of April and May, then continuously from June 1 through August 29. The fishery reopened on September 1 and remained open until the end of October.

Commercial fisheries had a 27-inch minimum size limit in California and a 28-inch minimum size limit in Oregon.

Recreational

The Monterey management area was open from April 6 through August 28. The San Francisco and Fort Bragg management areas were open for 18 days at the end of April. After a closure in early May, the fishery reopened on May 18 and remained open through the end of October.

In the KMZ, the California and Oregon portions were open concurrently from May 25 through September 2.

The Chinook fishery between Cape Falcon and Humbug Mountain extended from mid-March through the end of October.

Recreational fisheries in California had a 20-inch minimum size limit, except in the Monterey management area, which operated under a 24-inch size limit for the entire season, and the San Francisco management area which operated under a 24-inch size limit for the month of April. The size limit was higher in these times and areas to reduce impacts on SRWC. Recreational fisheries in Oregon had a 24-inch minimum size limit.

Inside Harvest

Recreational angling for salmon in the Sacramento River and its tributaries was expected to result in a catch of 28,263 adult SRFC. Actual harvest of SRFC in 2019 totaled 20,307 adults and 9,851 jacks.

Since 1990, regulations have closed the mainstem Sacramento River to retention of salmon from January 15 through July 15, a period when SRWC 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 the recovery of SRWC coded-wire tags (CWTs) in the sport fishery. To further protect SRWC spawners, an additional closure was implemented beginning in 2017 from April 1 through July 31. This closure prohibits all fishing in the uppermost six miles of the Sacramento River that is accessible to salmon, from the Highway 44 Bridge to Keswick Dam.

In March 2018, a section of the lower American River, extending from Nimbus Dam to about one-half mile downriver, was closed permanently to all fishing as part of a project to reconstruct the Nimbus Fish Hatchery fish ladder. This section of river, known as Nimbus Basin, has typically comprised a sizable portion of SRFC harvest. Foregone harvest in Nimbus Basin now contributes to American River natural area escapement.

Owing to low Chinook escapement to the Stanislaus, Tuolumne, and Merced rivers, the majority of the San Joaquin River Basin has been closed to recreational salmon fishing. However, beginning in 2012, recreational angling opportunity was reintroduced on the Mokelumne River, the first such opportunity since 2007. Harvest in the Mokelumne River fishery totaled 118 Chinook (adults and jacks) in 2019.

Escapement and Management Performance

Commercial harvest in areas between Cape Falcon and Point Arena were below preseason expectations, while the San Francisco and Monterey management areas to the south exceeded expectations (Table I-7). None of the commercial quotas in the KMZ were attained (Table I-6), although the August fisheries in both the Oregon and California portions of the KMZ exceeded the original quota amounts that were set prior to being increased through in-season action. Recreational harvest in the San Francisco and Monterey management areas substantially exceeded preseason expectations, while other areas had catches below expected levels (Table I-7).

Sacramento River Fall Chinook

Under the 2019 regulations, the projected spawning escapement in the Sacramento River Basin was 160,159 hatchery and natural area fall Chinook adults. A total of 162,532 hatchery and natural area adult spawners were estimated to have returned to the Sacramento River Basin in 2019 (Table II-1, Figure II-1).

Fall Chinook returns to Sacramento River hatcheries in 2019 totaled 42,138 adults and 10,530 jacks, and escapement to natural areas was 120,394 adults and 19,414 jacks. Table II-1 and Figure II-1 display historical natural area and hatchery adult fall spawner escapement estimates. For a more detailed breakdown of the historical escapement see Appendix B, Table B-1. It is important to note that available data indicate that hatchery-origin fish generally constitute a large portion of the Sacramento River naturally spawning fall Chinook population.

As mentioned above, SRFC met the criteria for overfished status in 2018. Under the terms of Amendment 16 to the salmon FMP, SRFC are considered to be rebuilt when the 3-year geometric mean spawning escapement exceeds the level associated with MSY (S_{MSY}) of 122,000 hatchery and natural area adults. The geometric mean of adult spawning escapement for years 2017-2019 is 90,675 and therefore SRFC remain overfished.

SRFC are considered to have been subject to overfishing if the estimated exploitation rate exceeds their maximum fishing mortality threshold (MFMT) of 0.78. An estimate of the 2019 SRFC exploitation rate is not yet available. However, fisheries in 2018 resulted in a preliminary exploitation rate of 0.53, which is below the MFMT. Therefore, overfishing did not occur in 2018 (Table II-6).

Sacramento River Winter and Spring Chinook

Spawner escapement of endangered SRWC in 2019 was estimated to be 7,569 adults and 559 jacks. This estimate was derived from three sources: a carcass survey conducted on the upper Sacramento River, SRWC captured in the Keswick trap which provides broodstock to Livingston Stone National Fish Hatchery, and SRWC returns to Battle Creek into and upstream of Coleman National Fish Hatchery as part of the Battle Creek "jumpstart" reintroduction effort.

SRWC spawner escapement estimates derived from Red Bluff Diversion Dam counts began in 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 SRWC migration period). Escapement estimates from the carcass survey are considered to be a better representation of SRWC spawner escapement due to the small proportion of the SRWC migration sampled during the Red Bluff Diversion Dam operation period. Red Bluff Diversion Dam gates were permanently removed in 2012, and escapement estimates based on dam passage are no longer available.

Escapement of spring Chinook to the Sacramento River system in 2019 totaled 20,012 fish (jacks and adults), most of which (an estimated 16,145 fish) returned to upper Sacramento River tributaries; the remaining 3,867 fish returned to the Feather River Hatchery. Estimates of spring Chinook escapement to the upper mainstem Sacramento River are no longer made due to the permanent removal of the Red Bluff Diversion Dam gates in 2012. 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. Since 2005, prior to the spring run spawning period, fish that entered the hatchery are tagged and returned to the river; the number of tagged fish that re-entered the hatchery during the spring run spawning period are used as the estimate of spring Chinook escapement in the Feather River. The fish that are tagged at the hatchery and returned to the river but did not re-enter the hatchery during the spawning period are 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 SRWC and spring Chinook salmon are presented in Appendix B, Table B-3.

Sacramento River Late-Fall Chinook

Late-fall Chinook spawning escapement in 2019 was estimated to be 9,964 adults and 1,550 jacks. These Chinook returned primarily to the Coleman National Fish Hatchery and the upper Sacramento River. These numbers also include late-fall Chinook that returned to upper Sacramento River tributaries and those captured in the Keswick trap for use as broodstock at Coleman National Fish Hatchery (Appendix B, Table B-3 provides historical spawner escapement).

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 2019 totaled 17,753 jacks and adults in natural areas, and 9,459 jacks and adults to hatcheries (Appendix B, Table B-2 provides historical spawner escapements). Salmon production in the San Joaquin River is determined largely by spring outflows three years earlier. In most years between 1986 and 2014, spawner returns to the San Joaquin River constituted less than 10 percent of the total Central Valley escapement for fall run Chinook. However, the San Joaquin contribution has exceeded 10 percent in every year since then with an average contribution of 18 percent. In 2019, San Joaquin fall Chinook spawners constituted 12 percent of the total fall run escapement to the Central Valley.

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

KRFC were managed in accordance with their control rule, which in 2019 specified a maximum exploitation rate of 53.7 percent, resulting in an expected spawner escapement of 40,700 adults in natural areas. The available harvest of KRFC was shared equally between non-tribal and Klamath River tribal fisheries (tribes with federally-recognized fishing rights). The NMFS ESA consultation standard for California Coastal Chinook limited the ocean harvest rate on age-4 KRFC to a maximum of 16 percent.

Regulations to Achieve Objectives

To achieve the management objectives for KRFC and California Coastal Chinook, the adopted regulations were designed to result in: (1) a Klamath River run of 97,912 fall Chinook adults, resulting in a spawner escapement of 40,700 adults to natural areas, taking into account projected river fishery impacts of 43,011 adults and returns to basin hatcheries; (2) 50 percent (32,401) of the allowable adult harvest for tribal subsistence and commercial fisheries; (3) 23.6 percent (7,637) of the non-tribal harvest to the Klamath River recreational fishery; and (4) 7.0 percent (1,724) of the ocean harvest to the KMZ recreational fishery. The age-4 ocean harvest rate resulting from the above configuration was forecast to be 16.0 percent. Season and size limit details are presented in Tables I-1 and I-3.

The primary constraint to commercial and recreational fisheries south of Cape Falcon in 2019 was NMFS guidance to plan fisheries resulting in an expected escapement of at least 160,000 hatchery and natural area adult SRFC.

Commercial

Oregon fisheries between Cape Falcon and Humbug Mountain were open for portions of April and May, then continuously from June 1 through August 29. The fishery reopened on September 1 and remained open until the end of October. The Oregon portion of the KMZ was open without a quota for portions of April and May, followed by monthly quotas June through August with weekly landing and possession limits. The California portion of the KMZ had monthly quotas June through August. The fishery was open five days per week with daily landing and possession limits. Quotas and landing/possession limits were adjusted in-season (see table C-9). The Fort Bragg management area was open for most of June, 21 days in the latter part of July, and most of August (Table I-1).

Recreational

The Chinook fishery between Cape Falcon and Humbug Mountain was open from March 15 through October 31. In the KMZ, the Oregon and California portions were open concurrently from May 25 through September 2. The Fort Bragg management area was open for 18 days at the end of April. After a closure in early May, the fishery reopened on May 18 and remained open through the end of October (Table I-3).

Inside Harvest

Yurok and Hoopa Valley tribes shared a federally-reserved right of 50 percent (32,401) of the available harvest surplus of adult Klamath fall Chinook. Tribal adult harvest was 5,974 (Yurok: 3,909 adults; Hoopa Valley: 2,065 adults), which was 18 percent of the tribal allocation (Appendix B, Tables B-4 and B-5). An estimated 5,365 fall Chinook adults were harvested in the Klamath Basin river recreational fishery in 2019. Harvest estimates for streams outside the Klamath River Basin were not available.

Escapement and Management Performance

Commercial harvest in areas between Cape Falcon and Point Arena were below preseason expectations, while the San Francisco and Monterey management areas to the south greatly exceeded expectations (Table I-7). None of the commercial quotas in the KMZ were attained (Table I-6), although the August fisheries in both the Oregon and California portions of the KMZ exceeded the original quota amounts that were set prior to being increased through in-season action. Recreational harvest in the San Francisco and Monterey management areas substantially exceeded preseason expectations, while other areas had catches below expected levels (Table I-7).

Threatened California Coastal Chinook

Historical indices of spawner abundance, or actual spawning escapement estimates, for Chinook salmon in California coastal streams outside of the Klamath River Basin have been limited. Cursory, nonsystematic surveys had been conducted on Tomki Creek (Eel River Basin), Sprowl Creek (Eel River Basin), and Cañon Creek (Mad River Basin), but the surveys on Sprowl and Cañon creeks were discontinued in 2016. However, there have been recent increases in survey effort. Video counts of Chinook passage at Mirabel Dam on the Russian River began in 2000. Additional Chinook escapement estimates or redd counts for Redwood Creek, the Mad River, the mainstem Eel River, the South Fork Eel River, and the Mattole River are newly available and will be reported on an annual basis. These streams are considered to be important spawning habitat for California Coastal Chinook. Historical spawning stock surveys for these northern California coastal rivers are presented in Appendix B, Table B-7.

Klamath River Fall Chinook

The 2019 preliminary postseason river run size estimate for KRFC was 37,270 adults compared to the preseason-predicted ocean escapement (river run size) of 97,912. The escapement to natural spawning areas was 20,245 adults, which was 50 percent of the preseason prediction of 40,700 adults. The estimated hatchery return was 5,178 adults. Jack returns to the Klamath Basin totaled 9,991 including 6,167 that

escaped to natural spawning areas. Table II-2, Figure II-2, and Appendix B, Table B-4 present historical harvest and escapement estimates 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 8,564 adults. The Shasta River has historically been the most important Chinook salmon spawning stream in the upper Klamath River, supporting a spawning escapement of 27,600 adults as recently as 2012 and 63,700 in 1935. The escapement in 2019 to the Shasta River was 5,926 adults. Escapement to the Salmon and Scott rivers was 957 and 1,681 adults, respectively (Appendix B, Table B-6).

As mentioned above, KRFC met the criteria for overfished status in 2018. Under the terms of Amendment 16 to the salmon FMP, KRFC are considered to be rebuilt when the 3-year geometric mean spawning escapement exceeds the level associated with MSY (S_{MSY}) of 40,700 natural area adult spawners. The geometric mean of adult spawning escapement in natural areas for years 2017-2019 is 27,631, therefore KRFC remain overfished (Table II-6).

KRFC are considered to have been subject to overfishing if the estimated exploitation rate exceeds their maximum fishing mortality threshold (MFMT) of 0.71. An estimate of the 2019 KRFC exploitation rate is not yet available. However, fisheries in 2018 resulted in a preliminary exploitation rate of 0.28, which is lower than the MFMT. Therefore, overfishing did not occur in 2018 (Table II-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 from the Elk River north, 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 in terminal area fisheries. 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 the northern and central Oregon Coast Chinook stock complexes 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. These stocks have been abundant historically; therefore, preseason abundance estimates were not developed and it has not been a critical management concern. Council-area Chinook fisheries have minor impacts on most of the stocks originating from these areas, which have a northerly marine distribution pattern. For the southern Oregon Coast Chinook stock complex, the conservation objective is assessed using the escapement estimate at Huntley Park on the Rogue River. 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.

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, impacts on these stocks from Council-area fisheries have not significantly affected achievement of management objectives in recent years.

Oregon State waters terminal area fisheries to provide additional harvest on robust hatchery or naturally produced fall Chinook were not adopted in 2019 due to lower than average expected returns. When in place, special regulations for each of these seasons are implemented to maintain fishery impacts within conservation objectives. These regulations would include season quotas, daily and weekly landing limits in commercial fisheries, and reduced daily and season bag limits and partial mark-selective restrictions in some recreational fisheries. If fisheries occur, the season and size limit details are presented in 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 2019 fisheries, regulations were adopted with the intention of reducing impacts on some of these stocks. Complete estimates of the 2019 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

Under the 2019 regulations, the Salmon Technical Team (STT) expected the aggregate conservation objectives for these stocks would be met with the constraints required for California Coastal Chinook and KRFC. Actual escapement was not estimated for the northern and central 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.). The aggregate northern and central Oregon Coast goal was likely met in 2019. ODFW is developing alternate methodologies for establishing escapement goals for these Oregon coastal Chinook stocks, including fall Chinook PSC indicator stocks. The aggregate southern Oregon Coast Chinook goal of at least 34,992 naturally-produced fall Chinook adults passing Huntley Park in the Rogue River was not met in 2019.

North Migrating Chinook

Index counts of adult spawners (peak count per index mile) were conducted for seven of the nine standard streams and used to measure natural spawner escapement trends for north-migrating fall Chinook in 2019. Data have been collected since about 1950 for most systems. Overall peak Chinook adult index spawner counts in 2019 were preliminarily estimated at 64 adults per mile, higher than the maximum sustainable yield (MSY) spawner escapement level of 60 adults per mile.

The geometric mean of north-migrating Oregon Coast Chinook adult escapement in 2017, 2018, and 2019 was 89 fish per mile, which exceeded both the MSST (30) and the MSY spawner escapement level. Estimates of exploitation rates were not available for 2017, 2018, and 2019, but earlier fisheries resulted in

exploitation rates that were lower than the MFMT (0.78). Therefore, north-migrating Oregon Coast Chinook should not be considered overfished or subject to overfishing (Table II-6).

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). The 2019 preliminary estimate was reported at 10 adults per mile. The escapement goal prior to 2015 was assessed using this methodology.

Two trend indicators of escapement for naturally produced spring Chinook are utilized: (1) Rogue River counts at Gold Ray Dam, and (2) Umpqua River counts at Winchester Dam (Table II-4). Gold Ray Dam was removed in October 2010. For recent years, an estimate of natural spring Chinook escapement above the Gold Ray Dam site was made using the relationship of 2004-10 spawning ground surveys to the Gold Ray Dam passage (Figures II-3 and II-4).

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). Passage estimates of naturally produced fall Chinook at Huntley Park in the lower Rogue River are presented in Table B-10.

The geometric mean of south/local migrating Oregon Coast Chinook adult escapement in 2017, 2018, and 2019 was 41,325, which exceeded the MSST (20,500); therefore, south/local-migrating Oregon Coast Chinook should not be considered overfished. Estimates of exploitation rates were not available, so an assessment of overfishing status was not possible, but based on exploitation rates for KRFC, it is unlikely that south/local-migrating Oregon Coast Chinook were subject to overfishing (Table II-6).

COLUMBIA RIVER BASIN CHINOOK STOCKS

Columbia River Basin Chinook salmon stocks include fall, summer, and spring stocks. NMFS has listed five Chinook evolutionarily significant units (ESUs) within the Columbia Basin under the ESA: (1) SRW fall Chinook listed as threatened in April 1992; (2) Snake River spring/summer listed as threatened in April 1992; (3) upper Columbia River spring listed as endangered in March 1999; (4) LCR Chinook listed as threatened in March 1999; and (5) upper Willamette River spring listed as threatened in March 1999.

The assessment below focuses on the five major stock groups of Columbia 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 LCR Chinook ESU; Spring Creek Hatchery (SCH) tule stock; upriver bright (URB) stock, which includes the ESA-listed SRW Chinook ESU; and mid-Columbia bright (MCB) hatchery stock. A brief assessment of upper Columbia summer Chinook is also included. Management details for Columbia River spring Chinook stocks are not discussed. Council-managed ocean salmon fisheries have very limited impacts on these stocks (less than a 2 percent exploitation rate in base-period fisheries); as a result, mid-Columbia spring stocks were removed from the FMP under Amendment 16 in December 2011. 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 and inriver fisheries can be found in the *Joint Staff Report: stock status and fisheries for spring Chinook, summer Chinook, sockeye, steelhead, and other species* and the *Joint Staff Report: stock status and fisheries for fall Chinook salmon, coho salmon, chum salmon, summer steelhead, and white sturgeon* published annually by the joint staffs of ODFW and WDFW.

Management Objectives

Council-area fisheries north of Cape Falcon in 2019 were managed to access URB, SCH and LRH stocks while meeting the NMFS ESA consultation standards for the ESA-listed LCR Chinook ESU (both LCR

natural tules and LRW) and SRW fall Chinook ESU. The standard for ESA-listed LCR 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 LCR natural tules. The NMFS ESA consultation standard for LRW was a North Lewis River fall Chinook spawning escapement of 5,700 (equivalent to 6,900 ocean escapement); the preseason forecast was for an ocean escapement of 14,100. 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 AEQ exploitation rate for all ocean fisheries combined.

The NMFS ESA consultation standard for the threatened LCR natural tule Chinook was a key consideration for management of Council-area Chinook fisheries north of Cape Falcon. However, the impacts on LCR natural tule Chinook did not limit, by itself, the fisheries north of Cape Falcon in 2019. Although the impacts on Puget Sound Chinook in Council-area fisheries are minor, these impacts were influential in terms of shaping ocean and inside fisheries for this ESU.

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 2019 forecast for the combined abundance of Chinook stocks contributing to AABM fisheries was higher than in 2018, but was lower than the most recent ten year average. The impacts of northern fisheries on Columbia River stocks are included in the modeling of Council-area fisheries

The 2019 overall non-Indian Chinook total allowable catch (TAC) for North of Cape Falcon was 52,500. This compares to a 2018 non-Indian TAC of 55,000. The 2019 overall TAC was divided into 26,250 commercial and 26,250 recreational. The treaty Indian ocean troll TAC was 35,000 Chinook and is applicable to the May-September period. This compares to a 2018 treaty Indian TAC of 40,000. Season and size limit details are presented in Tables I-1, I-2, and I-3.

Commercial

Non-Indian commercial fisheries north of Cape Falcon included a Chinook-directed fishery May 6-June 28 with landing and possession limits of 100 Chinook per vessel for the open period May 6-15 in the area between the U.S./Canada border and the Queets River, or in the area between Leadbetter Point and Cape Falcon; thereafter, a landing and possession limit of 50 Chinook per vessel per landing week (Thursday – Wednesday) was in effect in these areas. This fishery had a preseason quota of 13,200 Chinook, no more than 5,000 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 1,800 of which may be caught in the area between Leadbetter Pt. and Cape Falcon.

The July 1 through September 30 non-Indian commercial all-salmon fishery had a preseason quota of 13,050 Chinook with landing and possession limits of 150 marked coho per vessel per landing week (Thursday-Wednesday).

Recreational

In the area between the U.S./Canada Border and Cape Falcon, the coastwide quota was 26,250 Chinook. All subareas opened on June 22 and closed September 30.

Treaty Indian Ocean Harvest

The Tribal troll ocean fishery (also known as the Treaty troll fishery) quotas were defined by conservation concerns for ESA-listed Chinook and select coho stocks that were recently declared overfished. The 2019 Chinook Tribal troll quota of 35,000 was reduced when compared to the 2018 quota of 55,000. The Chinook quota was split 50/50 between the May-June and July-September 15 sub-quotas. This was a change from

2018 where the quota was split 40/60. The 2019 coho Tribal troll quota of 55,000 was increased when compared to the 2018 quota of 40,000. The Tribal troll fishery takes place in Washington ocean areas 2, 3, 4 and 4B. The Treaty Indian troll fishery opened on May 1 with a Chinook only fishery and continued through June 30 with a 17,500 sub-quota. The all-salmon fishery was open July 1 through September 14 with a sub-quota of 17,500 Chinook and a coho quota of 55,000.

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.* v. *Oregon* parties. In 2008, a 10-year management agreement was negotiated through the *U.S.* v. *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 120,000 to 200,000 URB, including at least 8,000 SRW fall Chinook, the allowable URB impact rate would be 31.25 percent. NMFS used the URB impact rate as a proxy in the SRW consultation standard. A new 10-year *U.S. v Oregon* management agreement for 2018-2027 was finalized, and NMFS issued a new Biological Opinion in February 2018.

In 2019, the fall fisheries were managed to achieve the NMFS ESA consultation standards for threatened LCR natural tule and SRW Chinook, and the 2019 URB and SRW preseason forecast run sizes (158,400 and 8,600, respectively) were both large enough to allow a 31.25 percent harvest rate in inriver fisheries.

Within the ESA limitations there were harvestable numbers of salmon available for most major stocks in 2019. While preliminary postseason run reconstructions were complete for spring and summer Chinook salmon, the postseason fall Chinook run reconstruction was not completed in time for this report. The preliminary catch estimates (adults) for the non-Indian commercial net fisheries were 601 spring and 23 summer Chinook. The preliminary catch estimate (adults) for the recreational fisheries totaled 2,330 spring Chinook and 80 summer Chinook in mainstem sport fisheries below and above Bonneville Dam (Appendix B, Table B-20).

Escapement and Management Performance

Upper Columbia summer Chinook met the escapement objective, and Columbia River fall Chinook are expected to also meet the escapement objectives (Table II-5). The number of URB fall Chinook counted at McNary Dam was 128,862, and the natural area spawner escapement is expected to exceed the MSY level of 39,625 adults established under FMP Amendment 16. The upper Columbia summer Chinook escapement (Rock Island Dam count) in 2019 was 41,090, exceeding the MSY spawner escapement objective of 12,143 adults established under FMP Amendment 16.

The preliminary 2019 URB inriver harvest rate estimate was not available in time for this report. The total adult SRW, hatchery, and supplementation fall Chinook count at Lower Granite Dam in 2019 was 15,777, less than the count of 16,904 in 2018. The estimated number of SRW fall Chinook at Lower Granite Dam in 2019 was 6,558 adults.

Table II-7 provides conservation objective and fishery impacts for Lower Columbia River (LCR) Natural tule fall Chinook, recent year estimates are preliminary. Postseason estimates of the exploitation rate on SRW fall Chinook in ocean fisheries were unavailable.

The geometric mean of upper Columbia summer Chinook adult escapement in 2017, 2018, and 2019 was 44,771, which exceeded the MSST (6,072); therefore, upper Columbia summer Chinook should not be considered overfished (Table II-6). Estimates of combined ocean and in-river exploitation rates were not

available for 2018 or 2019, but the 2017 exploitation rate of 0.52 was below the MFMT (0.75); therefore, upper Columbia summer Chinook did not experience overfishing in 2017 (Table II-6).

The preliminary geometric mean of Columbia URB fall Chinook adult escapement in 2017, 2018, and 2019 was 78,576, which exceeded the MSST (19,182); therefore, Columbia URB fall Chinook should not be considered overfished (Table II-6). Estimates of combined ocean and in-river exploitation rates were not available for 2018 or 2019, but the 2017 exploitation rate of 0.48 was below the MFMT (0.86); therefore, Columbia URB fall Chinook did not experience overfishing in 2017 (Table II-6).

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 did not have a defined conservation objective in the Salmon FMP during the preseason process, although WDFW has a spawning escapement objective of 4,350 natural Chinook, which is based on peak density estimates and watershed area. Amendment 16 to the Salmon FMP, adopted in December 2011, included an MSY spawning escapement objective of 3,393, which was based on the WDFW objective.

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 v. 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 v. 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. As provided for in Amendment 14, and pursuant to rules and procedures established under *U.S. v. Washington*, WDFW and the Quinault Indian Nation (QIN) presented new management objectives for Grays Harbor fall Chinook salmon. These objectives were reviewed by the Chinook Technical Committee of the Pacific Salmon Commission in February 2014 and adopted in November 2014. The new objectives are based on spawner-recruit relationships using estimates of production resulting from naturally spawning fish in the Chehalis and Humptulips river basins from brood years 1986 through 2005. It is the intent of WDFW and QIN to use for management purposes an aggregate natural spawning escapement goal of 13,500 for Grays Harbor fall Chinook salmon. No agreements on annual spawning targets for Washington coastal Chinook, other than those in the FMP, were made in 2019.

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. Because Council area fishery impacts to Washington coastal Chinook stocks are negligible, ocean regulations are not generally used to manage these stocks. Season and size limit details are presented in Tables I-1, I-2, and I-3.

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 and August 2019. Beginning in 2015, the Willapa Bay Salmon Management Policy (C-3622) prohibits Chinook directed non-Indian gillnet fisheries until after Labor Day. The 2019 preseason forecast of Chinook returning to Willapa Bay was 28,116 fish (4,309 natural and 23,807 hatchery). There were 27 12-hour Chinook and coho directed non-Indian gillnet fishery openings from September 3 through October 11, 2019. Retention of unmarked Chinook was prohibited. Total Chinook harvest in the non-Indian gillnet fisheries during 2019 was 1,546 fish, based on preliminary data. Non-directed openings were scheduled November 1 through November 30, 2019.

Beginning November 11, 2019, a commercial closure to salmon fishing was enacted due to natural coho escapement concerns. The fishery was not reopened for the remainder of the scheduled season.

Recreational salmon fisheries in the marine waters of Willapa Bay were open from June 22 through July 31, 2019 concurrent with Marine Area 2 (ocean rules applied). From August 1, 2019 through January 31, 2020, Willapa Bay marine waters were scheduled to be open to recreational fishing with a daily-bag-limit of 6 salmon, only 2 may be adults. Anglers were required to release unmarked Chinook. Anglers were could fish with two poles, if they had a Two-Pole Endorsement.

Recreational salmon fisheries in tributaries to Willapa Bay varied in duration but were generally open as early as August 1, 2019 through January 31, 2020. Retention of unmarked Chinook was prohibited. Single-point, barbless hooks were required in all areas except Naselle, South Fork Willapa, and Bear rivers, where only barbless hooks were required. All freshwater systems in Willapa bay were open to recreational fishing with a daily-bag-limit of 6 salmon, only 2 may be adults. Anglers were required to release unmarked Chinook and could fish with two poles in sections of the Naselle and Willapa rivers with the Two-Pole Endorsement.

Beginning November 13, 2019, a recreational (marine and freshwater) closure to salmon fishing was enacted due to natural coho escapement concerns. The fisheries were not reopened for the remainder of the scheduled season.

Escapement and Management Performance

In 2018, hatchery-origin Chinook returning to the Willapa Bay watershed totaled 18,271 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. The 2019 escapement estimate was unavailable.

The 2018 natural escapement was 2,853 Chinook, below the FMP objective of 3,393. The 2019 escapement estimate was unavailable.

The geometric mean of Willapa fall Chinook adult escapement in 2016, 2017, and 2018 was 2,549, which exceeded the MSST (1,696); therefore, Willapa Bay fall Chinook should not be considered overfished (Table II-6). Exploitation rate estimates were not available for 2018 and 2019. Estimates of exploitation rates for all Washington Coast fall Chinook are based on Queets River fall Chinook CWT analyses, and while ocean impacts for these fall stocks may be assumed to be similar, inside impacts may vary substantially. The MFMT for Willapa Bay fall Chinook is 0.78. In 2014, 2015, 2016, and 2017 the Willapa Bay fall Chinook exploitation rates, using Queets stock as a surrogate, were 0.58, 0.48, 0.61, and 0.55 respectively; therefore, Willapa Bay fall Chinook were not subject to overfishing during the most recent

three years of available data (Table II-6). The MFMT for Willapa Bay fall Chinook is also based on a proxy derived from an average value of other Chinook stocks; therefore, overfishing status based on total exploitation rates for Willapa Bay fall Chinook are less certain than for some other Washington Coast Chinook stocks.

Grays Harbor Chinook

Inside Harvest

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

The Quinault Indian Nation conducted a spring/summer commercial gillnet fishery on the Chehalis River and in Grays Harbor commercial fishing Areas 2A, 2A-1, C, and D restricted to large mesh in order to limit Chinook impacts in 2018. No spring/summer fishery was conducted on the Chehalis side in 2019. Preliminary data indicate that 1 Chinook was harvested in 2019 by the Chehalis Tribe for ceremonial purposes.

There were no non-Indian recreational fisheries allowing the retention of spring Chinook in the Chehalis River during the spring Chinook management period.

In 2019, The Quinault Indian Nation conducted a fall gillnet fishery harvesting a total of 2,374 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 and excluded the area known as the "South Channel" in the Chehalis River, and Areas 2D, 2A, and 2A-1 to limit catch of Chinook, which tend to concentrate in deep areas off the mouths of the Johns and Elk rivers. The 2019 fishery was scheduled on the Chehalis side to run from week 40 to week 42, during the weeks beginning September 29, then beginning October 6, and then week 42 beginning October 13 at 3 days per week. The fishery closed during weeks 43 and 44, then opened week 45 beginning November 3, week 46 beginning November 10, with both scheduled at 4 days per week. Week 47 beginning November 17 was scheduled at 2 days that week. All weeks of Chehalis fishing were conducted with a 6 ½-inch maximum mesh size restriction. The Chehalis side fall fishery then remained closed until steelhead season, scheduled to begin on November 24. The Chehalis area treaty Indian fishery catch of 1,988 Chinook was 1,174 fish less than predicted. The Humptulips area treaty Indian fishery schedule was also set with a 6½-inch maximum mesh restriction through the fall period. It was scheduled for weeks 41 to 44, at schedules of 3 days beginning September 30, 3 days beginning October 7, 3 days beginning October 13, 3 days beginning October 21, and 3 days beginning October 27. During weeks 45 to 47 it was set at schedules of 3 days beginning November 4, 3 days beginning November 10, then 2 days beginning November 17. The Humptulips reported harvest was 386 Chinook, 1,199 fish and 76 percent less than the predicted 1,585. The combined Grays Harbor treaty Indian Chinook catch was 50 percent less than predicted.

The 2019 non-Indian gillnet fishery in Humptulips commercial Area 2C harvested 21 Chinook during two 12-hour days scheduled on October 16 and October 30. This harvest was 92 percent less than the predicted 272. Retention of all fall Chinook, coho, and chum was allowed. The non-Indian gillnet fishery in the Chehalis River commercial Areas 2A and 2D harvested 11 hatchery-origin Chinook during four 12-hour days scheduled during week 43 (week of October 21, and four 12-hour days during week 44 (week of October 28). This harvest was 50 percent of the predicted harvest. Release of wild chinook was required. During these fisheries, all areas of 2D were open. During all fisheries live boxes were required, and wild Chinook could not be retained in Areas 2A and 2D.

A 2019 recreational mark-selective fishery in the northern portion of Marine Area 2-2 and Commercial Area 2C was open from August 1 through September 15. During this time, 1 adult salmon could be retained, however, wild Chinook and wild coho must be released. The portion of Marine Area 2-2 east of a line from the mouth of Johns River to Brackenridge Bluff Tripod was scheduled from September 16 through November 30 for the retention of two adult salmon per day. During this time all Chinook were required to be released.

A recreational mark-selective Chinook fishery was scheduled on the mainstem Humptulips River from the mouth to the confluence of the East and West forks that opened September 1 through November 30. The daily limit was 2 adults from September 1 through September 30, then reduced to one adult fish through the end of the schedule.

No recreational fisheries targeting Chinook were scheduled in 2019 in the Chehalis River or any of the tributaries, including the Hoquiam and Wishkah basins.

Escapement and Management Performance

Chehalis River spring Chinook, also referred to as Grays Harbor spring Chinook, are of natural origin and managed for an escapement goal of 1,400 adults. The 2018 terminal run forecast was 528 adult fish, compared to the final natural spawning escapement estimate of 493. The 2019 terminal run forecast was 561 adult fish, compared to the preliminary natural spawning escapement estimate of 1,185. The geometric mean of natural spawning escapement estimates in 2017, 2018, and 2019 is 932 fish, which exceeded the MSST (546); therefore, Grays Harbor spring Chinook should not be considered overfished (Table II-6).

The 2019 Grays Harbor fall Chinook run size forecast was for 17,995 natural and 7,661 hatchery adults. The return of hatchery-origin fall Chinook to Grays Harbor hatchery programs are unknown but expected to be sufficient to provide for 2019 fall Chinook production goals. The 2018 Grays Harbor fall Chinook run size of 28,334 included 20,267 natural and 8,067 hatchery adults. The combined components of the 2018 return were about 36 percent above the forecast.

Grays Harbor fall Chinook are managed for a natural spawning escapement goal of 13,326 adults. The preliminary natural spawning escapement estimate for 2019 was not available. The final 2019 spawning ground escapement estimate for the Grays Harbor is in development by QIN and WDFW. The 2018 natural spawning escapement estimate was 20,741. The geometric mean of natural spawning escapement estimates in 2016, 2017, and 2018 was 15,874, which exceeded the MSST (5,694); therefore, Grays Harbor fall Chinook should not be considered overfished (Table II-6). Exploitation rate estimates were not available for 2019, but earlier estimates were below the MFMT (0.78); therefore, Grays Harbor River fall Chinook should not be considered subject to overfishing (Table II-6).

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 Quinault 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.

In 2019, the tribal fishery had a reported harvest of zero spring/summer Chinook during the late summer fishery, which occurred after the normal timing of the sockeye fishery which remained closed for the normal period of the season. Subsequent commercial salmon fisheries were closed until the fall fishing period.

The 2019 treaty Indian gillnet fishery harvested 5,232 fall Chinook. The 2019 commercial schedule was similar to 2018; open an average of about 4 days per week to provide harvest opportunity in the months of August through November. The Quinault River Fall gillnet fishery is designed to maximize harvest opportunity during hatchery Chinook and coho entry while reducing the scheduled fishing days later in the season during primarily wild Chinook and wild coho entry.

Escapement and Management Performance

Quinault fall Chinook are managed for hatchery production. The 2019 fall Chinook natural spawning escapement is expected to be available for 2020 management planning. 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 2019 treaty Indian gillnet harvest of spring/summer Chinook remained closed through the summer months until week 36 the normal fall opening period, with the treaty commercial fishery opening to target early entering hatchery coho. There were 16 Chinook and 489 coho taken in the Queets treaty commercial September 1 opening during the 5-day schedule in week 36.

The 2019 non-Indian in-river recreational fishery was open September through November. Anglers were allowed to retain one Chinook per day. In areas within the Olympic National Park, anglers were required to release all wild fish encountered.

Fall Chinook were harvested in the 2019 treaty gillnet fishery, opening during Week 36 for 5 days (beginning September 1), with all 16 Chinook within that week's total determined to be fall fish. The fishery then continued through Week 47 (from the week of September 1 to November 17). Days open was set at 5 days each week from Week 36 through 39, 3 days in week 40, and 2 days in week 41, 1 day each in weeks 42 through 44, and 2 days each in weeks 45 through 47. Mesh size was set at a 6 ½-inch maximum mesh size. The winter season was set to begin the week of November 24. The fall fishery was directed at harvesting hatchery coho and available Chinook, while limiting the harvest of wild coho. The treaty Indian commercial gillnet fishery harvested 1,387 fall Chinook compared to a preseason expected commercial catch of 1,366. The Chinook catch peaked during week 40, the week beginning September 29.

The catch estimates for the 2018 recreational salmon fisheries was 10 Chinook. Catch estimates for 2019 recreational salmon fisheries were unavailable.

Escapement and Management Performance

The Queets River spring/summer Chinook spawning escapement estimate for 2019 is currently under development and review. The 2017 and 2018 escapement estimates for Queets River spring/summer Chinook were 825 in 2017 and 484 in 2018. The geometric mean adult spawning escapement in 2016, 2017, and 2018 is 655, which is above the MSST (350), therefore, Queets River spring/summer Chinook should not be considered overfished (Table II-6).

The 2019 Queets River fall Chinook spawner survey estimate is not available. The indicator Chinook originate from wild brood stock taken each year in the river. The 2018 spawning escapement estimate for Queets River fall Chinook was 2,095 wild plus indicator returns with an additional 104 broodstock including 8 indicator Chinook taken for broodstock. Indicator broodstock includes wild or a small number of indicator returns. In Appendix Table B-30, fish removed from the river for hatchery (indicator) brood stock are not included in the escapement columns but are included in the terminal run size columns.

The geometric mean of Queets River fall Chinook adult spawning escapement in 2016, 2017, and 2018 is 2,546, which exceeded the MSST (1,250); therefore, Queets River fall Chinook should not be considered overfished (Table II-6).

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 2019 Hoh River spring/summer Chinook terminal abundance forecast was 1,023 fish. The treaty Indian gillnet fishery was open one day per week during weeks 19, and 21 through 25, two days per week during weeks 18 and 20. The Indian gillnet fishery was closed week 26 through week 35 as a response to chronically low-abundance as per an agreement with WDFW co-managers. The Hoh treaty commercial fishery caught approximately 23 spring/summer Chinook.

The non-Indian recreational salmon fishery was open from the Olympic Park boundary upstream to the Oxbow Campground boat launch, June 1 through June 30, with a daily limit of 1 hatchery Chinook (release all salmon other than hatchery Chinook), only 1 barbless hook allowed.

Hoh River fisheries for fall Chinook were based on an expected terminal run size of 2,536 adults, allowing for a terminal harvest rate of 38 percent. The spawning escapement was expected to be 1,565 adults.

The treaty Indian fishery targeted 27 percent of the terminal run. The treaty Indian gillnet fishery was closed during weeks 36 and 37, open one day per week during weeks 38, 39 and 40, two days per week during weeks 41 through 46, and one day per week during weeks 47 and 48. The Hoh treaty commercial fishery caught approximately 768 Chinook.

The non-Indian recreational salmon fishery was open September 16 through November 30, from the Olympic National Park boundary upstream to the Oxbow Campground boat launch, and open October 16 through November 30 from the Oxbow Campground upstream to Morgans Crossing Boat Launch. The daily-bag-limit through November 15 was 6 salmon, only 2 of which could be adult salmon, and only 1 of which could be a Chinook, only 1 barbless hook allowed. November 16 through November 30 an Emergency rule was enacted that reduced the adult portion of the daily bag limit to 1 fish.

Escapement and Management Performance

The preliminary 2019 spawning escapement estimate for Hoh River spring/summer Chinook is not available. The geometric mean of Hoh River spring/summer Chinook spawner escapement in 2016, 2017, and 2018 was 1,074, which exceeded the MSST (450); therefore, Hoh River summer Chinook should not be considered overfished (Table II-6). Estimates of exploitation rates were not available for Washington coastal spring/summer Chinook stocks, but based on the limited in river harvest rate and lack of ocean harvest data, it is difficult to assess the extent to which Hoh River spring/summer Chinook were subject to overfishing in SUS fisheries in recent years (Table II-6).

The preliminary 2019 spawning escapement estimate for Hoh River fall Chinook is not available. The geometric mean of Hoh River fall Chinook adult spawning escapement in 2016, 2017 and 2018 was 2,332, which exceeded the MSST (600); therefore, Hoh River fall Chinook should not be considered overfished (Table II-6). Estimates of exploitation rates were not available for Hoh River fall Chinook, but Queets River fall Chinook can be used as a proxy. Exploitation rate estimates were not available for 2019 but earlier estimates were below the MFMT (0.90); given these assumptions, Hoh River fall Chinook should not be considered subject to overfishing (Table II-6).

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 brood stock 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/summer Chinook were established by a preseason management agreement between WDFW and the Quileute Tribe. The total Indian gill net (IGN) catch for 2019 was 1,542 hatchery and 129 natural spring/summer Chinook. In addition, ceremonial and subsistence fisheries occurred in 2019 and accounted for 27 hatchery and eight natural Chinook. WDFW required the release of unmarked (adipose fin intact) Chinook from February through August to reduce impacts of the recreational fishery on the natural spring/summer Chinook stock. The 2019 recreational spring/summer Chinook harvest is estimated at 743 hatchery Chinook.

The total 2019 Quileute IGN harvest of fall (wild) Chinook was 1,527. Catch of stray fall hatchery Chinook was five. Catch for ceremonial and subsistence use is included in the Indian gillnet harvest numbers. The 2019 recreational catch is estimated at 844 wild Chinook.

Both the treaty and non-treaty fall fisheries were reduced from previous years for conservation reasons. The fall recreational fishery in the Quillayute (park boundary to confluence of Bogachiel and Sol Duc) and Sol Duc (mouth to Sol Duc hatchery) were open February 1 through August 31 with up to two adults retained (release wild adult Chinook, wild adult coho, and sockeye), open September 1 through September 15 with up to three adult salmon of which one could be a wild Chinook (release wild adult coho and sockeye), and open from September 16 through November 30 with up to three adult salmon of which one could be a wild Chinook or a wild coho (release sockeye). The Bogachiel (mouth to hwy 101 bridge), Dickey (ONP boundary to confluence with East and West Forks) and Calawah (mouth to hwy 101 bridge) were open July 1 through August 31 with up to two adult salmon allowed (release wild coho and wild Chinook) and from September 1 through November 30 with a limit of one adult salmon. The Quileute Tribe greatly reduced the total number of days fished in their 2019 fall IGN fishery compared to previous years, restricting it from only a day and a half in weeks 36 through 40 and 44. Additionally, weeks 41 through 43 were restricted to only half a day per week, along with other emergency gear restrictions that limited mesh size. Due to in season modeling and an adjustment for a more reduced coho terminal runsize, the IGN fishery was closed October 30 through November 24.

Escapement and Management Performance

The 2019 management agreement called for an escapement goal of 300 hatchery spring Chinook. The actual hatchery rack return was 823 plus 152 jacks, which exceeded hatchery requirements.

The summer Chinook run was managed to achieve an MSY spawner escapement of 1,200 adults, jacks, and brood stock collection combined. The 2019 preliminary natural spawning summer Chinook escapement estimate was 991, which excludes 24 wild brood stock fish.

The geometric mean of Quillayute River summer Chinook spawner escapement in 2017, 2018, and 2019 is 1,033, which exceeded the MSST (600); therefore, Quillayute River summer Chinook should not be considered overfished (Table II-6). Estimates of exploitation rates were not available for Washington coastal spring/summer Chinook stocks, but based on the limited in-river harvest rate and ocean harvest rates of Queets fall Chinook, it is unlikely that Quillayute River summer Chinook were subject to overfishing in recent years (Table II-6).

Terminal area fisheries on fall Chinook are managed for a target 40 percent in-river harvest rate, equating to an escapement of 60 percent of the terminal return or 3,000 adults, whichever is greater. The preliminary 2019 escapement estimate of 7,256 fall Chinook was over the escapement floor and above the targeted escapement of 60 percent of the return (60 percent of the estimated preliminary return of fall Chinook is about 5,776).

The geometric mean of the Quillayute River fall Chinook adult spawning escapement in 2017, 2018, and 2019 was 4,687, which exceeded the MSST (1,500); therefore, Quillayute River fall Chinook should not be considered overfished (Table II-6). Estimates of exploitation rates were not available for Quillayute fall Chinook, but Queets River fall Chinook was used as a proxy. Exploitation rate estimates were not available for 2019, but earlier estimates were below the MFMT (0.87); therefore, Quillayute River fall Chinook should not be considered subject to overfishing (Table II-6).

Hoko River Chinook

Inside Harvest

Hoko River Chinook are primarily harvested in fisheries in southeast Alaska and northern British Columbia with minimal harvest in Council area and inside waters. There have been no tribal or recreational fisheries in the Hoko River for Chinook salmon since the early 1980s, although some catch is occasionally reported by anglers on WDFW Catch Record Cards. Historical terminal run size, catch, and escapement data for Hoko River summer/fall Chinook are presented in Appendix B, Table B-38.

Escapement and Management Performance

The 2019 escapement estimate for Hoko Chinook is 1,551 spawning in the river (natural origin and hatchery strays combined) and 264 spawned at the hatchery for a terminal runsize of 1,815.

The geometric mean of Hoko River summer/fall Chinook escapement in 2017, 2018, and 2019 is 1,644 which exceeds the MSST (425); therefore, Hoko River summer/fall Chinook should not be considered overfished (Table II-6). Exploitation rate estimates were not available for 2019, but earlier estimates were well below the MFMT (0.78); therefore, Hoko River summer/fall Chinook should not be considered subject to overfishing (Table II-6).

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

Puget Sound Chinook stocks are listed under the ESA and 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 expressed in terms of constraints on total fishery rebuilding exploitation rates (RER) or of exploitation rates on fisheries south of the Canadian border for those stocks without RERs. The Council's annual management objectives for ESA-listed stocks are to meet the ESA consultation standards set forth by NMFS.

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. 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 regulations affecting any of these stocks was closing the Cape Flattery Control Zone for the non-Indian commercial troll fishery and holding the non-Indian commercial troll fishery to impacts in Area 3 and Area 4 not to exceed those modeled preseason. Season and size limit details are presented in Tables I-1, I-2, and I-3.

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-39. These catches included some fish of non-Puget Sound origin. The total commercial harvest in Puget Sound in 2019 was 115,939 Chinook, compared to 119,636 Chinook caught in 2018. The 2019 non-Indian net catch was 9,509 Chinook, compared to 13,700 Chinook caught in 2018. The 2019 treaty Indian net and troll harvest was 106,430 Chinook, compared to 105,936 Chinook caught in 2018.

Chinook catches in the Puget Sound recreational fishery for years beginning in 1971 are presented in Appendix B, Table B-40. Catch estimates for the 2019 Puget Sound recreational fishery were unavailable.

Escapement and Management Performance

Puget Sound Chinook management goals for fishery planning processes in 2019 were compared to predicted escapements and exploitation rates to assess compliance with ESA consultation standards (Table II-5). 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-41. Recreational salmon catch estimates are summarized in Appendix B, Table B-40. Historical spring Chinook escapement data are presented in Appendix B, Table B-44. 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 2019. Preliminary data suggest no Puget Sound spring Chinook natural stocks met their escapement goals. Preliminary information on 2019 natural spawning escapements for summer/fall Chinook stocks indicate escapement goals were met in some areas, but not in many others. Escapement estimates for 2019 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

In 2019, the Sacramento River fall Chinook spawning escapement was above the FMP objective and NMFS guidance. The Klamath River fall Chinook spawning escapement fell below the FMP objective. Information to assess compliance with FMP conservation objectives and ESA consultation standards in 2019 was unavailable for LCR natural tule Chinook, SRW fall Chinook, several Washington coast Chinook stocks, and all Puget Sound natural Chinook stocks.

Stock Status Determinations

In 2011, the Council adopted SDC for overfishing, overfished, not overfished/rebuilding, and rebuilt under FMP Amendment 16. These criteria, approved and implemented since December 2011, are:

- Overfishing occurs when a single year exploitation rate exceeds the MFMT (F_{MSY});
- Overfished status occurs when a 3-year geometric mean spawning escapement is less than the MSST;
- Not overfished/rebuilding status occurs when the most recent 3-year geometric mean spawning escapement is greater than the MSST but less than S_{MSY};
- A stock is rebuilt when the most recent 3-year geometric mean spawning escapement exceeds S_{MSY}.

All criteria rely on the most recent estimates available, which in some cases may be a year or more in the past because of incomplete broods or data availability. The above criteria for rebuilt status are the default criteria provided in the FMP; however, alternative criteria may be developed through a rebuilding plan if warranted by stock specific circumstances. Stock specific reference points and recent year estimates for relevant stocks are presented in Table II-6.

Based on these SDCs, both Sacramento River fall Chinook and Klamath River fall Chinook continue to meet the criteria for overfished status (using data from 2017-19). In June 2018, NMFS published an overfished designation for these two Chinook stocks based on the geometric mean of escapement in 2015-17. Rebuilding plans for both of these Chinook stocks were completed in July 2019. Based on the most recent year exploitation rate estimates available, no stocks were subject to overfishing.

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

Year or	Upper River[a/]			Lower River			Total		
Average	Hatchery	Natural[b/]	Subtotal	Hatchery	Natural[b/]	Subtotal	Hatchery	Natural[b/]	Grand Total
1981-85	11,557	57,913	69,470	16,917	81,880	98,797	28,475	139,793	168,268
1986-90	11,507	87,396	98,903	11,521	73,633	85,154	23,028	161,029	184,057
1991-95	11,948	60,151	72,099	16,951	70,691	87,642	28,899	130,842	159,741
1996-00	29,965	153,777	183,742	21,137	137,071	158,207	51,102	290,848	341,949
2001-05	72,122	197,215 [c/]	269,337	30,520	214,652	245,172	102,643	411,867	514,510
2006	56,819	89,933	146,752	21,722	106,556	128,278	78,541	196,489	275,030
2007	11,543	36,079	47,622	9,759	33,993	43,752	21,302	70,072	91,374
2008	10,181	36,274	46,455	7,867	11,042	18,909	18,048	47,316	65,364
2009	5,433	12,277	17,710	10,492	12,671	23,163	15,925	24,948	40,873
2010	8,666	25,688	34,354	24,484	65,438	89,922	33,150	91,126	124,276
2011	19,312	20,466	39,778	22,176	57,388	79,564	41,488	77,854	119,342
2012	77,318	67,190	144,508	41,878	99,043	140,921	119,196	166,233	285,429
2013	67,758	90,119	157,877	33,453	215,516	248,969	101,211	305,635	406,846
2014	17,937	80,407	98,344	25,872	88,260	114,132	43,809	168,667	212,476
2015	13,861	40,696	54,557	25,103	33,808	58,911	38,964	74,504	113,468
2016	8,306	10,563	18,869	25,096	45,734	70,830	33,402	56,297	89,699
2017	1,316	1,526	2,842	24,299	16,325	40,624	25,615	17,851	43,466
2018	8,272	18,317	26,589	25,570	53,372	78,942	33,842	71,689	105,531
2019[d/]	13,065	53,608	66,673	29,073	66,786	95,859	42,138	120,394	162,532
Goal[e/]									122,000

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

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

d/ Preliminary.

e/ Sacramento River fall Chinook S_{MSY}.

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 or	Spawning Escapement				Inriver Recreational Catch		Indian Net Catch		Non-landed Fishing Mortality		Inriver Run Size
Average	Hatchery	Natural	Total	Percent	Numbers	Percent	Numbers	Percent	Numbers	Percent	Numbers
1981-85	11,746	27,667	39,413	63%	5,096	8%	17,128	27%	1,593	2%	63,230
1986-90	25,106	70,785	95,891	63%	15,145	10%	36,669	25%	3,498	2%	151,203
1991-95	18,084	47,932	66,016	74%	3,094	5%	10,574	19%	983	2%	80,666
1996-00	35,970	54,229	90,199	72%	6,817	6%	24,565	20%	2,275	2%	123,856
2001-05[a/]	38,952	56,346	95,298	70%	7,659	5%	25,414	19%	2,366	2%	136,848
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	63%	1,919	3%	22,259	32%	1,974	3%	70,554
2009	19,614	44,409	64,023	64%	5,651	6%	28,387	28%	2,583	3%	100,644
2010	18,052	37,225	55,277	61%	3,035	3%	29,887	33%	2,661	3%	90,860
2011	22,337	46,763	69,100	68%	4,147	4%	26,353	26%	2,377	2%	101,977
2012	55,939	121,543	177,482	60%	13,876	5%	95,386	32%	8,578	3%	295,322
2013	17,148	59,156	76,304	46%	19,800	12%	63,036	38%	5,885	4%	165,025
2014	31,276	95,104	126,380	79%	5,386	3%	25,967	16%	2,392	1%	160,396 [b/]
2015	11,085	28,112	39,197	50%	7,842	10%	28,048	36%	2,611	3%	77,821 [b/]
2016	3,578	13,937	17,515	71%	1,310	5%	5,160	21%	486	2%	24,582 [b/]
2017	11,213	19,904	31,117	94%	71	0%	1,880	6%	164	0%	33,232
2018	18,567	52,352	70,919	78%	4,110	5%	14,769	16%	1,262	1%	91,060
2019[c/]	5,178	20,245	25,423	68%	5,365	14%	5,974	16%	508	1%	37,270
Goal		≥40,700[d/e/]									

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/ Total inriver run includes fish collected from the Klamath and Trinity rivers by the Yurok and Hoopa Valley tribes, respectively, to test for the presence of the parasite *Ichthyophthirius multifiliis* during the following years: 2014 - 272 adults; 2015 - 123 adults; 2016 - 111 adults.

c/ Preliminary.

d/ In December 2011, Amendment 16 to the Salmon Fishery Management Plan was approved, which replaced the 35,000 spawning escapement floor with a S_{MSY} management objective of 40,700 natural area adult spawners. The 35,000 spawner floor was in effect from 1989-2007 and in 2011. In 2008-2010, fisheries were managed for a natural area spawning escapement of 40,700 adults under requirements of a rebuilding plan.

e/ Annual escapement goals may be more or less than S_{MSY} in some years due to meeting S_{ACL} requirements and de minimis fishing provisions.

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

Year or Average	Return to Facilities: Public Hatchery[a/] Spring	Return to Facilities: Public Hatchery[a/] Fall	Return to Facilities: Private All	Estuary and Freshwater Harvest[b/] Spring	Estuary and Freshwater Harvest[b/] Fall
			THOUSANDS OF CHINOOK		
1976-80	4.9	2.0	1.9	13.7	31.1
1981-85	5.0	3.0	12.8	8.2	26.8
1986-90	22.9	5.4	31.4	21.1	49.3
1991-95	15.7	3.3	4.1	15.2	49.6
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	29.0
2008	6.1	2.7	-	5.8	18.3
2009	7.2	4.2	-	9.2	26.1
2010	10.9	5.0	-	15.6	44.1
2011	7.8	4.0	-	16.1	63.0
2012	13.5	6.0	-	18.7	51.4
2013	13.1	7.2	-	16.3	83.3
2014	11.5	7.9	-	16.1	75.0
2015	10.7	9.6	-	18.3	117.3
2016	4.2	5.8	-	10.1	54.9
2017	5.1	3.1	-	9.8	56.5
2018	5.2	1.5	-	6.1	34.6
2019[c/]	4.9	2.3	-	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.[a/]

Year or Average	Fall Chinook Spawner Indices: North Migrating Peak Count Adults Per Mile	Fall Chinook Spawner Indices: Rogue River (South/local migrating) Adult Carcass Counts	South/local Migrating Spring Chinook Spawner Indices (1000's of fish): Gold Ray Dam Counts[b/]	South/local Migrating Spring Chinook Spawner Indices (1000's of fish): Umpqua River Winchester Dam Counts
1976-80	72	5,256	26	6
1981-85	89	3,906	16	5
1986-90	141	16,797	29	8
1991-95	116	4,387	10	4
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[c/]	13	5
2005	118	d/	6	4
2006	76	d/	5	3
2007	42	d/	3	2
2008	40	d/	4	3
2009	61	d/	5	5
2010	87	d/	10	6
2011	109	d/	10	9
2012	146	d/	14	8
2013	189	d/	12	7
2014	157	d/	6	6
2015	247	d/	15	5
2016	118	d/	10	4
2017	114	d/	10	4
2018[e/]	92	d/	10	3
2019[e/]	64	d/	5	4
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/ Gold Ray Dam removed October, 2010. Natural estimates after 2010 derived using relationship of 2004-2010 spawning ground surveys to Gold Ray Dam passage. Estimate includes an unknown number of jacks.

c/ 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.

d/ Surveys were not conducted.

e/ Preliminary.

TABLE II-5. Performance of Chinook salmon stocks in relation to 2019 preseason conservation objectives (preliminary data). (Page 1 of 2)

System and Stock	2019 Conservation/Management Objective(s)	2019 Achievement
Sacramento River Chinook		
Fall	Minimum escapement of 160,000 natural area and hatchery adults (NMFS guidance).	Preliminary estimate of 162,532 natural and hatchery adult fall Chinook exceeded 2019 management objective.
Winter (Endangered)	Age-3 impact rate for the area south of Point Arena, CA no greater than 15.7% (NMFS ESA consultation standard).	Preseason projection of 14.8%; no postseason estimate was available at time of printing.
Spring (Threatened)	No management objective	No management objective
California North Coast Chinook		
Klamath River Fall	Minimum escapement of 40,700 natural area adult spawners.	Preliminary estimate of 20,245 is below the 2019 management objective.
California Coastal (Threatened)	No greater than 16.0% ocean harvest rate on age-4 Klamath River fall Chinook.	Preseason projection of 16.0%; no postseason estimate was available at time of printing.
Oregon Coast Chinook		
North Migrating Stocks	150,000-200,000 natural adult spawners (equivalent to peak spawner index counts of 60-90 adults per mile).	64 natural adult spawners per mile, within the aggregate stock index range.
South/Local Migrating Stocks	34,992 natural adult passage estimate at Huntley Park in the lower Rogue River.	19,426 natural adult passage estimate at Huntley Park, below the conservation objective.
Columbia River Basin Fall Chinook		
LRW (Component of threatened lower Columbia River Chinook ESU)	MSY objective of 5,700 natural North Lewis River adult spawners.	Preliminary estimate of 14,307, well above the conservation objective.
LCR natural tules (Component of threatened lower Columbia River	Total (ocean plus inriver) AEQ exploitation rate on ESA-listed natural tules of no more than 38.0%.	Preseason projection of 36%. No postseason estimate was available.
LRH	14,800 adult hatchery spawners.	Preseason LRH forecast was 55,100. Postseason estimate not available.
SCH	6,000 adult hatchery spawners.	7,382 adult hatchery spawners, above the goal.
MCB	No FMP objective; target of 7,900 hatchery adults.	Preliminary estimate of 14,116 adult hatchery spawners, above the target.
URB	Minimum 40,000 natural and hatchery adults above McNary Dam, plus meet treaty Indian obligations. *U.S. v. Oregon* parties agreed to 60,000 in 2011.	128,862 natural and hatchery adults over McNary Dam, well over the MSY target in FMP.

TABLE II-5. Performance of Chinook salmon stocks in relation to 2019 preseason conservation objectives (preliminary data).
(Page 2 of 2)

System and Stock	2019 Conservation/Management Objective(s)	Achievement
Columbia River Basin Fall Chinook (continued)		
Snake River Fall Chinook (Threatened; component of URB)	SRFI ≤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 0.481. Postseason estimate was not available.
Washington Coastal Chinook		
Fall	Natural spawner escapement objectives as provided in state-tribal agreements; meet hatchery egg-take goals and meet treaty Indian obligations.	Preliminary estimates: Quillayute, and Hoko were above the goal. Estimates for other fall stocks were not available.
Spring/Summer	Natural spawner escapement objectives as provided in state-tribal agreements; meet hatchery egg-take goals and meet treaty Indian obligations.	Preliminary estimates: Grays Harbor and Quillayute were under the goal. Estimates for other spring/summer stocks were not available.
Puget Sound Chinook		
(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 were not available. Preseason predictions of adult equivalent exploitation rates and spawner objectives were:

	Exploitation Rate	Spawner Esc.	ISBM	Exploitation Rate	Spawner Esc.	ISBM
· Nooksack spring	10.5% SUS	-	≤1.00	10.5%	-	0.95
· Skagit summer/fall	-	≥8.242	≤0.95	36.7%	12.224	NA[a/]
· Skagit spring	-	≥0.841	≤0.95	32.1%	1.616	NA[a/]
· Stillaguamish summer/fall	≤22% Total		≤1.00	18.0%	-	0.53
· Snohomish summer/fall	≤20% Total	-	≤1.00	15.8%	-	0.55
· Lake Wash. summer/fall	-	≥0.500	-	-	0.844	-
· White River spring	22% SUS	-	-	16.7%	-	-
· Green River summer/fall	-	≥1.200	-	-	2.161	-
· Puyallup summer/fall	-	≥0.750	-	-	1.115	-
· Nisqually summer/fall	≤47% Total	-	-	47.0%		-
· Skokomish summer/fall	≤50% Total	-	-	48.2%	-	-
· Mid-Hood Canal fall	≤12% pre-term SUS	-	-	11.8%	-	-
· Dungeness spring	≤10% SUS	-	-	1.2%	-	-
· Elwha summer/fall	≤10% SUS	-	-	1.4%	-	-

a/ ISBM obligation not applicable because escapement goal expected to be met.

TABLE II-6. Chinook stock status relative to overfished and overfishing criteria. A stock is overfished if the 3-year geometric mean spawning escapement is less than the minimum stock size threshold (MSST); a stock experiences overfishing if the total annual exploitation rate exceeds the maximum fishing mortality threshold (MFMT).

	Spawning Escapement									Exploitation Rate						
Chinook Stock	2014	2015	2016	2017	2018	2019	3-yr Geo Mean	MSST	S_{MSY}	2014	2015	2016	2017	2018	2019	MFMT
Sacramento Fall	212,476	113,468	89,699	43,466	105,531	162,532	**90,675**	91,500	122,000	0.61	0.55	0.56	0.68	0.53	NA	0.78
Klamath River Fall	95,104	28,112	13,937	19,904	52,352	20,245	**27,631**	30,525	40,700	0.36	0.59	0.37	0.10	0.28	NA	0.71
Southern Oregon	53,546	30,462	27,278	91,977	39,497	19,426	41,325	20,500	34,992	NA	NA	NA	NA	NA	NA	0.78
Central and Northern OR[a/]	157	247	118	114	92	64	88	30 fish/mile	150k-200k	0.44	0.43	0.48	0.46	NA	NA	0.78
Upper River Bright - Fall[a/]	233,934	323,276	151,373	96,096	58,540	86,239	78,576	19,182	39,625	0.53	0.40	0.51	0.48	NA	NA	0.86
Upper River - Summer[a/]	77,982	88,691	79,253	56,265	38,816	41,090	44,771	6,072	12,143	0.67	0.65	0.63	0.52	NA	NA	0.75
Willapa Bay - Fall[b/]	2,075	2,824	1,887	3,078	2,853	NA	2,549	1,696	3,393	0.58	0.48	0.61	0.55	NA	NA	0.78
Grays Harbor Fall[b/]	11,893	17,305	11,248	17,145	20,741	NA	15,874	5,694	13,326	0.58	0.48	0.61	0.55	NA	NA	0.78
Grays Harbor Spring	1,583	1,841	926	1,384	493	1,185	932	546	1,400	NA	NA	NA	NA	NA	NA	0.78
Queets - Fall[a/]	3,820	5,313	2,915	2,702	2,095	NA	2,546	1,250	2,500	0.58	0.48	0.61	0.55	NA	NA	0.87
Queets - Sp/Su	377	532	704	825	484	NA	655	350	700	NA	NA	NA	NA	NA	NA	0.78
Hoh - Fall[b/]	1,933	1,795	2,831	1,808	2,478	NA	2,332	600	1,200	0.58	0.48	0.61	0.55	NA	NA	0.90
Hoh Sp/Su	744	1,070	1,144	1,364	793	NA	1,074	450	900	NA	NA	NA	NA	NA	NA	0.78
Quillayute - Fall[b/]	2,782	3,440	3,654	3,604	3,937	7,256	4,687	1,500	3,000	0.58	0.48	0.61	0.55	NA	NA	0.87
Quillayute - Sp/Su	625	783	871	1,097	990	1,015	1,033	600	1,200	NA	NA	NA	NA	NA	NA	0.78
Hoko -Su/Fa[a/]	1,760	2,877	1,324	1,188	2,062	1,815	1,644	425	850	0.42	0.30	0.28	0.27	NA	NA	0.78

a/ CWT based exploitation rates from PSC-CTC 2019 Exploitation Rate Analysis and Model Calibration.

b/ Queets River fall Chinook coded-wire-tag (CWT) exploitation rates used as a proxy. Exploitation rates in the terminal fisheries will differ from those calculated for Queets fall CWTs.

TABLE II-7. Conservation objective and fishery impacts for Lower Columbia River Natural Tule Chinook.

Year	LCR Natural Tule Fishery Impact (Total Marine and Freshwater Exploitation Rate)		
	Conservation Objective	Preseason Projection	Postseason Estimate[a/]
2002	≤0.49	0.45	-
2003	≤0.49	0.47	0.39
2004	≤0.49	0.46	0.44
2005	≤0.49	0.44	0.52
2006	≤0.49	0.47	0.45
2007	≤0.42	0.42	0.48
2008	≤0.41	0.36	0.38
2009	≤0.38	0.38	0.39
2010	≤0.38	0.38	0.36
2011	≤0.37	0.37	0.42
2012	≤0.41	0.41	0.43
2013	≤0.41	0.41	0.33
2014	≤0.41	0.41	0.45
2015	≤0.41	0.40	0.36
2016	≤0.41	0.38	0.38
2017[b/]	≤0.41	0.37	0.36
2018[b/]	≤0.38	0.38	0.35
2019	≤0.38	0.36	NA

a/ Post season estimates for 2003-16 are from FRAM validation runs completed in Oct 2018.
b/ Postseason estimates preliminary.

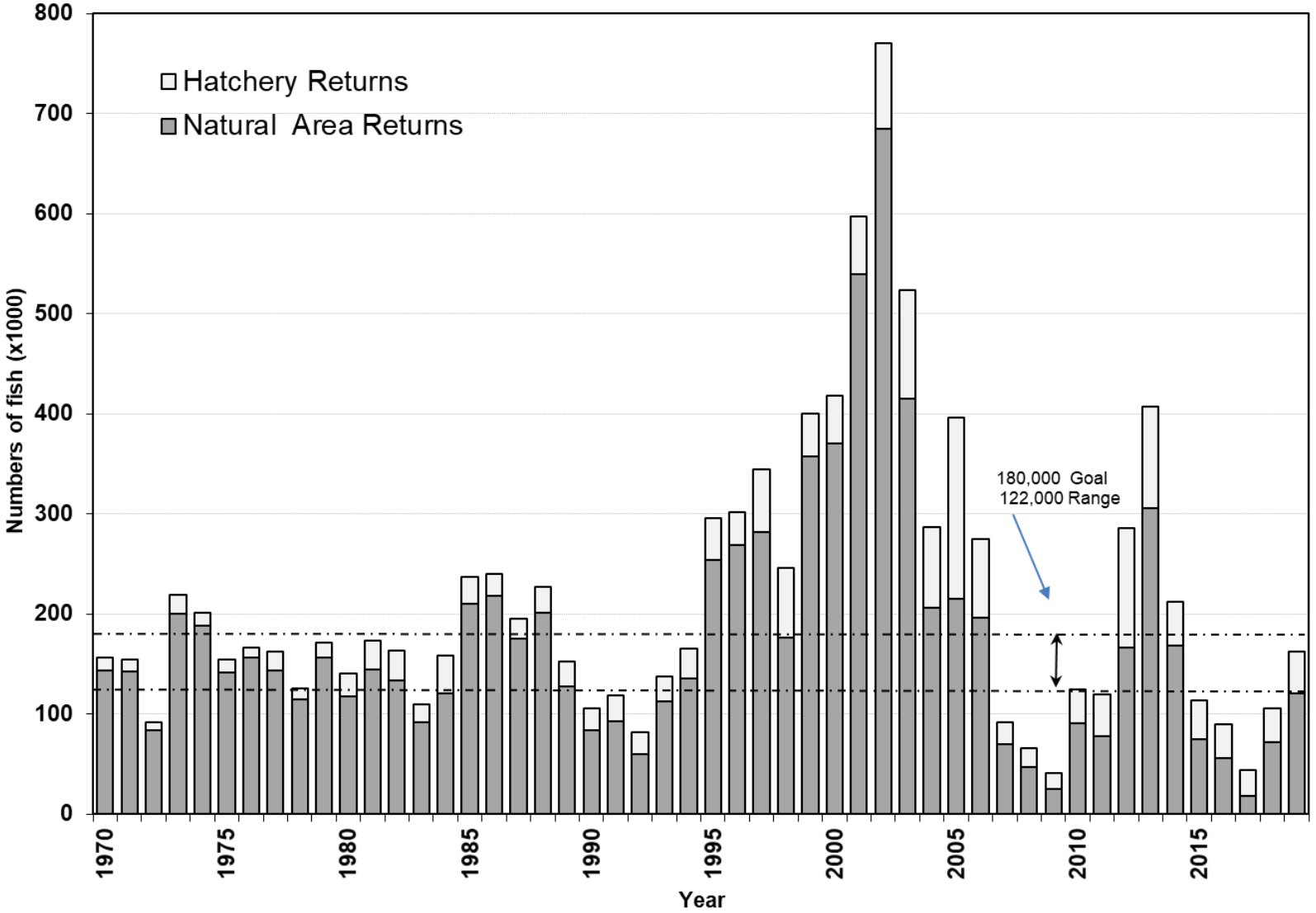

Figure II-1. Sacramento River adult fall Chinook spawning escapement, 1970-2019.

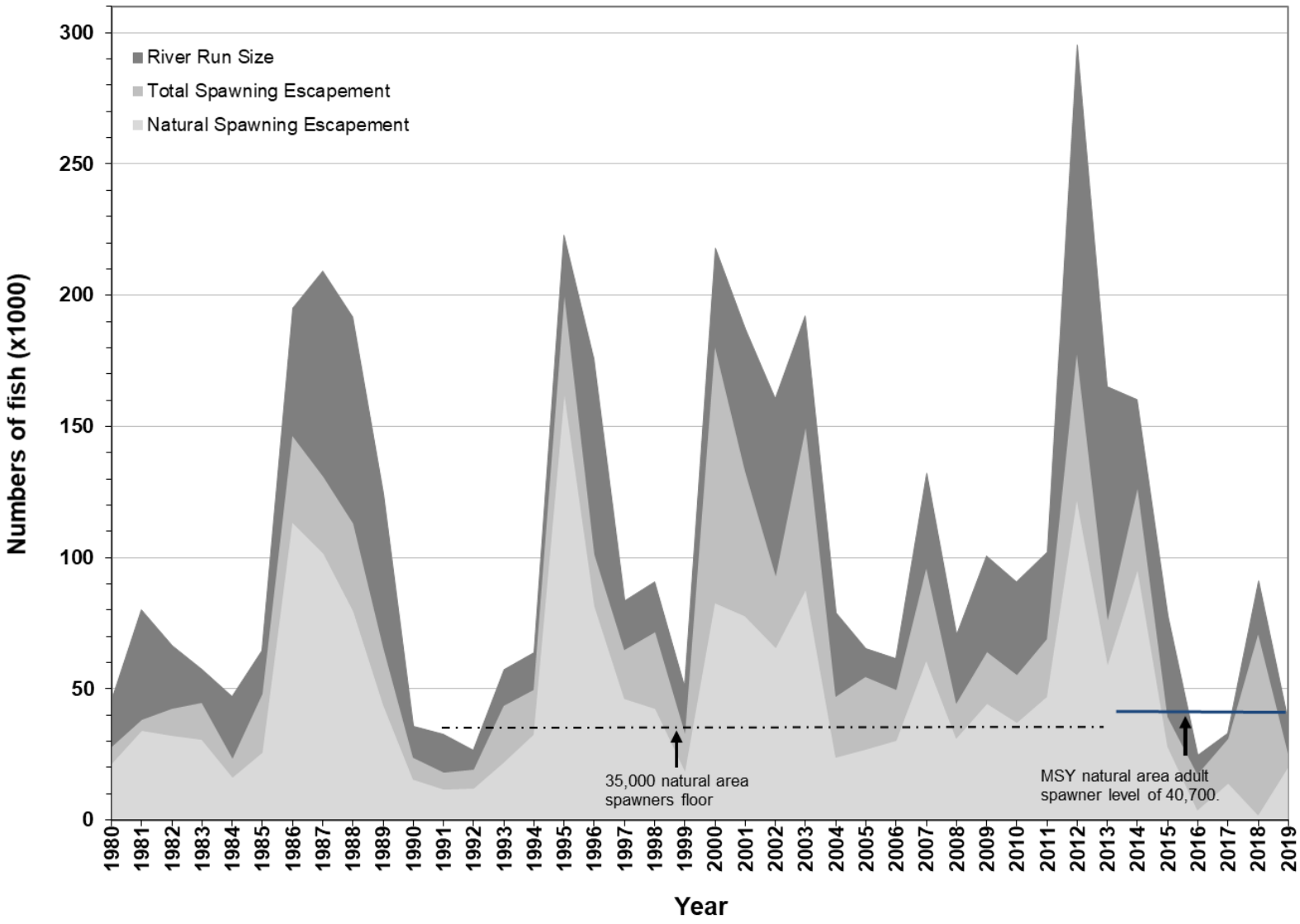

Figure II-2. Klamath River adult fall Chinook returns and spawning escapement, 1980-2019.

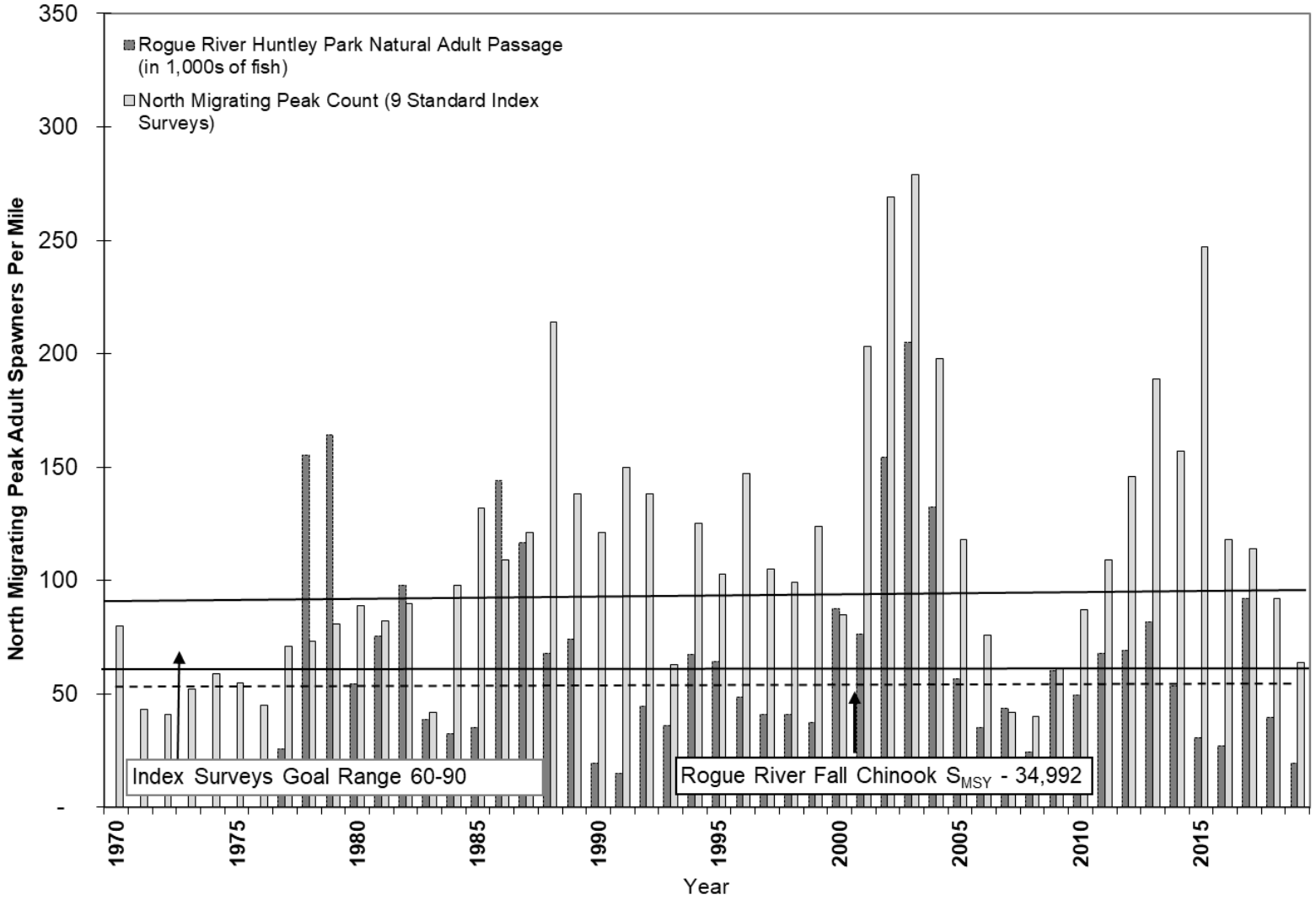

Figure II-3. Spawner indices for naturally produced Oregon coastal fall Chinook, 1970-2019.

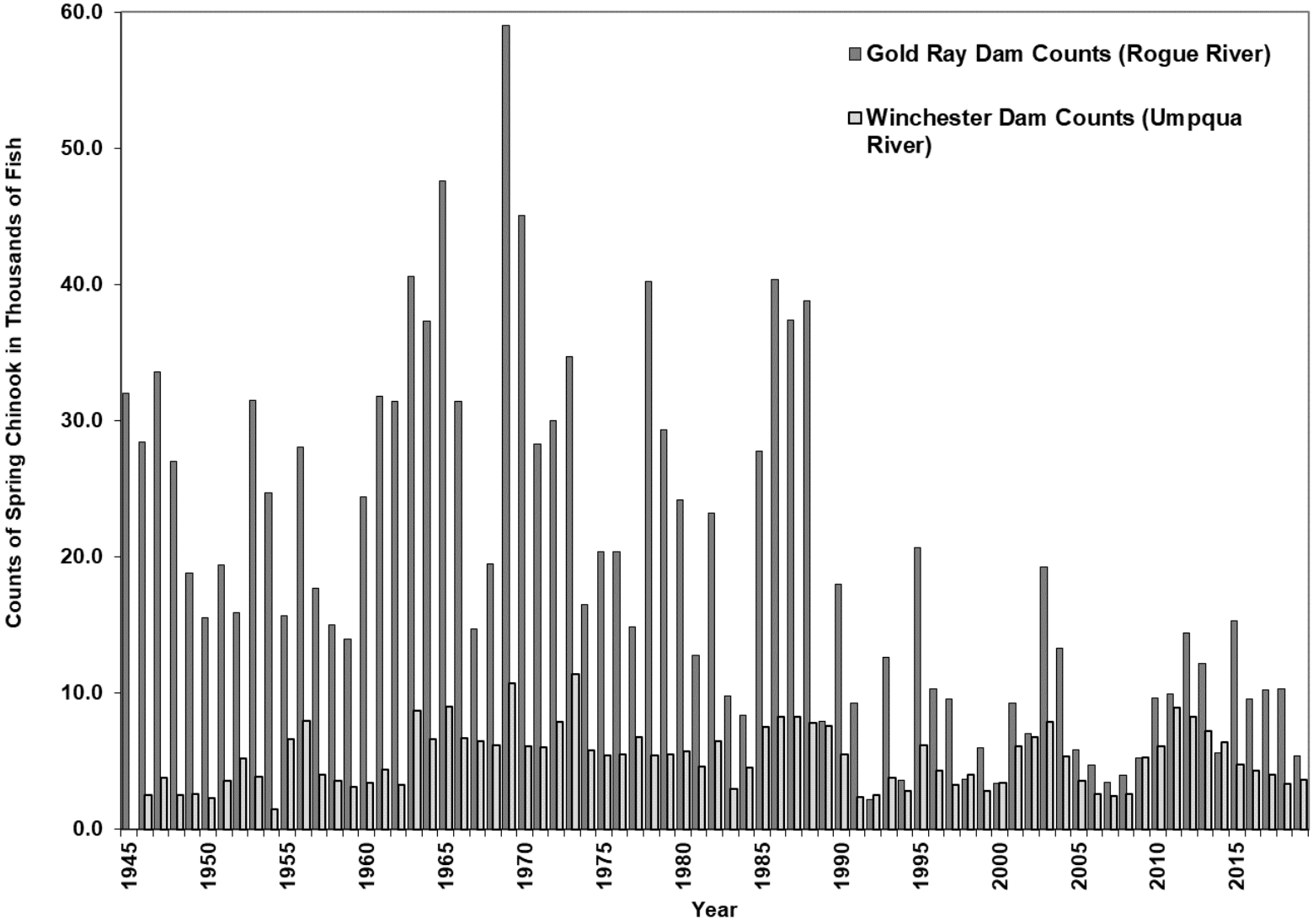

Figure II-4. Escapement indices for naturally produced Oregon coastal south/local migrating spring Chinook, 1945-2019.

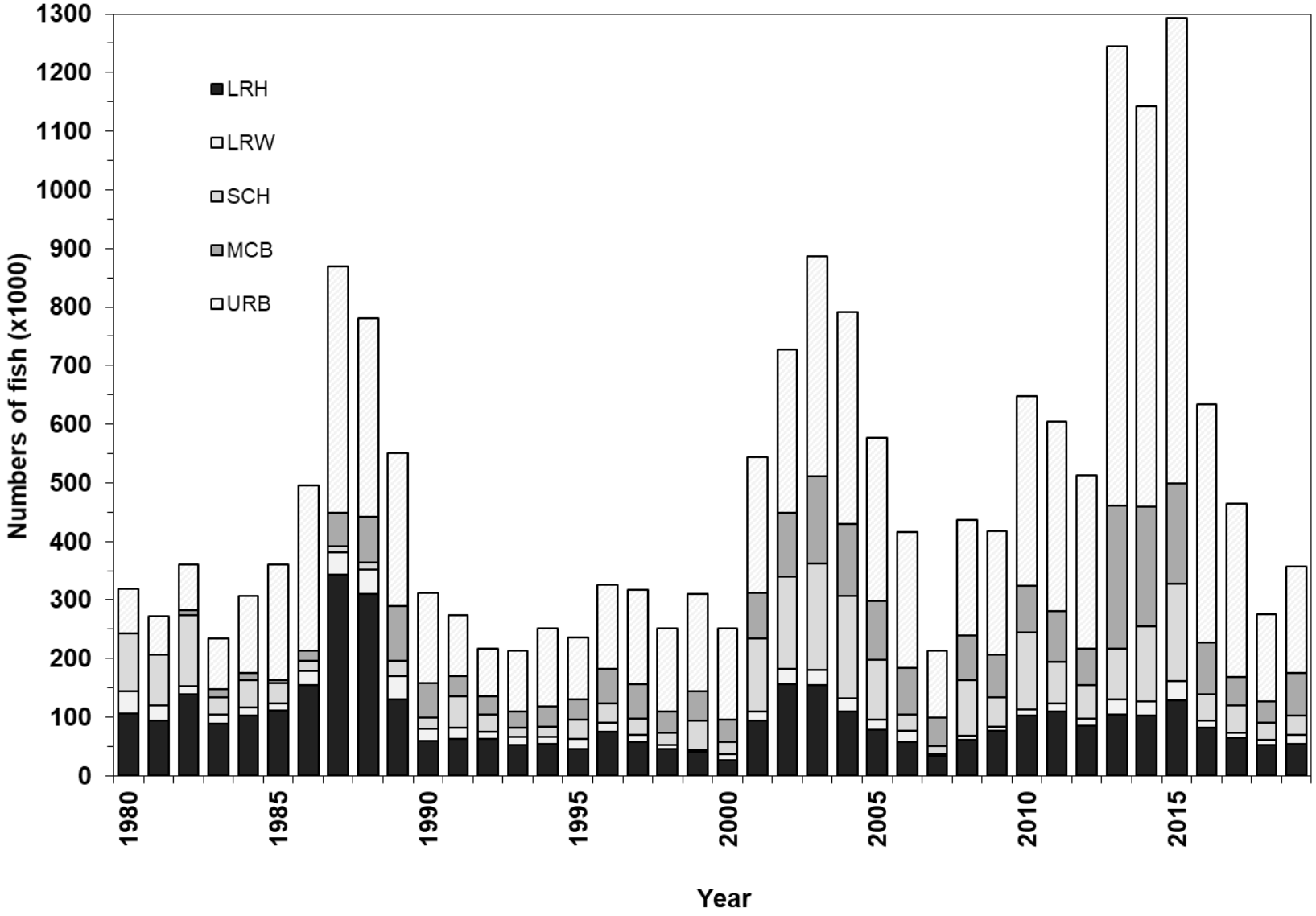

Figure II-5. Columbia River mouth adult returns of the five major fall Chinook stock groups, 1980-2019.

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. Prior to 2000, 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 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. Lower Columbia River natural (LCN) 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 2019 NMFS ESA guidance letter for LCN 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 23.0 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 the marine survival, the total allowable OCN coho exploitation rate for 2019 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 Coho Work Group during their review of Amendment 13. The work group recommendation was accepted by the Council as expert biological advice in November 2000. A modification to the marine survival index in the matrix was adopted by the Council in 2013.

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 has prohibited retention of coho in all fisheries south of the Oregon/California border since 1996. For the adopted seasons, the STT projected exploitation rates of 5.8 percent for RK coho in marine fisheries, 13.7 percent for OCN coho in marine and freshwater fisheries combined, and 18.0 percent for LCN coho in marine and freshwater fisheries combined.

Total allowable harvest set preseason for treaty Indian fisheries and the non-Indian commercial troll fisheries were 55,000 and 30,400 coho respectively. For the 2019 north of Cape Falcon recreational fisheries, the allowable harvest set preseason was 159,600. Season and size limit details are presented in Tables I-1, I-2, and I-3.

Commercial Troll

Commercial troll fisheries have been closed to coho retention south of Cape Falcon since 1993 except for limited fisheries in 2007, 2009, and 2014.

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 55,000 coho (Table I-2).

Non-Indian commercial troll fisheries from Cape Falcon to the U.S./Canada border in 2019 had an overall quota of 30,400 marked coho. (Table I-1). The fisheries were restricted to mark-selective retention of coho.

Recreational

From 1994 through 1998, coho retention was prohibited in Oregon recreational fisheries south of Cape Falcon. Retention of coho has been prohibited off California since 1996 to protect ESA-listed CCC coho. Mark-selective coho directed ocean recreational fisheries have been implemented in the OPI area since 1998. Limited non-mark-selective recreational ocean coho fisheries have occurred in recent years; 2004 between Leadbetter Point and the Queets River and since 2011 between Cape Falcon and Humbug Mountain. In 2012, 2013, and 2015 non-mark-selective fisheries occurred between the Queets River and Cape Falcon, and in 2014, non-mark-selective fisheries occurred in all areas from the U.S.-Canada border to Humbug Mountain. 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 2019, the recreational coho fisheries north of Cape Falcon operated with a quota of 159,600 (Table I-3). The recreational fishery between Cape Falcon and the Oregon/California border operated with a mark-selective quota of 90,000. After inseason adjustments, a non-mark-selective fishery with a quota of 15,640 occurred in September between Cape Falcon and Humbug Mountain (Table I-3).

Inside Harvest

Coho retention in all California fisheries was prohibited.

The 2019 inside recreational harvest of coho in Oregon coastal basins, as in recent years, was very restricted and generally limited to areas where abundant naturally-produced or hatchery coho returns were expected. Estimates of the 2019 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 (non-mark-selective) were approved in three lake systems in 2019. The preliminary total catch estimate for these fisheries was 290 coho.

The 2019 Columbia River non-Indian commercial net fishery harvested 21,300 adult coho. Select Area fisheries in both Oregon and Washington accounted for 18,600 of the total 2019 Columbia River commercial coho catch. The Columbia River treaty Indian mainstem commercial gillnet catch was approximately 3,900 coho. Columbia River commercial coho fisheries were mostly non-mark-selective in 2019. Coho harvest information for Columbia River commercial and recreational fisheries are reported in Appendix B, Table B-21.

All lower Columbia River recreational fisheries in 2019 were mark-selective for coho. In 2019, barbless hooks were not required in mainstem fisheries. The upriver boundary for the Buoy 10 fishery was at the Tongue Point, Oregon to Rocky Point, Washington line. In 2019 the Buoy 10 fishery opened August 1 for Chinook and marked coho, with a two fish daily-bag-limit but only one Chinook. From August 21 through December 31 the daily-bag-limit was two fish, and Chinook retention was prohibited. The 2019 Buoy 10 effort totaled 77,000 angler trips (Table III-2) and resulted in a harvest of 22,800 adult coho. Historical Buoy 10 catch and effort data are provided in Appendix B, Table B-22. Recreational coho harvest estimates for Columbia River mainstem downstream of Bonneville Dam are reported in Appendix B, Table B-21.

Escapement and Management Performance

The overall abundance estimate for OPI area stocks in 2019 was 414,000 compared to 232,400 in 2018, and to the recent ten-year average of 681,500 (Table III-3; Figure III-1). All Council area coho fisheries and quota limits are included in Table I-6.

Central California Coast and Northern California Coho

Table B-7 displays natural area coho spawning stock estimates for nine watersheds that have not been previously reported in this document, although estimates are mostly unavailable for the 2019 escapements.

For SONCC coho, redd counts are conducted in Redwood Creek, four tributaries to Humboldt Bay, and the South Fork Eel River, and in 2018 there were 554, 922, and 990 redds counted in these watersheds, respectively. These numbers are above average for Redwood Creek and Humboldt Bay, but below average for the South Fork Eel River. In Freshwater Creek, one of the tributaries to Humboldt Bay that is included in the aforementioned redd count, there were also escapement estimates derived from mark-recapture surveys. In 2018 and 2019, 420 and 312 coho were estimated to have entered Freshwater Creek, respectively, with both years being below average and the lowest escapements since 2013. In the Klamath Basin, estimates are available for escapement to hatcheries, but not for coho spawning in natural areas. In 2019, a total of 109 adult coho returned to Trinity River Hatchery and 619 adult coho returned to Iron Gate Hatchery (hatchery spawners are not reported in Table B-7).

For CCC coho, Table B-7 displays escapement estimates for Ten Mile River, Pudding Creek, Noyo River, and Little River. In 2018, an estimated 1,106, 755, 1,269, and 17 coho returned to these watersheds, respectively, which is above average for Ten Mile River and Pudding Creek, but below average for the Noyo and Little rivers. Escapement estimates are also shown for the Big River, but there are no data available for 2018. Further south in the CCC coho ESU, redd counts are conducted in the Lagunitas Creek basin. In 2018 and 2019, 306 and 44 redds were counted, respectively, and the 44 redds in 2019 is the second-lowest count in the time series behind 2008. However, the spawning season for this watershed may not be complete and the final redd count will likely change.

Oregon Coast Natural Coho

The preliminary estimate of natural spawner escapement in 2019 to Oregon coastal river and lake systems from the Sixes River north (Oregon Coast ESU) was 91,900 adult coho. This compares to 74,100 adults in 2018. Historical spawner escapement estimates of naturally produced coho are reported in Table III-1.

Preliminary information indicates the total natural spawning population on the Oregon Coast was the highest since 2014. The total estimate of the natural spawning population in 2019 was 94,100, 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 is 14.7 percent, which is slightly higher than the preseason projection of 13.7 percent, and less than the 15.0 percent maximum allowed under the OCN work group matrix.

Preliminary postseason estimates of marine exploitation on RK coho is 3.4 percent, which is lower than the preseason projection of 5.8 percent, and less than 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 1,600 adults (Table III-1).

Columbia River Coho

The 2019 ocean escapement of adult early and late Columbia River coho stocks was 210,900 fish, compared to 137,900 adults in 2018 (Appendix B, Table B-21).

Preliminary postseason estimates of marine exploitation on LCN coho was 15.9 percent, which is higher than the preseason projected 13.7 percent. The total exploitation rate (marine and freshwater), was estimated at 21.0 percent, less than the 23.0 percent allowed (Table III-5).

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

Preseason management goals for Grays Harbor and Olympic Peninsula coho stocks include achieving natural spawning escapement objectives and treaty Indian allocation requirements. The Council's preseason 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* v. *Baldrige*. The conservation objectives for the Queets, Hoh, and Quillayute rivers were developed as ranges intended to bracket estimates of MSY escapement. The range reflected the inherent uncertainty 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.* v. *Washington* and subsequent U.S. District Court orders. After an annual agreement was reached, ocean fishery escapement objectives were established for each river or region of origin. Agreements included provisions for treaty Indian allocation requirements and inside non-Indian fishery needs.

In December 2011, Amendment 16 to the FMP was approved, which established new conservation objectives and SDC for Washington coastal coho based on either S_{MSY} estimates derived from FRAM run reconstruction programs or existing conservation objectives.

Regulations to Achieve Objectives

Washington coastal coho stocks played a primary role in 2019 Council-area ocean fishery management, particularly north of Cape Falcon. All ocean coho fisheries both north and south of Cape Falcon were mark-selective except for a September recreational coho fishery south of Cape Falcon. Season and size limit details are presented in Tables I-1, I-2, and I-3.

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 2019 gillnet coho harvest in Willapa Bay totaled 8,200 fish. Based on the preseason forecast for a terminal run of 139,134 fish, the scheduled commercial fisheries were expected to harvest approximately 28,861 total coho. There were 27 12-hour Chinook and coho directed non-Indian gillnet fishery openings September 3 through October 11, 2019. Retention of both marked and unmarked coho was allowed. Unmarked Chinook retention was prohibited. Non-directed openings were scheduled November 1 through November 30, 2019.

Beginning November 11, 2019, a commercial closure to salmon fishing was enacted due to natural coho escapement concerns. The fishery was not reopened for the remainder of the scheduled season.

From June 22, 2019, through July 31, 2019, Willapa Bay (Marine Area 2-1) was open for recreational fishing concurrent with Marine Area 2 (ocean rules applied). From August 1, 2019 through January 31, 2020, Willapa Bay was scheduled to be open to recreational fishing with a daily-bag-limit of 6 salmon, only 2 may be adults. Anglers were required to release unmarked Chinook.

Freshwater recreational fisheries in the Willapa bay watersheds varied in duration but were generally open for salmon fishing as early as August 1, 2019, through January 31, 2020 with a daily-bag-limit of 6 salmon, only 2 may be adults. Anglers were required to release unmarked Chinook. Barbless hooks were required when fishing for salmon. Anglers could fish with two poles, if they had a Two-Pole Endorsement.

Expected harvest in all recreational fisheries based on preseason forecast abundance was 14,620 hatchery and wild coho. Marine and freshwater recreational harvest estimates were unavailable for 2019, but for 2018, Marine Area 2-1 and freshwater recreational harvest estimates totaled 2,181 fish.

Beginning November 13, 2019, a recreational (marine, and freshwater) closure to salmon fishing was enacted due to natural coho escapement concerns. The fisheries were not reopened for the remainder of the scheduled season.

Escapement and Management Performance

Willapa Bay coho were managed primarily for natural production. Estimates of natural spawning escapement for 2019 were unavailable. The most recent but still preliminary natural area escapement estimate available was 14,920 in 2018, which did not meet the FMP escapement objective of 17,200 natural area spawners. Escapement to Willapa Bay hatcheries in 2018 was estimated at 12,542 coho, which met the WDFW escapement objective of 6,100 spawners.

The geometric mean of Willapa Bay coho natural spawning escapements in 2016, 2017, and 2018 is 17,074, which was above the MSST of 8,600; therefore, Willapa Bay coho should not be considered overfished. Estimates of Willapa Bay coho exploitation rates were not available for 2018 or 2019; however, fisheries in earlier years resulted in exploitation rates well below the MFMT (0.74); therefore, Willapa Bay coho should not be considered subject to overfishing (Table III-7).

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 2018 terminal run size estimates for Grays Harbor coho, after execution of the ocean fishery were 57,980 natural origin and 22,043 hatchery origin coho. The 2019 terminal runsize data are not available.

The 2019 Treaty Indian gillnet and non-Treaty gillnet fisheries reported a harvest of 10,207 coho (natural, hatchery, and net-pen origin). The non-Treaty sport and Chehalis Tribe fisheries were underway at the time of this report and data was unavailable. The 2019 pre-terminal fishery was conducted to limit the impact to Queets coho and other limiting coho stocks, while the Grays Harbor terminal fisheries were conducted with regulations designed to restrict Chehalis River Chinook impacts.

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 preseason expected coho fishery impacts were limited by the expected abundance and harvest of Chinook in the Lower Chehalis side of the fishery. The combined Grays Harbor Treaty coho harvest was 8,207.

The non-Indian gillnet fishery in Humptulips commercial Area 2C was scheduled to open for two 12-hour days in late October. Retention of all fall Chinook, coho, and chum was allowed. Total catch of coho in Area 2C was five fish, four percent of the expected harvest. The non-Indian gillnet fishery in the Chehalis River, commercial Areas 2A and 2D, was scheduled to open for eight 12-hour days in late October. During these fisheries, all areas of 2D were open with live boxes required and wild Chinook could not be retained. Total catch for areas 2A and 2D is 2,000 coho, 50 percent of the predicted harvest estimate.

Chehalis Tribe Chehalis River upper mainstem fisheries occurred in the fall of 2019. Harvest data are not currently available.

The 2019 recreational fisheries were conducted in three general areas: Marine Area 2.2, the Chehalis River and its tributaries, and the Humptulips River. Catch estimates ae not currently available.

A recreational fishery in the northern portion of Marine Area 2-2, Commercial Area 2C, was open from August 1 through September 15. During this time, one adult salmon could be retained, and wild coho must be released. From September 16 through November 30, the portion of Marine Area 2-2 east of a line from the mouth of Johns River to Brackenridge Bluff Tripod was open for the retention of two adult salmon per day.

The Chehalis River and its tributaries were scheduled to open in 2019 for coho fishing on the following dates and areas:

- Chehalis River mainstem downstream of the Hwy 107 Bridge: August 1 through September 15, with a daily limit of 6 and all adults must be released. September 15 through November 15: adult daily limit of two, and all Chinook must be released. November 16 to December 31: adult daily limit was one fish and all Chinook must be released.
- Upstream of the South Elma Bridge (Wakefield Road) to the high bridge on Weyerhaeuser 1000 line approximately 400 yards downstream from Roger Creek and tributaries: September 15 through November 15, with a daily limit of two adults may be retained and all Chinook must be released. November 16 to December 31: adult daily limit was one fish and all Chinook must be released.

The Humptulips River recreational fishery was scheduled to open in 2019 for coho fishing on the following dates from the mouth to the confluence of the East and West forks:

- September 1 through September 30: a daily limit of 2 adults may be retained; wild Chinook and wild coho must be released.
- November 1 through December 31: a daily limit of one adult may be retained; wild Chinook and wild coho must be released

Escapement and Management Performance

Grays Harbor coho are managed by the co-managers for natural production with a spawning escapement goal of 35,400, which exceeds the FMP S_{MSY} of 24,426. The 2019 spawning escapement and terminal run size estimates for Grays Harbor coho are unavailable. The preliminary escapement estimate for 2018 natural spawning coho is 49,622. The 2018 terminal runsizes are estimated at 57,980 natural-origin coho and 22,043 hatchery-origin coho. The returns of hatchery-origin coho to Grays Harbor hatchery programs were sufficient to provide for 2019 coho production goals. The 2019 escapement has not been determined, but 363 natural origin fish were taken for hatchery broodstock.

The geometric mean of Grays Harbor coho natural spawning escapements in 2016, 2017, and 2018 is 37,213, which exceeded the MSST of 18,320; therefore, Grays Harbor coho should not be considered overfished. Estimates of Grays Harbor coho exploitation rates were not available for 2018 or 2019; however, fisheries in earlier years resulted in exploitation rates well below the MFMT (0.65); therefore, Grays Harbor coho should not be considered subject to overfishing (Table III-7).

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 4,350 coho were harvested by the gillnet fishery during the 2019 season.

Escapement and Management Performance

Quinault River coho were managed for hatchery production. Escapement estimates for Quinault River coho in 2019 were unavailable. The Quinault National Fish Hatchery egg take objectives for 2019 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 abundance estimates and planned Council ocean fisheries. The 2019 fishery was structured to target returning hatchery coho while limiting incidental impacts on natural coho, which were also limiting to marine harvest coast-wide, and limiting total freshwater Chinook harvest to a maximum rate of 40 percent. The schedule and mesh size restrictions fished in 2019 are depicted in the discussion of the Chinook directed fishery. The total harvest of coho in the Treaty Indian gillnet fishery was 2,560 commercially-landed fish, which was less than the preseason modeled catch of 6,064. The gillnet harvest was comprised of a mix of early-timed hatchery fish and normal/late-timed natural fish. A final estimate of the hatchery/natural mix in the catch is currently unavailable.

The 2019 recreational fishery within the Quinault Reservation was conducted from August 26 through December 1 under standard regulations for the Salmon River fisheries on the Reservation. The 2019 recreational catch estimates are not available. In 2018, the recreational catch estimate was 184 adult fish.

Recreational fisheries outside of reservation lands were scheduled in Queets, Clearwater, and Salmon rivers outside the Quinault reservation and were open September through November for salmon fishing to focus the fishery on early timed hatchery coho. The recreational fishery in the Clearwater allowed one adult salmon. In the Queets and Salmon rivers, anglers could keep up to two adult salmon and were required to release wild coho.

Escapement and Management Performance

The spawning escapement objective in the FMP for Queets River coho is a range of 5,800-14,500 natural adult spawners. In 2019, comanagers agreed to a spawning escapement objective of 6,781 adult coho. The preliminary 2019 spawning escapement estimate is not available but is anticipated to be below the preseason expectation. In 2018, the comanagers agreed to a spawning escapement objective of 5,629, which was equal to the preseason expected natural coho escapement, but below the range of 5,800-14,500 natural adult spawners in the FMP. The 2018 final natural coho escapement estimate was 2,631 adult fish.

The geometric mean of Queets River coho escapement in 2016, 2017, and 2018 was 4,140, which is below the MSST of 4,350. In June 2018, NMFS' published an overfished designation for Queets River coho based on the geometric mean of escapement in 2014-16 of 4,291. A rebuilding plan was adopted by the Council in September 2019, therefore no additional action is warranted and the stock remains categorized as 'overfished' (Table III-7). Estimates of Queets River coho exploitation rates were not available for 2018 or 2019; however, fisheries in earlier years resulted in exploitation rates well below the MFMT (0.65); therefore, Queets River coho should not be considered subject to overfishing (Table III-7).

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 2019 forecast for the terminal runsize of Hoh River natural coho was 6,021. The tribal fishery targeted 35.5 percent of the terminal run. The treaty Indian gillnet fishery occurred from the week of September 16 to the week of November 26 as described in Chapter II under the section labeled Hoh River Chinook. The Tribal commercial fishery harvested total was 1,485 wild coho.

The non-Indian recreational fishery was open September 16 through November 30, from the Olympic National Park boundary upstream to the Oxbow Campground boat launch, and open October 16 through November 30 from the Oxbow Campground upstream to Morgans Crossing Boat Launch. Regulations allowed a daily-bag-limit of 6 salmon, only 2 of which could be adult salmon, and only 1 of which could be a Chinook, only 1 barbless hook allowed. November 16 through November 30 an Emergency rule was enacted that reduced the adult portion of the daily bag limit to 1 fish. A catch estimate for the 2019 recreational fishery of wild coho was not available, the most recent 3 year average (2016-2018) sport catch available is 444.

Escapement and Management Performance

The preliminary 2019 spawning escapement estimate for coho in the Hoh River is not available. The escapement goal range established for this stock is 2,000 to 5,000.

The geometric mean of Hoh River coho escapement in 2016, 2017, and 2018 was 3,809, which exceeds the MSST of 1,890, therefore Hoh River coho should not be considered overfished. Estimates of Hoh River coho exploitation rates were not available for 2017, 2018, or 2019. However, fisheries in 2016 resulted in an exploitation rate well below the MFMT (0.65), therefore, Hoh River coho should not be considered subject to overfishing (Table III-7).

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. The 2019 Quileute Tribe's commercial, ceremonial, and subsistence fisheries harvested 637 summer coho (281 hatchery and 356 natural). The 2019 recreational fishery catch estimates included 553 summer coho (526 hatchery and 27 natural) and 2,145 fall coho (1,524 hatchery and 611 natural).

Both the treaty and non-treaty fall fisheries were reduced in 2019 from previous years for conservation reasons. The Quileute Tribe greatly reduced the total number of days fished in their 2019 fall IGN fishery by restricting weekly open periods to one and a half days in weeks 36 through 40, and week 44. Additionally, weeks 41 through 43 were restricted to only half a day per week, along with other emergency gear restrictions that limited mesh size. Due to in season modeling and an adjustment for a more reduced coho terminal runsize (TRS), the IGN fishery was closed October 30 through November 24. The 2019 tribal harvest of fall coho was 3,151 (1,265 hatchery and 1,886 natural). Fall coho taken in the ceremonial and subsistence fishery are included in the IGN catch.

The 2019 recreational coho fishery in the Quillayute (park boundary to confluence of Bogachiel and Sol Duc) and Sol Duc (mouth to Sol Duc hatchery) was open:

- February 1 through August 31 with up to two adults retained (release wild adult Chinook, wild adult coho, and sockeye),
- September 1 through September 15 with up to three adult salmon of which one could be a wild Chinook (release wild adult coho and sockeye),
- September 16 through November 3 with up to three adult salmon of which one could be a wild Chinook or a wild coho (release sockeye),

The areas closed to all fishing through emergency rule November 4 through November 22 and reopened:

- November 23 through November 30 with previous rules except release wild coho.

The Bogachiel (mouth to hwy 101 bridge), Dickey (ONP boundary to confluence with East and West Forks) and Calawah (mouth to hwy 101 bridge) were open:

- July 1 through August 31 with up to two adult salmon allowed (release wild coho and wild Chinook)
- September 1 through November 4 with a limit of one adult salmon.

The areas closed to all fishing through emergency rule November 4 through November 22 and reopened:

- November 23 through November 30 with the same rules except release wild coho.

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 2019 summer coho hatchery rack return was 815, which exceeds the goal of 300 hatchery summer coho. The 2019 wild summer coho escapement estimate was 499 fish.

The 2019 preliminary escapement estimate for Quillayute natural fall coho was 6,506, which includes 20 brood stock fish. The 2019 Sol Duc Hatchery rack return for fall coho was 4,712 adults and 2,398 jacks.

The geometric mean of natural Quillayute fall coho escapement in 2017, 2018, and 2019 was 6,666, which exceeds the MSST of 4,725; therefore, Quillayute fall coho should not be considered overfished. Estimates of Quillayute fall coho exploitation rates were not available for 2018 or 2019; however, fisheries in earlier years resulted in exploitation rates below the MFMT (0.59); therefore, Quillayute Fall coho should not be considered subject to overfishing (Table III-7).

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.* v. *Washington* and subsequent U.S. District Court orders (see "Memorandum Adopting Salmon Management Plan"; *U.S.* v. *Washington*, 626 F. Supp. 1405 [1985]).

In 2002, the PSC adopted a management plan for coho salmon originating in Washington and southern B.C. river systems. 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 U.S. 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 2019. 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 2014, the Council adopted management objectives for Puget Sound coho as recommended by WDFW and tribal co-managers under provisions of *U.S.* v. *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 2019, the objectives and categorical status under the PST Southern Coho Management Plan were as follows:

- Strait of Juan de Fuca (East and West): Low status 20 percent maximum exploitation rate
- Hood Canal: Moderate status 45 percent maximum exploitation rate
- Skagit: Moderate status 35 percent maximum exploitation rate
- Stillaguamish: Abundant status 50 percent maximum exploitation rate
- Snohomish: Moderate status 40 percent maximum exploitation rate

Regulations to Achieve Objectives

Puget Sound coho stocks did not play a primary role in 2019 ocean fishery management considerations, since management of impacts to Washington coastal natural coho and LCN coho were more constraining. Inside fisheries, primarily in Puget Sound, were constrained to meet objectives for Puget Sound 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 Washington Coast coho, Puget Sound coho, LCN coho, OCN coho, and Interior Fraser coho. Season and size limit details are presented in Tables I-1, I-2, and I-3.

Inside Harvest

Inside harvest of Puget Sound coho was managed on the basis of the six regional management units. 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-39. The 2019 total Puget Sound commercial catch of coho was 92,185 fish, compared to a catch of 251,401 coho in 2018. Non-Indian harvest was 2,980 coho, compared to 9,645 coho in 2018. Treaty Indian net and troll fisheries harvested 89,205 coho, compared to 241,756 coho in 2018.

Historical coho catches in the Puget Sound recreational fishery beginning in 1971 are listed in Appendix B, Table B-40. Catch estimates for the 2019 Puget Sound recreational fishery were unavailable.

Escapement and Management Performance

Puget Sound FMP conservation objectives were updated to reflect exploitation rate management objectives adopted by the Council in 2009. No 2019 postseason estimates were available for SUS harvest impacts on Puget Sound coho stocks; therefore, the 2019 preseason exploitation rate objectives could not be evaluated. Preliminary 2019 escapement information was not available for natural Puget Sound coho.

Strait of Juan de Fuca Coho

The geometric mean of Strait of Juan de Fuca natural coho escapement (combined Western and Eastern; the current stock designation) in 2016, 2017, and 2018 was 6,343, which was below the MSST of 7,000 and below the S_{MSY} estimate of 11,000. In June 2018, NMFS' published an overfished designation for Strait of Juan de Fuca coho based on the geometric mean of escapement in 2014-16 of 6,842. A rebuilding plan was adopted by the Council in September 2019, therefore no additional action is warranted and the

stock remains categorized as 'overfished'. Estimates of Strait of Juan de Fuca coho exploitation rates were not available for 2018 or 2019; however, fisheries in earlier years resulted in exploitation rates well below the MFMT (0.60); therefore, Strait of Juan de Fuca coho should not be considered subject to overfishing (Table III-7).

Hood Canal Coho

Coho escapement estimates for Hood Canal in 2018 were not available at time of printing. The geometric mean of Hood Canal natural coho escapement in 2015, 2016, and 2017 was 24,794, which was above the MSST of 10,750; therefore, Hood Canal coho should not be considered overfished. Estimates of Hood Canal coho exploitation rates were not available for 2018 or 2019; however, fisheries resulted in an exploitation rate above the MFMT (0.65) in 2014 and below the MFMT in 2015, 2016, and 2017; therefore, Hood Canal coho were subject to overfishing in 2014 (Table III-7).

Skagit River Natural Coho

The geometric mean of Skagit natural coho escapement in 2016, 2017, and 2018 was 23,970, which was above the MSST of 14,875; therefore, Skagit coho should not be considered overfished. Estimates of Skagit coho exploitation rates were not available for 2018 or 2019; however, fisheries resulted in exploitation rates above the MFMT (0.60) in 2015 and below the MFMT in 2014, 2016, and 2017; therefore, Skagit coho were subject to overfishing in 2015 (Table III-7).

Stillaguamish River Natural Coho

The geometric mean of Stillaguamish natural coho escapement in 2016, 2017, and 2018 was 12,396, which was above the MSST of 6,100; therefore, Stillaguamish coho should not be considered overfished. Estimates of Stillaguamish coho exploitation rates were not available for 2018 or 2019; however, fisheries in earlier years resulted in exploitation rates below the MFMT (0.50); therefore, Stillaguamish coho should not be considered subject to overfishing (Table III-7).

Snohomish River Natural Coho

The geometric mean of Snohomish natural coho escapement in 2016, 2017 and 2018 was 36,009, which was above the MSST of 31,000. In June 2018, NMFS' published an overfished designation for Snohomish natural coho based on the geometric mean of escapement in 2014-16 of 29,677. A rebuilding plan was adopted by the Council in September 2019; the stock now meets the criteria for 'not overfished/rebuilding' status. Estimates of Snohomish coho exploitation rates were not available for 2018 or 2019; however, fisheries in earlier years resulted in exploitation rates below the MFMT (0.60); therefore, Snohomish coho should not be considered subject to overfishing (Table III-7).

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 the 2019 management process, Interior Fraser coho were designated to be in the "low" status category, which required the total exploitation rate in SUS fisheries not to exceed 10.0 percent. This requirement was not a constraint for Council area and inside fisheries. The preseason expectation was that the total SUS fishery exploitation rate on Interior Fraser coho would not exceed 10.0 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.

COASTWIDE GOAL ASSESSMENT SUMMARY

Preliminary assessment indicates that ESA consultation standards and FMP conservation objectives for Council managed coho stocks in effect during the preseason planning process of 2019 were met for Rogue/Klamath, OCN, and LCN coho stocks (Table III-6). The preliminary 2019 postseason escapement estimate for Quillayute fall coho is below the FMP conservation objective. The 2019 data needed to assess compliance with FMP conservation objectives and ESA consultation standards for most other Washington coastal, and Puget Sound coho stocks were unavailable.

Stock Status Determinations

The Council adopted SDC for overfishing, overfished, not overfished/rebuilding, and rebuilt under FMP Amendment 16. These criteria, approved and implemented in December 2011, were:

- Overfishing occurs when a single year exploitation rate exceeds the MFMT (F_{MSY});
- Overfished status occurs when a 3-year geometric mean spawning escapement is less than the MSST;
- Not overfished/rebuilding status occurs when the most recent 3-year geometric mean spawning escapement is greater than the MSST but less than S_{MSY};
- A stock is rebuilt when the most recent 3-year geometric mean spawning escapement exceeds S_{MSY}.

All criteria rely on the most recent estimates available, which in some cases may be a year or more in the past because of incomplete broods or data availability. The above criteria for rebuilt status are the default criteria provided in the FMP; however, alternative criteria may be developed through a rebuilding plan if warranted by stock specific circumstances. All relevant stocks were evaluated relative to these SDC as required by the FMP. Stock specific reference points and recent year estimates for relevant stocks are presented in Table III-7.

Based on these SDC, Strait of Juan de Fuca and Queets natural coho continue to meet the criteria for overfished status (using the most recent data from 2016, 2017, and 2018). Snohomish natural coho now meet the criteria for 'not overfished/rebuilding' status (using the most recent data from 2016, 2017, and 2018). In June 2018, NMFS published an overfished designation for these three coho stocks based on the geometric mean of escapement in 2014-16. A rebuilding plan was adopted by the Council in September 2019 for each of these stocks. Exploitation rate estimates for these stocks are not available for 2019. The most recent year where exploitation rates are available is 2017, and no stocks were subject to overfishing.

TABLE III-1. Estimated returns to Oregon coastal streams and lakes in thousands of adult coho.

	Returns to Hatcheries			Winchester Dam Count[c/]	Number of OCN Spawners[a/]			Inside Harvest	Ocean Escapement to
Year	Private	Public	STEP[b/]	(North Umpqua)	Lakes	Rivers	Total	Impacts[d/]	Oregon Coast[a/]
1970-75	-	-	-	-	-	-	-	-	-
1976-80	26.1	19.0	-	0.4	4.0	26.6	30.6	9.1	79.9
1981-85	176.8	18.0	-	2.2	7.2	46.1	53.3	12.9	263.2
1986-90	154.3	26.9	1.3	3.6	6.2	37.1	43.3	15.2	244.6
1991	35.1	39.6	4.9	3.9	7.1	33.8	40.9	31.5	155.8
1992	-	23.3	0.6	5.0	2.0	44.7	46.6	18.7	94.3
1993	-	20.2	2.0	2.3	10.1	49.2	59.2	13.3	97.1
1994	-	23.4	1.8	2.0	5.7	41.7	47.4	2.5	77.1
1995	-	25.2	0.4	2.7	11.1	50.1	61.2	3.7	93.2
1996	-	23.4	1.0	5.1	13.4	69.2	82.7	4.1	116.4
1997	-	17.7	0.2	3.1	8.6	15.2	23.8	4.3	49.2
1998	-	15.3	0.2	6.3	11.1	21.5	32.6	5.2	59.7
1999	-	13.3	0.4	4.1	12.5	34.7	47.2	2.8	67.9
2000	-	15.0	0.5	13.4	12.7	61.0	73.8	4.4	107.1
2001	-	37.4	1.4	16.0	19.6	143.1	162.7	10.0	227.6
2002	-	30.9	2.6	7.4	22.0	236.4	258.4	8.0	307.3
2003	-	15.9	3.6	10.4	16.1	213.3	229.4	6.8	266.2
2004	-	13.2	0.8	7.2	18.6	154.1	172.8	6.3	200.3
2005	-	10.0	0.3	8.9	14.7	139.9	154.6	6.1	179.9
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	1.3	73.9
2008	-	7.0	0.0	0.2	23.6	156.1	179.7	3.0	189.9
2009	-	6.1	0.0	0.6	17.3	245.4	262.7	7.3	276.8
2010	-	7.9	0.0	0.7	38.7	244.7	283.4	5.7	297.6
2011	-	4.6	0.0	0.2	20.3	336.0	356.2	12.8	373.8
2012	-	2.2	0.0	0.7	18.9	80.2	99.2	8.1	110.1
2013	-	6.5	0.0	0.6	13.7	110.8	124.4	12.0	143.5
2014	-	16.0	0.0	0.1	22.0	337.6	359.6	23.5	399.2
2015	-	4.7	0.0	0.2	4.7	52.4	57.1	4.2	66.2
2016	-	8.9	0.0	0.1	8.0	67.9	75.9	1.8	86.7
2017	-	2.3	0.0	0.2	1.3	60.1	61.4	1.0	64.9
2018	-	1.1	0.0	0.2	6.7	67.4	74.1	1.1	76.5
2019[e/]	-	1.6	0.0	0.4	7.4	84.5	91.9	1.4	95.3

a/ Does not include estimates for the Rogue River (SONCC ESU). 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, marked fish only thereafter.

d/ Freshwater sport catch from ODFW salmon/steelhead angler catch record card information and represents only those coho greater than 24 inches total length through 1993, and those coho with a total length greater than 20 inches from 1994 on. 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 2019 Buoy 10 recreational fisheries (all data are preliminary).[a/]

Week Number	Ending Date of Period	Angler Trips	Catch[b/]		Catch Per Trip
			Chinook	Coho	
31	Aug.-4	3,822	509	164	0.18
32	Aug.-11	10,296	3,015	260	0.32
33	Aug.-18	19,919	5,566	1,345	0.35
34	Aug.-25	14,607	2,167	3,718	0.40
35	Sept.-1	10,368	11	5,991	0.58
36	Sept.-8	7,781	6	6,116	0.79
37	Sept.-15	5,076	0	3,019	0.59
38	Sept.-22	2,660	0	1,452	0.55
39	Sept.-29	1,582	0	418	0.26
40	Oct.-6	607	0	267	0.44
41-44	Nov.-3	259	0	25	0.10
Total		76,977	11,274	22,775	0.44

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. The North Jetty of the Columbia River was closed to access due to construction. Youngs Bay bubble closure in effect August 1 through September 15. Fishery opened August 1 for Chinook and marked coho, with a two fish daily-bag-limit, one of which may be a Chinook. Beginning August 21, the daily-bag-limit was two fish, Chinook retention prohibited.

b/ Includes adults and jacks as determined by CWT analysis.

TABLE III-3. Oregon production index (OPI) area coho harvest impacts, spawning, abundance, and exploitation rate estimates in thousands of fish.[a/]

Year or Avg.	Ocean Fisheries[b/]		Oregon and California Coastal Returns			Columbia River Returns	Abundance[e/]	Ocean Exploitation Rate Based on OPI Abundance[f/]
	Troll	Sport	Hatcheries and Freshwater Harvest[c/]	OCN Spawners[d/]	Private Hatcheries			
1970-1975	1,629.6	558.4	45.8	55.2	-	460.4	2,749.3	0.80
1976-1980	1,253.6	555.0	31.2	31.1	26.1	263.3	2,154.2	0.85
1981-1985	451.2	274.0	37.2	56.0	176.8	305.3	1,328.6	0.63
1986-1990	574.6	339.3	55.1	45.5	154.3	705.0	1,602.2	0.70
1991-1995	107.4	182.7	46.6	53.2	35.1	315.1	668.4	0.35
1996	7.0	31.8	45.8	87.5	-	117.1	260.3	0.15
1997	5.5	22.4	27.9	31.6	-	156.4	230.5	0.12
1998	3.5	12.8	31.2	34.9	-	175.9	270.8	0.06
1999	3.6	36.5	23.4	48.6	-	289.1	432.0	0.09
2000	25.2	74.6	37.0	84.8	-	558.3	762.4	0.13
2001	38.1	216.8	75.7	174.7	-	1,128.3	1,673.2	0.15
2002	15.0	118.7	53.9	266.9	-	535.8	972.2	0.14
2003	28.8	252.4	44.9	236.2	-	713.2	1,266.9	0.22
2004	26.2	159.3	38.1	197.3	-	463.5	904.5	0.21
2005	10.5	58.2	42.7	164.6	-	354.7	629.9	0.11
2006	4.5	47.5	29.5	132.7	-	409.7	674.1	0.08
2007	26.2	128.5	10.9	71.4	-	349.0	631.3	0.25
2008	0.6	26.4	16.0	180.1	-	520.8	769.8	0.04
2009	27.7	201.2	16.5	265.3	-	760.2	1,341.3	0.17
2010	5.8	48.8	18.5	287.1	-	466.5	848.4	0.06
2011	4.2	54.7	20.0	360.8	-	378.1	836.4	0.07
2012	4.7	45.5	18.5	104.6	-	152.4	311.3	0.16
2013	8.4	48.3	26.5	135.6	-	252.8	494.1	0.11
2014	35.6	197.4	42.0	362.1	-	1,019.5	1,724.8	0.14
2015	11.7	84.4	11.8	61.2	-	169.5	336.3	0.29
2016	2.8	31.7	11.4	82.2	-	203.6	334.8	0.10
2017	2.1	50.0	3.9	65.9	-	235.9	355.4	0.15
2018	1.5	53.8	3.1	82.3	-	137.9	232.4	0.24
2019[g/]	5.0	135.4	4.1	94.1	-	210.9	414.1	0.34

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

b/ Incl. est. nonretention mort.: troll: release mort.(1982-present) and drop-off mort.(all yrs.); sport --release mort.(1994-present) and drop-off mort.(all yrs.).

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

d/ Includes Rogue River.

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

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

g/ Preliminary.

TABLE III-4. Oregon Coast Natural (OCN) adult coho salmon spawner escapement.

	Adjusted SRS Adult Coho Spawner Population Estimates in Thousands of Spawners by Stock Component[a/]					Adult Coho Spawners Per Spawner Habitat Mile				
Year	Northern[b/]	North Central[c/]	South Central[d/]	Southern[e/]	Coast-wide	Northern[b/]	North Central[c/]	South Central[d/]	Southern[e/]	Coast-wide ave.
1990	2.2	5.6	13.5	1.2	22.5	2	5	8	3	6
1991	9.3	6.7	21.6	0.5	38.1	10	6	13	1	9
1992	2.4	15.4	24.4	2.0	44.2	3	13	15	5	11
1993	4.5	7.8	43.1	0.8f[/]	55.7	5	7	27	1[f/]	14
1994	3.5	9.8	30.9	4.3	48.5	4	8	19	11	12
1995	3.9	13.6	36.5	3.4	57.3	4	12	22	8	14
1996	3.3	18.1	52.6	5.2	79.3	4	16	32	13	19
1997	2.1	2.8	18.4	8.2	31.6	2	2	11	20	8
1998	2.6	3.3	26.1	2.3	34.3	3	3	16	6	8
1999	8.9	11.8	29.2	1.4	51.2	10	10	18	3	13
2000	17.9	14.3	37.9	11.0	81.1	20	12	23	27	20
2001	33.5	25.2	113.9	12.0	184.6	37	22	70	29	45
2002	52.5	104.0	104.1	8.5	269.0	58	89	64	21	66
2003	59.6	68.9	100.1	6.8	235.4	66	59	62	17	57
2004	28.8	42.1	101.9	24.5	197.3	32	36	63	60	48
2005	16.5	51.4	86.7	10.0	164.6	18	44	53	24	40
2006	24.1	21.2	83.5	3.9	132.7	27	18	51	10	32
2007	17.5	12.3	36.5	5.1	71.4	19	11	22	13	17
2008	25.6	68.1	86.0	0.4	180.1	28	59	53	1	44
2009	48.1	86.4	128.2	2.6	265.3	54	74	79	6	65
2010	55.0	56.5	171.9	3.7	287.1	61	49	106	9	70
2011	45.9	119.1	191.3	4.5	360.8	51	102	118	11	88
2012	7.5	33.8	57.8	5.5	104.6	8	29	36	13	26
2013	11.0	39.7	73.7	11.2	135.6	12	34	45	27	33
2014	67.4	122.0	170.4	2.4	362.1	75	105	105	6	88
2015	6.7	22.7	27.7	4.1	61.2	7	19	17	10	15
2016	18.7	26.5	30.7	6.3	82.2	21	23	19	15	20
2017	13.6	22.8	24.9	4.5	65.9	15	20	15	11	16
2018	8.0	22.0	44.1	8.3	82.3	9	19	27	20	20
2019[g/]	22.0	21.8	48.1	2.2	94.1	25	19	30	5	23

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/ 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.

c/ 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.

d/ 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.

e/ Estimate based on a mark-recapture methodology and 410 miles of spawner habitat within the Rogue River.

f/ Unreliable estimate.

g/ Preliminary.

TABLE III-5. Oregon Coastal Natural and Lower Columbia Natural adult coho salmon cons. objective and fishery impacts.

	OCN Fishery Impact (Total Marine and Freshwater Exploitation Rate)			LCN Fishery Impact (Total Marine and Freshwater Exploitation Rate)		
Year	Conservation Objective[a/]	Preseason Projection	Postseason Estimate[b/]	Conservation Objective[c/]	Preseason Projection	Postseason Estimate[b/]
1990	-	-	-	-	-	-
1991	-	0.460	0.639	-	-	-
1992	-	0.420	0.626	-	-	-
1993	-	0.260	0.396	-	-	-
1994	≤0.20	0.111	0.064	-	-	-
1995	≤0.20	0.118	0.106	-	-	-
1996	≤0.20	0.125	0.062	-	-	-
1997	≤0.20	0.110	0.091	-	-	-
1998	≤0.13	0.119	0.076	-	-	-
1999	≤0.15	0.087	0.073	-	-	-
2000	≤0.15	0.082	0.042	-	-	-
2001	≤0.08	0.074	0.035	-	-	-
2002	≤0.15	0.123	0.049	-	-	-
2003	≤0.15	0.144	0.080	-	-	-
2004	≤0.15	0.147	0.077	-	-	-
2005	≤0.15	0.111	0.044	≤0.15	0.10[d/]	0.179
2006	≤0.15	0.096	0.076	≤0.15	0.10[d/]	0.146
2007	≤0.20	0.113	0.118	≤0.20	0.13[d/]	0.208
2008	≤0.08	0.069	0.019	≤0.08	0.08	0.073
2009	≤0.15	0.130	0.067	≤0.20	0.20	0.187
2010	≤0.15	0.112	0.045	≤0.15	0.15	0.107
2011	≤0.15	0.132	0.059	≤0.15	0.15	0.111
2012	≤0.15	0.150	0.183	≤0.15	0.15	0.140
2013	≤0.30	0.231	0.149	≤0.15	0.15	0.143
2014	≤0.30	0.253	0.141	≤0.225	0.225	0.164
2015	≤0.15	0.149	0.198	≤0.23	0.23	0.244
2016	≤0.20	0.131	0.087	≤0.18	0.13	0.089
2017	≤0.30	0.093	0.116	≤0.18	0.114	0.108
2018	≤0.15	0.129	0.127	≤0.18	0.162	0.146
2019[e/]	≤0.15	0.137	0.147	≤0.23	0.18	0.210

a/ 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.

b/ From the coho FRAM.

c/ In 2005, the NMFS conservation objective was in terms of marine area fisheries. In 2006, the NMFS conservation objective was in terms of Council area and mainstem Columbia River fisheries; thereafter in terms of all marine area and mainstem Columbia.

d/ The preseason projection was in terms of a marine exploitation rate.

e/ Preliminary.

TABLE III-6. Performance of coho salmon stocks in relation to 2019 preseason conservation objectives (preliminary data). (Page 1 of 2)

System and Stock	2019 FMP Conservation/Management Objectives	Achievement
OPI Area Coho (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. Treaty obligations met.
Northern California (Threatened) and CCC (Endangered)	No directed coho fisheries or retention of coho south of the OR/CA border. Marine exploitation rate ≤13.0% as indicated by R/K hatchery stocks.	No coho retention south of the California/Oregon border. Preliminary postseason estimate of 3.4%.
OCN	Combined marine and freshwater exploitation rate ≤15.0%.	Preliminary postseason estimate of 14.7%.
LCN-Columbia River Natural (Threatened)	Combined marine and mainstem Columbia River exploitation rate ≤23.0%.	Preliminary postseason estimate of 21.0% exploitation rate in marine and mainstem Columbia River fisheries.
Washington Coast Coho	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.
Willapa	17,200 natural adult spawners.	Escapement estimate was unavailable; preseason projection was 56,272 ocean escapement.
Grays Harbor	24,400 adult spawners.	Escapement estimate was unavailable; preseason projection was 65,931 ocean escapement.
Queets	5,800 comanager adult spawner agreement.	Escapement estimate was unavailable; preseason projection was 9,124 ocean escapement.
Hoh	2,000 adult spawners.	Escapement estimate was unavailable; preseason projection was 5,787 ocean escapement.
Quillayute Fall	6,300 adult spawners.	Preliminary postseason escapement estimate was 13,731.

TABLE III-6. Performance of coho salmon stocks in relation to 2019 preseason conservation objectives (preliminary data).
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System and Stock	2019 FMP Conservation/Management Objectives	Achievement
Puget Sound Coho	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 2019 natural spawner escapements. Hatchery egg-take goals will be met.
Strait of Juan de Fuca	≤20% total exploitation rate.	Preseason expectation of a 8.9% total exploitation rate; postseason estimate unavailable.
Hood Canal	≤45% total exploitation rate.	Preseason expectation of a 44.3% total exploitation rate; postseason estimate unavailable.
Skagit	≤35% total exploitation rate.	Preseason expectation of a 32.5% total exploitation rate; postseason estimate unavailable.
Stillaguamish	≤50% total exploitation rate.	Preseason expectation of a 22.5% total exploitation rate; postseason estimate unavailable.
Snohomish	≤40% total exploitation rate.	Preseason expectation of a 19.4% total exploitation rate; postseason estimate unavailable.

TABLE III-7. Coho stock status relative to overfished and overfishing criteria. A stock is overfished if the 3-year geometric mean spawning escapement is less than the minimum stock size threshold (MSST); a stock experiences overfishing if the total annual exploitation rate exceeds the maximum fishing mortality threshold (MFMT).

	Escapement									**Exploitation Rate**						
Coho Stock	2014	2015	2016	2017	2018	2019	3-yr Geo Mean	MSST	S_{MSY}	2014	2015	2016	2017	2018	2019	MFMT
Willapa Bay	59,569	17,086	30,667	10,878	14,920	NA	17,074	8,600	17,200	0.51	0.44	0.38	0.33	NA	NA	0.74
Grays Harbor	105,039	21,278	38,595	26,907	49,622	NA	37,213	18,320	24,426	0.45	0.49	0.11	0.32	NA	NA	0.65
Queets	7,558	2,028	5,156	5,232	2,631	NA	**4,140**	4,350	5,800	0.41	0.26	0.15	0.23	NA	NA	0.65
Hoh	4,565	1,794	5,009	4,478	2,463	NA	3,809	1,890	2,520	0.52	0.39	0.07	0.43	NA	NA	0.65
Quillayute Fall	7,425	2,571	9,630	7,474	6,091	6,506	6,666	4,725	6,300	0.58	0.48	0.18	0.42	NA	NA	0.59
Juan de Fuca	11,488	3,859	8,435	5,530	5,470	NA	**6,343**	7,000	11,000	0.17	0.18	0.03	0.05	NA	NA	0.60
Hood Canal	26,787	26,926	24,313	23,283	NA	NA	24,794	10,750	14,350	**0.68**	0.59	0.40	0.35	NA	NA	0.65
Skagit	24,820	5,794	35,822	20,184	19,047	NA	23,970	14,875	25,000	0.52	**0.63**	0.20	0.09	NA	NA	0.60
Stillaguamish	35,829	2,914	13,048	6,099	23,937	NA	12,396	6,100	10,000	0.27	0.48	0.16	0.12	NA	NA	0.50
Snohomish	46,244	12,804	44,141	18,195	58,135	NA	36,009	31,000	50,000	0.31	0.55	0.18	0.21	NA	NA	0.60

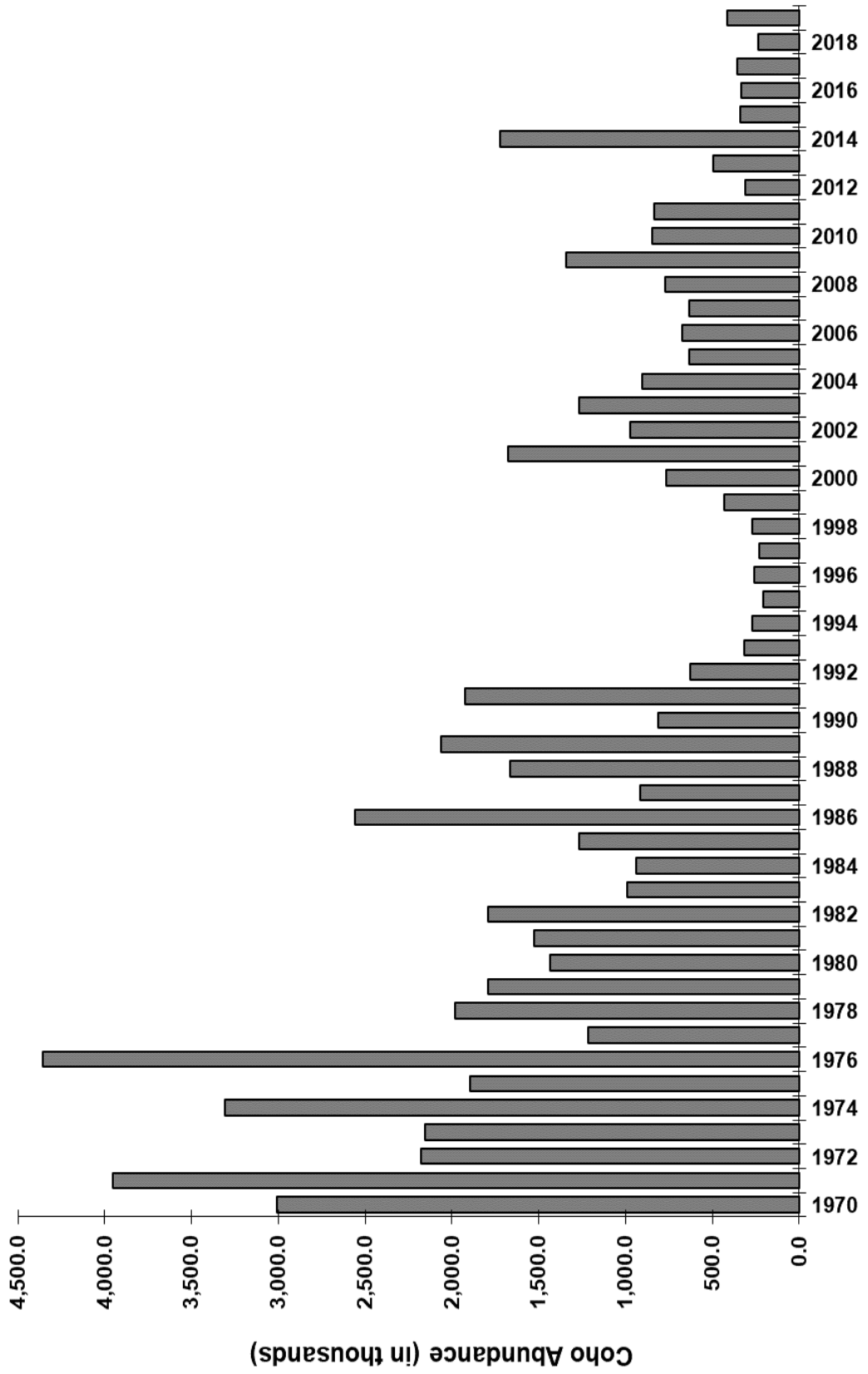

Figure III-1. Oregon Production Index (OPI) area coho abundance estimates, 1970-2019.

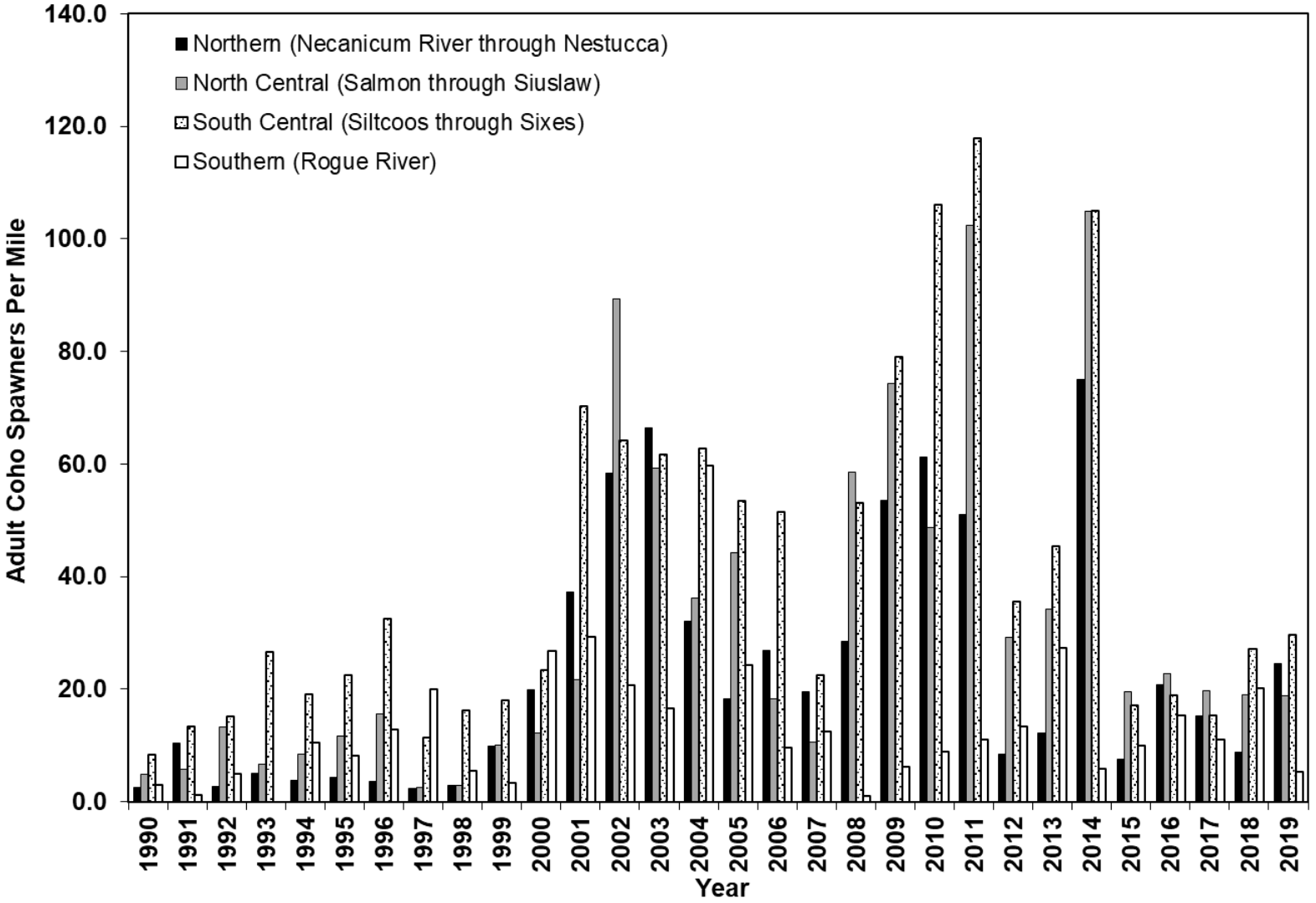

Figure III-2. Oregon coastal natural (OCN) adult coho spawners per habitat mile by coastal region based on SRS accounting methods, 1990-2019.

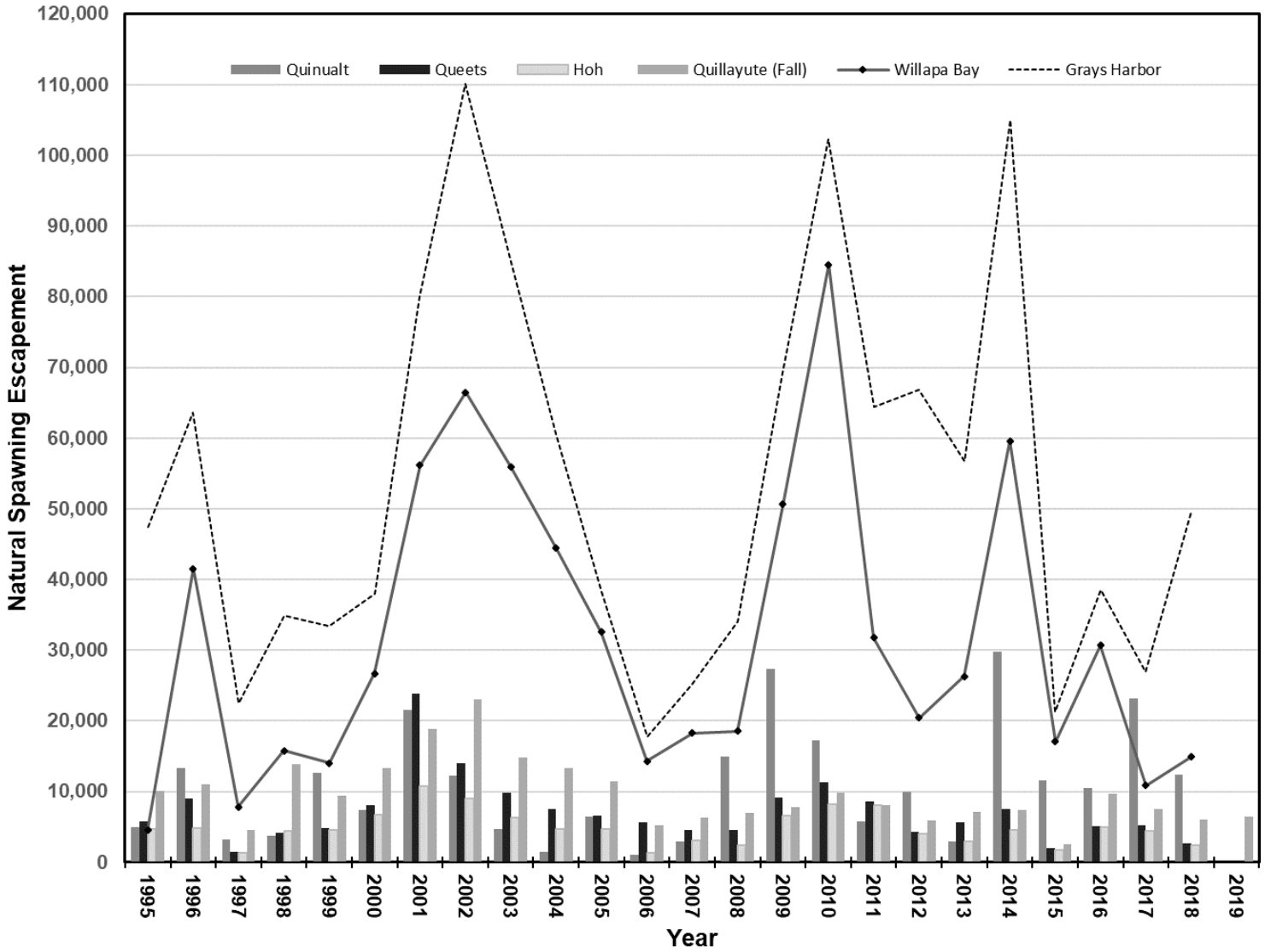

Figure III-3. Washington Coast adult coho natural spawning escapement, 1995-2019.

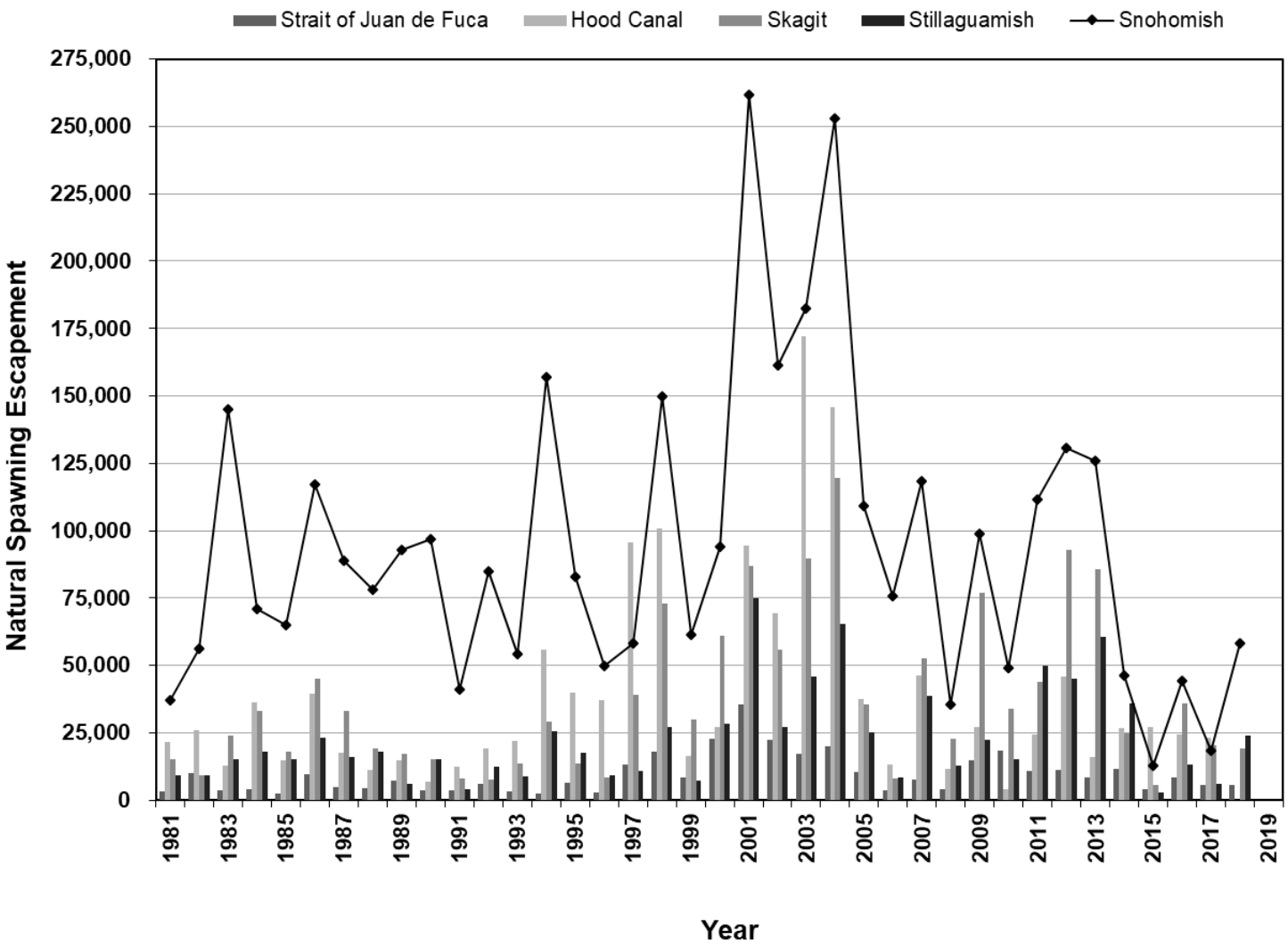

Figure III-4. Puget Sound adult coho natural spawning escapement, 1981-2019.

CHAPTER IV

SOCIOECONOMIC ASSESSMENT OF THE 2019 OCEAN SALMON FISHERIES

SUMMARY: Total 2019 exvessel value of the Council-managed non-Indian troll commercial salmon fishery was $21.2 million. This was 64 percent above last year's inflation-adjusted total of $13.0 million, more than double the inflation-adjusted total of $10.4 million in 2017, and 20 percent above the 2014-2018 inflation-adjusted average of $17.7 million, but 64 percent below the 1979-1990 inflation-adjusted average of $59.9 million. The coastwide average exvessel price for Chinook in 2019 was $6.58 per pound, 25 percent below last year's inflation-adjusted average of $8.79 and 30 percent below the 2017 inflation-adjusted average of $9.46. More than 99 percent of total coastwide exvessel value of non-Indian commercial troll salmon landed in 2019 was from Chinook. Approximately $85,300 exvessel value of coho were landed in the ocean commercial troll fishery in 2019 compared with inflation-adjusted total of $26,700 in 2018, $33,000 in 2017, and no commercial coho landings in 2016. The coastwide average exvessel price for coho in 2019 was $2.94, one percent above last year's inflation-adjusted value of $2.92 and the highest in inflation-adjusted terms since $3.05 in 2008.

The preliminary number of vessel-based ocean salmon recreational angler trips taken on the West Coast in 2019 was 263,600, an increase of 26 percent from last year, 51 percent above the number of angler trips taken in 2017 and 16 percent above the 2014-2018 average of 226,800, but 56 percent below the 1979-1990 average of 599,700 angler-trips per year.

Total West Coast income impacts associated with commercial and recreational ocean salmon fisheries in 2019 for Washington, Oregon, and California combined were an estimated $71.7 million, 36 percent above last year's inflation-adjusted total of $52.7 million, 64 percent above the 2017 inflation-adjusted total of $43.7 million, and 17 percent above the 2014-2018 inflation-adjusted average of $61.3 million.[1]

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 portion 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 somewhat less volatile harvest level 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 commercial and recreational fisheries have suffered substantial declines relative to harvest levels of the 1980s, the effects of which are amplified within specific geographic areas.

[1]A change in methodology from FEAM-based to IO-PAC-based income impact multipliers means that comparisons of annual income impacts for years prior to 2010 with later years are not meaningful. Consequently, any comparisons of income impacts in this document are generally confined to describing trends appearing since 2009, during which period the IO-PAC-based models and multipliers were applied. See Appendix E of the *Review of 2014 Ocean Salmon Fisheries* for a more detailed explanation of the change in income impact modeling methodology.

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 that is encountered at a relatively higher rate in that area. The geographic distribution of harvest opportunity along the coast involves balancing the often conflicting objectives of maximizing ocean harvest and distributing the responsibility for resource conservation. A brief outline of the regulatory objectives that shaped the 2019 season is provided in Chapter I, and an assessment of success in meeting the objectives is provided in Chapters II and III for Chinook and coho, respectively.

COMMERCIAL SALMON FISHERIES

West Coast Non-Indian Commercial Ocean Fishery

In-season Price Trends

The coastwide weighted-average exvessel prices for salmon caught in the 2019 ocean commercial troll fishery were $6.58 per dressed pound for Chinook and $2.94 per dressed pound for coho. Monthly average exvessel price data provide information on price trends over the season (Table IV-1). California Chinook prices were at their highest in October, May and September, averaging $8.79, $7.80 and $7.36 per pound, respectively, in those months. Weighted-average Chinook prices in Oregon were highest in April, May, October and November at $12.55, $9.84, $8.75 and $8.72 per pound, respectively. Weighted-average Chinook prices in Washington were highest in May and June at $8.62 and $6.58 per pound, respectively. The lowest weighted-average Chinook exvessel prices were recorded in California in June at $5.82, in Oregon in July at $6.29, and in Washington in July at $5.96 per pound. Over the entire 2019 season, Chinook exvessel prices in California, Oregon, and Washington averaged $6.61, $6.66 and $6.19 per pound, respectively, the lowest in inflation-adjusted terms since at least 2015. Coho exvessel prices were highest in September at $3.06 and $3.13 in Oregon and Washington, respectively. For the season coho exvessel prices averaged $2.66 and $3.03 per pound in Oregon and Washington, respectively.

Annual Trends (Seasons, Value, Prices, and Pounds)

Average Chinook and coho troll exvessel price and value by state and species, compiled from fish receiving tickets and expressed both in nominal and inflation-adjusted terms, are presented in Tables IV-2, IV-3, and IV-4. Data on pink salmon are shown in Table IV-5. The gross domestic product implicit price deflator, developed by the Bureau of Economic Analysis, was used to adjust nominal dollar values for inflation (Appendix D, Table D-22). Landing weights by state and port for Chinook and coho are presented in Tables IV-6, IV-7, and IV-8. These tables and the following discussion focus on the non-Indian commercial troll fishery in Council management areas and associated state territorial ocean-area waters.

In 2019, the total coastwide exvessel value of the Council-managed non-Indian commercial troll salmon fishery was $21.2 million, 64 percent above last year's $13.0 million, more than double the 2017 level of $10.4 million, and 20 percent above the 2014-2018 average of $17.7 million, all values adjusted for inflation (Figure IV-4). Coastwide exvessel value in 2019 was the highest level since $32.5 million landed in 2014 (including pinks, adjusted for inflation). More than 99 percent of total coastwide exvessel value of non-Indian commercial troll salmon landed in 2019 was from Chinook. Exvessel revenues from coho landings in 2019 were $85,300, more than triple the 2018 value of $26,700, 20 percent above the 2014-2018 average of $71,300 and the highest since $246,800 in 2014, all values adjusted for inflation.

In 2019, California achieved $17.2 million in non-Indian commercial troll salmon exvessel landings value, more than double the prior year's level of $8.1 million, more than triple the 2017 level of $5.1 million, more than double the 2014-2018 average of $8.3 million, but 45 percent below the 1979-1990 average of $31.5 million (which include coho landings during that period). All values are adjusted for inflation.

The 2019 exvessel value of the Oregon non-Indian commercial troll harvest ($2.1 million) was 15 percent below last year's level of $2.5 million, five percent below the $2.2 million recorded in 2017, and 68 percent below the 2014-2018 average of $6.6 million. Oregon's 2019 non-Indian commercial troll harvest value was also 89 percent below the 1979-1990 average of $19.0 million, and the lowest recorded since $0.4 million in 2009. All values are adjusted for inflation.

The $1.9 million exvessel value of Washington's 2019 non-Indian troll harvest was 20 percent below last year's value of $2.4 million, 37 percent below the 2017 value of $3 million, and the lowest value since $1.7 million in 2016. The 2019 value was also 30 percent below the 2014-2018 average of $2.8 million, and 77 percent below the 1979-1990 average of $8.5 million. All values are adjusted for inflation.

The 2019 average West Coast ocean harvest Chinook price of $6.58 per pound was 25 percent below last year's inflation-adjusted value of $8.79 per pound, 30 percent below the 2017 inflation-adjusted value of $9.46 per pound, and the lowest average value in inflation-adjusted terms since $6.10 in 2014. The 2019 value of $6.58 breaks a recent pattern of average inflation-adjusted exvessel Chinook prices above $8 per pound from 2016-2018.

In terms of numbers of fish, the 2019 coastwide, non-Indian commercial troll harvest of 323,400 Chinook was 156 percent above last year's level of 126,400, more than triple the 97,100 Chinook harvested in 2017, and 58 percent above the 2014-2018 recent five-year average of 204,700 fish, but 45 percent below the 1976-2018 long-term average of 592,000 fish (Figure IV-1). The 2019 coastwide average weight per non-Indian commercial troll harvested Chinook (9.9 pounds) was 15 percent below last year's average (11.6 pounds), 12 percent below the average weight in 2017 (11.3 pounds), and 15 percent below the previous five-year (2014-2018) average of 11.7 pounds per fish (Appendix D Tables D-1, D-2, and D-3).

The coastwide non-Indian commercial troll fishery landed 5,400 coho in 2019, nearly quadruple the 1,400 coho landed last year, nearly triple the quantity landed in 2017 (1,800), and the highest coho harvest in the non-Indian commercial troll fishery since 26,400 were landed in 2014. (Note: zero coho were harvested in the non-Indian commercial troll fishery in 2016, 1998, 1997, and 1994).

West Coast port areas with the highest shares of coastwide non-Indian commercial troll Chinook landings (by weight) in 2019 were San Francisco (50 percent), Monterey (26 percent), Newport (6 percent), Neah Bay (4 percent), Westport (3 percent) and Fort Bragg (3 percent). In 2018 the leading ports were San Francisco (39 percent), Westport (11 percent), Monterey (10 percent), Newport (9 percent), Fort Bragg (8 percent) and Coos Bay (6 percent). In 2017 the leading ports were San Francisco (29 percent), Westport (22 percent), Newport (16 percent), Monterey (13 percent), and Neah Bay (6 percent). In 2016, the leading ports were Newport (25 percent), San Francisco (23 percent), Fort Bragg (12 percent), Monterey (10 percent), and Westport and Coos Bay (9 percent each).

In 2019 the ports north of Cape Falcon (north of Tillamook) accounted for only about nine percent of the aggregate coastwide Chinook harvest by weight, the lowest share since 9 percent in 2013. By comparison, ports north of Cape Falcon accounted for about 17 percent of the aggregate coastwide Chinook harvest in 2018, 32 percent in 2017, 17 percent in 2016, 25 percent in 2015 and 12 percent in 2014. In the years since 2008 and 2009, during which there was no commercial ocean salmon harvest in California, ports north of Cape Falcon have accounted for an average of 21 percent of coastwide Chinook landings by weight.

Compared with 2018, non-Indian commercial troll Chinook harvest by weight in 2019 was up by 180 percent in California, nine percent in Oregon, and by 18 percent in Washington. Total non-Indian commercial troll coho harvest in 2019 was 29,200 pounds, 76 percent of which were landed in Washington. Commercial harvest of coho in California has been prohibited since 1992.

Ocean Commercial Salmon Harvesters

Based on Pacific Coast Fisheries Information Network (PacFIN) data, a total of 628 vessels participated in the West Coast non-Indian commercial troll salmon fishery in 2019. This is 11 percent fewer than participated in 2018 (709), three percent more vessels than participated in 2017 (610), and 19 percent fewer than participated in 2016 (772). Note that these coastwide vessel counts are lower than totals derived by summing values in the three state-level tables (Appendix D, tables D-4, D-5 and D-6) due to a degree of incompleteness at the time PacFIN data were extracted for this report, and because vessels landing in more than one state are counted more than once.

In 2019, 570 non-Indian commercial vessels made salmon landings in California, 114 more vessels than last year, 170 more than in 2017, and the most since 587 vessels made landings in 2015. In Oregon, the active fleet decreased by 10 vessels to 220 in 2019, but this was still 44 more vessels than participated in 2017, which was the lowest number in Oregon since 2008 when 138 vessels participated. The preliminary number of active vessels in Washington in 2019 was 88, 20 fewer than in the prior two years, and the lowest number of vessels landing salmon in Washington since 2008 when 86 vessels participated. Coastwide, the number of limited entry salmon permits issued by the three states decreased by 42 over the previous year, declining from 2,173 in 2018 to 2,131 in 2019. This is the lowest number of salmon permitted vessels on record, with the declines over the prior year occurring in California (-19) and Oregon (-23). The number of Washington permitted vessels has remained the same since 2017 (155). Landings were made on 41 percent of all permits in 2019, above the 10-year average (2009-2018) of 39 percent, and the largest share since 53 percent landed salmon in 2015. Note that the years in which the salmon fishery was closed in California are the two years with lowest permitted vessel participation on record (i.e., during 1982-2019): 2008 (9 percent) and 2009 (13 percent). From 1982 to 1993, an average of 5,193 of 7,942 total permits (65 percent) harvested on an annual basis. Harvest opportunity began declining substantially after that time, and some permits were subsequently removed in a buyback program. See Appendix D, tables D-4, D-5, and D-6 for details.

In 2019, coastwide average inflation-adjusted exvessel value of salmon landings per vessel increased 48 percent compared with 2018 to approximately $24,180 per vessel. Compared to 2018, average state-level exvessel revenue per vessel in 2019 was up 70 percent to $30,200 in California, but down 12 percent to $9,600 in Oregon, and down one percent to $21,900 in Washington. Note that some caution needs to be exercised in interpreting average exvessel revenue per vessel. The averages may be influenced as much by disproportionate changes in the number of relatively small or large harvesters participating from one year to the next as by any real change in the average revenues of vessels that have consistently participated 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 participants in each state's fishery is included in Appendix D.

West Coast Treaty Indian Commercial Ocean Fishery

Treaty Indian commercial fisheries in ocean areas off Washington operate under regulations established by the Council. While some of the treaty Indian harvest is for ceremonial and subsistence purposes, the vast majority of the catch is sold commercially. Commercial treaty Indian fisheries provide food to consumers and generate income in local and state economies through expenditures related to harvesting, processing, and marketing of the catch. In 2019, the treaty Indian ocean troll fishery harvested approximately 19,400 Chinook (188,700 pounds) and 55,500 coho (280,900 pounds), compared with 24,800 Chinook (186,200

pounds) and 11,800 coho (69,400 pounds) in 2018, 25,800 Chinook (207,900 pounds) and 13,400 coho (79,700 pounds) in 2017, and 23,500 Chinook (218,800 pounds) and 46 coho (400 pounds) in 2016. The preliminary exvessel value of Chinook and coho landed in the treaty Indian ocean troll fishery in 2019 was $1.4 million, compared with inflation-adjusted values of $1.3 million in 2018, $1.4 million in 2017 and $2.6 million in 2016[2].

Columbia River Commercial Fishery

Harvest in the ocean salmon fisheries affects the number of fish available for harvest in inside and in-river treaty Indian and non-Indian fisheries. Table IV-9 shows the exvessel value of treaty Indian and non-Indian commercial harvest of Chinook, coho, and chum salmon in the Columbia River. All prices and dollar values in the table and the following discussion are reported in inflation-adjusted dollars. Exvessel prices for in-river commercial salmon landings vary considerably with species (Chinook, coho or chum), race (e.g., spring versus fall Chinook), and stock (e.g., tules versus brights). Spring Chinook generally bring the highest prices, and tule fall Chinook and chum the lowest prices.

Total exvessel value of combined treaty Indian and non-Indian commercial salmon harvested in the Columbia River in 2019 was $3.7 million. This was 32 percent below the 2018 level of $5.4 million, 64 percent below the 2017 level of $10.1 million, 73 percent below the 2016 level of $13.5 million, and the lowest value recorded since $3.1 million in 2007 (all values adjusted for inflation). Of these amounts, the total exvessel value of salmon harvested in the non-Indian portion of the Columbia River commercial fishery in 2019 was $1.1 million, compared with $2.3 million in 2018, $3.5 million in 2017 and $5.7 million in 2016 (all values adjusted for inflation) (Table IV-9).

Total exvessel value of treaty Indian salmon harvested in the Columbia River and sold on fish tickets was $2.5 million in 2019. This is 17 percent below the $3.1 million harvested in 2018, 61 percent below the $6.5 million in 2017, 67 percent below $7.7 million in 2016, and the lowest value since $1.9 million in 2009 (all values adjusted for inflation). Note that these values include only sales made to licensed fish buyers. Treaty Indian fishers' direct sales to the public are accounted for in harvest monitoring reports (Table B-20), but estimates of the pounds and value of such sales are not included in Table IV-9.

Puget Sound and Washington Coastal Inside Fisheries

Information on 2019 Puget Sound and Washington coastal inside fisheries below is preliminary. All dollar values reported below are adjusted for inflation. In previous years, substantial revisions to these numbers have occurred after publication of this review. Based on PacFIN data (as of January 31, 2020), the exvessel value of all salmon species taken in the commercial non-Indian fisheries in Puget Sound and Washington coastal inside fisheries (excluding the Columbia River) in 2019 was $1.8 million. This was 80 percent less than last year's inflation-adjusted value of $9.1 million, 78 percent below the $8.1 million harvest value in 2017, and the lowest value since $1.0 million in 1999. Of the total Puget Sound and Washington coastal inside fisheries non-Indian commercial landings in 2019, $0.5 million were Chinook and coho, compared with $0.8 million in both 2017 and 2018, and $0.9 million in 2016. The 1981-2018 inflation-adjusted average annual exvessel value from Puget Sound and Washington coastal inside non-Indian commercial fisheries salmon landings was $15.7 million, of which approximately $3.7 million on average were landings of Chinook and coho. It is interesting to note that all years with recorded values higher than those averages occurred prior to 1994.

The preliminary 2019 exvessel value reported to PacFIN (as of January 31, 2020) for all salmon species taken in Puget Sound and Washington coastal inside commercial treaty Indian fisheries (excluding the

[2] Numbers of fish are from Table A-15, average weights are from Table D-3, and revenue values are based on January 31, 2020 PacFIN data.

Columbia River) was $0.8 million, of which $0.7 million were Chinook and coho. The preliminary 2019 harvest represents reductions of 95 percent for all salmon species and 90 percent for Chinook and coho compared with 2018, and reductions of 94 percent for all species and 92 percent for Chinook and coho compared with 2017 (all values adjusted for inflation). For reference, the revised inflation-adjusted total exvessel value for the 2018 commercial treaty Indian harvest in Puget Sound and Washington coastal inside fisheries (excluding the Columbia River) is $18.3 million for all salmon species, of which $7.3 million were Chinook and coho[3]. This compares with the preliminary value of $9.0 million for all salmon species of which $2.9 million were Chinook and coho[4]. From 1981 through 2018, the inflation-adjusted average annual exvessel value of commercial treaty Indian salmon fisheries in Puget Sound and Washington coastal inside areas was $21.0 million, of which on average $8.2 million were Chinook and coho.

Klamath River Fisheries

Commercial sales from the Yurok and Hoopa Valley tribal spring and fall gillnet fisheries on the Klamath and Trinity rivers occur periodically, and the 2,100 fall Chinook harvested commercially in 2019 are the first since 2015 when 17,100 fall Chinook were harvested commercially (Appendix B, Table B-5). Sales from the spring Chinook fishery occurred in 1989, 1996, 2000-2004, and 2007-2013. The average annual commercial catch of spring Chinook during years that the fishery was open was approximately 1,100 fish. Sales from the fall Chinook fishery occurred in 1987-1989, 1996, 1999-2004, 2007-2015, and 2019. The average annual commercial catch of fall Chinook during years that the fishery was open was approximately 22,800 fish, the vast majority of which were taken in the estuary.

Records are not available for the weight and value of harvests for years since 1997, after which each Indian fisher began marketing their fish independently. The 1989 total harvest of 25,500 fall Chinook reportedly had an average weight of 15.4 pounds per fish and sold for $852,000 ($1.4 million in inflation-adjusted 2019 dollars). In 1996, 3,100 spring Chinook and 40,100 fall Chinook were harvested, with an average weight per fish landed of 13.5 pounds and combined value at first sale of an estimated $525,000 ($0.7 million in inflation-adjusted 2019 dollars).

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, Table B-5. 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

West Coast Recreational Ocean Fishery

The preliminary number of vessel-based ocean salmon recreational angler trips taken on the West Coast in 2019 was 263,600, an increase of 26 percent from last year, 51 percent above the number taken in 2017, 16 percent above the 2014-2018 average of 226,800, but still 56 percent below the 1979-1990 average of 599,700 angler-trips per year. Compared with last year, preliminary estimates of the number of trips taken in 2019 increased by seven percent in California, by 48 percent in Oregon and by 37 percent in Washington. Note that Washington effort estimates shown in Tables IV-10 and IV-13 may differ from those in Table I-4 and Appendix A, Table A-17 because the former exclude bank fishers on the Columbia River north jetty.

[3] Based on PacFIN data extracted January 31, 2020.
[4] Based on PacFIN data extracted for the prior year's *Salmon Review* on January 30, 2019.

Recreational ocean area salmon fishing takes place primarily in two modes: (1) anglers fishing from privately owned pleasure craft, and (2) anglers employing the services of charter vessels. 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 also occur from jetties and piers. The coastwide proportion of angler trips taken on charter vessels in 2019 (27 percent) was 17 percent below the proportion of charter trips last year (33 percent) and 13 percent below the share taken in 2017 (31 percent). Underlying the coastwide values were decreases of 11 percent compared with last year in the proportion of charter trips in California, 10 percent in the proportion of charter trips in Oregon, and nine percent in the proportion of charter trips in Washington. Figure IV-5 and Tables IV-10, IV-11, IV-12, and IV-13 display recreational effort and catch statistics by port area and mode for each state.

California

The number of ocean recreational salmon trips in California in 2019 (103,700) was seven percent above the number in 2018 (96,600), and 40 percent above the level in 2017 (74,000). Regionally, the numbers of recreational salmon trips in 2019 increased from the prior year by 20 percent in Eureka and more than doubled in Monterey, but fell by 63 percent in Crescent City, by 23 percent in Fort Bragg and by 11 percent in San Francisco. A total of 88,500 Chinook were caught in California on the total of 103,700 trips, for an average success rate of 0.85 Chinook per trip, down 6 percent from last year, but 27 percent above the recent five-year (2014-2018) average success rate of 0.67 fish per angler-trip. The charter industry's share of California recreational salmon trips in 2019 was 44 percent, 11 percent below last year's share, and the lowest proportion of charter trips recorded since 40 percent in 2014 (Table IV-10, Table IV-11 and Figure IV-5).

Oregon

The 94,300 ocean recreational salmon trips in Oregon in 2019 were up 48 percent compared with 63,800 angler trips in 2018, more than double the 42,300 angler trips in 2017, and 42 percent above the most recent five-year (2014-2018) average of 66,500 trips (Tables IV-10 and IV-12). Compared with last year, regional effort was lower by 38 percent in Brookings, but up by 91 percent in Astoria, 87 percent in Tillamook, 49 percent in Newport, and by 33 percent in Coos Bay.

From 1984 to 1993, on average coho accounted for 87 percent of the Oregon annual recreational ocean salmon catch. From 1994 through 1998, the lack of opportunity to retain coho south of Cape Falcon generally resulted in much lower angler success rates (0.37 fish per angler day compared to an average of 0.99 for 1979 through 1993). Salmon retention rates increased with the opportunity to retain coho in mark-selective fisheries south of Cape Falcon beginning in 1999. From 1999 through 2018, retention rates average 0.66 salmon per angler-day. The 2019 Oregon salmon retention rate was 0.77, 51 percent higher than last year's value of 0.51, and 30 percent above the recent five-year (2014-2018) average retention rate of 0.60. In 2019, coho contributed 91 percent of total Oregon recreational ocean salmon catch, the highest share since 98 percent in 2009.

The charter industry's share of Oregon recreational salmon trips in 2019 was 8 percent, 10 percent lower than in 2018, and 11 percent below the recent five-year (2014-2018) average share (Table IV-10, Table IV-12, and Figure IV-5).

Washington

In 2019, 65,700 ocean angler trips were taken on vessels on the Washington coast, an increase of 37 percent from the 48,000 trips taken in 2018, but nine percent below the recent five-year (2014-2018) average of 71,800. Compared with last year, effort was higher in all regions, up by 16 percent in Neah Bay, 21 percent in La Push, four percent in Westport and by more than 100 percent in Ilwaco. The angler success rate in Washington (in terms of retained fish per angler-trip) was 1.13 in 2019, up 21 percent from last year, and

10 percent above the recent five-year (2014-2018) average success rate of 1.03 fish per angler-trip. About 28 percent of Washington angler trips in 2019 were taken on charter vessels, down nine percent from 2018, and also eight percent below the recent five-year (2014-2018) average charter trip share (Table IV-10, Table IV-13, and Figure IV-5). Note that these figures do not include angler effort that occurs from the ocean side of the Columbia River jetty, or in the state managed Area 4B add-on fishery (if open).

North of Cape Falcon Non-Salmon Recreational Fisheries

In order to offset the impact of reduced ocean recreational salmon trips on coastal communities, beginning in 1985 partial-week closures were instituted in the ocean recreational salmon fishery over the entire north of Cape Falcon area in hopes of increasing angler participation in non-salmon recreational fishing (e.g., bottomfish) and extending the overall length of the salmon season. Beginning in 1996, Sunday through Thursday salmon openings were generally used in the two southern areas (Westport and Columbia River), and seven-day per week seasons were common in the two northern areas (Neah Bay and La Push). Starting in 1999, seven-day per week openings began to be used in the later part of the summer in the Columbia River area and, initially to a lesser extent, in Westport. In the same year, partial week openings were instituted for much of the season in both northern areas. Since then, seven-day per week openings have been increasingly used in the Westport and Columbia River areas. Beginning in 2011, seven-day openings became common for all areas.

In 2019, there were 61,500 total recreational bottomfish trips north of Cape Falcon, approximately 100 more trips than the prior year and the greatest number since at least 1986. Compared with 2018, total bottomfish effort increased in two of the four Washington coast ocean port areas: La Push and Neah Bay–Area 4B; but fell in the Columbia River–Buoy 10 and Westport areas (Table IV-14).

Buoy 10 and Area 4B Add-On Fisheries

Salmon anglers fishing from private and charter boats originating from Oregon and Washington ports made a total of approximately 73,000 trips in the Buoy 10 fishery in 2019. The 2019 effort level is 12 percent more than the 65,200 trips recorded in 2018, but 17 percent below the approximately 88,100 trips made in 2017 and 18 percent below the 2014-2018 average of 89,400 angler-trips. The success/retention rate for anglers fishing from boats in the Buoy 10 fishery in 2019 was 0.45 salmon per angler day, 63 percent above the 0.27 success rate in 2018, but 14 percent below 0.52 average success rate in 2017 and 13 percent below the average success rate of 0.51 salmon per angler day in the Buoy 10 fishery during 2014-2018 (Table IV-15).

As in previous years, there was no Area 4B add-on fishery in 2019. In 2000, approximately 3,400 trips were made in the late-season Area 4B add-on fishery. Since then there have been no late season Area 4B add-on fisheries, with the exception of 2008, when there were an estimated 782 private trips and no charter trips (Table IV-15).

There were numerous other inside recreational salmon fishing opportunities in coastal streams and estuaries and Puget Sound that are not enumerated 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 annual salmon harvest on local economies and small businesses. Income impacts are based on commercial landings and recreational fishing days (angler-trips), and were estimated using the IO-PAC fisheries economic impact model. Prior to the *Review of 2014 Ocean Salmon Fisheries*, income impacts were estimated using the Fisheries Economic Assessment Model (FEAM). When IO-PAC was adopted it was applied retrospectively back to 2010. The change in methodology means that income impacts estimated using IO-

PAC for years beginning with 2010 are not completely comparable with historical values for years prior to 2010, which were estimated using FEAM. Consequently, comparisons of income impacts in this document are generally confined to describing trends appearing over 2010-2019, during which period the IO-PAC-based models and multipliers were applied. Appendix E to the *Review of 2014 Ocean Salmon Fisheries* contains a more detailed explanation of the change in income modeling methodology, including comparisons of IO-PAC with FEAM-based estimates for overlapping years.

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. Income impacts are most relevant to those dependent on an income stream from the fishery, including individuals, businesses, and state and local governments. These impacts represent estimates of total personal income associated with harvesting and processing activities in the commercial salmon fisheries and trip-related expenditures made by recreational salmon anglers, expressed at the local community (county) and state levels.[5] The income impacts reported in this chapter consist of the following personal income earned by those directly participating in the fishery (e.g. vessel owners, crew members, processing workers, recreational charter operators), income indirectly associated with the fishery that is earned by those providing inputs to harvesting, processing and recreational sectors (e.g. fuel, gear, packaging, bait, and ice suppliers; and hotel, restaurant, and campground operators), and income earned by those whose goods and services are purchased when direct and indirect income is re-spent in the community (e.g. grocery store owners and employees, local manufacturers, auto mechanics, restaurants, health care, and legal professionals). This latter category is sometimes called 'induced income.'

When the commercial or recreational fishery is reduced or absent, the net impact on local communities will depend on the economic base of the community and on how people respond to the reduced fishery. For example, if a recreational angler is unable to make a coastal salmon trip and instead travels inland to fish in-river or at a mountain lake, then the impact associated with the lost salmon trip represents a net loss to the members of the coastal community. On the other hand, if the recreational fisher instead took part in another form of recreational activity in the same coastal community, then there may be little or no net loss to the community as a whole. However, at least some of those whose livelihood involves the salmon fishery would experience an income reduction, as if the angler's money had been spent elsewhere (or not at all). Similarly, for those involved in the commercial fishery, whether or not reduced income impacts associated with a reduction in salmon harvest represents a net loss to the community depends on the degree to which opportunities exist in the community to engage in some other economic activity to compensate for the loss of income from commercial salmon harvesting and processing.

Income impacts are presented at the local and state levels. Estimates of changes in income impacts may represent a disruption due to redistribution of activity within the local economy or a net loss from activity leaving the local economy. At higher levels, such as for the state, it is more likely that an estimate of change represent a disruption due to redistribution of activity within the economy rather than a net loss to the greater state economy.

Income impacts are estimated based on several data components, including: reported commercial landings and exvessel prices by port or area, an inventory of local harvesters and processors, estimates of expenditures by harvesters and processors, estimates of the number of angler trips and expenditure patterns of recreational anglers, and local and state-level total income impact coefficients generated by IMPLAN®

[5] Because *income impact* refers to income "associated with" a given level of economic activity, the term *impact* in this context should not be confused with the term *impact* as frequently employed in policy analyses such as those required by the National Environmental Policy Act. Such policy analyses refer to impact as the effect (the difference) which results from taking an action (as compared to not taking the action). Income impacts are one of a number of different but related measures of total economic activity (e.g. income impacts, gross receipts, total jobs, etc.).

models constructed for each port or area. Commercial ocean harvests that are landed outside of coastal areas (e.g., ocean troll caught salmon landed in Puget Sound ports) are not included in these estimates of coastal community impacts, but may be included in the overall state-level impacts.

The income impacts presented below are estimates of annual trends and are intended to indicate the possible redirection of economic activity between fishing-dependent and non-fishing sectors. As such, they represent likely upper bounds on the local community and state-level income impacts generated by West Coast salmon fisheries. All income impact estimates reported in this document are in terms of inflation-adjusted 2019 dollars.

West Coast Ocean Fishery Commercial and Recreational Income Impacts

Total state-level income impacts associated with recreational and non-Indian commercial ocean salmon fisheries for all three states combined in 2019 were $71.7 million, 36 percent above the 2018 level of $52.7 million, 64 percent above the 2017 level of $43.7 million and 17 percent above the 2014-2018 average of $61.3 million (all values adjusted for inflation) (Tables IV-16, IV-17, and IV-18). Total West Coast income impacts associated with the 2019 non-Indian commercial ocean fishery were $34.6 million, 64 percent above the estimate for 2018 ($21.1 million), more than double the 2017 level of $17.0 million, and 26 percent above the 2014-2018 average of $27.4 million (all values adjusted for inflation).[6] Income impacts generated by the three states' combined 2019 ocean recreational fisheries totaled $37.1 million, 17 percent above last year's level of $31.6 million, 39 percent above the 2017 level of $26.7 million, and nine percent above the 2014-2018 average of $33.9 million (all values adjusted for inflation). Note that these aggregated coastwide values may mask the underlying effects in individual states and communities. Tables IV-16, IV-17, and IV-18 provide greater detail on the income impacts estimated for individual port areas in the three West Coast states.

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 Oregon and Washington communities on the Columbia River. In 2019, income impacts associated with the Columbia River commercial catch (combined non-Indian and treaty Indian) were estimated at $5.3 million, 32 percent below the annual estimate for 2018 of $7.9 million, 62 percent below the 2017 level of $14.2 million, 69 percent below the recent five-year average of $17.1 million for the 2014-2018 period, and the lowest level since the change in income impact estimating methodology for years beginning 2010 (all values adjusted for inflation) (Table IV-19).

Buoy 10 and Area 4B Add-On

Estimated local community income impacts associated with the 2019 Buoy 10 recreational salmon fishery were $5.4 million, 12 percent above last year's value of $4.8 million, but 19 percent below the $6.6 million estimated for 2017, and 19 percent below the 2014-2018 average value of approximately $6.6 million (all values adjusted for inflation). There was no late-season Area 4B add-on fishery in 2019. The most recent Area 4B add-on fishery, the only time since 2000, occurred in 2008. Local community income impacts associated with the 782 trips taken in the 2008 area 4B add-on fishery were estimated to be approximately $34,400 (adjusted for inflation) (Table IV-20).

[6] Income impact estimates for the commercial fishery do not include postseason settlement payments fishers may have received from buyers. In certain years postseason settlements have been particularly significant in the California fishery.

TABLE IV-1. Average monthly exvessel troll salmon price in dollars per dressed pound for California, Oregon, and Washington in 2019.

Species/Grade	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season[b/]
CALIFORNIA											
Chinook[a/]	-	-	7.80	5.82	6.75	6.28	7.36	8.79	-	-	6.61
Coho	-	-	-	-	-	-	-	-	-	-	-
OREGON											
Chinook											
Large (>11 Pounds)	-	12.86	8.45	7.93	6.56	6.80	10.53	8.99	9.00	-	6.87
Medium (7-11 Pounds)	-	12.65	8.10	6.50	5.88	6.23	10.71	7.99	8.00	-	6.21
Small (<7 Pounds)	-	-	-	8.36	6.53	9.17	7.47	10.00	-	-	7.70
Ungraded Chinook	-	12.50	10.71	7.00	6.33	6.54	7.84	9.24	-	-	6.73
Weighted Average	-	12.55	9.84	7.04	6.29	6.54	8.37	8.75	8.72	-	6.66
Mixed Coho	-	-	-	-	2.59	2.75	3.06	-	-	-	2.66
WASHINGTON[b/]											
Chinook											
Large (>11 Pounds)	-	-	8.64	6.63	6.01	6.43	6.30	-	-	-	6.88
Medium (8-11 Pounds)	-	-	8.50	6.30	5.52	5.79	5.31	-	-	-	6.63
Small (<8 Pounds)	-	-	6.20	4.94	4.92	5.03	4.60	-	-	-	5.37
Ungraded Chinook	-	-	-	-	-	-	-	-	-	-	-
Weighted Average	-	-	8.62	6.58	5.96	6.45	6.25	-	-	-	6.19
Mixed Coho	-	-	-	-	2.41	2.77	3.13	-	-	-	3.03

a/ Chinook salmon are sometimes sold in multiple 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, 2019) dollars.[a/]

	Chinook				Coho				Total[b/]	
Year or Avg.	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	44,587	2.53	6.50	2,303	5,916	2.19	5.63	19,659	50,504
1980	12,741	29,997	2.27	5.34	408	961	1.36	3.20	13,149	30,957
1981-1985	10,945	21,806	2.42	4.76	554	1,116	1.62	3.20	11,499	22,922
1986-1990	21,151	35,670	2.56	4.28	490	813	1.81	3.02	21,641	36,483
1991-1995	7,335	10,507	2.28	3.30	143	215	0.63	0.94	7,478	10,721
1996	5,984	8,097	1.44	1.95	-	-	-	-	5,984	8,097
1997	7,288	9,690	1.38	1.83	-	-	-	-	7,288	9,690
1998	3,060	4,023	1.66	2.18	-	-	-	-	3,060	4,023
1999	7,429	9,625	1.93	2.50	-	-	-	-	7,429	9,625
2000	10,304	13,067	2.01	2.55	-	-	-	-	10,304	13,067
2001	4,773	6,725	1.98	2.79	-	-	-	-	4,773	6,725
2002	7,776	10,785	1.55	2.15	-	-	-	-	7,776	10,785
2003	12,181	16,587	1.91	2.60	-	-	-	-	12,181	16,587
2004	17,895	23,730	2.87	3.81	-	-	-	-	17,895	23,730
2005	12,913	16,606	2.97	3.82	-	-	-	-	12,913	16,606
2006	5,350	6,678	5.13	6.40	-	-	-	-	5,350	6,678
2007	7,902	9,606	5.18	6.30	-	-	-	-	7,902	9,606
2008	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-
2010	1,246	1,457	5.47	6.40	-	-	-	-	1,246	1,457
2011	5,133	5,881	5.18	5.94	-	-	-	-	5,133	5,881
2012	13,521	15,201	5.34	6.00	-	-	-	-	13,521	15,201
2013	23,632	26,110	6.23	6.88	-	-	-	-	23,632	26,110
2014	12,521	13,583	5.56	6.03	-	-	-	-	12,521	13,583
2015	8,347	8,961	7.03	7.55	-	-	-	-	8,347	8,961
2016	5,312	5,645	8.63	9.17	-	-	-	-	5,312	5,645
2017	4,925	5,136	9.90	10.33	-	-	-	-	4,925	5,136
2018	7,932	8,076	8.53	8.68	-	-	-	-	7,932	8,076
2019[c/]	17,201	17,201	6.61	6.61	-	-	-	-	17,201	17,201

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 percent to 10 percent.

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, 2019) dollars.

	Chinook				Coho				Total[a/]	
Year or Avg.	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	7,725	0.89	3.44	3,658	14,218	0.64	2.44	5,694	21,943
1976-1980	5,290	14,541	2.17	5.94	6,389	18,100	1.51	4.13	11,679	32,641
1981-1985	3,582	7,099	2.46	4.84	2,248	4,648	1.45	2.86	5,830	11,747
1986-1990	9,381	15,795	2.47	4.13	3,203	5,406	1.54	2.58	12,584	21,200
1991-1995	1,971	2,829	2.24	3.24	326	489	0.64	0.94	2,297	3,318
1996	3,007	4,069	1.56	2.11	-	-	-	-	3,007	4,069
1997	2,469	3,283	1.60	2.13	-	-	-	-	2,469	3,283
1998	2,297	3,020	1.64	2.16	-	-	-	-	2,297	3,020
1999	1,400	1,814	1.94	2.51	1	1	1.03	1.33	1,401	1,815
2000	2,988	3,789	2.02	2.56	75	95	1.06	1.34	3,063	3,884
2001	4,680	6,594	1.61	2.27	41	58	0.79	1.11	4,721	6,652
2002	5,383	7,466	1.54	2.14	8	11	0.75	1.04	5,391	7,478
2003	7,186	9,785	1.97	2.68	36	49	0.85	1.16	7,222	9,835
2004	9,832	13,038	3.45	4.57	86	115	1.24	1.64	9,919	13,153
2005	8,466	10,887	3.17	4.08	37	48	1.87	2.40	8,503	10,935
2006	2,663	3,323	5.48	6.84	38	48	2.90	3.62	2,701	3,371
2007	2,630	3,196	5.66	6.88	193	234	1.90	2.31	2,822	3,431
2008	484	577	7.31	8.72	10	12	2.82	3.36	494	589
2009	77	92	5.06	5.99	267	316	2.04	2.41	345	408
2010	2,775	3,246	5.49	6.42	16	18	2.23	2.61	2,791	3,264
2011	2,396	2,746	5.96	6.83	5	6	2.01	2.30	2,401	2,751
2012	4,263	4,793	5.75	6.46	8	9	2.20	2.47	4,271	4,802
2013	7,604	8,401	5.88	6.50	7	7	2.56	2.83	7,611	8,409
2014	14,692	15,937	5.71	6.19	67	73	2.00	2.17	14,760	16,010
2015	7,313	7,851	6.15	6.60	21	22	1.88	2.02	7,334	7,873
2016	4,261	4,528	8.23	8.75	-	-	-	-	4,261	4,528
2017	2,121	2,212	8.03	8.37	8	9	3.03	3.16	2,129	2,221
2018	2,440	2,484	8.48	8.63	2	2	3.65	3.72	2,442	2,486
2019[b/]	2,085	2,085	6.66	6.66	18	18	2.66	2.66	2,103	2,103

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, 2019) dollars.[a/]

	Chinook				Coho				Total[b/]	
Year or Avg.	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	10,431	0.89	3.44	3,060	11,788	0.66	2.56	5,775	22,219
1976-1980	5,313	14,914	2.39	6.51	6,086	17,043	1.67	4.56	11,399	31,957
1981-1985	1,954	3,986	2.46	4.84	1,272	2,605	1.32	2.60	3,225	6,591
1986-1990[c/]	1,310	2,200	2.61	4.38	360	595	1.62	2.71	1,670	2,795
1991-1995[d/]	550	809	2.17	3.14	120	177	0.86	1.25	670	985
1996[d/]	d/	d/	d/	d/	59	79	0.86	1.16	d/	d/
1997	125	166	1.55	2.06	-	-	-	-	125	166
1998	123	162	1.51	1.99	-	-	-	-	123	162
1999	377	488	1.90	2.46	19	25	0.88	1.14	396	513
2000	224	285	1.71	2.17	34	43	1.09	1.38	258	328
2001	349	492	1.44	2.03	34	48	0.69	0.97	383	539
2002	756	1,049	1.11	1.54	2	2	1.58	2.19	758	1,051
2003	951	1,295	1.15	1.57	40	55	0.74	1.01	991	1,350
2004	1,079	1,431	2.14	2.84	106	140	1.16	1.54	1,185	1,571
2005	1,273	1,637	2.70	3.47	16	21	1.65	2.12	1,290	1,658
2006	1,029	1,284	4.64	5.79	16	21	1.69	2.11	1,045	1,304
2007	905	1,099	4.90	5.96	48	59	1.46	1.77	953	1,158
2008	673	803	6.73	8.02	36	43	2.49	2.97	709	845
2009	893	1,057	5.76	6.82	276	326	2.02	2.39	1,169	1,383
2010	3,083	3,606	5.61	6.56	32	38	2.14	2.50	3,115	3,644
2011	1,652	1,893	5.12	5.87	35	41	2.10	2.41	1,687	1,933
2012	2,323	2,611	5.34	6.00	35	39	1.99	2.24	2,358	2,651
2013	2,771	3,061	6.16	6.81	67	74	2.15	2.38	2,838	3,135
2014	2,549	2,765	5.50	5.97	160	174	1.83	1.99	2,709	2,938
2015	3,423	3,675	5.48	5.88	26	27	1.67	1.79	3,448	3,702
2016	1,606	1,706	8.00	8.50	-	-	-	-	1,606	1,706
2017	2,896	3,020	8.66	9.03	23	24	2.59	2.70	2,919	3,045
2018	2,326	2,368	9.16	9.33	24	24	2.81	2.86	2,350	2,393
2019	1,858	1,858	6.19	6.19	67	67	3.03	3.03	1,925	1,925

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, 2019) dollars.

	Oregon				Washington				Total	
Year or Avg.[a/]	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	480	0.75	2.05	1,200	3,253	0.54	1.49	1,367	3,733
1981-1985	129	259	0.74	1.46	287	585	0.41	0.82	416	844
1986-1990	41	71	0.77	1.29	57	92	0.66	1.11	98	163
1991-1995	1	2	0.88	1.26	38	56	0.64	0.92	39	58
1997	b/	b/	0.56	0.75	b/	b/	0.20	0.27	b/	b/
1999	b/	b/	0.67	0.87	b/	b/	0.38	0.49	b/	b/
2001	1	1	0.58	0.82	b/	b/	0.22	0.31	1	1
2003	b/	b/	0.85	1.16	b/	b/	0.30	0.41	b/	1
2005	b/	b/	1.25	1.61	b/	b/	0.52	0.67	b/	b/
2007	b/	b/	1.11	1.35	b/	b/	0.33	0.40	b/	b/
2009	b/	b/	0.51	0.60	b/	b/	0.33	0.39	b/	b/
2011	b/	b/	1.31	1.50	1	1	0.83	0.95	1	1
2013	b/	b/	1.35	1.49	b/	b/	0.61	0.67	b/	b/
2015	b/	b/	1.60	1.72	b/	b/	0.77	0.83	b/	b/
2017	-	-	-	-	b/	b/	b/	b/	b/	b/
2019	b/	b/	2.11	2.11	b/	b/	b/	b/	b/	b/

a/ Odd year averages.

b/ Less than $500.

TABLE IV-6. Pounds of salmon landed by the commercial troll ocean fishery for major California port areas.[a/b/]

Year or Avg.	Crescent City	Eureka	Fort Bragg	San Francisco	Monterey	State Total
CHINOOK (thousands of dressed pounds)						
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
2001-2005	86	64	1,268	2,704	756	4,877
2006	-	-	273	684	87	1,043
2007	34	81	357	888	165	1,525
2008	-	-	-	-	-	-
2009	-	-	-	-	-	-
2010	-	4	186	16	20	228
2011	8	53	622	215	94	992
2012	5	78	611	1,189	648	2,530
2013	24	200	1,427	1,776	367	3,793
2014	27	110	1,038	970	108	2,253
2015	6	48	617	363	154	1,188
2016	c/	6	165	313	131	615
2017	-	3	37	316	141	497
2018	42	43	123	577	145	930
2019[d/]	39	14	97	1,622	831	2,603
COHO (thousands of dressed pounds)						
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	c/	4	11	56	23	94
1996-2000	-	-	-	-	-	-
2001-2005	-	-	-	-	-	-
2006	-	-	-	-	-	-
2007	-	-	-	-	-	-
2008	-	-	-	-	-	-
2009	-	-	-	-	-	-
2010	-	-	-	-	-	-
2011	-	-	-	-	-	-
2012	-	-	-	-	-	-
2013	-	-	-	-	-	-
2014	-	-	-	-	-	-
2015	-	-	-	-	-	-
2016	-	-	-	-	-	-
2017	-	-	-	-	-	-
2018	-	-	-	-	-	-
2019	-	-	-	-	-	-

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 Albion; San Francisco includes Point Arena, Bodega Bay, Richmond, Bolinas, Sausalito, Berkeley, Alameda, 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/ Less than 500 pounds.

d/ Preliminary.

TABLE IV-7. Pounds of salmon landed by the commercial troll ocean fishery for major Oregon port areas.[a/]

Year or Avg.	Astoria	Tillamook	Newport	Coos Bay	Brookings	State Total
CHINOOK (thousands of dressed pounds)						
1976-1980	170.7	118.3	530.4	907.7	699.9	2,426.9
1981-1985	92.5	44.6	270.7	638.3	385.8	1,431.8
1986-1990	52.1	264.2	828.7	2,118.1	467.5	3,730.6
1991-1995	7.4	85.8	579.5	235.5	31.0	939.6
1996-2000	25.2	70.4	790.3	435.0	92.2	1,413.6
2001-2005	186.5	213.8	1,380.7	1,124.0	203.6	3,108.9
2006	99.0	67.5	218.1	56.2	45.0	485.8
2007	21.7	36.5	75.8	231.9	98.3	464.3
2008	39.2	19.0	-	-	7.9	66.2
2009	6.7	4.1	-	-	4.6	15.3
2010	116.4	40.0	184.5	122.2	42.6	505.7
2011	30.4	13.7	67.9	231.2	58.8	401.9
2012	84.4	64.0	275.0	221.0	97.1	741.5
2013	34.0	76.0	232.0	783.0	166.0	1,291.0
2014	172.1	149.0	927.0	1,025.0	298.0	2,571.1
2015	115.0	89.0	429.0	429.0	127.0	1,189.0
2016	24.0	16.0	338.0	116.0	24.0	518.0
2017	22.0	15.0	180.0	34.0	14.0	265.0
2018	3.0	8.0	131.0	87.0	59.0	288.0
2019[c/]	3.0	16.0	196.0	63.0	35.0	313.0
COHO (thousands of dressed pounds)						
1976-1980	384.6	659.7	1,189.8	1,660.5	357.2	4,251.8
1981-1985	132.9	293.1	450.5	549.9	110.7	1,537.1
1986-1990	73.4	473.2	693.0	648.4	69.2	1,957.2
1991-1995	16.5	92.9	110.3	103.9	1.5	325.1
1996-2000	14.4	-	-	-	-	14.4
2001-2005	28.7	9.8	1.0	-	-	39.1
2006	7.6	5.5	-	-	-	13.1
2007	36.5	34.3	13.5	14.3	2.5	101.1
2008	2.9	0.7	-	-	-	3.7
2009	47.7	43.4	35.0	4.6	b/	130.8
2010	6.3	0.7	-	-	-	7.0
2011	2.0	0.6	-	-	-	2.6
2012	2.5	1.3	-	-	-	3.8
2013	2.0	-	-	-	-	2.0
2014	32.7	17.8	9.2	6.5	1.3	67.5
2015	10.0	1.0	-	-	-	11.0
2016	-	-	-	-	-	-
2017	1.0	1.0	-	-	-	2.0
2018	b/	b/	-	-	-	-
2019[c/]	4.0	3.0	-	-	-	7.0

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.[a/b/]

Year or Avg.	Neah Bay	La Push	Westport	Ilwaco	Coastal Community Total	Puget Sound	State Total[c/]
CHINOOK (thousands of dressed pounds)							
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[d/]	137	29	123	9	204	30	234
1996-2000[d/]	49	1	37	3	80	22	102
2001-2005	250	55	208	26	539	4	543
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
2011	113	44	155	11	322	-	322
2012	172	92	147	23	435	-	435
2013	85	83	275	7	450	e/	450
2014	77	93	182	112	463	e/	463
2015	61	133	383	43	621	4	625
2016	28	32	118	19	197	3	201
2017	69	22	237	6	334	-	334
2018	42	49	162	1	254	-	254
2019	133	59	105	3	300	-	300
COHO (thousands of dressed pounds)							
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
2001-2005	7	8	23	5	40	1	41
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
2011	6	2	9	e/	17	-	17
2012	7	5	6	1	18	-	18
2013	5	8	18	1	31	e/	31
2014	7	22	47	12	87	-	87
2015	e/	1	10	4	15	e/	15
2016	e/	-	-	-	-	e/	e/
2017	2	1	5	1	9	-	9
2018	1	3	4	e/	9	-	9
2019	5	3	14	1	22	-	22

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. Landings, exvessel values and average prices (inflation adjusted, 2019 dollars) of inriver commercial harvest of Columbia River salmon.[a/] (Page 1 of 2)

Year or Avg.	Non-Indian Gillnet[b/] Chinook Spring	Non-Indian Gillnet[b/] Chinook Fall Brights[d/]	Non-Indian Gillnet[b/] Chinook Fall Tules	Non-Indian Gillnet[b/] Coho	Non-Indian Gillnet[b/] Chum[e/]	Non-Indian Gillnet[b/] TOTAL	Treaty Indian[c/] - All Gears Chinook Spring	Treaty Indian[c/] - All Gears Chinook Fall Brights[d/]	Treaty Indian[c/] - All Gears Chinook Fall Tules	Treaty Indian[c/] - All Gears Coho	Treaty Indian[c/] - All Gears Chum[e/]	Treaty Indian[c/] - All Gears TOTAL	Col. R. Total By State
Oregon													
Average Price Per Landed Pound[f/] (dollars)													
1986-1990	5.32	2.13	0.76	2.39	0.98		5.63	2.13	0.63	1.69	-		
1991-1995	4.91	1.47	0.40	1.15	0.48		5.06	1.27	0.28	0.83	-		
1996-2000	3.35	1.19	0.24	0.89	0.29		3.58	0.97	0.17	0.53	-		
2001-2005	4.22	1.34	0.22	0.83	0.42		2.96	1.30	0.31	0.86	-		
2006-2010	6.17	2.80	0.49	1.64	0.65		4.53	2.43	0.41	1.51	-		
2011	5.82	2.61	0.66	1.89	0.88		4.09	2.70	0.81	1.75	-		
2012	6.54	2.48	0.61	1.81	0.55		6.21	2.88	0.83	2.08	-		
2013	7.13	2.77	0.63	2.03	0.55		5.73	2.28	0.71	1.48	-		
2014	5.84	1.99	0.62	1.27	0.54		5.46	1.87	0.62	0.99	-		
2015	6.19	2.60	0.54	1.63	0.32		4.49	2.67	0.49	1.57	-		
2016	7.53	3.41	0.67	1.96	-		6.38	3.08	0.64	1.65	-		
2017	7.81	3.32	0.65	2.12	0.52		7.48	5.11	0.63	2.04	-		
2018	10.61	3.60	0.68	2.01	-		8.09	4.74	0.70	2.14	-		
2019	11.37	2.64	0.53	1.70	-		6.09	3.58	0.50	1.98	-		
Exvessel Value (thousands of dollars)													
1986-1990	969	5,846	336	4,128	6	11,286	5	2,403	31	22	-	2,461	13,747
1991-1995	289	254	18	637	g/	1,198	1	238	29	7	-	274	1,472
1996-2000	127	90	10	329	g/	555	1	71	10	2	-	84	639
2001-2005	902	465	39	802	g/	2,208	56	203	11	6	-	275	2,483
2006-2010	1,054	914	77	816	g/	2,862	264	631	44	32	g/	971	3,833
2011	1,337	1,658	156	829	g/	3,980	210	685	35	35	-	964	4,944
2012	1,187	1,012	124	167	g/	2,490	83	393	6	13	-	494	2,985
2013	1,023	2,345	117	542	g/	4,028	99	1,145	25	7	-	1,276	5,304
2014	681	1,758	153	1,801	g/	4,393	303	963	15	37	-	1,318	5,710
2015	1,337	1,557	100	277	g/	3,271	457	1,056	32	2	-	1,548	4,819
2016	1,326	1,406	64	413	-	3,209	150	895	2	8	-	1,055	4,264
2017	1,530	576	31	457	g/	2,595	168	928	3	16	-	1,115	3,709
2018	1,426	314	23	142	-	1,905	450	897	2	20	-	1,369	3,274
2019[h/]	451	182	11	202	-	847	158	1,024	g/	13	-	1,194	2,042
Pounds (thousands)													
1986-1990	182	2,331	378	1,843	6	4,741	1	1,057	54	14	-	1,126	5,867
1991-1995	58	165	45	539	1	809	g/	194	113	8	-	314	1,124
1996-2000	37	80	46	395	1	559	g/	72	58	3	-	133	692
2001-2005	211	355	178	1,082	g/	1,825	24	141	73	8	-	246	2,071
2006-2010	174	342	120	517	g/	1,152	54	268	81	22	g/	425	1,577
2011	230	635	234	439	g/	1,537	51	253	43	20	-	367	1,904
2012	181	407	204	92	g/	885	13	137	7	6	-	163	1,048
2013	144	846	186	267	g/	1,442	17	503	35	5	-	560	2,002
2014	117	886	247	1,419	g/	2,669	55	516	24	38	-	634	3,302
2015	216	599	186	170	g/	1,171	102	395	64	1	-	563	1,734
2016	176	412	95	211	g/	895	24	290	3	5	-	322	1,217
2017	196	174	48	215	g/	633	22	182	4	8	-	216	850
2018	134	87	34	71	-	326	56	189	3	9	-	257	583
2019[h/]	40	69	22	119	-	249	26	286	1	7	-	319	569

TABLE IV-9. Landings, exvessel values and average prices (inflation adjusted, 2019 dollars) of inriver commercial harvest of Columbia River salmon.[a/] (Page 2 of 2)

	Non-Indian Gillnet[b/]						Treaty Indian[c/] - All Gears						
	Chinook						Chinook						Col. R.
		Fall						Fall					Total By
Year or Avg.	Spring	Brights[d/]	Tules	Coho	Chum[e/]	TOTAL	Spring	Brights[d/]	Tules	Coho	Chum[e/]	TOTAL	State
Washington[h/i/j/]													
Average Price Per Landed Pound[f/] (dollars)													
1986-1990	5.43	1.96	-	2.45	1.06		5.15	2.04	-	1.82	-		
1991-1995	4.79	1.34	-	1.14	0.44		3.31	0.79	-	0.82	-		
1996-2000	5.76	1.18	-	0.86	0.33		4.68	0.61	-	0.59	-		
2001-2005	5.32	1.13	-	0.83	0.41		1.83	0.44	-	0.23	-		
2006-2010	6.57	2.59	-	1.51	0.93		4.32	1.49	-	0.87	0.93		
2011	5.14	2.19		1.73	0.66		4.02	2.09		1.64	3.59		
2012	7.05	2.29		1.83	0.48		5.19	1.94		1.42	-		
2013	6.77	2.36		2.02	-		5.05	2.09		1.29	-		
2014	5.81	1.76		1.23	0.50		5.11	1.57		1.06	1.17		
2015	5.95	2.16		1.75	-		4.28	2.00		1.38	-		
2016	7.91	3.08		1.99	-		5.72	2.55		1.48	-		
2017	10.03	3.08		2.15	-		5.60	0.88		1.39	0.88		
2018	12.92	2.98		1.81	-		6.86	3.04		1.75	0.97		
2019	13.97	2.55		1.92	-		5.24	2.28		1.32	-		
Exvessel Value (thousands of dollars)													
1986-1990	259	664	-	464	1	1,388	78	17	-	16	-	111	1,499
1991-1995	575	2,787	-	2,061	1	5,424	27	8	-	93	-	128	5,552
1996-2000	194	101	-	278	1	573	1	g/	-	8	-	9	582
2001-2005	5	71	-	114	g/	190	13	4	-	6	-	23	212
2006-2010	270	315	-	382	g/	967	251	54	-	8	-	314	1,280
2011	634	598	-	379	2	1,613	2,318	701	-	26	-	3,046	4,658
2012	404	855	-	273	1	1,532	1,910	990	-	267	1	3,168	4,700
2013	371	818	-	70	g/	1,258	1,036	1,916	-	40	-	2,993	4,250
2014	215	1,493	-	241	-	1,949	966	4,695	-	120	-	5,781	7,730
2015	268	1,485	-	645	g/	2,397	2,147	5,561	-	392	2	8,102	10,500
2016	542	1,595	-	86	-	2,223	2,848	6,501	-	29	-	9,377	11,600
2017	444	1,942	-	117	-	2,503	2,004	4,596	-	91	-	6,692	9,194
2018	98	677	-	164	-	938	1,158	4,141	-	107	11	5,418	6,355
2019	79	267	-	46	-	391	375	1,262	-	57	8	1,702	2,093
Pounds (thousands)													
1986-1990	109	1,053	-	835	4	2,001	5	1,490	-	51	-	1,546	3,546
1991-1995	38	71	-	225	2	335	g/	351	-	10	-	361	696
1996-2000	1	60	-	147	1	209	5	567	-	9	-	581	790
2001-2005	51	272	-	566	g/	889	142	1,342	-	38	-	1,521	2,410
2006-2010	64	214	-	218	1	497	226	1,023	-	73	g/	1,322	1,819
2011	78	391	-	158	1	628	475	1,596	-	163	g/	2,234	2,862
2012	53	355	-	38	g/	446	194	980	-	28	-	1,202	1,648
2013	32	630	-	119	-	781	191	2,244	-	93	-	2,528	3,309
2014	46	846	-	524	g/	1,416	421	3,540	-	369	2	4,332	5,748
2015	91	738	-	49	-	878	666	3,254	-	21	-	3,940	4,818
2016	56	629	-	59	-	744	350	1,803	-	62	-	2,216	2,960
2017	10	220	-	76	-	306	207	1,325	-	77	12	1,621	1,927
2018	6	89	-	25	-	121	55	415	-	32	8	510	631
2019	1	81	-	27	-	110	36	487	-	34	8	566	675

a/ Excluding pink, sockeye, and steelhead.

b/ Mainstem below Bonneville and Select Areas (Youngs Bay, Tongue Point, Blind Slough, and Deep River). Gear type may also include purse seine, beach seine and tanglenet gear after 2013.

c/ Treaty Indian landings and values do not include direct sales to consumers ('Over-the-bank' sales).

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/ Sale and possession of chum salmon prohibited beginning October 2013 in Columbia R. commercial fisheries. Reported sales are likely mis-identified fish at time of landing.

f/ Gillnet exvessel salmon prices are recorded in round weight and therefore are not strictly comparable to exvessel troll prices.

g/ Less than $500 or 500 pounds.

h/ Preliminary. (All Washington values in this table are based on preliminary information available when each year's Salmon Review is drafted.)

i/ Washington prices for years prior to 2000 are based on a combination of Washington and Oregon value information.

j/ Treaty Indian values are primarily mainstem Columbia 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)

	Angler Trips		Chinook Catch[a/]		Coho Catch[a/]	
Year or Avg.	Charter	Private	Charter	Private	Charter	Private
			CALIFORNIA			
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
2001-2005	76.5	103.6	72.5	75.5	0.1	0.9
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	-	b/	-	-
2009	0.6	4.7	0.1	0.6	-	b/
2010	13.6	35.0	4.7	10.1	-	0.2
2011	29.5	62.2	18.7	31.1	b/	0.3
2012	52.7	95.3	44.2	79.7	b/	0.1
2013	55.0	92.3	49.2	66.9	b/	0.3
2014	48.3	72.0	33.8	41.1	-	0.5
2015	37.7	44.1	23.4	14.1	b/	b/
2016	31.2	38.9	22.9	15.1	-	0.1
2017	35.3	38.7	38.8	23.4	b/	0.4
2018	47.7	49.0	59.2	28.1	b/	0.2
2019[c/]	45.3	58.4	48.7	39.8	b/	0.7
			OREGON[d/e/]			
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
2001-2005	17.6	101.2	8.5	31.5	13.6	52.4
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	5.0	48.3	0.6	4.4	2.8	15.5
2011	5.9	42.8	0.6	4.6	3.5	15.3
2012	6.6	60.7	1.5	17.3	3.0	13.1
2013	7.4	78.9	1.8	28.6	3.5	11.1
2014	14.5	107.0	1.3	17.2	19.0	80.5
2015	7.8	58.2	0.8	8.7	5.3	23.0
2016	2.4	36.4	0.3	3.8	1.2	7.2
2017	2.4	39.9	0.3	4.3	1.7	19.6
2018	5.6	58.2	0.3	4.7	2.0	25.7
2019[c/]	7.5	86.8	0.3	6.3	5.6	60.7

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)

	Angler Trips		Chinook Catch[a/]		Coho Catch[a/]	
Year or Avg.	Charter	Private	Charter	Private	Charter	Private
			WASHINGTON[f/g/]			
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
1996-2000	13.6	20.6	2.7	2.2	17.4	20.8
2001-2005	38.2	67.5	17.0	18.2	41.4	66.9
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	26.5	54.4	15.4	21.5	14.1	22.2
2011	22.2	49.2	9.8	19.3	15.1	24.4
2012	24.5	50.5	11.8	21.8	11.8	19.3
2013	24.7	52.3	9.2	19.6	17.9	27.9
2014	34.6	78.1	12.1	27.7	46.0	73.3
2015	30.6	61.3	12.0	26.9	27.6	39.5
2016	13.7	34.0	4.5	12.3	5.8	10.1
2017	16.3	42.4	4.2	15.7	11.5	24.5
2018	14.5	33.5	3.0	7.0	11.8	22.9
2019[c/]	18.1	47.5	1.6	8.0	22.6	41.8

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
			CHARTER TRIPS			
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
2001-2005	a/	1.4	9.6	49.2	16.3	76.5
2006-2010	0.0	0.6	2.8	11.6	3.0	18.1
2011	0.0	1.5	4.4	17.5	6.0	29.5
2012	0.2	3.6	4.2	33.7	11.0	52.7
2013	a/	4.1	5.5	40.4	4.9	55.0
2014	0.1	3.2	5.4	34.0	5.5	48.3
2015	a/	1.9	3.4	30.1	2.2	37.7
2016	a/	1.6	2.3	26.2	1.1	31.2
2017	-	-	0.8	33.3	1.1	35.3
2018	a/	1.0	3.1	42.0	1.6	47.7
2019[b/]	a/	1.5	2.6	37.2	3.9	45.3
			PRIVATE TRIPS			
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
2001-2005	4.1	15.5	18.6	34.3	31.1	103.6
2006-2010	1.0	7.7	6.2	13.1	11.3	39.2
2011	0.8	12.7	9.9	16.9	21.9	62.2
2012	7.7	20.0	10.6	23.8	33.3	95.3
2013	7.0	18.6	11.7	29.2	25.7	92.3
2014	4.3	13.0	12.1	20.7	22.0	72.0
2015	0.6	6.4	8.4	15.8	13.0	44.1
2016	0.6	6.8	7.3	17.6	6.7	38.9
2017	-	-	3.8	20.9	13.9	38.7
2018	1.3	5.0	6.8	23.5	12.3	49.0
2019[b/]	0.5	5.7	5.0	20.8	26.4	58.4
			TOTAL TRIPS			
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
2001-2005	4.1	16.9	28.2	83.5	47.4	180.1
2006-2010	1.0	8.3	9.0	24.8	14.3	57.4
2011	0.8	14.2	14.4	34.4	28.0	91.7
2012	7.8	23.6	14.8	57.5	44.3	148.0
2013	7.0	22.8	17.3	69.5	30.7	147.3
2014	4.4	16.2	17.5	54.7	27.5	120.3
2015	0.6	8.3	11.8	45.9	15.2	81.8
2016	0.6	8.4	9.6	43.8	7.8	70.1
2017	-	-	4.7	54.2	15.1	74.0
2018	1.3	6.0	9.9	65.4	13.9	96.6
2019[b/]	0.5	7.2	7.6	58.1	30.3	103.7

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
			CHARTER TRIPS			
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[a/]	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
2001-2005	3.3	1.7	8.8	3.4	0.5	17.6
2006-2010	2.0	0.7	4.1	0.9	0.2	7.8
2011	1.6	0.5	3.6	0.1	0.1	5.9
2012	1.7	0.4	3.7	0.5	0.2	6.6
2013	1.7	0.6	4.2	0.3	0.6	7.4
2014	2.6	1.0	10.2	0.3	0.4	14.5
2015	2.0	0.6	5.1	c/	0.1	7.8
2016	0.4	0.1	1.9	-	c/	2.4
2017	0.6	0.2	1.5	c/	c/	2.4
2018	0.5	0.4	4.7	c/	0.1	5.6
2019[b/]	0.9	1.1	5.3	c/	0.1	7.5
			PRIVATE TRIPS			
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[a/]	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
2001-2005	14.0	20.3	18.0	31.1	17.8	101.2
2006-2010	7.4	15.7	12.2	13.2	7.5	56.0
2011	5.8	12.3	8.3	10.2	6.2	42.8
2012	3.1	12.0	11.1	16.0	18.6	60.7
2013	4.4	13.5	11.1	29.5	19.5	78.1
2014	9.7	24.2	27.0	29.5	16.7	107.0
2015	6.6	14.9	13.1	14.7	8.9	58.2
2016	4.0	10.9	6.3	11.2	4.2	36.4
2017	7.9	8.4	8.8	12.8	2.0	39.9
2018	7.2	10.8	18.9	14.3	6.9	58.2
2019[b/]	13.8	20.0	29.8	19.0	4.3	86.8
			TOTAL TRIPS			
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[a/]	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
2001-2005	17.3	22.1	26.7	34.5	18.3	118.9
2006-2010	9.4	16.4	16.2	14.1	7.7	63.8
2011	7.4	12.8	12.0	10.3	6.3	48.8
2012	4.8	12.4	14.8	16.5	18.8	67.3
2013	6.1	14.1	15.3	29.8	20.1	85.5
2014	12.3	25.2	37.2	29.8	17.1	121.5
2015	8.6	15.5	18.2	14.7	9.0	66.0
2016	4.3	11.0	8.2	11.2	4.2	38.9
2017	8.6	8.6	10.3	12.8	2.0	42.3
2018	7.7	11.3	23.6	14.3	7.0	63.8
2019[b/]	14.7	21.1	35.1	19.0	4.4	94.2

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.

c/ Less than 50 trips.

TABLE IV-13. Estimates of Washington recreational ocean salmon angler trips (thousands) by port area and boat type.

Year or Avg.	Neah Bay[a/]	La Push	Westport	Ilwaco[b/]	State Total
			CHARTER TRIPS		
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
2001-2005	1.6	0.6	24.1	11.9	38.2
2006-2010	0.5	0.5	15.6	7.7	24.3
2011	0.5	0.7	14.1	6.9	22.2
2012	0.8	0.7	16.2	6.9	24.5
2013	0.9	0.7	15.9	7.1	24.7
2014	1.1	1.1	22.7	9.7	34.6
2015	1.0	0.8	20.2	8.6	30.6
2016	0.6	0.3	7.5	5.3	13.7
2017	0.7	0.4	10.5	4.7	16.3
2018	0.7	0.5	9.2	4.1	14.5
2019[c/]	0.8	0.6	10.8	5.9	18.1
			PRIVATE TRIPS		
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
2001-2005	17.7	3.6	18.4	27.8	67.5
2006-2010	11.6	3.2	13.5	17.9	46.2
2011	10.6	3.6	19.4	15.7	49.2
2012	12.7	3.3	21.1	13.4	50.5
2013	14.4	3.6	20.0	14.4	52.3
2014	15.4	3.9	31.2	27.6	78.1
2015	13.8	2.7	25.2	19.6	61.3
2016	7.7	0.8	10.4	15.1	34.0
2017	10.0	1.5	15.5	15.4	42.4
2018	8.0	1.4	13.3	10.7	33.5
2019[c/]	9.3	1.7	12.6	24.0	47.5
			TOTAL TRIPS		
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
2001-2005	19.3	4.1	42.5	39.7	105.6
2006-2010	12.1	3.7	29.1	25.6	70.5
2011	11.1	4.2	33.5	22.5	71.4
2012	13.4	3.9	37.3	20.3	75.0
2013	15.4	4.3	35.9	21.5	77.0
2014	16.5	5.1	53.9	37.2	112.7
2015	14.8	3.5	45.5	28.2	91.9
2016	8.3	1.1	17.8	20.5	47.7
2017	10.7	1.9	26.0	20.0	58.6
2018	8.7	1.9	22.5	14.9	48.0
2019[c/]	10.1	2.3	23.4	29.9	65.7

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/ 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 2)

	Columbia River and Buoy 10					Westport			La Push			Neah Bay and Area 4B Add-On		
Year	Charter	Private	Subtotal	Jetty[b/]	Total	Charter	Private	Total	Charter	Private	Total	Charter	Private	Total
SALMON EFFORT														
1984-1990	36.8	145.6	182.4	14.5	153.7	33.2	14.2	47.3	0.0	2.0	2.0	2.1	18.5	20.6
1991-1995	18.0	88.5	106.4	20.1	126.6	24.2	20.6	44.8	0.2	2.5	2.6	1.2	19.3	20.5
1996-2000	7.5	51.3	58.8	6.3	65.1	9.7	6.3	15.9	0.1	1.5	1.5	0.4	7.9	8.3
2001-2005	17.0	123.0	140.0	7.6	146.0	28.1	18.4	42.5	0.6	3.6	4.1	1.6	17.8	19.4
2006-2010	10.3	70.9	81.2	1.2	82.2	15.6	13.5	29.1	0.5	3.2	3.7	0.5	11.8	12.2
2011	10.5	76.2	86.7	2.2	88.9	14.1	19.4	33.5	0.7	3.6	4.2	0.5	10.6	11.1
2012	9.5	79.3	88.8	2.7	91.5	16.2	21.1	37.3	0.7	3.3	3.9	0.8	12.7	13.4
2013	10.2	82.3	92.5	4.8	97.2	15.9	20.0	35.9	0.7	3.6	4.3	0.9	14.4	15.4
2014	12.8	140.3	153.1	10.9	164.0	22.5	31.2	53.8	1.1	3.9	5.1	1.1	15.4	16.5
2015	11.1	127.4	138.5	5.2	143.8	20.2	25.2	45.5	0.8	2.7	3.5	1.0	13.8	14.8
2016	6.0	107.5	113.5	3.8	117.3	7.5	10.4	17.8	0.3	0.8	1.1	0.6	7.7	8.3
2017	5.9	110.8	116.7	8.2	124.9	10.5	15.5	26.0	0.4	1.5	1.9	0.7	10.0	10.7
2018	5.3	82.5	87.7	2.2	89.9	9.2	13.3	22.5	0.5	1.4	1.9	0.7	8.0	8.7
2019[c/]	6.9	110.7	117.6	4.0	121.6	10.8	12.6	23.4	0.6	1.7	2.3	0.8	9.3	10.1
BOTTOMFISH EFFORT[d/]														
1984-1990	1.7	0.3	2.0	1.3	3.3	19.1	0.9	20.0	0.0	0.4	0.4	4.7	14.2	18.9
1991-1995	1.8	0.6	2.4	2.3	4.7	22.5	1.7	24.1	0.1	1.4	1.5	4.8	18.1	22.9
1996-2000[e/f/]	1.3	0.6	1.9	1.2	3.1	19.2	1.2	20.4	0.1	1.5	1.5	4.8	21.6	26.4
2001-2005	4.9	0.7	3.0	0.7	3.6	15.1	1.5	16.6	0.5	1.8	2.3	4.2	17.5	21.7
2006-2010	2.9	1.5	4.5	0.5	4.9	14.8	1.8	16.6	0.6	2.8	3.4	2.7	15.6	18.3
2011	3.6	1.8	4.5	0.9	5.4	13.9	2.4	16.3	0.5	4.8	5.3	1.2	14.2	15.4
2012	3.2	2.0	5.2	0.6	5.8	15.5	2.5	18.0	0.4	5.9	6.3	0.9	13.5	14.4
2013	3.3	2.2	5.6	0.4	6.0	14.5	2.9	17.3	0.4	5.2	5.6	0.7	15.9	16.6
2014	3.0	1.5	4.5	0.8	5.3	13.8	2.7	16.5	0.4	5.0	5.4	0.8	17.6	18.4
2015	3.0	1.6	4.6	b/	4.6	16.4	3.6	19.9	0.5	5.3	5.8	0.9	15.3	16.2
2016	4.6	3.0	7.5	1.6	7.5	18.8	5.5	24.3	0.8	6.4	7.2	1.3	17.7	19.0
2017	3.6	3.2	6.8	2.1	6.8	17.1	5.8	22.9	0.7	5.0	5.6	1.3	16.2	17.5
2018	5.2	3.8	9.0	0.0	9.0	19.0	5.8	24.8	1.0	6.3	7.3	1.6	18.7	20.3
2019[c/]	3.8	3.2	7.0	0.0	7.0	17.2	6.1	23.4	1.0	7.5	8.5	1.4	21.2	22.6

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 2 of 2)

	Columbia River and Buoy 10					Westport			La Push			Neah Bay and Area 4B Add-On		
Year	Charter	Private	Subtotal	Jetty[b/]	Total	Charter	Private	Total	Charter	Private	Total	Charter	Private	Total
STURGEON EFFORT[g/]														
1984-1990	4.7	31.6	36.2	-	36.2	-	-	-	-	-	-	-	-	-
1991-1995	6.0	41.7	47.7	-	47.7	-	-	-	-	-	-	-	-	-
1996-2000	12.5	53.4	65.9	-	65.9	-	-	-	-	-	-	-	-	-
2001-2005	8.7	41.7	50.3	-	50.3	-	-	-	-	-	-	-	-	-
2006-2010	6.7	38.0	44.7	-	44.7	-	-	-	-	-	-	-	-	-
2011	3.6	21.7	25.3	-	25.3	-	-	-	-	-	-	-	-	-
2012	2.4	16.5	18.9	-	18.9	-	-	-	-	-	-	-	-	-
2013	1.5	14.8	16.3	-	16.3	-	-	-	-	-	-	-	-	-
2014	0.1	1.5	1.7	-	1.7	-	-	-	-	-	-	-	-	-
2015	a/	1.0	1.0	-	1.0	-	-	-	-	-	-	-	-	-
2016	a/	2.5	2.5	-	2.5	-	-	-	-	-	-	-	-	-
2017	0.5	13.7	14.2	-	14.2	-	-	-	-	-	-	-	-	-
2018	1.0	16.5	17.5	-	17.5	-	-	-	-	-	-	-	-	-
2019[c/]	0.7	19.9	20.6	-	20.6	-	-	-	-	-	-	-	-	-

a/ Fewer than 50 angler trips.

b/ Columbia River north jetty was not sampled in 2005, 2007, 2018 and 2019 due to construction limiting access; the outer jetty was not sampled in 2015 due to construction limiting access to near-beach areas.

c/ Preliminary.

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/ For 1996, no Oregon bottomfish trips are included.

f/ For 1996, 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[a/b/] and Area 4B add-on recreational salmon angler trips and catch by boat type. (Page 1 of 2)

	Angler Trips			Chinook Catch			Coho Catch			Pink Catch	
Year or Avg.	Charter	Private	Jetty	Charter	Private	Jetty	Charter	Private	Jetty	Charter	Private
					OREGON BUOY 10						
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
2001-2005	664	41,198	2,025	32	8,055	3	435	20,070	237	0	0
2006-2010	131	26,556	929	11	3,511	5	56	8,860	117	0	0
2011	70	30,074	1,705	3	7,150	34	6	5,029	315	0	0
2012	468	39,753	1,368	52	12,934	22	42	4,909	104	0	0
2013	459	40,648	1,754	81	15,448	41	50	4,638	148	0	0
2014	237	70,402	3,696	13	19,033	41	385	39,873	2,295	0	0
2015	150	67,883	6,081	43	25,227	246	88	22,067	3,442	0	0
2016	96	59,778	4,114	5	13,551	404	13	5,560	582	0	0
2017	73	59,382	2,443	2	21,368	160	30	11,469	475	0	0
2018	36	41,898	2,153	1	8,191	66	13	3,927	457	0	0
2019[c/]	10	50,492	3,995	-	8,587	49	1	15,367	1,368	0	0
					WASHINGTON BUOY 10						
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
2001-2005	970	39,680	97	61	6,547	5	738	21,472	-	0	0
2006-2010	486	18,765	-	41	1,748	-	222	6,090	-	0	0
2011	372	17,188	-	43	3,689	-	70	2,194	-	0	0
2012	447	23,034	-	51	5,491	-	82	2,248	-	0	0
2013	93	22,813	-	6	7,018	-	27	2,757	-	0	0
2014	179	32,675	333	-	7,701	-	179	14,673	339	0	0
2015	316	33,386	-	30	10,947	-	337	10,918	-	0	0
2016	149	28,668	2,145	7	3,797	16	62	2,691	274	0	0
2017	471	28,162	3,016	79	6,721	68	252	5,933	675	0	0
2018	615	22,616	-	84	3,278	-	114	2,250	-	0	0
2019[c/]	22	22,458	-	-	2,638	-	2	6,037	-	0	0

TABLE IV-15. Buoy 10[a/b/] and Area 4B add-on recreational salmon angler trips and catch by boat type. (Page 2 of 2)

	Angler Trips			Chinook Catch			Coho Catch			Pink Catch	
Year or Avg.	Charter	Private	Jetty	Charter	Private	Jetty	Charter	Private	Jetty	Charter	Private
					TOTAL BUOY 10						
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
2001-2005	1,634	80,878	2,122	93	14,602	8	1,173	41,541	237	0	0
2006-2010	617	45,322	929	51	5,259	5	278	14,950	117	0	0
2011	442	47,262	1,705	46	10,839	34	76	7,223	315	0	0
2012	915	62,787	1,368	103	18,425	22	124	7,157	104	0	0
2013	552	63,461	1,754	87	22,466	41	77	7,395	148	0	0
2014	416	103,077	4,029	13	26,734	41	564	54,546	2,634	0	0
2015	466	101,269	6,081	73	36,174	246	425	32,985	3,442	0	0
2016	245	88,446	6,259	12	17,348	420	75	8,251	856	0	0
2017	544	87,544	5,459	81	28,089	228	282	17,402	1,150	0	0
2018	651	64,514	2,153	85	11,469	66	127	6,177	457	0	0
2019[c/]	32	72,950	3,995	0	11,225	49	3	21,404	1,368	0	0
					TOTAL AREA 4B ADD-ON[d/]						
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
1996-2000[e/]	123	2,528	-	1	23	-	173	3,086	-	28	83
2001-2005	-	-	-	-	-	-	-	-	-	0	0
2006[e/]	-	-	-	-	-	-	-	-	-	0	0
2007	-	-	-	-	-	-	-	-	-	0	0
2008	-	782	-	-	11	-	-	137	-	0	0
2009[f/]	-	-	-	-	-	-	-	-	-	0	0

a/ From 2000, catch downstream of boundary line from Tongue Pt., OR to Rocky Pt., WA. Prior to 2000, only catch downstream of Astoria-Megler Br.
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 in 1999 and 2006 as the Area 4 ocean quota was not attained.
f/ There has been no Area 4B add-on fishery planned since 2008.

TABLE IV-16. Estimates of California coastal community and state personal income impacts in thousands of real (inflation adjusted, 2019) dollars of the troll and recreational ocean salmon fishery for major port areas.[a/]

Year or Avg.	Crescent City	Eureka	Fort Bragg	San Francisco	Monterey	Coastal Community Total[b/]	State-Level Total
				OCEAN TROLL[c/]			
1976-1980	6,737	17,112	16,779	22,011	9,448	72,088	92,677
1981-1985	3,412	4,116	9,634	18,186	6,197	41,545	51,725
1986-1990	1,283	3,176	16,897	32,810	12,270	66,437	81,536
1991-1995	10	151	1,062	12,348	7,035	20,605	24,830
1996-2000	11	179	750	12,926	7,838	21,704	22,964
2001-2005	576	386	7,272	17,527	4,727	30,489	32,111
2006-2010	74	190	1,622	3,260	609	5,754	6,014
2011	38	461	4,436	2,810	684	8,428	10,519
2012	22	709	4,075	12,900	3,898	21,604	25,886
2013	116	1,819	10,634	20,629	2,093	35,291	41,244
2014	111	797	6,800	10,073	593	18,373	21,394
2015	29	377	4,642	4,863	896	10,807	13,161
2016	d/	60	1,639	4,720	991	7,410	8,400
2017[e/]	-	31	380	5,268	1,233	6,913	8,365
2018	270	338	944	6,868	1,926	10,347	13,384
2019[f/]	169	80	677	16,592	4,935	22,453	28,075
				RECREATIONAL			
1976-1980	1,307	1,515	883	13,263	888	17,856	20,029
1981-1985	1,432	1,476	707	11,746	938	16,298	18,345
1986-1990	2,426	2,528	1,233	14,355	3,857	24,398	28,433
1991-1995	880	947	1,430	12,142	5,815	21,214	24,907
1996-2000	408	750	1,461	12,173	5,347	20,139	23,429
2001-2005	188	904	2,201	9,791	3,943	17,027	18,054
2006-2010	46	466	748	2,815	1,162	5,238	5,791
2011	57	1,221	1,844	5,911	3,193	12,226	15,114
2012	601	2,149	1,857	10,497	5,212	20,316	25,120
2013	531	2,152	2,236	12,631	3,322	20,872	25,369
2014	345	1,560	2,241	10,243	3,096	17,486	21,192
2015	50	829	1,486	8,805	1,622	12,791	15,093
2016	42	802	1,153	8,062	821	10,880	12,779
2017	-	-	531	10,103	1,492	12,126	13,822
2018	106	559	1,270	12,430	1,436	15,800	18,275
2019[f/]	40	705	1,003	11,023	3,185	15,956	18,787

a/ Estimates of income impacts are provided from output of the Fishery Economic Assessment Model (FEAM) and IOPAC. These are the income impacts associated with expenditures in the troll and/or recreational sectors. There is no differentiation between money that may be new to the area versus money that may otherwise have been expended in other sectors. Values through 1995 are based on a 1992 run of the FEAM using 1989 IMPLAN data. Values from 1996 through 2000 are based on a 1998 run of the FEAM using 1996 IMPLAN data. Values from 2001 through 2009 are based on a run of the FEAM using 2000 PacFIN landings and 1998 IMPLAN data. Beginning with the 2010 data year, income impact estimates are based on the NWFSC's IOPAC model, which uses updated IMPLAN and landings data, and survey-based industry cost data. A description of the transition from FEAM-based to IOPAC-based impact multipliers and comparisons of results from the two models are found in Appendix E of the Review of 2014 Ocean Salmon Fisheries:

http://www.pcouncil.org/salmon/stock-assessment-and-fishery-evaluation-safe-documents/review-of-2014-ocean-salmon-fisheries/

b/ Total personal income impacts on coastal areas. Totals do not include impacts of one coastal area on another.

c/ Excluding pink salmon.

d/ Less than 500 dollars.

e/ Eureka impacts are from fish caught in the Fort Bragg area fishery and landed in Eureka.

f/ Preliminary.

TABLE IV-17. Estimates of Oregon coastal community and state personal income impacts in thousands of real (inflation adjusted, 2019) dollars of the troll and recreational ocean salmon fishery for major port areas.[a/]

Year or Avg.	Astoria	Tillamook	Newport	Coos Bay	Brookings	Coastal Community Total[b/]	State-Level Total
			OCEAN TROLL[c/]				
1976-1980	4,325	5,567	13,059	20,097	8,355	51,403	69,694
1981-1985	1,401	1,802	4,227	7,455	3,236	18,121	24,626
1986-1990	647	3,771	8,393	16,178	3,066	32,055	43,291
1991-1995	90	703	2,880	1,399	143	5,215	7,032
1996-2000	150	295	3,048	1,760	425	5,677	6,918
2001-2005	939	1,039	6,492	5,726	1,087	15,282	17,634
2006-2010	617	342	810	774	323	2,866	3,335
2011	255	61	555	2,472	276	3,618	4,760
2012	734	294	2,028	2,310	374	5,740	8,143
2013	369	517	1,636	6,958	651	10,131	13,658
2014	1,916	1,006	5,730	8,519	1,262	18,433	26,018
2015	1,015	721	2,681	3,698	546	8,659	10,758
2016	270	173	3,013	1,248	135	4,840	6,303
2017	339	158	1,693	350	98	2,638	3,466
2018	51	95	1,220	958	434	2,759	3,871
2019[d/]	47	136	1,489	541	184	2,396	3,272
			RECREATIONAL				
1979-1980	4,001	1,540	5,800	5,716	2,649	19,707	25,393
1981-1985	2,137	1,723	4,116	4,197	2,921	15,094	19,595
1986-1990	1,463	1,830	5,695	4,149	3,041	16,178	21,062
1991-1995	993	800	1,811	1,617	1,142	6,363	8,252
1996-2000	385	441	434	479	921	2,661	3,508
2001-2005	1,177	1,112	2,120	1,860	817	7,085	8,709
2006-2010	709	747	1,187	707	343	3,693	4,616
2011	692	530	1,072	478	298	3,070	4,219
2012	530	504	1,249	781	902	3,966	5,612
2013	616	587	1,328	1,372	994	4,898	7,006
2014	1,140	1,044	3,225	1,365	835	7,609	10,471
2015	826	639	1,584	671	428	4,149	5,688
2016	343	432	675	505	199	2,154	3,064
2017	667	350	752	579	96	2,444	3,300
2018	585	465	1,855	647	334	3,886	5,241
2019[d/]	1,122	894	2,598	858	212	5,684	7,631

a/ Estimates of income impacts are provided from output of the Fishery Economic Assessment Model (FEAM) and IOPAC. These are the income impacts associated with expenditures in the troll and/or recreational sectors. There is no differentiation between money that may be new to the area versus money that may otherwise have been expended in other sectors. Values through 1995 are based on a 1992 run of the FEAM using 1989 IMPLAN data. Values from 1996 through 2000 are based on a 1998 run of the FEAM using 1996 IMPLAN data. Values from 2001 through 2009 are based on a run of the FEAM using 2000 PacFIN landings and 1998 IMPLAN data. Beginning with the 2010 data year, income impact estimates are based on the NWFSC's IOPAC model, which uses updated IMPLAN and landings data, and survey-based industry cost data. A description of the transition from FEAM-based to IOPAC-based impact multipliers and comparisons of results from the two models are found in Appendix E of the Review of 2014 Ocean Salmon Fisheries:

http://www.pcouncil.org/salmon/stock-assessment-and-fishery-evaluation-safe-documents/review-of-2014-ocean-salmon-fisheries/

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, 2019) dollars of the troll and recreational ocean salmon fishery for major port areas.[a/]

Year or Avg.	Neah Bay	La Push	Westport	Ilwaco[b/]	Coastal Community Total[c/d/]	Puget Sound	State-Level Total
				OCEAN TROLL[e/f/]			
1976-1980	6,246	8,528	16,906	6,054	37,734	8,404	60,197
1981-1985	1,227	497	4,632	1,108	7,465	1,793	11,734
1986-1990	679	178	2,128	463	3,449	1,038	5,650
1991-1995[g/]	500	110	711	51	1,374	201	2,022
1996-2000	168	3	203	20	394	104	541
2001-2005	829	219	1,100	137	2,286	16	2,590
2006-2010	326	349	1,489	160	2,325	23	2,711
2011	601	238	1,470	100	2,409	-	3,162
2012	887	516	1,471	235	3,108	-	4,261
2013	505	467	2,787	78	3,836	0	4,777
2014	402	463	1,591	1,154	3,610	1	4,465
2015	293	595	2,927	407	4,223	30	5,606
2016	191	190	1,391	220	1,992	44	2,649
2017	529	165	3,090	77	3,862	-	5,199
2018	402	421	2,116	20	2,959	-	4,085
2019	93	377	973	43	1,486	-	2,072
				RECREATIONAL			
1976-1980	2,301	1,141	22,888	11,204	37,534	-	50,740
1981-1985	1,392	142	9,005	4,628	15,168	-	20,526
1986-1990	1,068	122	5,110	2,755	9,055	-	12,265
1991-1995	567	111	3,154	1,600	5,432	-	7,345
1996-2000	301	81	1,477	723	2,581	-	3,480
2001-2005	976	244	6,005	3,691	10,917	-	12,772
2006-2010	558	229	4,122	2,534	7,443	-	9,238
2011	673	329	4,649	2,693	8,345	-	12,125
2012	840	312	5,254	2,542	8,950	-	13,005
2013	970	335	5,106	2,659	9,071	-	13,239
2014	1,063	443	7,463	4,181	13,150	-	19,063
2015	945	307	6,477	3,368	11,097	-	16,044
2016	-	104	2,464	2,302	4,870	-	7,856
2017	685	162	3,529	2,160	6,536	-	9,549
2018	571	178	3,070	1,717	5,536	-	8,066
2019	663	214	3,397	3,057	7,331	-	10,674

a/ Estimates of income impacts are provided from output of the Fishery Economic Assessment Model (FEAM) and IOPAC. These are the income impacts associated with expenditures in the troll and/or recreational sectors. There is no differentiation between money that may be new to the area versus money that may otherwise have been expended in other sectors. Values through 1995 are based on a 1992 run of the FEAM using 1989 IMPLAN data. Values from 1996 through 2000 are based on a 1998 run of the FEAM using 1996 IMPLAN data. Values from 2001 through 2009 are based on a run of the FEAM using 2000 PacFIN landings and 1998 IMPLAN data. Beginning with the 2010 data year, income impact estimates are based on the NWFSC's IOPAC model, which uses updated IMPLAN and landings data, and survey-based industry cost data. A description of the transition from FEAM-based to IOPAC-based impact multipliers and comparisons of results from the two models are found in Appendix E of the Review of 2014 Ocean Salmon Fisheries: http://www.pcouncil.org/salmon/stock-assessment-and-fishery-evaluation-safe-documents/review-of-2014-ocean-salmon-fisheries/

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, 2019) dollars of the inriver commercial salmon fishery on Oregon and Washington Columbia River communities.[a/] (page 1 of 2)

Year or Avg.	Non-Indian - Gillnet [b/]						Treaty Indian - All Gears[c/]					
	Chinook						Chinook					
		Fall						Fall				
	Spring	Brights[d/]	Tules	Coho	Chum	TOTAL	Spring	Brights[d/]	Tules	Coho	Chum	TOTAL
Oregon												
1984-1985	3,731	e/	e/	3,935	e/	7,666	e/	2,130	7	30	e/	2,167
1986-1990	1,893	8,507	720	6,116	10	17,246	8	3,634	90	39	e/	3,771
1991-1995	561	493	60	1,264	1	2,379	1	490	120	15	e/	627
1996-2000	247	241	67	874	1	1,431	1	201	81	6	e/	290
2001-2005	1,702	1,176	267	2,347	e/	5,491	121	485	102	13	e/	720
2006-2010	1,648	1,648	174	1,438	e/	4,908	407	1,191	108	61	e/	1,766
2011	1,768	2,191	206	1,096	e/	5,260	277	905	46	46	e/	1,274
2012	1,546	1,317	161	218	e/	3,242	108	512	7	17	e/	644
2013	1,591	3,648	182	844	e/	6,264	154	1,781	39	11	e/	1,985
2014	1,055	2,724	237	2,791	e/	6,807	469	1,492	23	58	e/	2,042
2015	1,723	2,006	128	358	e/	4,214	589	1,361	41	3	e/	1,994
2016	1,743	1,847	84	543	e/	4,217	197	1,176	3	11	e/	1,387
2017	2,385	898	48	713	e/	4,045	262	1,446	4	25	e/	1,737
2018[f/]	2,223	489	35	221	e/	2,969	702	1,398	3	31	e/	2,134
2019[f/]	703	284	18	315	e/	1,321	246	1,596	1	20	e/	1,863
Washington[f/g/h/]												
1984-1985	2,595	e/		1,182	e/	3,777	e/	734		e/	e/	734
1986-1990	1,149	3,731		2,706	3	7,589	32	4,991		141	e/	5,164
1991-1995	301	201		545	2	1,050	1	699		19	e/	719
1996-2000	8	183		314	1	506	28	1,257		17	e/	1,302
2001-2005	491	838		1,194	e/	2,523	593	2,637		59	e/	3,289
2006-2010	639	980		612	1	2,231	1,567	2,864		156	e/	4,587
2011	594	1,258	-	402	1	2,255	2,810	1,457	e/	393	1	4,660
2012	532	1,173	-	100	e/	1,805	1,487	2,749	e/	58	e/	4,293
2013	305	2,119	-	341	e/	2,765	1,371	6,661	e/	171	e/	8,203
2014	379	2,098	-	911	e/	3,389	3,035	7,860	e/	554	3	11,450
2015	712	2,097	-	113	e/	2,922	3,743	8,546	e/	38	e/	12,327
2016	603	2,636	-	158	e/	3,397	2,721	6,239	e/	124	e/	9,085
2017	130	900	-	217	e/	1,247	1,540	5,506	e/	143	15	7,189
2018	105	354	-	61	e/	520	498	1,678	e/	75	11	2,252
2019	22	275	-	70	e/	366	251	1,478	e/	60	e/	1,789

TABLE IV-19. Local personal income impacts in thousands of real (inflation adjusted, 2019) dollars of the inriver commercial salmon fishery on Oregon and Washington Columbia River communities.[a/] (page 2 of 2)

	Non-Indian - Gillnet [b/]						Treaty Indian - All Gears[c/]						
	Chinook						Chinook						
Year or		Fall						Fall					Columbia
Avg.	Spring	Brights[d/]	Tules	Coho	Chum	TOTAL	Spring	Brights[d/]	Tules	Coho	Chum	TOTAL	River Total
Columbia River (Combined)													
1984-1985	6,326	e/	e/	5,117	e/	11,443	e/	2,864	7	30	e/	2,901	14,344
1986-1990	3,041	12,238	720	8,822	13	24,835	40	8,625	90	180	e/	8,935	33,770
1991-1995	862	695	60	1,809	3	3,429	2	1,189	120	35	e/	1,345	4,775
1996-2000	256	424	67	1,187	3	1,937	29	1,459	81	24	e/	1,593	3,530
2001-2005	2,192	2,014	267	3,540	1	8,014	713	3,122	102	72	e/	4,009	12,023
2006-2010	2,287	2,628	174	2,049	2	7,139	1,974	4,055	108	216	e/	6,354	13,493
2011	2,362	3,654		1,497	1	7,515	3,088	2,409		438	1	5,934	13,449
2012	2,077	2,651		318	e/	5,047	1,595	3,268		74	e/	4,937	9,984
2013	1,896	5,948		1,185	e/	9,029	1,525	8,481		181	e/	10,187	19,217
2014	1,434	5,060		3,702	e/	10,195	3,504	9,375		612	3	13,492	23,687
2015	2,435	4,231		470	e/	7,136	4,333	9,947		41	e/	14,321	21,458
2016	2,346	4,566		702	e/	7,614	2,918	7,418		135	e/	10,471	18,085
2017	2,515	1,846		930	e/	5,292	1,802	6,957		168	15	8,926	14,218
2018	2,328	879		282	e/	3,489	1,200	3,079		106	11	4,386	7,875
2019[f/]	726	577		385	e/	1,687	497	3,075		80	e/	3,652	5,339

a/ Estimates of income impacts are provided from output of the Fishery Economic Assessment Model (FEAM) and IOPAC. These are the income impacts associated with expenditures in the troll and/or recreational sectors. There is no differentiation between money that may be new to the area versus money that may otherwise have been expended in other sectors. Values through 1995 are based on a 1992 run of the FEAM using 1989 IMPLAN data. Values from 1996 through 2000 are based on a 1998 run of the FEAM using 1996 IMPLAN data. Values from 2001 through 2009 are based on a run of the FEAM using 2000 PacFIN landings and 1998 IMPLAN data. Beginning with the 2010 data year, income impact estimates are based on the NWFSC's IOPAC model, which uses updated IMPLAN and landings data, and survey-based industry cost data. A description of the transition from FEAM-based to IOPAC-based impact multipliers and comparisons of results from the two models are found in Appendix E of the Review of 2014 Ocean Salmon Fisheries: http://www.pcouncil.org/salmon/stock-assessment-and-fishery-evaluation-safe-documents/review-of-2014-ocean-salmon-fisheries/

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 Review is drafted.)

g/ Washington income impacts for years prior to 2000 are based on a combination of Washington and Oregon value information.

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, 2019) dollars of the Buoy 10 recreational fishery in Oregon and Washington and the Area 4B add-on fishery in Washington[a/].

Year or Avg.	Total Angler Trips (thousands)	Income Impacts (thousands of dollars) Oregon	Washington	Total
		BUOY 10 (including bank fishing)		
1987-1990	136	2,656	4,630	7,286
1991-1995	79	1,510	2,570	4,080
1996-2000	45	967	1,324	2,291
2001-2005	85	2,009	1,726	3,735
2006-2010	68	1,387	956	2,343
2011	49	2,220	1,288	3,507
2012	65	2,940	1,714	4,654
2013	66	3,028	1,616	4,644
2014	108	5,189	2,348	7,537
2015	108	5,164	2,407	7,570
2016	95	4,454	2,188	6,642
2017	94	4,307	2,288	6,595
2018	67	3,066	1,724	4,789
2019[b/]	77	3,786	1,575	5,360
		AREA 4B ADD-ON [c/d/e/]		
1989-1990	12	-	656	656
1991-1995	6	-	382	382
1996-2000	3	-	137	137
2001-2005	-	-	-	-
2006	-	-	-	-
2007	-	-	-	-
2008	1	-	34	34
2009	-	-	-	-

a/ Estimates of income impacts are provided from output of the Fishery Economic Assessment Model (FEAM) and IOPAC. These are the income impacts associated with expenditures in the troll and/or recreational sectors. There is no differentiation between money that may be new to the area versus money that may otherwise have been expended in other sectors. Values through 1995 are based on a 1992 run of the FEAM using 1989 IMPLAN data. Values from 1996 through 2000 are based on a 1998 run of the FEAM using 1996 IMPLAN data. Values from 2001 through 2009 are based on a run of the FEAM using 2000 PacFIN landings and 1998 IMPLAN data. Beginning with the 2010 data year, income impact estimates are based on the NWFSC's IOPAC model, which uses updated IMPLAN and landings data, and survey-based industry cost data. A description of the transition from FEAM-based to IOPAC-based impact multipliers and comparisons of results from the two models are found in Appendix E of the Review of 2014 Ocean Salmon Fisheries:
http://www.pcouncil.org/salmon/stock-assessment-and-fishery-evaluation-safe-documents/review-of-2014-ocean-salmon-fisheries/

b/ Preliminary

c/ There were no Area 4B add-on fisheries prior to 1989.

d/ There was no Area 4B add-on fishery opening in 1999 and 2006 as the Area 4 ocean quota was not attained.

e/ There has been no Area 4B add-on fishery planned since 2008.

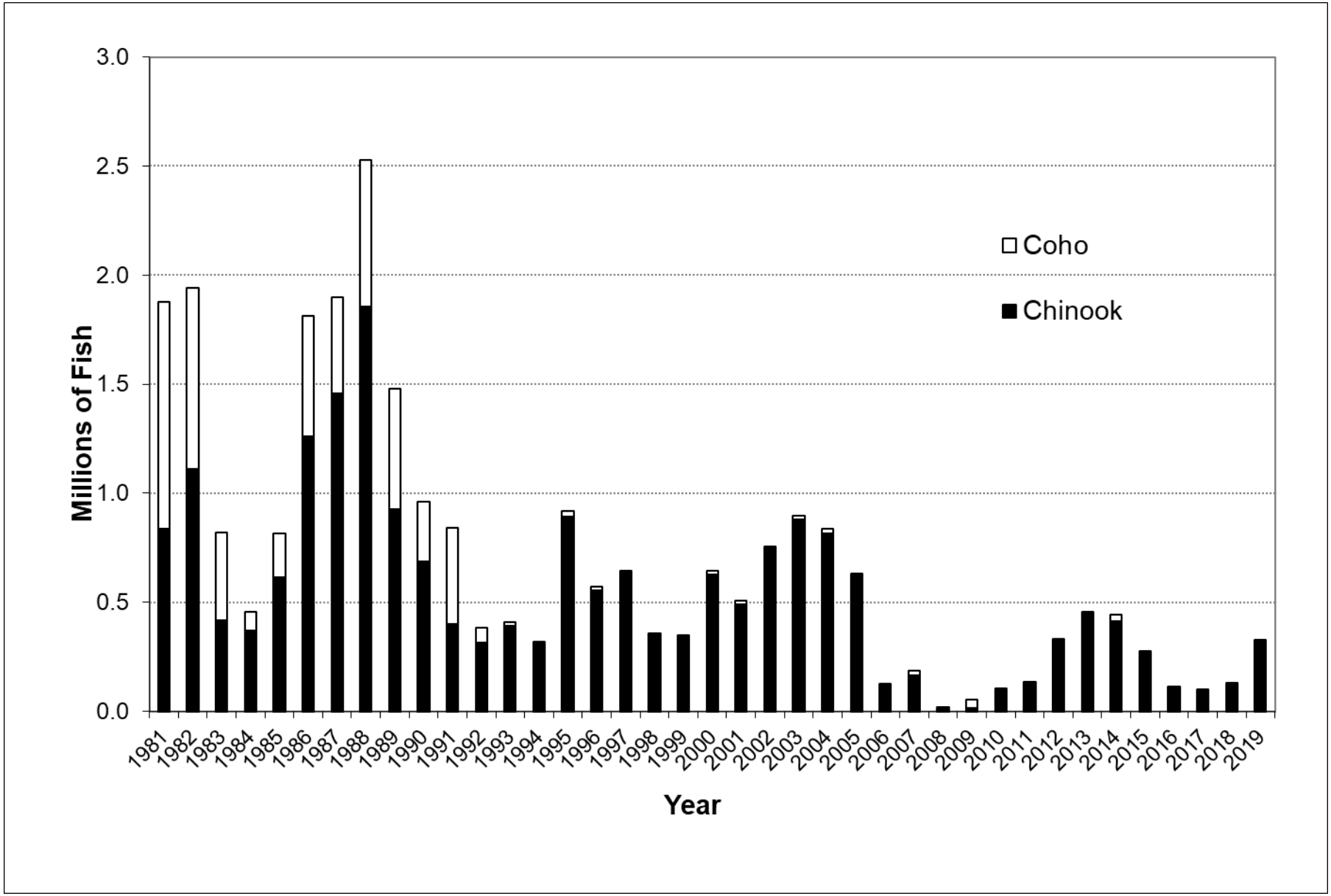

Figure IV-1. West Coast ocean non-Indian commercial Chinook and coho harvest.

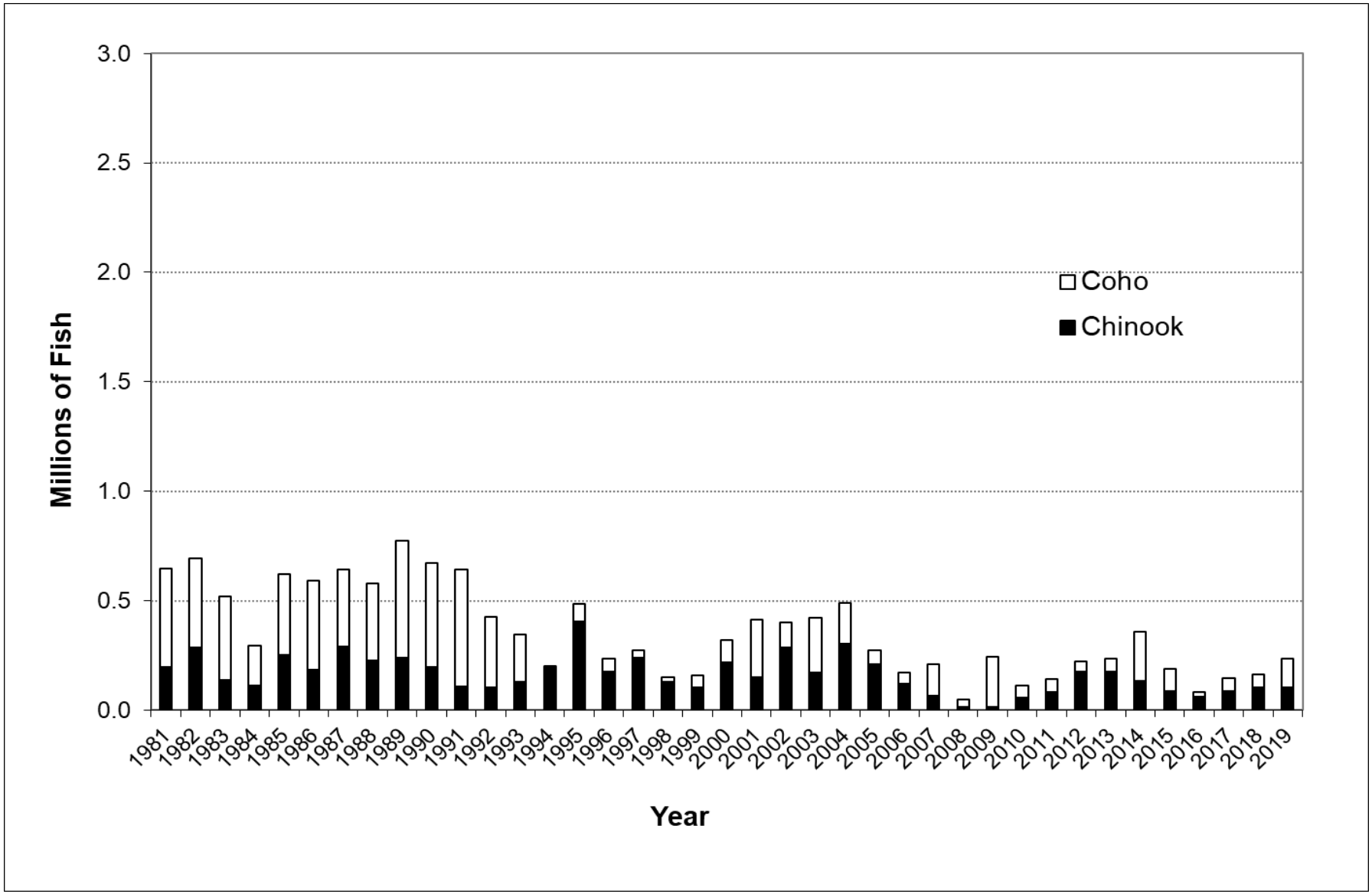

Figure IV-2. West Coast ocean recreational Chinook and coho harvest.

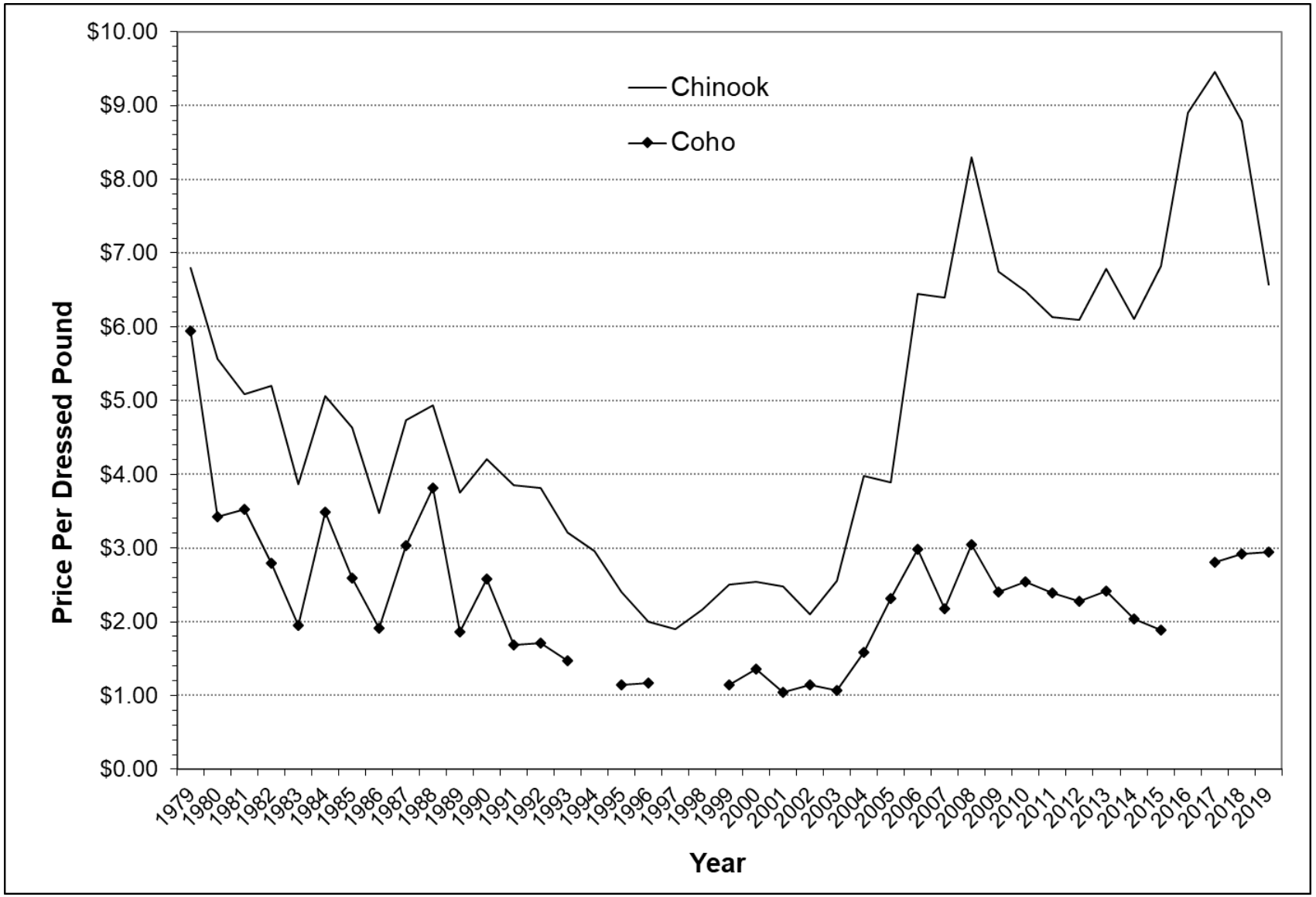

Figure IV-3. West Coast non-Indian ocean commercial salmon average annual exvessel prices (inflation adjusted, 2019 dollars).

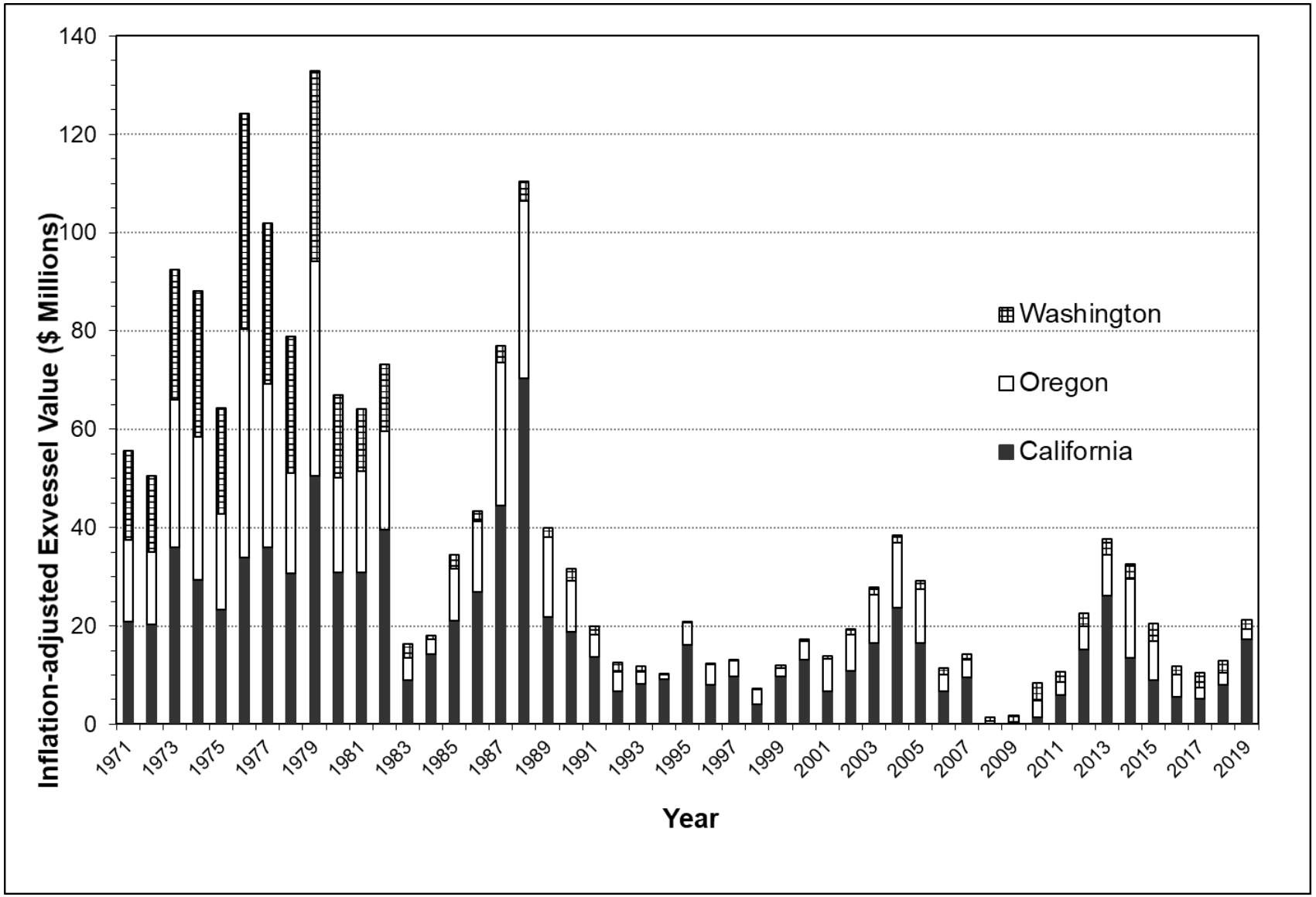

Figure IV-4. Exvessel value of West Coast non-Indian ocean commercial Chinook and coho landings by state of landing (inflation adjusted, 2019 dollars).

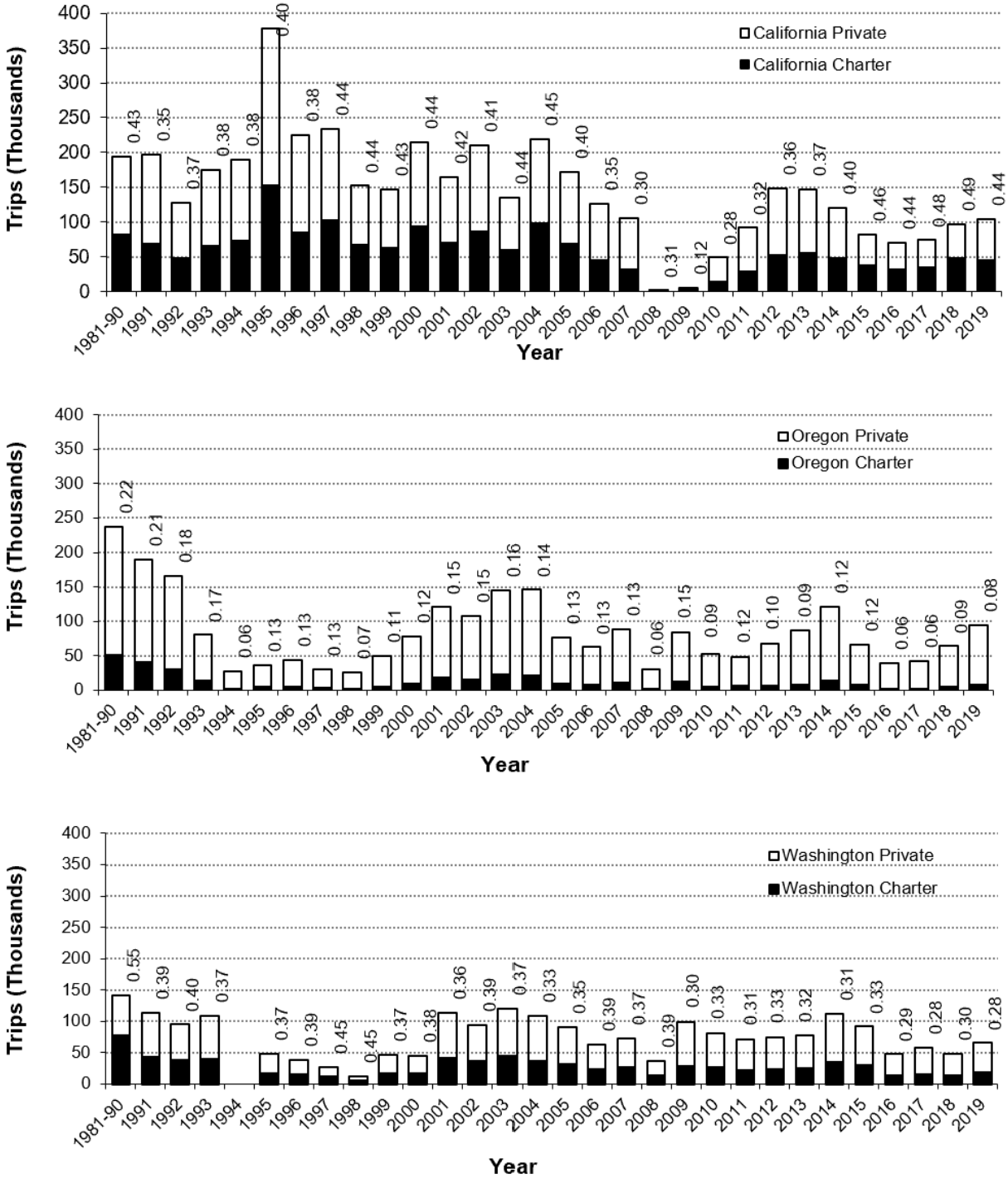

Figure IV-5. Total recreational ocean salmon trips for California, Oregon, and Washington, with proportion of charter trips shown above each bar.

APPENDIX A
HISTORICAL RECORD OF OCEAN SALMON FISHERY EFFORT AND LANDINGS

LIST OF TABLES

TABLE A-1. California commercial troll salmon fishing effort in days fished and landings in numbers of fish by catch area.

Year or Avg.	Crescent City[a/]	Eureka	Fort Bragg	San Francisco	Monterey	Oregon	Season
			DAYS FISHED				
1986-1990	545	1,629	16,392	25,555	14,391	12	58,511
1991-1995	-	600	1,775	13,340	10,820	0	25,700
1996-2000	15	202	796	9,546	7,740	0	18,299
2001-2005	66	261	3,255	8,878	4,674	87	17,187
2006	-	-	434	5,488	2,337	-	8,259
2007	87	270	1,400	6,736	2,178	-	10,671
2008	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-
2010	-	-	1,486	244	245	-	1,975
2011	20	181	2,143	2,907	1,722	-	6,973
2012	45	260	2,221	7,505	4,491	-	14,522
2013	98	563	5,341	8,327	2,964	-	17,293
2014	7	92	4,261	8,441	1,593	-	14,394
2015	10	22	4,971	5,466	2,542	-	13,011
2016	7	52	1,486	4,093	1,560	-	7,198
2017	-	-	267	4,374	2,084	-	6,725
2018	238	461	819	4,747	1,312	-	7,577
2019[b/]	153	151	1,041	8,241	6,188	-	15,774
			CHINOOK LANDINGS				
1986-1990	13,997	32,329	252,416	351,115	144,846	1,064	794,703
1991-1995	-	4,700	17,354	200,588	126,517	0	341,928
1996-2000	126	3,379	12,529	195,662	156,305	0	368,001
2001-2005	1,412	5,298	96,466	210,228	64,827	9,484	383,921
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	-	-	12,553	1,105	1,430	-	15,088
2011	417	1,974	39,311	21,912	6,414	-	70,028
2012	400	4,831	38,282	119,100	52,972	-	215,585
2013	1,225	8,953	116,158	143,654	27,637	-	297,627
2014	21	599	76,931	82,424	8,308	-	168,283
2015	36	10	60,052	35,696	14,713	-	110,507
2016	6	190	15,380	26,363	13,246	-	55,185
2017	-	-	1,935	27,912	12,479	-	42,326
2018	4,412	4,599	10,551	39,429	19,425	-	78,416
2019[b/]	4,235	1,622	10,467	159,431	95,942	-	271,697
			COHO LANDINGS				
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	-	-	-	-	-	-	-
2001-2005	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-

a/ Includes minor effort off Oregon for fish landed in California prior to 1986.

b/ Preliminary.

TABLE A-2. California commercial troll salmon fishing effort in days fished by catch area and month. (Page 1 of 2)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
Crescent City[a/]								
1986-1990	-	9	360	219	253	10	-	545
1991-1995	-	-	-	-	-	-	-	-
1996-2000	-	-	-	-	10	13	-	15
2001-2005[b/]	18	2	3	36	97	61	6	119
2006	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	87	-	87
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-
2011	-	-	-	4	16	-	-	20
2012	-	-	-	-	-	45	-	45
2013	-	8	31	46	10	3	-	98
2014	-	-	-	-	-	7	-	7
2015	-	-	-	-	-	10	-	10
2016	-	-	-	-	-	7	-	7
2017	-	-	-	-	-	-	-	-
2018	-	20	108	42	68	-	-	238
2019[c/]	-	-	13	50	90	-	-	153
Eureka								
1986-1990	-	-	882	518	547	467	64	1,629
1991-1995	-	-	-	-	-	500	100	600
1996-2000	-	-	-	-	128	177	-	202
2001-2005	-	-	-	-	94	242	-	261
2006	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	270	-	270
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-
2011	-	-	-	148	33	-	-	181
2012	-	-	-	-	-	260	-	260
2013	-	174	129	111	103	46	-	563
2014	-	-	-	-	-	92	-	92
2015	-	-	-	-	-	22	-	22
2016	-	-	-	-	-	52	-	52
2017	-	-	-	-	-	-	-	-
2018	-	110	116	121	114	-	-	461
2019[c/]	-	-	74	19	58	-	-	151
Fort Bragg								
1986-1990	-	2,775	3,887	5,151	3,802	777	-	16,392
1991-1995	-	100	-	-	3,500	875	-	1,775
1996-2000	-	-	-	-	1,300	536	-	796
2001-2005	-	614	-	1,380	1,926	1,026	-	3,255
2006	-	-	-	-	-	434	-	434
2007	106	-	-	-	1,252	42	-	1,400
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010	-	-	-	616	870	-	-	1,486
2011	-	-	-	596	1,386	161	-	2,143
2012	-	-	-	960	973	288	-	2,221
2013	-	277	1,032	2,221	1,251	560	-	5,341
2014	-	-	1,129	2,208	825	99	-	4,261
2015	-	2,376	987	768	623	217	-	4,971
2016	-	-	663	-	618	205	-	1,486
2017	-	-	-	-	-	267	-	267
2018	-	-	-	304	453	62	-	819
2019[c/]	-	-	309	319	413	-	-	1,041

TABLE A-2. California commercial troll salmon fishing effort in days fished by catch area and month. (Page 2 of 2)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
San Francisco								
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	-	9,546
2001-2005	-	2,106	1,894	2,643	1,493	1,249	293	8,878
2006	-	-	-	616	2,549	1,949	374	5,488
2007	-	1,656	-	2,954	1,152	806	168	6,736
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010	-	-	-	244	-	-	-	244
2011	-	900	164	873	394	459	117	2,907
2012	-	1,723	686	2,199	1,422	1,006	469	7,505
2013	-	2,401	2,062	1,358	1,269	1,014	223	8,327
2014	-	2,187	1,200	761	2,058	1,660	575	8,441
2015	-	839	745	639	1,250	1,478	515	5,466
2016	-	581	148	-	1,832	1,358	174	4,093
2017	-	-	-	-	2,610	1,544	220	4,374
2018	-	-	-	519	2,298	1,489	441	4,747
2019[c/]	-	683	2,040	1,795	2,372	1,100	251	8,241
Monterey								
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	178	94	-	7,740
2001-2005	-	2,318	852	1,069	315	120	-	4,674
2006	-	2,062	103	34	44	94	-	2,337
2007	-	1,476	29	334	255	84	-	2,178
2008	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2010	-	-	-	245	-	-	-	245
2011	-	979	340	268	117	18	-	1,722
2012	-	2,015	907	1,247	255	67	-	4,491
2013	-	1,590	810	400	118	46	-	2,964
2014	-	824	353	312	104	-	-	1,593
2015	-	1,219	660	536	127	-	-	2,542
2016	-	1,081	479	-	-	-	-	1,560
2017	-	874	1,210	-	-	-	-	2,084
2018	-	473	839	-	-	-	-	1,312
2019[c/]	-	3,192	2,023	973	-	-	-	6,188
Total Statewide[a/]								
1986-1990	-	14,524	16,246	14,658	9,741	3,316	64	58,511
1991-1995	-	7,860	5,620	5,160	4,320	2,720	100	25,700
1996-2000	363	4,642	4,173	4,570	2,346	2,424	-	18,299
2001-2005	18	4,249	2,368	4,547	3,021	2,700	296	17,187
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	-	-	-	1,105	870	-	-	1,975
2011	-	1,879	504	1,889	1,946	638	117	6,973
2012	-	3,738	1,593	4,406	2,650	1,666	469	14,522
2013	-	4,450	4,064	4,136	2,751	1,669	223	17,293
2014	-	3,011	2,682	3,281	2,987	1,858	575	14,394
2015	-	4,434	2,392	1,943	2,000	1,727	515	13,011
2016	-	1,662	1,290	-	2,450	1,622	174	7,198
2017	-	874	1,210	-	2,610	1,811	220	6,725
2018	-	603	1,063	986	2,933	1,551	441	7,577
2019[c/]	-	3,875	4,459	3,156	2,933	1,100	251	15,774

a/ Includes minor effort off Oregon for fish landed in California.

b/ Commercial fishery closed in all months except August 2002 (27 days fished) and September 2001-2005 (quota fisheries); all other harvest occurred in Oregon waters but was landed in Crescent City.

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)

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
						CHINOOK								**COHO**		
Crescent City[a/]																
1986-1990	-	527	12,995	3,017	2,534	452	-	13,997	-	-	4,408	1,262	5	18	-	3,795
1991-1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996-2000	-	-	-	-	98	106	-	126	-	-	-	-	-	-	-	-
2001-2005[b/]	1,186	84	53	5,245	10,184	1,351	293	7,103	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	2,367	-	2,367	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	11	406	-	-	417	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	400	-	400	-	-	-	-	-	-	-	-
2013	-	85	524	487	116	13	-	1,225	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	21	-	21	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	36	-	36	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	6	-	6	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	241	1,497	775	1,899	-	-	4,412	-	-	-	-	-	-	-	-
2019[c/]	-	-	114	1,311	2,810	-	-	4,235	-	-	-	-	-	-	-	-
Eureka																
1986-1990	-	-	26,180	4,316	6,726	6,295	480	32,329	-	-	5,948	508	211	860	125	5,998
1991-1995	-	-	-	-	-	4,300	400	4,700	-	-	-	-	-	3,000	100	3,100
1996-2000	-	-	-	-	-	2,860	-	3,379	-	-	-	-	-	-	-	-
2001-2005	-	-	-	-	1,392	5,020	-	5,298	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	6,395	-	6,395	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	1,573	401	-	-	1,974	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	4,831	-	4,831	-	-	-	-	-	-	-	-
2013	-	2,603	2,400	1,887	1,892	171	-	8,953	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	599	-	599	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	10	-	10	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	190	-	190	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	696	980	1,045	1,878	-	-	4,599	-	-	-	-	-	-	-	-
2019[c/]	-	-	623	164	835	-	-	1,622	-	-	-	-	-	-	-	-

TABLE A-3. California commercial troll Chinook and coho salmon landings in numbers of fish by catch 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**							
Fort Bragg																
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	-	-	-	-	-	-	-	-
2001-2005	-	17,715	-	51,702	51,853	27,247	-	96,466	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	10,835	-	10,835	-	-	-	-	-	-	-	-
2007	748	-	-	-	15,173	195	-	16,116	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	6,371	6,182	-	-	12,553	-	-	-	-	-	-	-	-
2011	-	-	-	21,085	17,766	460	-	39,311	-	-	-	-	-	-	-	-
2012	-	-	-	24,324	12,304	1,654	-	38,282	-	-	-	-	-	-	-	-
2013	-	4,352	23,785	68,781	14,916	4,324	-	116,158	-	-	-	-	-	-	-	-
2014	-	-	23,126	45,563	7,788	454	-	76,931	-	-	-	-	-	-	-	-
2015	-	38,546	11,317	5,333	3,848	1,008	-	60,052	-	-	-	-	-	-	-	-
2016	-	-	9,956	-	4,515	909	-	15,380	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	1,935	-	1,935	-	-	-	-	-	-	-	-
2018	-	-	-	6,081	4,137	333	-	10,551	-	-	-	-	-	-	-	-
2019[c/]	-	-	4,141	2,894	3,432	-	-	10,467	-	-	-	-	-	-	-	-
San Francisco																
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	-	-	-	-	-	-	-	-
2001-2005	-	52,401	74,746	75,262	19,186	12,158	1,905	210,228	-	-	-	-	-	-	-	-
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	-	-	-	1,105	-	-	-	1,105	-	-	-	-	-	-	-	-
2011	-	7,753	2,830	8,305	1,395	1,312	317	21,912	-	-	-	-	-	-	-	-
2012	-	34,005	10,090	51,592	14,292	5,808	3,313	119,100	-	-	-	-	-	-	-	-
2013	-	56,365	47,837	24,215	7,819	6,477	941	143,654	-	-	-	-	-	-	-	-
2014	-	30,605	14,917	6,994	15,879	11,044	2,985	82,424	-	-	-	-	-	-	-	-
2015	-	7,407	4,762	4,456	7,055	9,399	2,617	35,696	-	-	-	-	-	-	-	-
2016	-	3,147	446	-	13,819	8,362	589	26,363	-	-	-	-	-	-	-	-
2017	-	-	-	-	18,336	8,297	1,279	27,912	-	-	-	-	-	-	-	-
2018	-	-	-	7,015	19,790	10,593	2,031	39,429	-	-	-	-	-	-	-	-
2019[c/]	-	16,076	61,739	24,978	49,779	6,058	801	159,431	-	-	-	-	-	-	-	-

TABLE A-3. California commercial troll Chinook and coho salmon landings in numbers of fish by catch 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**							
Monterey																
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	-	-	-	-	-	-	-	-
2001-2005	-	32,363	13,821	16,115	2,047	480	-	64,827	-	-	-	-	-	-	-	-
2006	-	9,911	391	346	248	308	-	11,204	-	-	-	-	-	-	-	-
2007	-	11,202	156	1,930	605	116	-	14,009	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	1,430	-	-	-	1,430	-	-	-	-	-	-	-	-
2011	-	3,979	1,359	695	333	48	-	6,414	-	-	-	-	-	-	-	-
2012	-	24,852	9,295	16,926	1,670	229	-	52,972	-	-	-	-	-	-	-	-
2013	-	14,111	10,003	2,900	514	109	-	27,637	-	-	-	-	-	-	-	-
2014	-	4,341	1,538	2,011	418	-	-	8,308	-	-	-	-	-	-	-	-
2015	-	7,608	3,410	3,131	564	-	-	14,713	-	-	-	-	-	-	-	-
2016	-	10,220	3,026	-	-	-	-	13,246	-	-	-	-	-	-	-	-
2017	-	5,588	6,891	-	-	-	-	12,479	-	-	-	-	-	-	-	-
2018	-	4,566	14,859	-	-	-	-	19,425	-	-	-	-	-	-	-	-
2019[c/]	-	54,926	31,542	9,474	-	-	-	95,942	-	-	-	-	-	-	-	-
Total Statewide[a/]																
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	-	-	-	-	-	-	-	-
2001-2005	1,186	81,387	73,639	123,448	56,697	46,255	2,022	383,921	-	-	-	-	-	-	-	-
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	-	-	-	8,906	6,182	-	-	15,088	-	-	-	-	-	-	-	-
2011	-	11,732	4,189	31,669	20,301	1,820	317	70,028	-	-	-	-	-	-	-	-
2012	-	58,857	19,385	92,842	28,266	12,922	3,313	215,585	-	-	-	-	-	-	-	-
2013	-	77,516	84,549	98,270	25,257	11,094	941	297,627	-	-	-	-	-	-	-	-
2014	-	34,946	39,581	54,568	24,085	12,118	2,985	168,283	-	-	-	-	-	-	-	-
2015	-	53,561	19,489	12,920	11,467	10,453	2,617	110,507	-	-	-	-	-	-	-	-
2016	-	13,367	13,428	-	18,334	9,467	589	55,185	-	-	-	-	-	-	-	-
2017	-	5,588	6,891	-	18,336	10,232	1,279	42,326	-	-	-	-	-	-	-	-
2018	-	5,503	17,336	14,916	27,704	10,926	2,031	78,416	-	-	-	-	-	-	-	-
2019[c/]	-	71,002	98,159	38,821	56,856	6,058	801	271,697	-	-	-	-	-	-	-	-

a/ Includes minor catches made off Oregon and landed in California prior to 2005.

b/ Commercial fishery closed all months except Aug. 2002 (681 Chinook) and Sept. 2001-2005; all other harvest occurred in Oregon waters but was landed in Crescent City.

c/ Preliminary.

TABLE A-4. California ocean recreational salmon fishing effort in angler trips by catch area and month. (Page 1 of 3)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
Crescent City											
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
2001-2005	-	-	-	594	1,038	969	1,182	289	-	-	4,072
2006	-	-	-	325	754	312	-	87	-	-	1,478
2007	-	-	-	277	484	1,027	225	69	-	-	2,082
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	498	607	-	-	1,105
2010	-	-	-	72	38	48	33	15	-	-	206
2011	-	-	-	187	104	245	185	45	-	-	766
2012	-	-	-	455	1,018	4,134	1,702	502	-	-	7,811
2013	-	-	-	456	2,538	3,228	816	0	-	-	7,038
2014	-	-	-	1,441	786	1,996	172	10	-	-	4,405
2015	-	-	-	210	89	161	137	44	-	-	641
2016	-	-	-	59	222	176	56	50	-	-	563
2017	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	359	673	328	3	-	-	1,363
2019[a/]	-	-	-	15	137	279	56	24	-	-	511
Eureka											
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
2001-2005	-	-	-	2,309	4,388	2,651	5,749	1,819	-	-	16,915
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	-	-	-	464	638	897	1,841	183	-	-	4,023
2011	-	-	-	1,664	2,574	4,625	4,597	723	-	-	14,183
2012	-	-	-	2,680	6,514	5,833	6,671	1,873	-	-	23,571
2013	-	-	-	2,756	5,976	6,028	7,416	614	-	-	22,790
2014	-	-	-	2,710	4,157	5,170	3,580	612	-	-	16,229
2015	-	-	-	2,431	1,166	2,321	2,216	164	-	-	8,298
2016	-	-	-	1,579	1,933	2,380	1,888	610	-	-	8,390
2017	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	2,298	2,067	1,593	48	-	-	6,006
2019[a/]	-	-	-	349	2,601	2,535	1,617	99	-	-	7,201

TABLE A-4. California ocean recreational salmon fishing effort in angler trips by catch area and month. (Page 2 of 3)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
Fort Bragg											
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
2001-2005	463	878	1,309	3,054	6,649	8,885	6,013	996	75	8	28,239
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	-	-	1,269	1,230	743	1,460	1,625	232	-	-	6,559
2011	-	-	1,532	1,522	2,294	6,234	1,975	650	182	-	14,389
2012	-	-	1,230	2,088	2,975	4,076	2,890	1,069	334	151	14,813
2013	-	-	934	1,666	3,519	7,136	3,076	667	220	47	17,265
2014	-	-	1,049	1,371	2,538	9,435	2,554	373	102	48	17,470
2015	-	-	1,051	1,321	1,615	5,002	2,278	423	94	5	11,789
2016	-	-	706	934	1,003	4,817	1,751	295	68	0	9,574
2017	-	-	403	1,101	-	-	1,869	1,286	17	0	4,676
2018	-	-	-	-	1,009	5,523	2,897	423	39	-	9,891
2019[a/]	-	-	606	166	1,646	3,180	1,735	228	52	-	7,613
San Francisco											
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	666	5,891	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
2001-2005	-	-	6,252	10,800	11,324	24,675	16,469	8,815	4,073	1,140	83,548
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	-	-	3,889	1,521	1,693	4,846	5,730	1,673	-	-	19,352
2011	-	-	2,046	2,272	1,630	8,505	9,094	7,591	3,249	-	34,387
2012	-	-	4,113	6,663	11,396	15,667	10,085	6,421	2,779	418	57,542
2013	-	-	6,406	7,823	11,183	22,814	14,354	4,572	2,003	379	69,534
2014	-	-	3,433	3,406	2,163	11,779	18,604	9,589	5,046	675	54,695
2015	-	-	2,380	2,708	5,176	9,851	12,523	9,838	3,389	-	45,865
2016	-	-	2,797	4,723	2,797	11,554	11,437	8,205	2,298	-	43,811
2017	-	-	1,470	1,665	5,429	19,131	17,489	7,210	1,834	-	54,228
2018	-	-	-	-	8,043	28,234	15,575	8,561	5,033	-	65,446
2019[a/]	-	-	3,207	1,612	12,056	15,392	17,321	6,697	1,769	-	58,054

TABLE A-4. California ocean recreational salmon fishing effort in angler trips by catch area and month. (Page 3 of 3)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
Monterey											
1986-1990	3,447	7,261	11,695	4,141	6,637	10,555	4,182	637	269	364	49,189
1991-1995	792	8,912	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
2001-2005	-	2,946	20,318	9,402	6,396	7,846	1,366	322	- -	-	47,353
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	-	-	11,616	4,019	300	2,004	528	60	-	-	18,527
2011	-	-	11,987	2,149	3,013	5,561	3,318	1,923	-	-	27,951
2012	-	-	16,123	9,326	7,603	8,674	1,645	424	475	-	44,270
2013	-	-	12,262	5,698	3,613	6,210	2,582	282	22	-	30,669
2014	-	-	15,744	3,745	2,974	2,678	1,841	481	45	-	27,508
2015	-	-	7,654	3,372	2,419	1,391	317	32	-	-	15,185
2016	-	-	4,503	2,624	484	150	-	-	-	-	7,761
2017	-	-	8,232	2,234	1,145	3,459	-	-	-	-	15,070
2018	-	-	8,140	2,021	3,244	514	-	-	-	-	13,919
2019[a/]	-	-	13,537	3,801	4,471	4,360	4,163	-	-	-	30,332
Total Statewide											
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	1,263	15,054	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
2001-2005	463	2,645	27,879	26,158	29,796	45,026	30,779	12,176	4,148	1,148	180,127
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	-	-	16,774	7,306	3,412	9,255	9,757	2,163	-	-	48,667
2011	-	-	15,565	7,794	9,615	25,170	19,169	10,932	3,431	-	91,676
2012	-	-	21,466	21,212	29,506	38,384	22,993	10,289	3,588	569	148,007
2013	-	-	19,602	18,399	26,829	45,416	28,244	6,135	2,245	426	147,296
2014	-	-	20,226	12,673	12,618	31,058	26,751	11,065	5,193	723	120,307
2015	-	-	11,085	10,042	10,465	18,726	17,471	10,501	3,483	5	81,778
2016	-	-	8,006	9,919	6,439	19,077	15,132	9,160	2,366	0	70,099
2017	-	-	10,105	5,000	6,574	22,590	19,358	8,496	1,851	0	73,974
2018	-	-	8,140	2,021	14,953	37,011	20,393	9,035	5,072	-	96,625
2019[a/]	-	-	17,350	5,943	20,911	25,746	24,892	7,048	1,821	-	103,711

a/ Preliminary.

TABLE A-5. California ocean recreational salmon landings in numbers of fish by catch area and month. (Page 1 of 3)

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**					
Crescent City																						
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
2001-2005	-	-	-	265	403	237	308	91	-	-	1,304	-	-	-	6	19	22	15	-	-	-	49
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	-	-	-	0	0	0	0	0	-	-	0	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	36	12	42	18	5	-	-	113	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	115	761	4,761	1,469	326	-	-	7,432	-	-	-	-	23	27	-	-	-	-	50
2013	-	-	-	140	2,913	2,726	284	0	-	-	6,063	-	-	-	-	22	19	-	-	-	-	41
2014	-	-	-	1,522	402	1,284	25	0	-	-	3,233	-	-	-	-	16	50	-	-	-	-	66
2015	-	-	-	23	19	0	22	0	-	-	64	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	4	9	20	0	0	-	-	33	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	124	128	76	0	-	-	328	-	-	-	-	8	16	-	-	-	-	24
2019[a/]	-	-	-	1	33	10	13	4	-	-	61	-	-	-	-	-	4	4	-	-	-	8
Eureka																						
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
2001-2005	-	-	-	2,609	3,762	2,062	4,074	1,808	-	-	14,315	-	-	-	51	83	26	41	27	-	-	217
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	-	-	-	17	158	37	477	31	-	-	720	-	-	-	-	-	-	50	-	-	-	50
2011	-	-	-	630	934	4,342	3,672	296	-	-	9,874	-	-	-	5	10	50	29	4	-	-	98
2012	-	-	-	3,462	10,104	7,049	9,019	2,378	-	-	32,012	-	-	-	-	12	5	-	-	-	-	17
2013	-	-	-	2,423	7,601	8,579	8,876	439	-	-	27,918	-	-	-	-	35	39	122	-	-	-	196
2014	-	-	-	2,074	4,877	3,159	2,181	303	-	-	12,594	-	-	-	19	72	118	4	3	-	-	216
2015	-	-	-	877	260	1,088	1,385	16	-	-	3,626	-	-	-	-	8	4	-	-	-	-	12
2016	-	-	-	1,450	934	1,414	646	523	-	-	4,967	-	-	-	-	18	9	-	-	-	-	27
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	1,590	734	1,059	27	-	-	3,410	-	-	-	-	41	4	33	-	-	-	78
2019[a/]	-	-	-	315	2,273	1,308	941	59	-	-	4,896	-	-	-	-	47	61	39	-	-	-	147

TABLE A-5. California ocean recreational salmon landings in numbers of fish by catch area and month. (Page 2 of 3)

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**										
Fort Bragg																						
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
2001-2005	196	426	746	2,129	6,469	9,036	4,379	397	28	0	23,767	-	-	-	21	89	119	33	13	-	-	241
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	-	-	204	264	27	417	657	109	-	-	1,678	-	-	-	7	-	15	19	-	-	-	41
2011	-	-	880	705	938	4,043	510	204	118	-	7,398	-	-	-	-	18	83	4	-	5	-	110
2012	-	-	414	1,530	1,951	2,300	1,185	393	84	72	7,929	-	-	-	-	13	9	-	3	-	-	25
2013	-	-	310	695	2,459	5,145	1,296	258	5	0	10,168	-	-	-	-	9	20	4	-	-	-	33
2014	-	-	714	630	1,358	9,035	696	103	4	0	12,540	-	-	-	-	18	123	-	-	-	-	141
2015	-	-	394	331	215	3,071	1,295	183	4	0	5,493	-	-	-	5	-	13	5	-	-	-	23
2016	-	-	108	104	222	3,524	990	75	8	0	5,031	-	-	-	-	-	35	-	-	-	-	35
2017	-	-	22	650	-	-	837	370	8	0	1,887	-	-	-	-	-	-	4	-	-	-	4
2018	-	-	-	-	540	3,217	1,846	95	0	-	5,698	-	-	-	-	-	13	4	8	-	-	25
2019[a/]	-	-	206	81	947	1,701	825	101	0	-	3,861	-	-	-	-	13	22	5	-	-	-	40
San Francisco																						
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	249	5,050	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
2001-2005	-	-	5,540	11,659	13,806	26,717	10,680	6,287	2,220	395	77,305	-	-	2	56	68	187	55	9	-	-	348
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	-	-	1,004	452	598	1,764	2,012	286	-	-	6,116	-	-	-	-	68	-	-	8	-	-	76
2011	-	-	432	934	326	4,457	6,531	5,914	1,140	-	19,734	-	-	-	-	17	26	-	-	-	-	43
2012	-	-	3,837	5,143	10,700	15,329	5,340	3,871	1,881	88	46,189	-	-	-	3	-	5	-	-	-	-	8
2013	-	-	8,121	9,018	12,204	21,798	6,818	1,891	1,354	87	61,291	-	-	-	-	24	62	-	-	-	-	86
2014	-	-	1,854	2,318	559	5,587	12,679	6,266	3,065	125	32,453	-	-	-	4	-	40	-	-	-	-	44
2015	-	-	933	1,072	2,396	5,126	6,113	8,014	1,573	-	25,227	-	-	-	-	4	2	-	-	-	-	6
2016	-	-	1,206	3,563	1,253	8,025	6,111	5,858	630	-	26,646	-	-	-	-	-	-	8	-	-	-	8
2017	-	-	398	1,206	5,241	24,206	17,972	3,890	843	-	53,756	-	-	-	3	-	322	40	-	-	-	365
2018	-	-	-	-	11,361	38,248	11,717	6,689	4,172	-	72,187	-	-	-	-	5	63	-	-	-	-	68
2019[a/]	-	-	2,982	1,645	15,459	16,558	15,861	3,570	468	-	56,543	-	-	-	2	100	4	348	14	5	-	473

TABLE A-5. California ocean recreational salmon landings in numbers of fish by catch area and month. (Page 3 of 3)

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**					
Monterey																						
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	292	6,001	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
2001-2005	-	2,235	15,937	3,243	4,292	5,967	440	81	--	-	31,284	-	-	4	82	40	34	-	-	-	-	124
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	-	-	4,057	1,692	5	387	154	0	-	-	6,295	-	-	8	-	-	-	-	-	-	-	8
2011	-	-	4,210	280	1,170	3,998	2,369	676	-	-	12,703	-	-	8	10	27	7	13	-	-	-	65
2012	-	-	14,535	4,473	4,376	6,268	462	121	129	-	30,364	-	-	-	-	1	-	-	-	-	-	1
2013	-	-	5,225	1,624	1,066	2,261	440	18	0	-	10,634	-	-	-	-	1	4	-	-	-	-	5
2014	-	-	11,356	964	782	613	267	34	4	-	14,020	-	-	-	-	12	-	-	-	-	-	12
2015	-	-	1,697	490	543	313	27	0	-	-	3,070	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	716	572	47	0	-	-	-	-	1,335	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	3,878	449	192	2,035	-	-	-	-	6,554	-	-	-	-	-	96	-	-	-	-	96
2018	-	-	3,935	476	1,157	123	-	-	-	-	5,691	-	-	-	-	-	-	-	-	-	-	-
2019[a/]	-	-	13,592	1,437	2,159	2,636	3,279	-	-	-	23,103	-	-	-	-	2	26	-	-	-	-	28
Total Statewide																						
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	484	11,136	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
2001-2005	196	1,767	22,222	19,905	28,732	44,019	19,882	8,648	2,248	395	147,974	-	-	3	171	280	379	122	31	-	-	979
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	-	-	5,265	2,425	788	2,605	3,300	426	-	-	14,809	-	-	8	7	68	15	69	8	-	-	175
2011	-	-	5,522	2,585	3,380	16,882	13,100	7,095	1,258	-	49,822	-	-	8	15	72	166	46	4	5	-	316
2012	-	-	18,786	14,723	27,892	35,707	17,475	7,089	2,094	160	123,926	-	-	-	3	49	46	-	3	-	-	101
2013	-	-	13,656	13,900	26,243	40,509	17,714	2,606	1,359	87	116,074	-	-	-	-	91	144	126	-	-	-	361
2014	-	-	13,924	7,508	7,978	19,678	15,848	6,706	3,073	125	74,840	-	-	-	23	118	331	4	3	-	-	479
2015	-	-	3,024	2,793	3,433	9,598	8,842	8,213	1,577	0	37,480	-	-	-	5	12	19	5	-	-	-	41
2016	-	-	2,030	5,693	2,465	12,983	7,747	6,456	638	0	38,012	-	-	-	-	18	44	8	-	-	-	70
2017	-	-	4,298	2,305	5,433	26,241	18,809	4,260	851	0	62,197	-	-	-	3	-	418	44	-	-	-	465
2018	-	-	3,935	476	14,772	42,450	14,698	6,811	4,172	-	87,314	-	-	-	-	54	96	37	8	-	-	195
2019[a/]	-	-	16,780	3,479	20,871	22,213	20,919	3,734	468	-	88,464	-	-	-	2	162	117	396	14	5	-	696

a/ Preliminary.

TABLE A-6. Summary of Oregon commercial troll salmon fishing effort in days fished and landings in fish by catch area.[a/] (Page 1 of 2)

Year or Ave.	Astoria	Tillamook	Newport	Coos Bay	Brookings	Oregon Subtotal	Alaska	Washington	California	Total
					DAYS FISHED					
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
2001-2005	390	1,591	4,664	4,935	439	12,019	0	125	8	12,153
2006	984	751	2,216	367	184	4,502	0	0	0	4,502
2007	330	698	1,104	2,620	465	5,217	0	0	0	5,217
2008	655	49	-	48	51	803	0	0	-	803
2009	540	271	286	137	-	1,234	0	0	-	1,234
2010	632	404	1,524	1,555	181	4,296	0	0	-	4,296
2011	289	220	748	2,206	289	3,752	0	0	-	3,752
2012	416	635	2,112	2,711	382	6,256	0	0	-	6,256
2013	287	830	1,722	5,440	707	8,986	0	0	-	8,986
2014	816	556	3,697	4,864	770	10,703	0	0	-	10,703
2015	818	866	2,752	3,773	520	8,729	0	0	-	8,729
2016	225	237	2,756	1,047	127	4,392	0	0	-	4,392
2017	342	182	1,264	155	109	2,052	0	0	-	2,052
2018	98	179	1,043	778	475	2,573	0	0	-	2,573
2019[b/]	193	144	1,675	388	234	2,634	0	0	-	2,634
					CHINOOK LANDINGS					
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
2001-2005	8,095	25,572	126,126	117,529	5,245	282,567	0	5,574	311	288,452
2006	10,489	2,756	18,895	1,979	738	34,857	0	0	0	34,857
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	11,120	3,648	12,377	11,419	869	39,433	0	0	-	39,433
2011	2,836	1,106	4,980	21,833	1,326	32,081	0	0	-	32,081
2012	8,444	7,397	26,612	25,204	5,444	73,101	0	0	-	73,101
2013	1,945	8,880	15,700	79,416	6,816	112,757	0	0	-	112,757
2014	16,182	7,009	83,122	85,637	16,146	208,096	0	0	-	208,096
2015	10,882	8,845	36,858	43,451	4,223	104,259	0	0	-	104,259
2016	2,058	1,067	31,281	7,543	398	42,347	0	0	-	42,347
2017	2,627	717	17,438	734	329	21,845	0	0	-	21,845
2018	333	465	14,445	5,277	3,899	24,419	0	0	-	24,419
2019[b/]	558	567	22,741	3,175	1,872	28,913	0	0	-	28,913

TABLE A-6. Summary of Oregon commercial troll salmon fishing effort in days fished and landings in numbers of fish by catch area.[a/] (Page 2 of 2)

Year or Ave.	Astoria	Tillamook	Newport	Coos Bay	Brookings	Oregon Subtotal	Alaska	Washington	California	Total
					COHO LANDINGS					
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
2001-2005	5,749	-	-	-	-	5,749	0	189	-	5,938
2006	1,414	-	-	-	-	1,414	0	0	-	1,414
2007	11,554	1,279	1,883	2,393	-	17,109	0	0	-	17,109
2008	434	-	-	-	-	434	0	0	-	434
2009	12,684	3,490	5,105	683	-	21,962	0	0	-	21,962
2010	1,040	-	-	-	-	1,040	0	0	-	1,040
2011	464	-	-	-	-	464	0	0	-	464
2012	624	-	-	-	-	624	0	0	-	624
2013	452	-	-	-	-	452	0	0	-	452
2014	7,702	1,104	1,222	970	-	10,998	0	0	-	10,998
2015	2,213	-	-	-	-	2,213	0	0	-	2,213
2016	-	-	-	-	-	-	0	0	-	0
2017	470	-	-	-	-	470	0	0	-	470
2018	92	-	-	-	-	92	0	0	-	92
2019[b/]	1,409	-	-	-	-	1,409	0	0	-	1,409

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 fishing effort in days fished by area and month.[a/] (Page 1 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
Astoria											
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
2001-2005	-	-	78	28	89	152	72	-	-	-	390
2006	-	-	516	296	-	79	93	-	-	-	984
2007	-	-	77	46	40	153	14	-	-	-	330
2008	-	-	272	282	33	58	10	-	-	-	655
2009	-	-	72	85	239	135	9	-	-	-	540
2010	-	-	68	288	141	119	16	-	-	-	632
2011	-	-	85	124	41	24	15	-	-	-	289
2012	-	-	58	223	37	25	73	-	-	-	416
2013	-	-	64	119	32	46	26	-	-	-	287
2014	-	-	455	79	161	65	56	-	-	-	816
2015	-	-	531	88	48	61	90	-	-	-	818
2016	-	-	71	82	21	51	-	-	-	-	225
2017	-	-	82	92	11	104	53	-	-	-	342
2018	-	-	16	50	3	29	0	-	-	-	98
2019[b/]	-	-	9	17	102	41	24	-	-	-	193
Tillamook											
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
2001-2005	71	64	268	354	174	225	301	218	10	-	1,591
2006	-	-	-	179	12	34	178	317	31	-	751
2007	-	8	280	100	4	86	95	95	30	-	698
2008	-	-	-	-	-	-	37	12	--	-	49
2009	-	-	-	-	-	-	247	24	-	-	271
2010	-	-	33	177	109	39	37	9	-	-	404
2011	-	-	25	96	21	23	42	13	-	-	220
2012	-	52	175	91	36	22	102	157	-	-	635
2013	-	189	87	52	40	196	192	74	-	-	830
2014	-	10	96	159	60	40	177	14	-	-	556
2015	-	50	321	249	9	26	140	71	-	-	866
2016	-	44	38	66	8	12	55	14	-	-	237
2017	-	7	34	46	8	-	70	17	-	-	182
2018	-	-	60	44	5	36	23	11	-	-	179
2019[b/]	-	3	49	24	16	12	16	24	-	-	144

TABLE A-7. Oregon commercial troll salmon fishing effort in days fished by area and month.[a/] (Page 2 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
Newport											
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
2001-2005	252	452	954	923	407	631	753	551	-	-	4,664
2006	-	-	-	838	471	151	413	250	93	-	2,216
2007	-	81	347	286	94	170	91	29	6	-	1,104
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	286	-	-	-	286
2010	-	-	477	411	290	346	-	-	-	-	1,524
2011	-	60	325	229	22	101	-	11	-	-	748
2012	-	155	475	335	114	312	465	256	-	-	2,112
2013	-	334	484	263	141	325	98	77	-	-	1,722
2014	-	469	1,076	507	354	932	255	104	-	-	3,697
2015	-	738	317	230	782	530	155	-	-	-	2,752
2016	-	666	625	309	388	547	217	4	-	-	2,756
2017	-	99	149	345	647	-	18	6	-	-	1,264
2018	-	-	161	119	191	534	36	2	-	-	1,043
2019[b/]	-	30	72	258	847	374	85	9	-	-	1,675
Coos Bay											
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
2001-2005	364	692	1,088	897	361	776	619	443	151	25	4,935
2006	-	-	-	-	-	-	30	156	155	26	367
2007	-	253	554	388	167	895	117	120	126	-	2,620
2008	-	-	-	-	-	-	-	-	48	-	48
2009	-	-	-	-	-	-	101	36	-	-	137
2010	-	-	505	399	169	334	-	148	-	-	1,555
2011	-	256	538	755	57	83	80	202	235	-	2,206
2012	-	315	784	510	96	298	320	267	121	-	2,711
2013	-	506	563	456	337	1,626	1,055	742	155	-	5,440
2014	-	473	929	1,052	648	1,183	310	171	98	-	4,864
2015	-	967	924	770	484	232	72	166	158	-	3,773
2016	-	178	170	260	146	75	58	119	41	-	1,047
2017	-	-	-	-	-	-	-	114	41	-	155
2018	-	-	127	270	91	97	21	89	83	-	778
2019[b/]	-	16	29	85	68	22	14	154	-	-	388

TABLE A-7. Oregon commercial troll salmon fishing effort in days fished by area and month.[a/] (Page 3 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
Brookings											
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
2001-2005	3	8	40	81	98	94	84	108	13	-	439
2006	-	-	-	-	-	-	6	151	27	-	184
2007	-	6	8	138	99	95	60	47	12	-	465
2008	-	-	-	-	-	-	-	51	-	-	51
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	43	-	26	40	-	72	-	-	181
2011	-	-	60	60	8	86	-	75	-	-	289
2012	-	- -	23	118	90	67	43	41	-	-	382
2013	-	13	3	107	284	208	40	52	-	-	707
2014	-	10	471	82	38	70	21	78	-	-	770
2015	-	12	150	100	90	24	-	144	-	-	520
2016	-	7	13	47	8	-	-	52	-	-	127
2017	-	-	-	-	-	-	-	109	-	-	109
2018	-	-	37	127	123	73	-	115	-	-	475
2019[b/]	-	2	7	22	70	133	-	-	-	-	234
South of Cape Falcon											
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
2001-2005	689	1,215	2,342	2,058	1,015	1,725	1,757	1,321	168	25	11,629
2006	-	-	-	1,017	483	185	627	874	306	26	3,518
2007	-	348	1,189	912	364	1,246	363	291	174	-	4,887
2008	-	-	-	-	-	-	37	63	48	-	148
2009	-	-	-	-	-	-	634	60	-	-	694
2010	-	-	1,058	987	594	759	37	229	-	-	3,664
2011	-	316	948	1,140	108	293	122	301	235	-	3,463
2012	-	522	1,457	1,054	336	699	930	721	121	-	5,840
2013	-	1,042	1,137	878	802	2,355	1,385	945	155	-	8,699
2014	-	962	2,572	1,800	1,100	2,225	763	367	98	-	9,887
2015	-	1,767	1,712	1,349	1,365	812	367	381	158	-	7,911
2016	-	895	846	682	550	634	330	189	41	-	4,167
2017	-	106	183	391	655	-	88	246	41	-	1,710
2018	-	-	385	560	410	740	80	217	83	-	2,475
2019[b/]	-	51	157	389	1,001	541	115	187	-	-	2,441

TABLE A-7. Oregon commercial troll salmon fishing effort in days fished by area and month.[a/] (Page 4 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
Statewide Total											
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
2001-2005	689	1,215	2,419	2,086	901	1,532	1,800	1,321	168	25	12,019
2006	-	-	516	1,313	483	264	720	874	306	26	4,502
2007	-	348	1,266	958	404	1,399	377	291	174	-	5,217
2008	-	-	272	282	33	58	47	63	48	-	803
2009	-	-	72	85	239	135	643	60	-	-	1,234
2010	-	-	1,126	1,275	735	878	53	229	-	-	4,296
2011	-	316	1,033	1,264	149	317	137	301	235	-	3,752
2012	-	522	1,515	1,277	373	724	1,003	721	121	-	6,256
2013	-	1,042	1,201	997	834	2,401	1,411	945	155	-	8,986
2014	-	962	3,027	1,879	1,261	2,290	819	367	98	-	10,703
2015	-	1,767	2,243	1,437	1,413	873	457	381	158	-	8,729
2016	-	895	917	764	571	685	330	189	41	-	4,392
2017	-	106	265	483	666	104	141	246	41	-	2,052
2018	-	-	401	610	413	769	80	217	83	-	2,573
2019[b/]	-	51	166	406	1,103	582	139	187	-	-	2,634

a/ Summary of ODFW fish receiving ticket information. Beginning in 1979, monthly totals are the sum of statistical weeks with closest fit to the calendar month. Excludes effort occurring off Alaska, Washington, and California. Days fished data 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-8. Oregon commercial troll Chinook and coho salmon landings in numbers of fish by catch area and month.[a/] (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**			
Astoria																	
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
2001-2005	-	-	2,633	1,402	1,445	2,329	478	-	-	-	8,095	-	1,524	2,472	3,430	-	5,749
2006	-	-	7,167	3,168	1	61	92	-	-	-	10,489	-	10	915	489	-	1,414
2007	-	-	777	374	115	163	14	-	-	-	1,443	-	1,062	10,335	157	-	11,554
2008	-	-	2,616	2,508	129	161	20	-	-	-	5,434	-	49	356	29	-	434
2009	-	-	119	232	240	117	4	-	-	-	712	-	9,061	3,458	165	-	12,684
2010	-	-	580	6,652	2,121	1,657	110	-	-	-	11,120	-	637	368	35	-	1,040
2011	-	-	1,057	1,400	114	239	26	-	-	-	2,836	-	234	147	83	-	464
2012	-	-	1,034	5,366	210	149	1,685	-	-	-	8,444	-	38	35	551	-	624
2013	-	-	432	704	136	279	394	-	-	-	1,945	-	39	295	118	-	452
2014	-	-	12,804	725	2,282	175	196	-	-	-	16,182	-	2,428	1,570	3,704	-	7,702
2015	-	-	6,806	1,527	1,293	700	556	-	-	-	10,882	-	328	411	1,474	-	2,213
2016	-	-	519	743	169	627	-	-	-	-	2,058	-	-	-	-	-	-
2017	-	-	1,080	652	50	611	234	-	-	-	2,627	-	16	305	149	-	470
2018	-	-	16	269	10	38	0	-	-	-	333	-	8	84	-	-	92
2019[b/]	-	-	17	36	384	93	28	-	-	-	558	-	1,026	302	81	-	1,409
Tillamook																	
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	-	-	-	-	-	-
2001-2005	1,881	888	5,198	6,484	2,709	3,511	3,416	3,074	31	-	25,572	-	-	-	-	-	-
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	-	-	-	3,490	-	3,490
2010	-	-	108	2,466	931	72	56	15	-	-	3,648	-	-	-	-	-	-
2011	-	1	130	615	174	52	114	20	-	-	1,106	-	-	-	-	-	-
2012	-	440	1,492	441	178	55	1,146	3,645	-	-	7,397	-	-	-	-	-	-
2013	-	1,391	349	144	380	2,869	3,461	286	-	-	8,880	-	-	-	-	-	-
2014	-	20	1,133	2,640	593	246	2,355	22	-	-	7,009	-	-	-	1,104	-	1,104
2015	-	205	4,114	3,118	96	186	807	319	-	-	8,845	-	-	-	-	-	-
2016	-	167	185	515	16	23	135	26	-	-	1,067	-	-	-	-	-	-
2017	-	6	325	224	17	-	112	33	-	-	717	-	-	-	-	-	-
2018	-	-	180	168	19	58	26	14	-	-	465	-	-	-	-	-	-
2019[b/]	-	3	144	68	234	42	33	43	-	-	567	-	-	-	-	-	-

TABLE A-8. Oregon commercial troll Chinook and coho salmon landings in numbers of fish by catch area and month.[a/] (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					
Newport																	
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	-	-	-	-	-	-
2001-2005	5,438	7,253	23,241	18,832	10,415	20,541	26,687	20,998	-	-	126,126	-	-	-	-	-	-
2006	-	-	-	8,397	3,556	923	3,852	1,528	639	-	18,895	-	-	-	-	-	-
2007	-	279	1,553	1,427	323	338	88	54	2	-	4,064	-	-	1,607	276	-	1,883
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,105	-	5,105
2010	-	-	3,950	3,513	2,505	2,409	-	-	-	-	12,377	-	-	-	-	-	-
2011	-	378	2,357	1,477	192	561	-	15	-	-	4,980	-	-	-	-	-	-
2012	-	1,090	4,408	2,578	998	5,819	8,550	3,169	-	-	26,612	-	-	-	-	-	-
2013	-	2,186	3,436	1,740	1,443	5,569	865	461	-	-	15,700	-	-	-	-	-	-
2014	-	9,078	18,829	8,108	6,348	36,167	3,658	934	-	-	83,122	-	-	-	1,222	-	1,222
2015	-	7,286	2,240	2,503	18,472	5,544	813	-	-	-	36,858	-	-	-	-	-	-
2016	-	5,610	5,044	1,948	9,188	8,063	1,426	2	-	-	31,281	-	-	-	-	-	-
2017	-	547	904	2,950	13,002	-	25	10	-	-	17,438	-	-	-	-	-	-
2018	-	-	486	709	2,101	10,994	151	4	-	-	14,445	-	-	-	-	-	-
2019[b/]	-	68	352	2,645	14,699	4,424	539	14	-	-	22,741	-	-	-	-	-	-
Coos Bay																	
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
2001-2005	7,479	17,217	21,669	20,217	7,753	26,693	18,998	8,507	1,276	148	117,529	-	-	-	-	-	-
2006	-	-	-	-	-	-	65	962	821	131	1,979	-	-	-	-	-	-
2007	-	1,563	3,018	2,114	1,430	11,963	489	504	621	3	21,705	-	-	2,234	159	-	2,393
2008	-	-	-	-	-	-	-	-	208	-	208	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	293	-	-	293	-	-	-	683	-	683
2010	-	-	4,961	2,987	840	1,316	-	1,315	-	-	11,419	-	-	-	-	-	-
2011	-	4,102	5,414	8,309	333	399	223	1,058	1,995	-	21,833	-	-	-	-	-	-
2012	-	2,103	8,633	4,338	609	2,897	3,981	1,942	701	-	25,204	-	-	-	-	-	-
2013	-	3,796	5,308	4,103	3,508	30,097	23,925	7,677	1,002	-	79,416	-	-	-	-	-	-
2014	-	6,403	15,427	17,812	11,385	30,187	2,838	1,116	469	-	85,637	-	-	-	970	-	970
2015	-	8,890	6,786	14,182	8,682	1,727	386	1,635	1,163	-	43,451	-	-	-	-	-	-
2016	-	808	760	2,273	2,039	541	251	689	182	-	7,543	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	638	96	-	734	-	-	-	-	-	-
2018	-	-	300	2,001	810	1,215	48	472	431	-	5,277	-	-	-	-	-	-
2019[b/]	-	79	170	632	1,245	174	62	813	-	-	3,175	-	-	-	-	-	-

TABLE A-8. Oregon commercial troll Chinook and coho salmon landings in numbers of fish by catch area and month.[a/] (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		
Brookings																	
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	-	-	-	-	-	-
2001-2005	25	63	425	1,156	1,615	1,434	1,211	543	66	-	5,245	-	-	-	-	-	-
2006	-	-	-	-	-	-	12	590	136	-	738	-	-	-	-	-	-
2007	-	15	25	727	1,150	1,524	400	209	47	-	4,097	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	236	-	-	236	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	164	-	51	125	-	529	-	-	869	-	-	-	-	-	-
2011	-	-	601	254	27	337	-	107	-	-	1,326	-	-	-	-	-	-
2012	-	-	371	1,287	1,456	1,328	884	118	-	-	5,444	-	-	-	-	-	-
2013	-	50	7	1,450	3,171	1,848	135	155	-	-	6,816	-	-	-	-	-	-
2014	-	53	13,352	1,349	492	403	54	443	-	-	16,146	-	-	-	-	-	-
2015	-	39	1,146	1,528	779	92	-	639	-	-	4,223	-	-	-	-	-	-
2016	-	12	34	179	21	-	-	152	-	-	398	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	329	-	-	329	-	-	-	-	-	-
2018	-	-	272	1,529	1,168	614	-	316	-	-	3,899	-	-	-	-	-	-
2019[b/]	-	12	16	70	462	1,312	-	-	-	-	1,872	-	-	-	-	-	-
South of Cape Falcon																	
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
2001-2005	14,823	25,409	50,447	42,413	22,088	52,179	50,313	33,123	1,347	148	274,472	-	-	-	-	-	-
2006	-	-	-	9,550	3,616	962	4,379	4,039	1,691	131	24,368	-	-	-	-	-	-
2007	-	1,871	7,353	5,190	2,909	13,884	1,113	1,004	717	3	34,044	-	-	5,036	519	-	5,555
2008	-	-	-	-	-	-	64	248	208	-	520	-	-	-	-	-	-
2009	-	-	-	-	-	-	105	332	-	-	437	-	-	-	9,278	-	9,278
2010	-	-	9,183	8,966	4,327	3,922	56	1,859	-	-	28,313	-	-	-	-	-	-
2011	-	4,481	8,502	10,655	726	1,349	337	1,200	1,995	-	29,245	-	-	-	-	-	-
2012	-	3,633	14,904	8,644	3,241	10,099	14,561	8,874	701	-	64,657	-	-	-	-	-	-
2013	-	7,423	9,100	7,437	8,502	40,383	28,386	8,579	1,002	-	110,812	-	-	-	-	-	-
2014	-	15,554	48,741	29,909	18,818	67,003	8,905	2,515	469	-	191,914	-	-	-	3,296	-	3,296
2015	-	16,420	14,286	21,331	28,029	7,549	2,006	2,593	1,163	-	93,377	-	-	-	-	-	-
2016	-	6,597	6,023	4,915	11,264	8,627	1,812	869	182	-	40,289	-	-	-	-	-	-
2017	-	553	1,229	3,174	13,019	-	137	1,010	96	-	19,218	-	-	-	-	-	-
2018	-	-	1,238	4,407	4,098	12,881	225	806	431	-	24,086	-	-	-	-	-	-
2019[b/]	-	162	682	3,415	16,640	5,952	634	870	-	-	28,355	-	-	-	-	-	-

TABLE A-8. Oregon commercial troll Chinook and coho salmon landings in numbers of fish by catch area and month.[a/] (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			
Statewide Total																	
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
2001-2005	14,823	25,409	53,080	43,815	19,115	44,072	50,600	33,123	1,347	148	282,567	-	1,524	2,472	3,430	-	5,749
2006	-	-	7,167	12,718	3,617	1,023	4,471	4,039	1,691	131	34,857	-	10	915	489	-	1,414
2007	-	1,871	8,130	5,564	3,024	14,047	1,127	1,004	717	3	35,487	-	1,062	15,371	676	-	17,109
2008	-	-	2,616	2,508	129	161	84	248	208	-	5,954	-	49	356	29	-	434
2009	-	-	119	232	240	117	109	332	-	-	1,149	-	9,061	3,458	9,443	-	21,962
2010	-	-	9,763	15,618	6,448	5,579	166	1,859	-	-	39,433	-	637	368	35	-	1,040
2011	-	4,481	9,559	12,055	840	1,588	363	1,200	1,995	-	32,081	-	234	147	83	-	464
2012	-	3,633	15,938	14,010	3,451	10,248	16,246	8,874	701	-	73,101	-	38	35	551	-	624
2013	-	7,423	9,532	8,141	8,638	40,662	28,780	8,579	1,002	-	112,757	-	39	295	118	-	452
2014	-	15,554	61,545	30,634	21,100	67,178	9,101	2,515	469	-	208,096	-	2,428	1,570	7,000	-	10,998
2015	-	16,420	21,092	22,858	29,322	8,249	2,562	2,593	1,163	-	104,259	-	328	411	1,474	-	2,213
2016	-	6,597	6,542	5,658	11,433	9,254	1,812	869	182	-	42,347	-	-	-	-	-	-
2017	-	553	2,309	3,826	13,069	611	371	1,010	96	-	21,845	-	16	305	149	-	470
2018	-	-	1,254	4,676	4,108	12,919	225	806	431	-	24,419	-	8	84	-	-	92
2019[b/]	-	162	699	3,451	17,024	6,045	662	870	-	-	28,913	-	1,026	302	81	-	1,409

a/ Monthly totals are the sum of statistical weeks with closest fit to the calendar month. Excludes harvests off Alaska, Washington (north of Leadbetter Point), and California that were landed in Oregon. Landings are reported 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.[a/] (Page 1 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
Astoria										
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
2001-2005	-	-	155	260	4,788	10,258	2,041	-	-	17,275
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	-	-	-	306	2,211	6,996	741	-	-	10,254
2011	-	-	-	459	1,402	4,645	877	-	-	7,383
2012	-	-	-	681	1,792	1,954	411	-	-	4,838
2013	-	-	-	1,593	1,329	2,912	302	-	-	6,136
2014	-	-	42	708	3,579	6,279	1,647	-	-	12,255
2015	-	-	62	699	2,723	3,092	2,053	-	-	8,629
2016	-	-	-	-	1,920	2,412	-	-	-	4,332
2017	-	-	-	587	2,697	5,284	-	-	-	8,568
2018	-	-	-	380	1,839	5,332	148	-	-	7,699
2019[b/]	-	-	-	1,334	5,066	7,930	365	-	-	14,695
Tillamook										
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
2001-2005	19	35	441	2,043	8,269	3,897	4,170	3,017	182	22,064
2006	2	16	385	1,334	3,299	497	5,292	4,988	98	15,911
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	-	-	126	1,158	3,833	3,620	3,718	1,048	-	13,503
2011	0	50	143	936	3,771	2,968	3,730	1,240	-	12,838
2012	0	38	567	830	2,372	2,933	4,126	1,521	-	12,387
2013	2	78	369	647	3,166	2,605	3,326	3,942	-	14,135
2014	0	7	1,052	1,110	9,027	4,657	8,066	1,305	-	25,224
2015	0	42	919	485	3,259	2,097	6,463	2,217	-	15,482
2016	14	4	838	1,578	1,657	855	5,505	530	-	10,981
2017	0	12	335	692	2,161	2,039	3,100	292	-	8,631
2018	0	0	354	332	1,533	4,541	3,670	829	-	11,259
2019[b/]	0	0	293	2,061	8,113	6,440	2,725	1,470	-	21,102

TABLE A-9. Oregon ocean recreational effort in salmon angler trips by catch area and month.[a/] (Page 2 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
Newport										
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
2001-2005	20	77	235	3,896	13,532	6,509	2,064	397	-	26,723
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	-	-	349	1,093	2,933	8,491	2,127	-	-	14,993
2011	20	2	103	847	4,550	2,518	3,913	-	-	11,953
2012	23	290	325	658	3,425	4,030	5,947	107	-	14,805
2013	354	441	204	425	5,037	4,073	4,606	188	-	15,328
2014	87	83	492	2,235	15,116	9,307	9,804	63	-	37,187
2015	48	76	136	716	9,102	2,369	5,680	75	-	18,202
2016	50	9	41	647	2,448	1,037	3,886	75	-	8,193
2017	0	0	12	299	4,528	2,751	2,603	89	-	10,282
2018	39	0	125	538	5,623	11,666	5,502	70	-	23,563
2019[b/]	37	0	65	2,864	16,935	11,609	3,507	96	-	35,113
Coos Bay										
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
2001-2005	24	100	783	6,477	16,186	8,250	2,564	117	--	34,491
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	-	-	388	709	2,350	4,683	489	--	--	8,619
2011	2	23	187	1,182	2,514	4,687	1,711	-	16	10,322
2012	0	52	730	2,290	4,075	5,568	3,647	77	18	16,457
2013	123	174	338	2,898	3,011	19,299	3,901	84	--	29,828
2014	0	46	691	1,906	8,659	11,899	6,518	53	--	29,772
2015	12	34	327	1,149	5,664	3,060	4,443	82	--	14,771
2016	18	5	158	574	2,277	2,943	5,188	7	--	11,170
2017	17	48	153	925	3,368	4,593	3,640	72	--	12,816
2018	15	19	178	252	2,410	6,012	5,424	0	--	14,310
2019[b/]	6	8	52	1,348	7,337	6,775	3,428	15	-	18,969

TABLE A-9. Oregon ocean recreational effort in salmon angler trips by catch area and month.[a/] (Page 3 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
Brookings										
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
2001-2005	-	-	1,595	3,138	3,059	7,048	2,192	3,145	-	20,177
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	-	-	129	95	335	619	2,502	2,270	-	5,950
2011	-	-	393	296	189	1,772	1,853	1,757	-	6,260
2012	-	-	484	1,982	4,678	6,810	1,201	3,666	-	18,821
2013	-	-	289	2,259	6,658	7,147	208	3,547	-	20,108
2014	-	-	1,437	1,466	5,557	3,723	246	4,639	-	17,068
2015	-	-	305	424	1,492	574	1,120	5,040	-	8,955
2016	-	-	44	467	717	190	898	1,872	-	4,188
2017	-	-	-	-	-	-	-	2,012	-	2,012
2018	-	-	508	1,058	1,398	1,934	-	2,102	-	7,000
2019[b/]	-	-	132	769	1,797	1,635	24	-	-	4,357
South of Cape Falcon										
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
2001-2005	63	212	3,123	15,737	40,575	23,882	11,307	6,514	182	101,571
2006	24	92	1,414	7,575	19,050	3,817	13,560	8,449	98	54,079
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	-	-	992	3,055	9,451	17,413	8,836	3,318	--	43,065
2011	22	75	826	3,261	11,024	11,945	11,207	2,997	16	41,373
2012	23	380	2,106	5,760	14,550	19,341	14,921	5,371	18	62,470
2013	479	693	1,200	6,229	17,872	33,124	12,041	7,761	--	79,399
2014	87	136	3,672	6,717	38,359	29,586	24,634	6,060	--	109,251
2015	60	152	1,687	2,774	19,517	8,100	17,706	7,414	--	57,410
2016	82	18	1,081	3,266	7,099	5,025	15,477	2,484	--	34,532
2017	17	60	500	1,916	10,057	9,383	9,343	2,465	--	33,741
2018	54	19	1,165	2,180	10,964	24,153	14,596	3,001	--	56,132
2019[b/]	43	8	542	7,042	34,182	26,459	9,684	1,581	-	79,541

TABLE A-9. Oregon ocean recreational effort in salmon angler trips by catch area and month.[a/] (Page 4 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
Total All Areas										
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
2001-2005	63	212	3,154	15,893	45,363	34,140	13,348	6,515	182	118,845
2006	24	92	1,414	7,575	20,761	9,586	14,322	8,449	98	62,321
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	-	-	992	3,361	11,662	24,409	9,577	3,318	--	53,319
2011	22	75	826	3,720	12,426	16,590	12,084	2,997	16	48,756
2012	23	380	2,106	6,441	16,342	21,295	15,332	5,371	18	67,308
2013	479	693	1,200	7,822	19,201	36,036	12,343	7,761	--	85,535
2014	87	136	3,714	7,425	41,938	35,865	26,281	6,060	--	121,506
2015	60	152	1,749	3,473	22,240	11,192	19,759	7,414	--	66,039
2016	82	18	1,081	3,266	9,019	7,437	15,477	2,484	--	38,864
2017	17	60	500	2,503	12,754	14,667	9,343	2,465	--	42,309
2018	54	19	1,165	2,560	12,803	29,485	14,744	3,001	--	63,831
2019[b/]	43	8	542	8,376	39,248	34,389	10,049	1,581	-	94,236

a/ Monthly totals are the sum of statistical weeks with closest fit to the calendar month. Since 1981, data from sampled ports only. Effort consists of salmon angler trips 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/ Preliminary.

TABLE A-10. Oregon ocean recreational salmon landings in numbers of fish by catch area and month.[a/] (Page 1 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	May	June	July	Aug.	Sept.	Oct.	Season
	CHINOOK										**COHO**						
Astoria																	
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
2001-2005	-	-	33	127	774	1,605	241	3	-	2,704	-	212	6,991	14,070	2,020	-	23,165
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	-	-	-	37	388	1,321	66	-	-	1,812	-	12	1,479	4,404	213	-	6,108
2011	-	-	-	129	147	1,264	79	-	-	1,619	-	178	981	4,132	755	-	6,046
2012	-	-	-	578	650	431	45	-	-	1,704	-	86	615	740	231	-	1,672
2013	-	-	-	731	323	792	72	-	-	1,918	-	1,143	991	1,706	173	-	4,013
2014	-	-	21	150	628	1,402	105	-	-	2,306	-	391	5,030	8,503	2,816	-	16,740
2015	-	-	28	259	434	1,030	1,006	-	-	2,757	-	732	3,764	2,872	1,472	-	8,840
2016	-	-	-	-	653	387	-	-	-	1,040	-	-	915	1,739	-	-	2,654
2017	-	-	-	330	567	1,011	-	-	-	1,908	-	13	2,249	4,308	-	-	6,570
2018	-	-	-	120	150	415	4	-	-	689	-	36	1,393	5,680	19	-	7,128
2019[b/]	-	-	-	104	668	485	38	-	-	1,295	-	1,852	6,548	8,543	281	-	17,224
Tillamook																	
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
1996-2000	-	-	70	10	65	31	502	494	--	1,188	-	-	976	6	9	-	602
2001-2005	6	4	51	331	1,890	1,240	1,181	939	31	5,668	2	1,663	7,354	2,212	66	20	10,979
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	-	-	12	72	112	190	323	122	-	831	-	323	1,392	1,390	268	-	3,373
2011	0	0	4	29	128	182	574	207	-	1,124	-	366	1,535	1,288	2,532	-	5,721
2012	0	1	79	102	133	429	1,008	419	-	2,171	-	13	423	1,302	1,424	-	3,162
2013	0	21	28	82	189	156	709	712	-	1,897	-	-	2,034	777	812	12	3,635
2014	0	0	84	16	385	236	703	111	-	1,535	-	641	10,479	5,817	9,692	49	26,678
2015	0	2	88	26	63	140	1,677	1,437	-	3,433	-	37	2,453	1,465	1,000	19	4,974
2016	0	0	124	179	30	131	687	70	-	1,221	-	158	188	2	1,426	22	1,796
2017	0	0	76	80	89	141	424	35	-	845	-	86	901	1,440	1,252	-	3,679
2018	0	4	19	28	66	366	160	63	-	706	-	25	274	1,652	858	-	2,809
2019[b/]	8	0	37	95	422	212	293	239	-	1,306	-	609	6,201	2,749	1,156	5	10,720

TABLE A-10. Oregon ocean recreational salmon landings in numbers of fish by catch area and month.[a/] (Page 2 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	May	June	July	Aug.	Sept.	Oct.	Season
	CHINOOK										**COHO**						
Newport																	
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
2001-2005	0	25	79	475	3,829	3,126	1,445	375	-	9,354	2	3,466	12,245	4,402	79	2	19,484
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	-	-	55	52	135	474	88	-	-	804	-	27	551	6,283	966	-	7,827
2011	0	6	21	44	111	52	234	-	-	468	-	179	1,703	385	3,680	-	5,947
2012	21	95	60	56	223	481	1,034	27	-	1,997	-	11	1,046	2,796	4,727	-	8,580
2013	231	123	28	126	498	251	305	76	-	1,638	-	-	2,648	1,779	1,517	7	5,951
2014	10	23	113	43	723	606	431	20	-	1,969	-	2,269	18,001	11,786	13,547	-	45,603
2015	30	3	45	32	151	39	393	14	-	707	-	213	6,755	1,011	1,695	3	9,677
2016	28	5	2	14	117	348	135	6	-	655	-	29	582	18	1,793	-	2,422
2017	0	0	6	31	207	467	47	4	-	762	-	36	3,419	1,943	2,192	-	7,590
2018	0	0	23	59	409	490	217	11	-	1,209	-	2	2,125	6,042	3,095	-	11,264
2019[b/]	2	3	66	348	1,405	277	84	17	-	2,202	-	1,931	16,778	7,594	1,934	-	28,237
Coos Bay																	
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
2001-2005	1	33	136	2,738	7,334	3,467	1,458	24	--	15,190	11	2,357	8,406	1,264	34	-	12,066
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	-	-	8	83	133	444	28	--	--	696	-	18	238	663	8	-	927
2011	0	1	31	88	254	389	248	-	6	1,017	-	11	330	338	411	-	1,090
2012	0	12	391	529	502	1,348	749	60	8	3,599	-	31	782	829	814	-	2,456
2013	26	52	135	1,189	790	11,479	657	4	--	14,332	-	9	66	94	329	-	498
2014	0	9	69	767	1,865	2,399	736	6	--	5,851	1	620	4,371	1,672	3,255	-	9,919
2015	0	3	18	209	187	197	744	3	--	1,361	-	208	2,633	81	1,731	-	4,653
2016	4	4	2	44	91	213	318	0	--	676	-	58	410	59	959	-	1,486
2017	0	6	7	28	212	199	121	0	--	573	-	241	1,452	557	1,146	-	3,396
2018	0	0	6	52	180	311	244	0	--	793	-	4	579	887	2,983	-	4,453
2019[b/]	0	0	0	87	603	236	305	-	-	1,231	-	1,265	4,322	2,023	1,980	-	9,590

TABLE A-10. Oregon ocean recreational salmon landings in numbers of fish by catch area and month.[a/] (Page 3 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	May	June	July	Aug.	Sept.	Oct.	Season
						CHINOOK								**COHO**			
Brookings																	
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
2001-2005	-	-	494	1,815	807	1,931	1,510	469	-	7,027	-	100	143	62	18	8	323
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	-	-	7	2	3	24	247	541	-	824	-	-	19	25	16	-	60
2011	-	-	148	24	7	328	196	233	-	936	-	-	12	8	8	-	28
2012	-	-	334	904	2,329	4,014	1,208	534	-	9,323	-	15	144	48	-	2	209
2013	-	-	22	1,815	4,942	2,836	20	814	-	10,449	-	8	302	123	-	6	439
2014	-	-	817	477	3,341	1,053	16	1,115	-	6,819	3	31	528	5	-	-	567
2015	-	-	30	97	149	47	69	792	-	1,184	-	5	118	5	4	6	138
2016	-	-	0	82	72	3	59	287	-	503	-	11	36	3	2	-	52
2017	-	-	-	-	-	-	-	506	-	506	-	-	-	-	-	-	-
2018	-	-	105	149	458	448	4	429	-	1,593	-	3	3	12	-	-	18
2019[b/]	-	-	9	117	212	223	11	-	-	572	-	139	343	60	-	-	542
South of Cape Falcon																	
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
2001-2005	3	61	761	5,358	13,860	9,764	5,595	1,807	31	37,238	9	6,560	28,149	7,940	177	25	42,851
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	-	-	82	209	383	1,132	686	663	--	3,155	-	368	2,200	8,361	1,258	-	12,187
2011	0	7	204	185	500	951	1,252	440	6	3,545	-	556	3,580	2,019	6,631	-	12,786
2012	21	108	864	1,591	3,187	6,272	3,999	1,040	8	17,090	-	70	2,395	4,975	6,965	2	14,407
2013	257	196	213	3,212	6,419	14,722	1,691	1,606	--	28,316	-	17	5,050	2,773	2,658	25	10,523
2014	10	32	1,083	1,303	6,314	4,294	1,886	1,252	--	16,174	4	3,561	33,379	19,280	26,494	49	82,767
2015	30	8	181	364	550	423	2,883	2,246	--	6,685	-	463	11,959	2,562	4,430	28	19,442
2016	32	9	128	319	310	695	1,199	363	--	3,055	-	256	1,216	82	4,180	22	5,756
2017	0	6	89	139	508	807	592	545	--	2,686	-	363	5,772	3,940	4,590	-	14,665
2018	0	4	153	288	1,113	1,615	625	503	--	4,301	-	34	2,981	8,593	6,936	-	18,544
2019[b/]	10	3	112	647	2,642	948	693	256	-	5,311	-	3,944	27,644	12,426	5,070	5	49,089

TABLE A-10. Oregon ocean recreational salmon landings in numbers of fish by catch area and month.[a/] (Page 4 of 4)

Year or Average	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season	May	June	July	Aug.	Sept.	Oct.	Season
	CHINOOK										COHO						
Total All Areas																	
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
2001-2005	3	61	767	5,434	14,634	11,369	5,836	1,808	31	39,942	9	6,645	35,139	22,010	2,198	25	66,017
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	-	-	82	246	771	2,453	752	663	--	4,967	-	380	3,679	12,765	1,471	-	18,295
2011	0	7	204	314	647	2,215	1,331	440	6	5,164	-	734	4,561	6,151	7,386	-	18,832
2012	21	108	864	2,169	3,837	6,703	4,044	1,040	8	18,794	-	156	3,010	5,715	7,196	2	16,079
2013	257	196	213	3,943	6,742	15,514	1,763	1,606	--	30,234	-	1,160	6,041	4,479	2,831	25	14,536
2014	10	32	1,104	1,453	6,942	5,696	1,991	1,252	--	18,480	4	3,952	38,409	27,783	29,310	49	99,507
2015	30	8	209	623	984	1,453	3,889	2,246	--	9,442	-	1,195	15,723	5,434	5,902	28	28,282
2016	32	9	128	319	963	1,082	1,199	363	--	4,095	-	256	2,131	1,821	4,180	22	8,410
2017	0	6	89	469	1,075	1,818	592	545	--	4,594	-	376	8,021	8,248	4,590	-	21,235
2018	0	4	153	408	1,263	2,030	629	503	--	4,990	-	70	4,374	14,273	6,955	-	25,672
2019[b/]	10	3	112	751	3,310	1,433	731	256	--	6,606	-	5,796	34,192	20,969	5,351	5	66,313

a/ Monthly totals are the sum of statistical weeks with closest fit to the calendar month and may include illegal catch. 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/ 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[a/]	Washington Subtotal	Oregon	California	Alaska	Total
				DAYS FISHED					
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	3,475	100	0	3	3,578
1996-2000	20	128	55	235	431	30	0	0	460
2001-2005	82	593	195	454	1,324	30	0	0	1,354
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	92	1,620	426	298	2,436	-	-	0	2,436
2011	92	1,133	669	170	2,064	-	-	0	2,064
2012	107	654	1,045	254	2,060	-	-	0	2,060
2013	130	1,498	435	245	2,308	-	-	0	2,308
2014	394	791	716	121	2,022	-	-	0	2,022
2015	275	1,447	657	266	2,645	-	-	0	2,645
2016	188	881	411	148	1,628	-	-	0	1,628
2017	93	1,411	502	367	2,373	-	-	0	2,373
2018	54	1,194	360	541	2,149	-	-	0	2,149
2019[b/]	77	290	429	942	1,738	-	-	0	1,738
				CHINOOK LANDINGS					
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
2001-2005	1,293	17,254	4,481	17,310	40,338	812	0	0	41,149
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	886	34,171	5,911	4,131	45,099	-	-	0	45,099
2011	1,032	12,518	10,418	2,934	26,902	-	-	0	26,902
2012	2,250	8,781	19,722	6,102	36,855	-	-	0	36,855
2013	560	25,171	8,388	5,971	40,090	-	-	0	40,090
2014	8,980	12,550	13,851	3,326	38,707	-	-	0	38,707
2015	4,025	33,410	13,180	4,698	55,313	-	-	0	55,313
2016	1,659	9,724	4,173	1,788	17,344	-	-	0	17,344
2017	574	21,177	4,831	6,351	32,933	-	-	0	32,933
2018	131	12,941	3,208	7,276	23,556	-	-	0	23,556
2019[b/]	229	2,339	6,385	13,823	22,776	-	-	0	22,776

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[a/]	Washington Subtotal	Oregon	California	Alaska	Total
				COHO LANDINGS					
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
1996-2000	1,413	2,387	851	7,478	8,881	0	-	103	8,984
2001-2005	929	3,240	1,555	1,231	6,397	0	-	103	6,500
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	151	1,657	209	87	2,104	-	-	0	2,104
2011	38	1,708	1,167	140	3,053	-	-	0	3,053
2012	89	856	2,119	204	3,268	-	-	0	3,268
2013	127	3,759	1,846	309	6,041	-	-	0	6,041
2014	2,239	8,525	4,602	41	15,407	-	-	0	15,407
2015	690	1,839	309	34	2,872	-	-	0	2,872
2016	-	-	-	-	-	-	-	-	-
2017	131	524	402	311	1,368	-	-	-	1,368
2018	33	366	488	405	1,292	-	-	-	1,292
2019[b/]	259	1,331	1,290	1,117	3,997	-	-	-	3,997
				PINK LANDINGS[c/]					
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
1996-2000	0	2	7	21	29	19	0	0	48
2001-2005	13	18	38	29	97	19	0	0	116
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	0	0	0	0	0	-	-	0	0
2011	0	110	98	7	215	-	-	0	215
2012	0	0	0	0	0	-	-	0	0
2013	0	15	99	27	141	-	-	0	141
2014	0	0	0	0	0	-	-	0	0
2015	0	12	36	20	68	-	-	0	68
2016	0	0	0	0	0	-	-	0	0
2017	0	0	2	11	13	-	-	0	13
2018	0	0	0	0	0	-	-	0	0
2019[b/]	2	23	56	230	311	-	-	0	311

a/ Neah Bay data include landings from Strait of Juan de Fuca Area 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.[a/] (Page 1 of 2)

Year or Avg.	May	June	July	Aug.	Sept.[b/]	Oct.	Season
Neah Bay[c/]							
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
2001-2005	165	56	129	119	24	-	454
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	139	97	44	18	0	-	298
2011	107	34	17	3	9	-	170
2012	114	83	21	21	15	-	254
2013	151	-	90	4	-	-	245
2014	109	1	6	5	-	-	121
2015	180	66	14	3	3	-	266
2016	85	56	3	4	-	-	148
2017	41	40	140	112	34	-	367
2018	234	121	149	22	15	-	541
2019[d/]	138	271	498	25	10	-	942
La Push							
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
2001-2005	31	12	76	88	15	-	195
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	154	93	95	81	3	-	426
2011	199	236	139	70	25	-	669
2012	124	286	229	246	160	-	1,045
2013	190	-	175	70	-	-	435
2014	291	84	169	140	32	-	716
2015	227	-	194	174	62	-	657
2016	213	56	111	31	-	-	411
2017	194	89	33	129	57	-	502
2018	160	14	36	103	47	-	360
2019[d/]	52	12	133	152	80	-	429
Westport							
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
2001-2005	207	73	151	129	55	-	593
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	218	668	362	329	43	-	1,620
2011	300	386	292	135	20	-	1,133
2012	126	264	202	39	23	-	654
2013	380	498	206	331	83	-	1,498
2014	189	103	222	192	85	-	791
2015	411	418	283	273	62	-	1,447
2016	349	247	134	151	-	-	881
2017	527	477	207	170	30	-	1,411
2018	347	539	237	64	7	-	1,194
2019[d/]	171	52	30	14	23	-	290

TABLE A-12. Washington non-Indian commercial troll salmon fishing effort in days fished by catch area and month.[a/]
(Page 2 of 2)

Year or Avg.	May	June	July	Aug.	Sept.[b/]	Oct.	Season
Ilwaco							
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
2001-2005	15	5	24	29	14	-	82
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	23	22	23	17	7	-	92
2011	42	43	1	3	3	-	92
2012	5	76	14	2	10	-	107
2013	47	51	15	10	7	-	130
2014	250	49	42	35	18	-	394
2015	177	26	11	26	35	-	275
2016	78	48	30	32	-	-	188
2017	16	24	15	15	23	-	93
2018	13	17	15	7	2	-	54
2019[d/]	42	9	12	14	0	-	77
Statewide Total							
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	-	3,475
1996-2000	221	124	158	145	10	-	431
2001-2005	417	146	381	324	94	-	1,324
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	534	880	524	445	53	-	2,436
2011	648	699	449	211	57	-	2,064
2012	369	709	466	308	208	-	2,060
2013	768	549	486	415	90	-	2,308
2014	839	237	439	372	135	-	2,022
2015	995	510	502	476	162	-	2,645
2016	725	407	278	218	-	-	1,628
2017	778	630	395	426	144	-	2,373
2018	754	691	437	196	71	-	2,149
2019[d/]	403	344	673	205	113	-	1,738

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 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.[a/] (Page 1 of 3)

Year or Avg.	May	June	July	Aug.	Sept.[b/]	Season	May	June	July	Aug.	Sept.[b/]	Season	May	June	July	Aug.	Sept.[b/]	Season
			CHINOOK						**COHO**						**PINKS**			
Neah Bay[c/]																		
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
2001-2005	6,624	2,491	4,402	4,393	699	17,310	-	-	424	962	171	1,231	0	3	18	12	0	29
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	1,902	1,529	368	332	0	4,131	-	-	69	18	0	87						
2011	2,022	513	276	30	93	2,934	-	-	1	0	139	140	0	0	7	0	0	7
2012	4,511	788	157	421	225	6,102	-	-	0	125	79	204						
2013	3,984	-	1,900	87	-	5,971	-	-	279	30	-	309	2	-	2	23	-	27
2014	3,075	27	168	56	-	3,326	-	-	19	22	-	41						
2015	3,274	839	402	104	79	4,698	-	-	15	13	6	34	0	20	0	0	0	20
2016	948	794	39	7	-	1,788	-	-	-	-	-	-						
2017	451	374	3,058	2,158	310	6,351	-	-	49	182	80	311	0	0	10	1	0	11
2018	2,797	1,330	2,684	283	182	7,276	-	-	249	50	106	405						
2019[d/]	1,430	2,616	9,491	219	67	13,823	-	-	938	59	120	1,117	0	0	230	0	0	230
La Push																		
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
2001-2005	797	338	1,798	1,848	176	4,481	-	-	745	956	187	1,555	1	0	21	18	10	38
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	2,125	1,632	984	1,147	23	5,911	-	-	121	87	1	209						
2011	2,700	4,075	2,683	781	179	10,418	-	-	574	436	157	1,167	0	2	58	37	1	98
2012	4,242	4,341	3,524	5,868	1,747	19,722	-	-	256	839	1,024	2,119						
2013	4,186	-	2,396	1,806	-	8,388	-	-	1,054	792	-	1,846	0	0	93	6	0	99
2014	7,553	1,217	3,208	1,672	201	13,851	-	-	1,149	3,069	384	4,602						
2015	4,288	-	4,292	3,619	981	13,180	-	-	133	114	62	309	0	0	36	0	0	36
2016	2,228	551	1,305	89	-	4,173	-	-	-	-	-	-						
2017	2,112	780	308	1,275	356	4,831	-	-	34	228	140	402	0	0	0	2	0	2
2018	1,174	94	297	1,119	524	3,208	-	-	41	181	266	488						
2019[d/]	529	61	1,838	2,373	1,584	6,385	-	-	313	633	344	1,290	0	0	27	29	0	56

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).[a/] (Page 2 of 3)

Year or Avg.	May	June	July	Aug.	Sept.[b/]	Season	May	June	July	Aug.	Sept.[b/]	Season	May	June	July	Aug.	Sept.[b/]	Season
			CHINOOK						**COHO**						**PINKS**			
Westport																		
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
2001-2005	7,894	3,243	3,497	2,336	475	17,254	-	-	696	1,083	2,667	3,240	0	0	16	2	0	18
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	4,192	19,171	4,761	5,788	259	34,171	-	-	895	639	123	1,657						
2011	2,960	4,727	3,056	1,709	66	12,518	-	-	1,055	456	197	1,708	0	1	53	56	0	110
2012	1,613	5,242	1,631	109	186	8,781	-	-	490	152	214	856						
2013	2,317	11,848	3,520	6,796	690	25,171	-	-	559	2,942	258	3,759	0	0	6	8	1	15
2014	2,160	1,313	4,722	3,936	419	12,550	-	-	1,739	2,959	3,827	8,525						
2015	5,360	13,569	7,916	6,108	457	33,410	-	-	539	871	429	1,839	1	0	11	0	0	12
2016	3,258	2,619	1,981	1,866	-	9,724	-	-	-	-	-	-						
2017	10,793	6,092	2,340	1,852	100	21,177	-	-	134	309	81	524	0	0	0	0	0	0
2018	2,682	7,518	2,457	281	3	12,941	-	-	125	225	16	366						
2019[d/]	1,803	341	65	49	81	2,339	-	-	226	368	737	1,331	0	0	23	0	0	23
Ilwaco																		
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
2001-2005	398	110	357	355	121	1,293	-	-	278	405	502	929	0	0	11	1	0	13
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	210	230	168	237	41	886	-	-	99	38	14	151						
2011	472	543	1	12	4	1,032	-	-	1	25	12	38	0	0	0	0	0	0
2012	263	1,687	66	0	234	2,250	-	-	23	2	64	89						
2013	102	358	42	19	39	560	-	-	28	80	19	127	0	0	0	0	0	0
2014	7,438	553	598	297	94	8,980	-	-	534	822	883	2,239						
2015	2,681	650	96	337	261	4,025	-	-	41	171	478	690	0	0	0	0	0	0
2016	656	346	259	398	-	1,659	-	-	-	-	-	-						
2017	148	222	74	21	109	574	-	-	14	50	67	131	0	0	0	0	0	0
2018	20	68	20	19	4	131	-	-	32	1	-	33						
2019[d/]	139	26	36	28	0	229	-	-	161	98	0	259	0	0	0	2	0	2

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).[a/] (Page 3 of 3)

Year or Avg.	May	June	July	Aug.	Sept.[b/]	Season	May	June	July	Aug.	Sept.[b/]	Season	May	June	July	Aug.	Sept.[b/]	Season
			CHINOOK						COHO						PINKS			
Statewide Total																		
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
2001-2005	15,712	6,182	10,054	7,683	1,178	40,338	-	-	2,142	2,639	3,408	6,397	2	3	66	23	5	97
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	8,429	22,562	6,281	7,504	323	45,099	-	-	1,184	782	138	2,104						
2011	8,154	9,858	6,016	2,532	342	26,902	-	-	1,631	917	505	3,053	0	3	118	93	1	215
2012	10,629	12,058	5,378	6,398	2,392	36,855	-	-	769	1,118	1,381	3,268						
2013	10,589	12,206	7,858	8,708	729	40,090	-	-	1,920	3,844	277	6,041	2	0	101	37	1	141
2014	20,226	3,110	8,696	5,961	714	38,707	-	-	3,441	6,872	5,094	15,407						
2015	15,603	15,058	12,706	10,168	1,778	55,313	-	-	728	1,169	975	2,872	1	20	47	0	0	68
2016	7,090	4,310	3,584	2,360	-	17,344	-	-	-	-	-	-						
2017	13,504	7,468	5,780	5,306	875	32,933	-	-	231	769	368	1,368	0	0	10	3	0	13
2018	6,673	9,010	5,458	1,702	713	23,556	-	-	447	457	388	1,292						
2019[d/]	3,901	3,044	11,430	2,669	1,732	22,776	-	-	1,638	1,158	1,201	3,997	0	0	280	31	0	311

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.	May-Sept.	Year
Area 4B										
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
2001-2005	34	15	18	27	27	10	-	65	97	196
2006	28	13	157	16	15	10	-	39	211	278
2007	179	9	29	48	18	0	-	129	104	412
2008	52	9	21	59	110	13	-	51	212	315
2009	76	48	202	101	124	4	-	18	479	573
2010	145	143	200	25	7	1	-	51	376	572
2011	303	68	51	7	1	0	-	22	127	452
2012	182	75	78	67	16	8	-	29	244	455
2013	270	141	74	64	46	13	-	124	338	732
2014	419	45	167	6	6	6	-	34	230	683
2015	384	255	173	4	40	28	-	7	500	891
2016	35	167	40	22	27	2	-	34	258	327
2017	149	9	57	19	22	25	-	3	132	284
2018	93	73	114	86	21	22	-	26	316	435
2019[a/]	100	49	33	28	5	2	-	13	117	230
Neah Bay										
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
2001-2005	1	30	46	71	84	56	-	0	286	287
2006	1	78	118	138	112	101	-	2	547	550
2007	0	13	161	135	125	4	-	0	438	438
2008	2	14	74	30	83	74	-	0	275	277
2009	0	26	27	122	110	0	-	0	285	285
2010	0	5	94	63	99	41	-	0	302	302
2011	0	24	130	122	95	21	-	0	392	392
2012	0	56	175	134	190	94	-	0	649	649
2013	0	131	106	270	495	107	-	0	1,109	1,109
2014	0	103	62	141	137	36	-	0	479	479
2015	0	24	173	143	85	22	-	0	447	447
2016	0	12	171	105	57	0	-	0	345	345
2017	0	15	29	293	320	139	-	0	796	796
2018	0	21	133	185	108	80	-	0	527	527
2019[a/]	0	11	36	327	255	105	-	0	734	734
La Push[b/]										
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
2001-2005	0	0	0	1	1	1	10	-	4	12
2006	0	2	7	11	8	3	5	-	31	36
2007	0	0	15	2	13	1	0	-	31	31
2008	0	4	26	11	9	2	1	-	52	53
2009	0	2	3	2	6	0	4	-	13	17
2010	0	3	1	11	12	2	4	-	29	33
2011	0	0	3	0	3	2	1	-	8	9
2012	0	8	3	5	12	2	4	-	30	34
2013	0	6	18	30	13	35	0	-	102	102
2014	0	41	61	304	253	82	0	-	741	741
2015	0	38	23	205	115	54	0	-	435	435
2016	0	21	15	4	1	0	0	-	41	41
2017	0	0	1	2	3	2	0	-	8	8
2018	0	0	1	0	0	3	0	-	4	4
2019[a/]	0	0	0	0	2	5	0	-	7	7

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.	Nov.-Dec.	Total May-Sept.	Year Total
Westport										
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
2001-2005	0	2	1	1	4	2	-	-	10	10
2006	0	3	3	2	5	3	-	-	16	16
2007	0	0	0	4	11	2	-	-	17	17
2008	0	3	4	2	29	3	-	-	41	41
2009	0	6	6	8	29	1	-	-	50	50
2010	0	4	40	56	32	18	-	-	150	150
2011	0	0	8	23	41	1	-	-	73	73
2012	0	5	13	8	11	0	-	-	37	37
2013	0	1	8	5	29	4	-	-	47	47
2014	0	7	5	14	23	28	-	-	77	77
2015	0	7	11	37	21	0	-	-	76	76
2016	0	4	7	10	5	0	-	-	26	26
2017	0	3	3	3	12	6	-	-	27	27
2018	0	5	7	1	16	5	-	-	34	34
2019[a/]	0	5	3	10	14	8	-	-	40	40
Statewide Total										
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
2001-2005	35	47	66	100	116	69	10	65	397	505
2006	29	96	285	167	140	117	5	41	805	880
2007	179	22	205	189	167	7	0	129	590	898
2008	54	30	125	102	231	92	1	51	580	686
2009	76	82	238	233	269	5	4	18	827	925
2010	145	155	335	155	150	62	4	51	857	1,057
2011	303	92	192	152	140	24	1	22	600	926
2012	182	144	269	214	229	104	4	29	960	1,175
2013	270	279	206	369	583	159	0	124	1,596	1,990
2014	419	196	295	465	419	152	0	34	1,527	1,980
2015	384	324	380	389	261	104	0	7	1,458	1,849
2016	35	204	233	141	90	2	0	34	670	739
2017	149	27	90	317	357	172	0	3	963	1,115
2018	93	99	255	272	145	110	0	26	881	1,000
2019[a/]	100	65	72	365	276	120	0	13	898	1,011

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 Avg.	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.[b/]	Nov.-Dec.	Total May-Sept.	Total Year	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.[b/]	Nov.-Dec.	Total May-Sept.	Total Year
						CHINOOK										**COHO**				
Area 4B																				
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
2001-2005	894	388	2,299	522	485	358	-	3,765	4,052	8,711	1	0	0	1,309	3,197	545	-	30	5,051	5,082
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	272	618	1,607	109	-	375	2,641	3,499	0	0	8	81	483	72	-	0	644	644
2009	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	1,722	1,657	3,240	171	37	9	-	200	5,114	7,036	0	0	0	106	3	0	-	12	109	121
2011	2,883	585	373	46	15	0	-	90	1,019	3,992	2	0	0	10	13	0	-	2	23	27
2012	1,216	635	699	651	295	43	-	335	2,323	3,874	0	0	2	235	229	166	-	4	632	636
2013	1,661	1,989	2,468	223	383	10	-	721	5,073	7,455	3	0	0	378	454	354	-	10	1,186	1,199
2014	3,316	819	3,051	20	22	12	-	267	3,924	7,507	3	0	0	12	24	19	-	0	55	58
2015	3,249	4,142	4,283	47	135	73	-	17	8,680	11,946	0	0	0	0	249	190	-	2	439	441
2016	244	1,758	239	135	84	5	-	182	2,221	2,647	0	0	0	8	10	0	-	0	18	18
2017	1,343	68	712	452	56	92	-	11	1,380	2,734	0	0	0	48	51	288	-	0	387	387
2018	798	727	2,363	511	94	54	-	129	3,749	4,676	0	0	3	192	222	239	-	0	656	656
2019[a/]	1,001	503	603	700	8	5	-	70	1,819	2,890	0	0	0	173	59	7	-	0	239	239
Neah Bay																				
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
2001-2005	11	4,666	12,259	8,821	5,524	2,762	-	0	34,033	34,044	20	2	3	5,938	14,570	8,744	-	0	29,257	29,277
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	242	5,694	1,066	3,119	3,071	-	0	13,192	13,247	17	0	8	511	2,107	9,304	-	0	11,930	11,947
2009	0	799	1,083	1,615	1,649	0	-	0	5,146	5,146	0	0	0	21,558	23,832	0	-	0	45,390	45,390
2010	0	231	8,059	5,080	8,486	957	-	0	22,813	22,813	0	0	13	1,304	4,580	2,882	-	0	8,779	8,779
2011	0	535	7,701	14,462	5,014	359	-	0	28,071	28,071	0	0	0	1,951	4,196	6,174	-	0	12,321	12,321
2012	0	2,975	19,218	8,805	13,121	4,627	-	0	48,746	48,746	0	1	27	2,131	16,750	15,524	-	0	34,433	34,433
2013	0	8,983	13,788	7,834	6,995	2,073	-	0	39,673	39,673	0	0	0	6,955	33,559	3,847	-	1	44,361	44,362
2014	0	7,247	5,754	4,362	2,617	492	-	0	20,472	20,472	0	0	11	2,852	9,739	1,070	-	0	13,672	13,672
2015	0	1,196	17,352	7,361	1,153	189	-	0	27,251	27,251	0	0	0	881	568	218	-	0	1,667	1,667
2016	0	372	12,687	4,342	1,036	0	-	1	18,437	18,438	0	0	0	15	0	0	-	1	15	16
2017	0	1,099	1,297	15,296	4,316	589	-	0	22,597	22,597	0	0	0	833	6,811	4,363	-	0	12,007	12,007
2018	0	521	9,216	7,952	1,604	397	-	0	19,690	19,690	0	0	12	1,559	4,781	3,972	-	0	10,324	10,324
2019[a/]	0	186	1,492	11,589	2,709	224	-	0	16,200	16,200	0	0	0	13,981	31,842	5,979	-	0	51,802	51,802

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 Avg.	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.[b/]	Nov.-Dec.	Total May-Sept.	Total Year	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.[b/]	Nov.-Dec.	Total May-Sept.	Total Year
					CHINOOK											**COHO**				
La Push																				
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
2001-2005	0	52	10	70	40	15	23	-	186	204	0	0	0	12	84	12	66	-	109	162
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	0	83	99	20	158	0	25	-	360	385	0	0	0	102	3,060	15	15	-	3,177	3,192
2010	0	6	85	754	702	74	10	-	1,621	1,631	0	2	0	157	226	51	15	-	436	451
2011	0	0	457	0	69	46	0	-	572	572	0	0	0	0	29	482	0	-	511	511
2012	0	722	258	322	1,060	164	10	-	2,526	2,536	0	0	1	44	1,002	179	0	-	1,226	1,226
2013	0	954	2,694	1,197	207	794	0	-	5,846	5,846	0	0	7	370	1,176	127	0	-	1,680	1,680
2014	0	4,192	7,992	15,669	5,502	2,152	0	-	35,507	35,507	0	0	4	7,446	29,203	5,031	0	-	41,684	41,684
2015	0	1,868	1,371	14,068	1,999	524	0	-	19,830	19,830	0	0	0	1,008	383	298	0	-	1,689	1,689
2016	0	641	555	256	4	0	0	-	1,456	1,456	0	0	0	0	0	0	1	-	0	1
2017	0	0	10	5	4	30	0	-	49	49	0	0	0	8	14	167	0	-	189	189
2018	0	0	25	0	0	3	0	-	28	28	0	0	0	0	0	17	0	-	17	17
2019[a/]	0	0	0	0	14	23	0	-	37	37	0	0	0	0	123	219	0	-	342	342
Westport																				
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
2001-2005	0	355	92	49	222	125	-	-	843	843	0	0	0	0	114	80	-	-	194	194
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	0	128	118	101	144	0	-	-	491	491	0	0	0	443	3,694	68	-	-	4,205	4,205
2010	0	32	766	938	468	624	-	-	2,828	2,828	0	0	50	448	249	1,390	-	-	2,137	2,137
2011	0	0	286	253	1,610	13	-	-	2,162	2,162	0	0	0	101	553	55	-	-	709	709
2012	0	133	521	366	174	0	-	-	1,194	1,194	0	0	71	359	809	0	-	-	1,239	1,239
2013	0	3	153	56	331	25	-	-	568	568	0	0	0	19	974	48	-	-	1,041	1,041
2014	0	350	205	592	652	59	-	-	1,858	1,858	0	0	15	95	265	249	-	-	624	624
2015	0	109	691	1,634	744	0	-	-	3,178	3,178	0	0	3	105	107	0	-	-	215	215
2016	0	134	271	396	186	0	-	-	987	987	0	0	0	6	5	0	-	-	11	11
2017	0	86	20	19	229	34	-	-	388	388	0	0	0	114	274	379	-	-	767	767
2018	0	71	152	23	185	5	-	-	436	436	0	0	0	0	509	296	-	-	805	805
2019[a/]	0	120	15	25	58	47	-	-	265	265	0	0	0	260	1,794	1,068	-	-	3,122	3,122

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 Avg.	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.[b/]	Nov.-Dec.	Total May-Sept.	Total Year	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.[b/]	Nov.-Dec.	Total May-Sept.	Total Year
						CHINOOK										**COHO**				
Statewide Total																				
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
2001-2005	905	5,461	14,660	9,462	6,271	3,260	23	3,765	39,114	43,802	20	2	3	7,259	17,964	9,381	66	30	34,611	34,714
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	358	8,864	2,099	6,007	3,579	1	375	20,907	21,821	17	0	18	865	3,561	9,820	0	0	14,264	14,281
2009	464	1,491	5,828	2,329	2,566	12	25	68	12,226	12,783	0	0	0	25,422	35,141	100	15	0	60,663	60,678
2010	1,722	1,926	12,150	6,943	9,693	1,664	10	200	32,376	34,308	0	2	63	2,015	5,058	4,323	15	12	11,461	11,488
2011	2,883	1,120	8,817	14,761	6,708	418	0	90	31,824	34,797	2	0	0	2,062	4,791	6,711	0	2	13,564	13,568
2012	1,216	4,465	20,696	10,144	14,650	4,834	10	335	54,789	56,350	0	1	101	2,769	18,790	15,869	0	4	37,530	37,534
2013	1,661	11,929	19,103	9,310	7,916	2,902	0	721	51,160	53,542	3	0	7	7,722	36,163	4,376	0	11	48,268	48,282
2014	3,316	12,608	17,002	20,643	8,793	2,715	0	267	61,761	65,344	3	0	30	10,405	39,231	6,369	0	0	56,035	56,038
2015	3,249	7,315	23,697	23,110	4,031	786	0	17	58,939	62,205	0	0	3	1,994	1,307	706	0	2	4,010	4,012
2016	244	2,905	13,752	5,129	1,310	5	0	183	23,101	23,528	0	0	0	29	15	0	1	1	44	46
2017	1,343	1,253	2,039	15,772	4,605	745	0	11	24,414	25,768	0	0	0	1,003	7,150	5,197	0	0	13,350	13,350
2018	798	1,319	11,756	8,486	1,883	459	0	129	23,903	24,830	0	0	15	1,751	5,512	4,524	0	0	11,802	11,802
2019[a/]	1,001	809	2,110	12,314	2,789	299	0	70	18,321	19,392	0	0	0	14,414	33,818	7,273	0	0	55,505	55,505

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.[a/]	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	Total May-Sept.	Total Year
Area 4B										
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	0	0	0	82	141	0	-	0	223	223
2009	0	0	0	189	219	0	-	0	408	408
2011	0	0	3	55	15	0	-	0	73	73
2013	0	0	0	39	0	0	-	0	39	39
2015	0	0	2	0	2	0	-	0	4	4
2017	0	0	0	1	1	0	-	0	2	2
2019[b/]	0	0	0	0	0	0	-	0	0	0
Neah Bay										
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	0	0	7	244	96	0	-	0	347	347
2009	0	0	0	237	145	0	-	0	382	382
2011	0	0	3	659	310	16	-	0	988	988
2013	0	0	0	49	115	0	-	0	164	164
2015	0	0	4	0	16	0	-	0	20	20
2017	0	0	0	60	133	0	-	0	193	193
2019[b/]	0	0	0	243	270	0	-	0	513	513
La Push										
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	0	0	0	0	14	0	0	-	14	14
2009	0	0	0	1	4	0	0	-	5	5
2011	0	0	0	0	4	0	0	-	4	4
2013	0	0	0	1	5	0	0	-	6	6
2015	0	0	0	98	0	0	0	-	98	98
2017	0	0	0	0	0	0	0	-	0	0
2019[b/]	0	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.[a/]	Jan.-Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.-Dec.	Total May-Sept.	Total Year
Westport										
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	0	0	0	0	0	0	-	-	0	0
2009	0	0	0	4	1	0	-	-	5	5
2011	0	0	0	4	5	0	-	-	9	9
2013	0	0	0	0	0	0	-	-	0	0
2015	0	0	0	0	0	0	-	-	0	0
2017	0	0	0	0	0	0	-	-	0	0
2019[b/]	0	0	0	0	0	0	-	-	0	0
Total Statewide										
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	0	0	7	326	251	0	0	0	584	584
2009	0	0	0	431	369	0	0	0	800	800
2011	0	0	6	718	334	16	0	0	1,074	1,074
2013	0	0	0	89	120	0	0	0	209	209
2015	0	0	6	98	18	0	0	0	122	122
2017	0	0	0	244	271	0	0	0	515	515
2019[b/]	0	0	0	243	270	0	0	0	513	513

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
Neah Bay								
1981-1985	80	557	979	9,338	13,391	3,382	126	27,495
1991-1995[a/]	-	431	491	13,953	7,341	2,193	-	23,175
1996-2000[a/]	-	1,258	4	12,553	9,455	994	-	20,494
1996-2000	-	-	-	3,462	5,345	1,098	-	8,301
2001-2005	-	576	1,447	10,063	7,081	1,199	-	19,326
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	-	-	1,239	5,701	3,803	807	-	11,549
2011	-	-	638	5,500	4,259	671	-	11,069
2012	-	-	1,204	7,324	3,641	1,268	-	13,439
2013	-	815	1,714	7,399	5,044	391	-	15,362
2014	-	827	2,334	8,102	3,547	1,706	-	16,517
2015	-	370	2,371	8,761	2,345	919	-	14,765
2016	-	-	-	7,504	751	-	-	8,255
2017	-	-	386	7,874	2,037	494	-	10,791
2018	-	-	1,169	5,989	1,499	0	-	8,657
2019[b/]	-	-	2,527	5,150	1,987	400	-	10,064
La Push								
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
2001-2005	-	59	199	1,711	1,486	678	132	4,138
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	-	-	390	838	1,940	513	154	3,836
2011	-	-	194	1,406	1,946	676	16	4,237
2012	-	-	236	1,190	1,379	768	353	3,926
2013	-	136	239	971	2,263	420	237	4,266
2014	-	36	352	1,422	2,007	883	365	5,064
2015	-	90	247	1,389	1,058	420	300	3,504
2016	-	-	-	702	387	-	-	1,089
2017	-	-	82	465	1,005	348	-	1,901
2018	-	-	80	400	1,408	20	-	1,908
2019[b/]	-	-	124	530	1,114	294	240	2,301
Westport								
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
2001-2005	-	1,861	4,425	18,150	15,487	6,189	-	42,500
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	-	-	7,822	11,841	13,804	4,961	-	38,428
2011	-	-	4,705	10,428	14,973	3,440	-	33,545
2012	-	-	8,187	8,898	14,147	6,092	-	37,325
2013	-	-	7,020	7,641	16,639	4,589	-	35,889
2014	-	780	7,645	19,006	18,838	7,500	-	53,769
2015	-	981	6,356	18,629	12,162	7,327	-	45,455
2016	-	-	-	9,587	8,253	-	-	17,840
2017	-	-	-	13,216	12,780	-	-	25,997
2018	-	-	-	8,019	14,110	390	-	22,519
2019[b/]	-	-	1,604	9,823	10,178	1,788	-	23,393

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
Ilwaco[c/]								
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
2001-2005	-	215	781	12,573	23,125	7,773	-	43,983
2006	-	-	781	9,502	21,175	6,351	-	37,539
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	-	-	557	7,165	17,349	2,070	-	27,141
2011	-	-	674	5,358	15,127	3,586	-	24,744
2012	-	-	1,964	5,627	10,154	5,224	-	22,970
2013	-	-	2,843	4,833	13,381	3,438	-	24,496
2014	-	36	2,575	11,306	22,617	7,735	-	44,268
2015	-	207	2,347	8,520	15,497	6,819	-	33,389
2016	-	-	-	7,666	16,587	-	-	24,254
2017	-	-	388	8,532	13,844	-	-	22,765
2018	-	-	1,195	5,098	7,979	613	-	14,884
2019[b/]	-	-	2,396	10,576	15,602	1,335	-	29,909
Statewide Total[c/]								
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	-	1,258	4,140	48,319	36,915	16,837	714	104,949
1996-2000	-	-	-	15,695	21,407	4,496	-	38,459
2001-2005	-	2,711	6,245	42,497	47,179	14,601	132	109,947
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	-	-	10,008	25,546	36,896	8,351	154	80,955
2011	-	-	6,211	22,692	36,305	8,372	16	73,596
2012	-	-	11,591	23,040	29,322	13,352	353	77,659
2013	-	951	11,816	20,844	37,328	8,838	237	80,014
2014	-	1,678	12,906	39,834	47,010	17,824	365	119,617
2015	-	1,648	11,320	37,299	31,063	15,484	300	97,114
2016	-	-	-	25,458	25,978	-	-	51,437
2017	-	-	857	30,088	29,666	842	-	61,453
2018	-	-	2,444	19,506	24,995	1,023	-	47,968
2019[b/]	-	-	6,651	26,079	28,881	3,816	240	65,667

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**				
Neah Bay																
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[a/]	-	114	143	2,587	358	35	-	2,478	-	-	384	15,896	11,629	3,446	-	29,747
1991-1995[b/]	-	148	-	1,443	232	62	-	1,420	-	40	-	15,654	13,052	991	-	25,804
1996-2000[b/]	-	-	-	396	68	5	-	267	-	-	-	1,686	5,023	1,782	-	7,103
2001-2005	-	234	683	2,710	705	77	-	3,949	-	-	573	8,391	7,468	1,039	-	17,128
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[b/]	-	-	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	-	-	144	1,573	1,453	129	-	3,299	-	-	1	1,926	1,609	150	-	3,687
2011	-	-	257	1,382	1,330	14	-	2,983	-	-	54	1,918	943	140	-	3,054
2012	-	-	812	3,524	1,173	42	-	5,552	-	-	27	3,643	3,094	784	-	7,548
2013	-	127	635	3,267	2,142	74	-	6,245	-	-	257	3,082	2,934	233	-	6,506
2014	-	158	948	3,975	806	48	-	5,935	-	-	188	1,734	2,244	1,478	-	5,643
2015	-	96	1,577	6,196	522	107	-	8,498	-	-	214	2,137	1,274	4,140	-	7,764
2016	-	-	-	3,011	255	-	-	3,266	-	-	-	30	23	-	-	53
2017	-	-	244	6,134	856	54	-	7,287	-	-	45	1,767	1,214	507	-	3,533
2018	-	-	352	2,269	420	-	-	3,041	-	-	548	3,170	1,221	-	-	4,939
2019[c/]	-	-	1,474	2,385	-	-	-	3,859	-	-	754	3,344	1,764	318	-	6,179
La Push																
1981-1985	-	0	7	132	166	8	-	304	-	0	72	861	2,786	251	-	3,791
1986-1990[a/]	-	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
2001-2005	-	7	96	740	541	195	51	1,586	-	-	-	1,110	1,306	309	10	2,770
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	-	-	38	294	715	86	45	1,177	-	-	-	211	709	223	37	1,180
2011	-	-	32	501	907	90	5	1,535	-	-	48	572	1,029	398	2	2,050
2012	-	-	86	463	443	153	133	1,278	-	-	-	473	1,052	698	21	2,243
2013	-	4	99	693	1,288	152	119	2,355	-	-	57	439	2,015	269	18	2,798
2014	-	0	227	725	406	115	110	1,584	-	-	102	922	2,265	1,121	199	4,608
2015	-	7	159	1,417	537	115	164	2,399	-	-	37	195	156	178	13	579
2016	-	-	-	221	34	-	-	255	-	-	-	3	2	-	-	5
2017	-	-	7	209	229	37	-	482	-	-	13	159	1,155	423	-	1,750
2018	-	-	26	102	297	2	-	427	-	-	25	94	814	21	-	954
2019[c/]	-	-	10	216	190	33	164	613	-	-	2	336	1,095	318	16	1,767

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**				
Westport																
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
2001-2005	-	1,020	3,109	3,808	4,944	878	-	11,648	-	4,793	8,111	21,306	21,852	7,244	-	54,535
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	-	-	4,711	9,948	10,586	1,744	-	26,989	-	-	45	3,680	3,957	4,925	-	12,607
2011	-	-	2,220	5,579	10,835	455	-	19,089	-	-	229	4,499	6,723	2,392	-	13,843
2012	-	-	7,574	4,033	6,709	1,170	-	19,486	-	-	184	3,124	3,375	5,241	-	11,924
2013	-	-	2,192	3,403	7,021	1,074	-	13,689	-	-	379	3,097	12,233	4,668	-	20,377
2014	-	427	3,935	8,190	9,944	970	-	23,466	-	-	5,935	17,687	17,874	12,979	-	54,474
2015	-	431	3,345	8,048	4,613	2,682	-	19,120	-	-	2,357	12,753	7,358	8,216	-	30,684
2016	-	-	-	4,198	4,232	-	-	8,430	-	-	-	30	13	-	-	43
2017	-	-	-	4,247	2,358	-	-	6,605	-	-	-	6,664	9,086	-	-	15,750
2018	-	-	-	2,537	2,307	32	-	4,877	-	-	-	1,638	13,496	236	-	15,370
2019[c/]	-	-	126	1,163	959	121	-	2,368	-	-	341	7,878	10,930	1,077	-	20,227
Ilwaco[d/]																
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
2001-2005	-	53	664	1,814	3,895	826	-	6,944	-	-	522	18,205	29,244	8,022	-	55,784
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	-	-	106	1,485	3,588	229	-	5,409	-	-	1	6,430	11,725	650	-	18,805
2011	-	-	352	808	4,107	329	-	5,596	-	-	289	5,104	12,678	2,564	-	20,634
2012	-	-	1,793	2,200	2,691	730	-	7,414	-	-	196	3,057	4,421	2,045	-	9,719
2013	-	-	1,300	1,356	3,284	688	-	6,629	-	-	2,287	4,007	8,599	1,566	-	16,459
2014	-	44	917	2,570	5,019	491	-	9,041	-	-	2,223	14,833	30,029	11,247	-	58,332
2015	-	61	957	1,419	4,836	2,140	-	9,414	-	-	2,607	12,325	15,756	5,022	-	35,711
2016	-	-	-	2,088	2,868	-	-	4,957	-	-	-	4,692	11,266	-	-	15,958
2017	-	-	319	2,191	3,153	-	-	5,663	-	-	30	5,724	9,301	-	-	15,055
2018	-	-	455	507	586	21	-	1,569	-	-	258	4,679	8,422	88	-	13,447
2019[c/]	-	-	237	1,533	888	84	-	2,743	-	-	3,507	14,386	16,997	1,361	-	36,251

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**				
Total Statewide[d/]																
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[a/]	-	901	1,886	14,500	8,674	1,212	-	25,590	-	19	5,077	91,015	62,794	7,165	45	165,058
1991-1995[b/]	-	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[b/]	-	-	-	2,603	2,407	564	-	4,940	-	-	-	17,736	23,289	3,967	-	41,445
2001-2005	-	2,607	5,200	14,961	12,700	2,859	51	35,251	-	5	1,795	40,606	52,131	15,016	10	109,200
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[b/]	-	-	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	-	-	5,000	13,299	16,341	2,189	45	36,874	-	-	47	12,247	17,999	5,947	37	36,278
2011	-	-	2,861	8,271	17,178	889	5	29,203	-	-	620	12,093	21,372	5,494	2	39,582
2012	-	-	10,265	10,220	11,016	2,096	133	33,729	-	-	407	10,297	11,942	8,767	21	31,434
2013	-	131	4,226	8,719	13,734	1,989	119	28,918	-	-	2,980	10,626	25,782	6,735	18	46,140
2014	-	629	6,027	15,460	16,174	1,624	110	40,025	-	-	8,448	35,175	52,411	26,824	199	123,057
2015	-	595	6,039	17,081	10,509	5,043	164	39,431	-	-	5,215	27,410	24,544	17,555	13	74,737
2016	-	-	-	9,519	7,388	-	-	16,907	-	-	-	4,755	11,304	-	-	16,059
2017	-	-	569	12,781	6,596	91	-	20,037	-	-	88	14,314	20,755	930	-	36,087
2018	-	-	833	5,414	3,611	56	-	9,913	-	-	832	9,581	23,952	345	-	34,710
2019[c/]	-	-	1,847	5,297	2,037	238	164	9,583	-	-	4,603	25,944	30,786	3,075	16	64,425

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.[a/]	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
Neah Bay								
1981-1985	-	18	4	780	3,547	82	27	4,398
1987	-	-	6	686	713	-	-	1,405
1989[b/]	-	0	0	1,443	295	202	-	1,940
1991[b/]	-	-	-	479	1,543	0	-	2,022
1993[b/]	-	0	-	609	1,264	371	-	2,244
1995	-	-	-	-	2,578	30	-	2,608
1997[b/]	-	-	-	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	-	-	9	2,591	4,266	270	-	7,136
2011	-	-	33	3,320	3,960	159	-	7,473
2013	-	-	31	4,088	1,866	13	-	5,997
2015	-	-	803	4,984	593	5	-	6,385
2017	-	-	1	368	299	7	-	676
2019[c/]	-	-	15	260	593	0	-	869
La Push								
1981-1985	-	0	0	5	207	1	-	213
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	-	-	6	148	77	0	0	231
2011	-	-	4	520	929	67	0	1,520
2013	-	-	3	232	406	1	0	643
2015	-	-	24	113	5	0	0	142
2017	-	-	0	4	8	0	0	12
2019[c/]	-	-	0	41	165	0	0	206
Westport								
1981-1985	-	16	60	497	541	3	-	1,111
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	-	-	51	79	131	0	-	261
2011	-	-	4	544	1,270	13	-	1,832
2013	-	-	5	648	372	0	-	1,024
2015	-	-	209	1,829	60	3	-	2,101
2017	-	-	0	36	9	0	-	45
2019[c/]	-	-	0	127	565	8	-	700

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.[a/]	Apr.	May	June	July	Aug.	Sept.	Oct.	Season
Ilwaco[d/]								
1981-1985	-	1	1	36	155	0	-	193
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	-	-	0	0	0	0	-	0
2011	-	-	0	2	1	0	-	3
2013	-	-	0	0	4	0	-	4
2015	-	-	0	3	1	0	-	4
2017	-	-	0	0	0	0	-	0
2019[c/]	-	-	0	0	0	0	-	0
Total Statewide[d/]								
1981-1985	-	35	65	1,318	4,451	85	27	5,915
1987	-	-	6	991	804	-	-	1,801
1989[b/]	-	0	0	1,482	352	202	-	2,036
1991[b/]	-	-	0	613	1,597	4	-	2,214
1993[b/]	-	0	-	695	1,344	377	-	2,416
1995	-	-	-	44	2,725	52	-	2,821
1997[b/]	-	-	-	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	-	-	65	2,818	4,474	270	0	7,627
2011	-	-	41	4,386	6,161	240	0	10,828
2013	-	-	39	4,967	2,648	14	0	7,668
2015	-	-	1,035	6,929	659	8	0	8,631
2017	-	-	1	407	316	7	0	732
2019[c/]	-	-	15	428	1,324	8	0	1,775

a/ Odd year averages only.

b/ Includes catch from the Washington State waters Area 4B fishery.

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-20. Cape Falcon to U.S./Mexico border commercial troll salmon fishing effort in days fished by region and month.
(Page 1 of 2)

Year or Avg.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
Cape Falcon to Humbug Mt.[a/]											
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
2001-2005	687	1,208	2,310	1,994	942	1,631	1,673	1,213	161	25	11,190
2006	-	-	-	1,017	483	185	621	723	279	26	3,334
2007	-	342	1,181	774	265	1,151	303	244	162	-	4,422
2008	-	-	-	-	-	-	37	12	48	-	97
2009	-	-	-	-	-	-	634	60	-	-	694
2010	-	-	1,015	987	568	719	37	157	-	-	3,483
2011	-	316	888	1,080	100	207	122	226	235	-	3,174
2012	-	522	1,434	936	246	632	887	680	121	-	5,458
2013	-	1,029	1,134	771	518	2,147	1,345	893	155	-	7,992
2014	-	952	2,101	1,718	1,062	2,155	742	289	98	-	9,117
2015	-	1,755	1,562	1,249	1,275	788	367	237	158	-	7,391
2016	-	888	833	635	542	634	330	137	41	-	4,040
2017	-	106	183	391	655	-	88	137	41	-	1,601
2018	-	-	348	433	287	667	80	102	83	-	2,000
2019[b/]	-	49	150	367	931	408	115	187	-	-	2,207
Humbug Mt. to Horse Mt. (KMZ)[a/c/]											
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	-	-	56	522	157	-	-	396
1996-2000	-	-	55	-	-	107	208	150	-	-	533
2001-2005	-	17	41	82	110	166	388	110	13	-	819
2006	-	-	-	-	-	-	6	151	27	-	184
2007	-	6	8	138	99	95	417	47	12	-	822
2008	-	-	-	-	-	-	-	51	-	-	51
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	43	-	26	40	-	72	-	-	181
2011	-	-	60	60	160	135	-	75	-	-	490
2012	-	0	23	118	90	67	348	41	-	-	687
2013	-	13	185	267	441	321	89	52	-	-	1,368
2014	-	10	471	82	38	70	120	78	-	-	869
2015	-	12	150	100	90	24	32	144	-	-	552
2016	-	7	13	47	8	-	59	52	-	-	186
2017	-	-	-	-	-	-	-	109	-	-	109
2018	-	-	167	351	286	255	-	115	-	-	1,174
2019[b/]	-	2	7	109	139	281	-	-	-	-	538

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
Horse Mt. to U.S./Mexico Border											
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	2,318	2,235	-	-	-	18,082
2001-2005	-	-	4,248	2,367	4,540	2,963	2,396	293	-	-	16,807
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	-	-	-	-	1,105	870	-	-	-	-	1,975
2011	-	-	1,879	504	1,737	1,897	638	117	-	-	6,772
2012	-	-	3,738	1,593	4,406	2,650	1,361	469	-	-	14,217
2013	-	-	4,268	3,904	3,979	2,638	1,620	223	-	-	16,632
2014	-	-	3,011	2,682	3,281	2,987	1,759	575	-	-	14,295
2015	-	-	4,434	2,392	1,943	2,000	1,695	515	-	-	12,979
2016	-	-	1,662	1,290	-	2,450	1,563	174	-	-	7,139
2017	-	-	874	1,210	-	2,610	1,811	220	-	-	6,725
2018	-	-	473	839	823	2,751	1,551	441	-	-	6,878
2019[b/]	-	-	3,875	4,372	3,087	2,785	1,100	251	-	-	15,470
Total South of Cape Falcon[a/]											
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	3,957	3,416	786	116	-	25,430
2001-2005	689	1,222	6,590	4,426	5,359	4,401	4,457	1,616	168	25	28,816
2006	-	-	2,062	1,120	1,133	2,778	3,104	1,248	306	26	11,777
2007	-	454	4,321	941	3,652	3,905	1,652	459	174	-	15,558
2008	-	-	-	-	-	-	37	63	48	-	148
2009	-	-	-	-	-	-	634	60	-	-	694
2010	-	-	1,058	987	1,699	1,629	37	229	-	-	5,639
2011	-	316	2,827	1,644	1,997	2,239	760	418	235	-	10,436
2012	-	522	5,195	2,647	4,742	3,349	2,596	1,190	121	-	20,362
2013	-	1,042	5,587	4,942	4,938	5,106	3,054	1,168	155	-	25,992
2014	-	962	5,583	4,482	4,381	5,212	2,621	942	98	-	24,281
2015	-	1,767	6,146	3,741	3,308	2,812	2,094	896	158	-	20,922
2016	-	895	2,508	1,972	550	3,084	1,952	363	41	-	11,365
2017	-	106	1,057	1,601	655	2,610	1,899	466	41	-	8,435
2018	-	-	988	1,623	1,396	3,673	1,631	658	83	-	10,052
2019[b/]	-	51	4,032	4,848	4,157	3,474	1,215	438	-	-	18,215

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month.

b/ Preliminary.

c/ The current commercial KMZ boundaries are Humbug Mt. to Humboldt south jetty.

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 1 of 2)

Year or Avg.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
						CHINOOK											**COHO**					
Cape Falcon to Humbug Mt.[a/]																						
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
2001-2005	14,799	25,358	50,107	41,488	20,877	50,745	49,102	32,580	1,307	148	269,227	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	9,550	3,616	962	4,367	3,449	1,555	131	23,630	-	-	-	-	-	-	-	-	-	-	-
2007	-	1,856	7,328	4,463	1,759	12,360	713	795	670	3	29,947	-	-	-	-	-	5,036	519	-	-	-	5,555
2008	-	-	-	-	-	-	64	12	208	-	284	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	105	332	-	-	437	-	-	-	-	-	-	9,278	-	-	-	9,278
2010	-	-	9,019	8,966	4,276	3,797	56	1,330	-	-	27,444	-	-	-	-	-	-	-	-	-	-	-
2011	-	4,481	7,901	10,401	699	1,012	337	1,093	1,995	-	27,919	-	-	-	-	-	-	-	-	-	-	-
2012	-	3,633	14,533	7,357	1,785	8,771	13,677	8,756	701	-	59,213	-	-	-	-	-	-	-	-	-	-	-
2013	-	7,373	9,093	5,987	5,331	38,535	28,251	8,424	1,002	-	103,996	-	-	-	-	-	-	-	-	-	-	-
2014	-	15,501	35,389	28,560	18,326	66,600	8,851	2,072	469	-	175,768	-	-	-	-	-	-	3,296	-	-	-	3,296
2015	-	16,381	13,140	19,803	27,250	7,457	2,006	1,954	1,163	-	89,154	-	-	-	-	-	-	-	-	-	-	-
2016	-	6,585	5,989	4,736	11,243	8,627	1,812	717	182	-	39,891	-	-	-	-	-	-	-	-	-	-	-
2017	-	553	1,229	3,174	13,019	-	137	681	96	-	18,889	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	966	2,878	2,930	12,267	225	490	431	-	20,187	-	-	-	-	-	-	-	-	-	-	-
2019[b/]	-	150	666	3,345	16,178	4,640	634	870	-	-	26,483	-	-	-	-	-	-	-	-	-	-	-
Humbug Mt. to Horse Mt. (KMZ)[a/c/]																						
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	-	-	-	-	-	-	-	-	-	-	-
2001-2005	25	656	446	1,182	3,363	6,874	7,582	661	66	-	17,645	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	12	590	136	-	738	-	-	-	-	-	-	-	-	-	-	-
2007	-	15	25	727	1,150	1,524	9,162	209	47	-	12,859	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	236	-	-	236	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	164	-	51	125	-	529	-	-	869	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	601	254	1,611	1,144	-	107	-	-	3,717	-	-	-	-	-	-	-	-	-	-	-
2012	-	0	371	1,287	1,456	1,328	6,115	118	-	-	10,675	-	-	-	-	-	-	-	-	-	-	-
2013	-	50	2,695	4,374	5,545	3,856	319	155	-	-	16,994	-	-	-	-	-	-	-	-	-	-	-
2014	-	53	13,352	1,349	492	403	674	443	-	-	16,766	-	-	-	-	-	-	-	-	-	-	-
2015	-	39	1,146	1,528	779	92	46	639	-	-	4,269	-	-	-	-	-	-	-	-	-	-	-
2016	-	12	34	179	21	-	196	152	-	-	594	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	329	-	-	329	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	1,209	4,006	2,988	4,391	-	316	-	-	12,910	-	-	-	-	-	-	-	-	-	-	-
2019[b/]	-	12	16	807	1,937	4,957	-	-	-	-	7,729	-	-	-	-	-	-	-	-	-	-	-

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	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
					CHINOOK												**COHO**					
Horse Mt. to U.S./Mexico Border																						
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	-	-	-	-	-	-	-	-	-	-	-
2001-2005	-	-	81,370	73,618	122,399	52,345	39,885	1,905	-	-	371,521	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	8,906	6,182	-	-	-	-	15,088	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	11,732	4,189	30,085	19,494	1,820	317	-	-	67,637	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	58,857	19,385	92,842	28,266	7,691	3,313	-	-	210,354	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	74,828	81,625	95,896	23,249	10,910	941	-	-	287,449	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	34,946	39,581	54,568	24,085	11,498	2,985	-	-	167,663	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	53,561	19,489	12,920	11,467	10,407	2,617	-	-	110,461	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	13,367	13,428	-	18,334	9,271	589	-	-	54,989	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	5,588	6,891	-	18,336	10,232	1,279	-	-	42,326	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	4,566	14,859	13,096	23,927	10,926	2,031	-	-	69,405	-	-	-	-	-	-	-	-	-	-	-
2019[b/]	-	-	71,002	97,422	37,346	53,211	6,058	801	-	-	265,840	-	-	-	-	-	-	-	-	-	-	-
Total South of Cape Falcon [a/]																						
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
2001-2005	14,823	25,883	131,834	116,052	141,118	98,440	96,569	35,145	1,347	148	658,393	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	9,911	9,941	20,399	19,551	27,361	5,111	1,691	131	94,096	-	-	-	-	-	-	-	-	-	-	-
2007	-	2,619	43,951	5,346	44,717	37,096	12,380	1,356	717	3	148,185	-	-	-	-	-	5,036	519	-	-	-	5,555
2008	-	-	-	-	-	-	64	248	208	-	520	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	105	332	-	-	437	-	-	-	-	-	-	9,278	-	-	-	9,278
2010	-	-	9,183	8,966	13,233	10,104	56	1,859	-	-	43,401	-	-	-	-	-	-	-	-	-	-	-
2011	-	4,481	20,234	14,844	32,395	21,650	2,157	1,517	1,995	-	99,273	-	-	-	-	-	-	-	-	-	-	-
2012	-	3,633	73,761	28,029	96,083	38,365	27,483	12,187	701	-	280,242	-	-	-	-	-	-	-	-	-	-	-
2013	-	7,423	86,616	91,986	106,772	65,640	39,480	9,520	1,002	-	408,439	-	-	-	-	-	-	-	-	-	-	-
2014	-	15,554	83,687	69,490	73,386	91,088	21,023	5,500	469	-	360,197	-	-	-	-	-	-	3,296	-	-	-	3,296
2015	-	16,420	67,847	40,820	40,949	19,016	12,459	5,210	1,163	-	203,884	-	-	-	-	-	-	-	-	-	-	-
2016	-	6,597	19,390	18,343	11,264	26,961	11,279	1,458	182	-	95,474	-	-	-	-	-	-	-	-	-	-	-
2017	-	553	6,817	10,065	13,019	18,336	10,369	2,289	96	-	61,544	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	6,741	21,743	19,014	40,585	11,151	2,837	431	-	102,502	-	-	-	-	-	-	-	-	-	-	-
2019[b/]	-	162	71,684	101,574	55,461	62,808	6,692	1,671	-	-	300,052	-	-	-	-	-	-	-	-	-	-	-

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month.

b/ Preliminary.

c/ The current commercial KMZ boundaries are Humbug Mt. to Humboldt south jetty.

TABLE A-22. Cape Falcon to U.S/Mexico border ocean recreational fishing effort in salmon angler trips by region and month. (Page 1 of 2)

Year or Avg.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Season
Cape Falcon to Humbug Mt.[a/]											
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
2001-2005	-	63	212	1,460	12,416	37,987	18,656	8,798	3,531	182	83,279
2006	-	24	92	803	4,918	18,334	3,817	9,995	5,368	98	43,449
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	-	-	-	863	2,960	9,116	16,794	6,334	1,048	--	37,115
2011	-	22	75	433	2,965	10,835	10,173	9,354	1,240	16	35,113
2012	-	23	380	1,622	3,778	9,872	12,531	13,720	1,705	18	43,649
2013	-	479	693	911	3,970	11,214	25,977	11,833	4,214	--	59,291
2014	-	87	136	2,235	5,251	32,802	25,863	24,388	1,421	--	92,183
2015	-	60	152	1,382	2,350	18,025	7,526	16,586	2,374	--	48,455
2016	-	82	18	1,037	2,799	6,382	4,835	14,579	612	--	30,344
2017	-	17	60	500	1,916	10,057	9,383	9,343	453	--	31,729
2018	-	54	19	657	1,122	9,566	22,219	14,596	899	--	49,132
2019[b/]	-	43	8	410	6,273	32,385	24,824	9,660	1,581	-	75,184
Humbug Mt. to Horse Mt. (KMZ)[a/]											
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
2001-2005	-	-	-	4,566	8,748	6,208	12,157	4,617	2,983	-	39,279
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	-	-	-	665	771	1,280	2,493	2,700	2,270	-	10,179
2011	-	-	-	2,244	2,974	5,059	6,554	2,621	1,757	-	21,209
2012	-	-	-	3,619	9,514	14,645	15,183	3,576	3,666	-	50,203
2013	-	-	-	3,501	10,773	15,914	15,379	822	3,547	-	49,936
2014	-	-	-	5,588	6,409	12,723	7,475	868	4,639	-	37,702
2015	-	-	-	2,946	1,679	3,974	2,927	1,328	5,040	-	17,894
2016	-	-	-	1,682	2,622	3,273	2,134	1,558	1,872	-	13,141
2017	-	-	-	-	-	-	-	-	2,012	-	2,012
2018	-	-	-	508	3,715	4,138	3,855	51	2,102	-	14,369
2019[b/]	-	-	-	496	3,507	4,611	3,308	147	-	-	12,069

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
Horse Mt. to U.S./Mexico Border											
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	1,263	15,054	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
2001-2005	371	2,645	27,879	23,256	24,370	41,406	23,848	10,068	4,148	1,148	159,140
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	-	-	16,774	6,770	2,736	8,310	7,883	1,965	-	-	44,438
2011	-	-	15,565	5,943	6,937	20,300	14,387	10,164	3,431	-	76,727
2012	-	-	21,466	18,077	21,974	28,417	14,620	7,914	3,588	569	116,625
2013	-	-	19,602	15,187	18,315	36,160	20,012	5,521	2,245	426	117,468
2014	-	-	20,226	8,522	7,675	23,892	22,999	10,443	5,193	723	99,673
2015	-	-	11,085	7,401	9,210	16,244	15,118	10,293	3,483	5	72,839
2016	-	-	8,006	8,281	4,284	16,521	13,188	8,500	2,366	0	61,146
2017	-	-	10,105	5,000	6,574	22,590	19,358	8,496	1,851	0	73,974
2018	-	-	8,140	2,021	12,296	34,271	18,472	8,984	5,072	-	89,256
2019[b/]	-	-	17,350	5,579	18,173	22,932	23,219	6,925	1,821	-	95,999
Total South of Cape Falcon[a/]											
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	1,263	15,054	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
2001-2005	371	2,683	28,091	29,281	45,533	85,601	54,662	23,483	10,662	1,330	281,698
2006	289	322	19,290	22,818	38,913	53,213	13,501	21,417	10,276	546	180,585
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	-	-	16,774	8,298	6,467	18,706	27,170	10,999	3,318	--	91,732
2011	-	22	15,640	8,620	12,876	36,194	31,114	22,139	6,428	16	133,049
2012	-	23	21,846	23,318	35,266	52,934	42,334	25,210	8,959	587	210,477
2013	-	479	20,295	19,599	33,058	63,288	61,368	18,176	10,006	426	226,695
2014	-	87	20,362	16,345	19,335	69,417	56,337	35,699	11,253	723	229,558
2015	-	60	11,237	11,729	13,239	38,243	25,571	28,207	10,897	5	139,188
2016	-	82	8,024	11,000	9,705	26,176	20,157	24,637	4,850	--	104,631
2017	-	17	10,165	5,500	8,490	32,647	28,741	17,839	4,316	--	107,715
2018	-	54	8,159	3,186	17,133	47,975	44,546	23,631	8,073	--	152,757
2019[b/]	-	43	17,358	6,485	27,953	59,928	51,351	16,732	3,402	-	183,252

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month.

b/ Preliminary.

TABLE A-23. Cape Falcon to U.S./Mexico border ocean recreational salmon landings in numbers of fish by region 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**					
Cape Falcon to Humbug Mt.[a/]																						
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
2001-2005	-	3	61	266	3,544	13,052	7,832	4,085	1,338	31	30,212	-	-	-	8	6,461	28,005	7,878	163	21	-	42,529
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	-	-	-	75	207	380	1,108	439	122	--	2,331	-	-	-	-	368	2,181	8,336	1,242	-	-	12,127
2011	-	0	7	56	161	493	623	1,056	207	6	2,609	-	-	-	-	556	3,568	2,011	6,623	-	-	12,758
2012	-	21	108	530	687	858	2,258	2,791	506	8	7,767	-	-	-	-	55	2,251	4,927	6,965	-	-	14,198
2013	-	257	196	191	1,397	1,477	11,886	1,671	792	--	17,867	-	-	-	-	9	4,748	2,650	2,658	19	-	10,084
2014	-	10	32	266	826	2,973	3,241	1,870	137	--	9,355	-	-	-	1	3,530	32,851	19,275	26,494	49	-	82,200
2015	-	30	8	151	267	401	376	2,814	1,454	--	5,501	-	-	-	-	458	11,841	2,557	4,426	22	-	19,304
2016	-	32	9	128	237	238	692	1,140	76	--	2,552	-	-	-	-	245	1,180	79	4,178	22	-	5,704
2017	-	0	6	89	139	508	807	592	39	--	2,180	-	-	-	-	363	5,772	3,940	4,590	-	-	14,665
2018	-	0	4	48	139	655	1,167	621	74	--	2,708	-	-	-	-	31	2,978	8,581	6,936	-	-	18,526
2019[b/]	-	10	3	103	530	2,430	725	682	256	-	4,739	-	-	-	-	3,805	27,301	12,366	5,070	5	-	48,547
Humbug Mt. to Horse Mt. (KMZ)[a/]																						
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
2001-2005	-	-	-	3,369	5,979	3,107	6,313	3,409	469	-	22,646	-	-	-	54	201	182	117	38	8	-	588
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	-	-	-	24	160	40	501	278	541	-	1,544	-	-	-	-	-	19	75	16	-	-	110
2011	-	-	-	814	970	4,391	4,018	497	233	-	10,923	-	-	-	5	10	62	37	12	-	-	126
2012	-	-	-	3,911	11,769	14,139	14,502	3,912	534	-	48,767	-	-	-	-	50	176	48	-	2	-	276
2013	-	-	-	2,585	12,329	16,247	11,996	459	814	-	44,430	-	-	-	-	65	360	245	-	6	-	676
2014	-	-	-	4,413	5,756	7,784	3,259	319	1,115	-	22,646	-	-	-	22	119	696	9	3	-	-	849
2015	-	-	-	930	376	1,237	1,454	85	792	-	4,874	-	-	-	-	13	122	5	4	6	-	150
2016	-	-	-	1,454	1,025	1,506	649	582	287	-	5,503	-	-	-	-	29	45	3	2	-	-	79
2017	-	-	-	-	-	-	-	-	506	-	506	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	105	1,863	1,320	1,583	31	429	-	5,331	-	-	-	-	52	23	45	-	-	-	120
2019[b/]	-	-	-	325	2,423	1,530	1,177	74	-	-	5,529	-	-	-	-	186	408	103	-	-	-	697

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**					
Horse Mt. to U.S./Mexico Border																						
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	484	11,136	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
2001-2005	196	1,767	22,222	17,031	24,567	41,719	15,500	6,749	2,248	395	132,355	-	-	3	118	179	340	66	22	-	-	713
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	-	-	5,265	2,408	630	2,568	2,823	395	-	-	14,089	-	-	8	7	68	15	19	8	-	-	125
2011	-	-	5,522	1,919	2,434	12,498	9,410	6,794	1,258	-	39,835	-	-	8	10	62	116	17	-	5	-	218
2012	-	-	18,786	11,146	17,027	23,897	6,987	4,385	2,094	160	84,482	-	-	-	3	14	14	-	3	-	-	34
2013	-	-	13,656	11,337	15,729	29,204	8,554	2,167	1,359	87	82,093	-	-	-	-	34	86	4	-	-	-	124
2014	-	-	13,924	3,912	2,699	15,235	13,642	6,403	3,073	125	59,013	-	-	-	4	30	163	-	-	-	-	197
2015	-	-	3,024	1,893	3,154	8,510	7,435	8,197	1,577	0	33,790	-	-	-	5	4	15	5	-	-	-	29
2016	-	-	2,030	4,239	1,522	11,549	7,101	5,933	638	0	33,012	-	-	-	-	-	35	8	-	-	-	43
2017	-	-	4,298	2,305	5,433	26,241	18,809	4,260	851	0	62,197	-	-	-	3	-	418	44	-	-	-	465
2018	-	-	3,935	476	13,058	41,588	13,563	6,784	4,172	-	83,576	-	-	-	-	5	76	4	8	-	-	93
2019[b/]	-	-	16,780	3,163	18,565	20,895	19,965	3,671	468	-	83,507	-	-	-	2	115	52	353	14	5	-	541
Total South of Cape Falcon [a/]																						
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	484	11,136	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
2001-2005	157	1,769	22,283	20,665	34,090	57,878	29,645	14,243	4,055	427	185,213	-	-	3	176	6,841	28,528	8,062	202	25	-	43,830
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	-	-	5,265	2,507	997	2,988	4,432	1,112	663	--	17,964	-	-	8	7	436	2,215	8,430	1,266	-	-	12,362
2011	-	0	5,529	2,789	3,565	17,382	14,051	8,347	1,698	6	53,367	-	-	8	15	628	3,746	2,065	6,635	5	-	13,102
2012	-	21	18,894	15,587	29,483	38,894	23,747	11,088	3,134	168	141,016	-	-	-	3	119	2,441	4,975	6,968	2	-	14,508
2013	-	257	13,852	14,113	29,455	46,928	32,436	4,297	2,965	87	144,390	-	-	-	-	108	5,194	2,899	2,658	25	-	10,884
2014	-	10	13,956	8,591	9,281	25,992	20,142	8,592	4,325	125	91,014	-	-	-	27	3,679	33,710	19,284	26,497	49	-	83,246
2015	-	30	3,032	2,974	3,797	10,148	9,265	11,096	3,823	0	44,165	-	-	-	5	475	11,978	2,567	4,430	28	-	19,483
2016	-	32	2,039	5,821	2,784	13,293	8,442	7,655	1,001	0	41,067	-	-	-	-	274	1,260	90	4,180	22	-	5,826
2017	-	0	4,304	2,394	5,572	26,749	19,616	4,852	1,396	0	64,883	-	-	-	3	363	6,190	3,984	4,590	-	-	15,130
2018	-	0	3,939	629	15,060	43,563	16,313	7,436	4,675	0	91,615	-	-	-	-	88	3,077	8,630	6,944	-	-	18,739
2019[b/]	-	10	16,783	3,591	21,518	24,855	21,867	4,427	724	0	93,775	-	-	-	2	4,106	27,761	12,822	5,084	10	-	49,785

a/ Monthly totals for Oregon data are the sum of statistical weeks with closest fit to the calendar month.

b/ Preliminary.

TABLE A-24. U.S./Canada border to Cape Falcon commercial troll salmon fishing effort in days fished by area and month.[a/]
(Page 1 of 3)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season
U.S./Canada Border to Leadbetter Pt. - Non-Indian							
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
2001-2005	402	141	357	294	80	-	1,242
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	511	858	501	428	46	-	2,344
2011	606	656	448	208	54	-	1,972
2012	364	633	452	306	198	-	1,953
2013	721	498	471	405	83	-	2,178
2014	589	188	397	337	117	-	1,628
2015	818	484	491	450	127	-	2,370
2016	647	359	248	186	-	-	1,440
2017	762	606	380	411	121	-	2,280
2018	741	674	422	189	69	-	2,095
2019[b/]	361	335	661	191	113	-	1,661
U.S./Canada Border to Leadbetter Pt. - Treaty Indian[c/]							
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
2001-2005	47	66	100	116	69	-	397
2006	96	285	167	140	117	5	805
2007	22	205	189	167	7	0	590
2008	30	125	102	231	92	1	580
2009	82	238	233	269	5	4	827
2010	155	335	155	150	62	4	857
2011	92	192	152	140	24	1	600
2012	144	269	214	229	104	4	960
2013	279	206	369	583	159	0	1,596
2014	196	295	465	419	152	0	1,527
2015	324	380	389	261	104	0	1,458
2016	204	233	141	90	2	0	670
2017	27	90	317	357	172	0	963
2018	99	255	272	145	110	0	881
2019[b/]	65	72	365	276	120	0	898
U.S./Canada Border to Leadbetter Pt. - Total[c/]							
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
2001-2005	449	207	457	411	117	-	1,639
2006	455	666	266	436	286	5	2,109
2007	467	458	543	281	15	0	1,764
2008	276	478	325	444	152	1	1,675
2009	549	789	665	589	139	4	2,731
2010	666	1,193	656	578	108	4	3,201
2011	698	848	600	348	78	1	2,572
2012	508	902	666	535	302	4	2,913
2013	1,000	704	840	988	242	0	3,774
2014	785	483	862	756	269	0	3,155
2015	1,142	864	880	711	231	0	3,828
2016	851	592	389	276	2	0	2,110
2017	789	696	697	768	293	0	3,243
2018	840	929	694	334	179	0	2,976
2019[b/]	426	407	1,026	467	233	0	2,559

TABLE A-24. U.S./Canada border to Cape Falcon commercial troll salmon fishing effort in days fished by area and month.[a/]
(Page 2 of 3)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season
Leadbetter Pt. to Cape Falcon - Non-Indian							
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
2001-2005	93	33	114	181	86	-	472
2006	587	350	1	81	99	-	1,118
2007	99	73	50	184	24	-	430
2008	306	362	36	66	13	-	783
2009	79	98	259	178	13	-	627
2010	91	310	164	136	23	-	724
2011	127	167	42	27	18	-	381
2012	63	299	51	27	83	-	523
2013	111	170	47	56	33	-	417
2014	705	128	203	100	74	-	1,210
2015	708	114	59	87	125	-	1,093
2016	149	130	51	83	-	-	413
2017	98	116	26	119	76	-	435
2018	29	67	18	36	2	-	152
2019[b/]	51	26	114	55	24	-	270
U.S./Canada Border to Cape Falcon - Non-Indian Total							
1981-1985	3,669	305	5,497	3,294	149	1	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
2001-2005	495	173	470	475	166	-	1,713
2006	946	731	100	377	268	-	2,422
2007	544	326	404	298	32	-	1,604
2008	552	715	259	279	73	-	1,878
2009	546	649	691	498	147	-	2,531
2010	602	1,168	665	564	69	-	3,068
2011	733	823	490	235	72	-	2,353
2012	427	932	503	333	281	-	2,476
2013	832	668	518	461	116	-	2,595
2014	1,294	316	600	437	191	-	2,838
2015	1,526	598	550	537	252	-	3,463
2016	796	489	299	269	-	-	1,853
2017	860	722	406	530	197	-	2,715
2018	770	741	440	225	71	-	2,247
2019[b/]	412	361	775	246	137	-	1,931
U.S./Canada Border to Cape Falcon - Treaty Indian Total[c/]							
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
2001-2005	47	66	100	116	69	-	397
2006	96	285	167	140	117	5	805
2007	22	205	189	167	7	0	590
2008	30	125	102	231	92	1	580
2009	82	238	233	269	5	4	827
2010	155	335	155	150	62	4	857
2011	92	192	152	140	24	1	600
2012	144	269	214	229	104	4	960
2013	279	206	369	583	159	0	1,596
2014	196	295	465	419	152	0	1,527
2015	324	380	389	261	104	0	1,458
2016	204	233	141	90	2	0	670
2017	27	90	317	357	172	0	963
2018	99	255	272	145	110	0	881
2019[b/]	65	72	365	276	120	0	898

TABLE A-24. U.S./Canada border to Cape Falcon commercial troll salmon fishing effort in days fished by area and month. [a/]
(Page 3 of 3)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season
U.S./Canada Border to Cape Falcon - Total Treaty Indian and Non-Indian [c/]							
1981-1985	3,748	446	5,781	3,607	295	17	13,878
1986-1990	2,736	884	702	1,907	504	6	6,737
1991-1995	1,108	735	537	1,014	292	10	3,686
1996-2000	210	139	74	232	61	-	716
2001-2005	541	239	570	592	168	10	2,111
2006	1,042	1,016	267	517	385	5	3,227
2007	566	531	593	465	39	0	2,194
2008	582	840	361	510	165	1	2,458
2009	628	887	924	767	152	4	3,358
2010	757	1,503	820	714	131	4	3,925
2011	825	1,015	642	375	96	1	2,953
2012	571	1,201	717	562	385	4	3,436
2013	1,111	874	887	1,044	275	0	4,191
2014	1,490	611	1,065	856	343	0	4,365
2015	1,850	978	939	798	356	0	4,921
2016	1,000	722	440	359	2	0	2,523
2017	887	812	723	887	369	0	3,678
2018	869	996	712	370	181	0	3,128
2019[b/]	477	433	1,140	522	257	0	2,829

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.[a/] (Page 1 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 Leadbetter Pt. - Non-Indian														
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
2001-2005	15,314	6,072	9,697	7,328	1,057	-	39,045	-	-	1,864	2,234	2,906	-	5,468
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	8,219	22,332	6,113	7,267	282	-	44,213	-	-	1,085	744	124	-	1,953
2011	7,682	9,315	6,015	2,520	338	-	25,870	-	-	1,630	892	493	-	3,015
2012	10,366	10,371	5,312	6,398	2,158	-	34,605	-	-	746	1,116	1,317	-	3,179
2013	10,487	11,848	7,816	8,689	690	-	39,530	-	-	1,892	3,764	258	-	5,914
2014	12,788	2,557	8,098	5,664	620	-	29,727	-	-	2,907	6,050	4,211	-	13,168
2015	12,922	14,408	12,610	9,831	1,517	-	51,288	-	-	687	998	497	-	2,182
2016	6,434	3,964	3,325	1,962	-	-	15,685	-	-	-	-	-	-	-
2017	13,356	7,246	5,706	5,285	766	-	32,359	-	-	217	719	301	-	1,237
2018	6,653	8,942	5,438	1,683	709	-	23,425	-	-	415	456	388	-	1,259
2019[b/]	3,762	3,018	11,394	2,641	1,732	-	22,547	-	-	1,477	1,060	1,201	-	3,738
U.S./Canada Border to Leadbetter Pt. - Treaty Indian[c/]														
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
2001-2005	5,461	14,660	9,462	6,271	3,260	23	39,114	2	3	7,259	17,964	9,381	66	34,611
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	358	8,864	2,099	6,007	3,579	1	20,907	0	18	865	3,561	9,820	0	14,264
2009	1,491	5,828	2,329	2,566	12	25	12,226	0	0	25,422	35,141	100	15	60,663
2010	1,926	12,150	6,943	9,693	1,664	10	32,376	2	63	2,015	5,058	4,323	15	11,461
2011	1,120	8,817	14,761	6,708	418	0	31,824	0	0	2,062	4,791	6,711	0	13,564
2012	4,465	20,696	10,144	14,650	4,834	10	54,789	1	101	2,769	18,790	15,869	0	37,530
2013	11,929	19,103	9,310	7,916	2,902	0	51,160	0	7	7,722	36,163	4,376	0	48,268
2014	12,608	17,002	20,643	8,793	2,715	0	61,761	0	30	10,405	39,231	6,369	0	56,035
2015	7,315	23,697	23,110	4,031	786	0	58,939	0	3	1,994	1,307	706	0	4,010
2016	2,905	13,752	5,129	1,310	5	0	23,101	0	0	29	15	0	1	44
2017	1,253	2,039	15,772	4,605	745	0	24,414	0	0	1,003	7,150	5,197	0	13,350
2018	1,319	11,756	8,486	1,883	459	0	23,903	0	15	1,751	5,512	4,524	0	11,802
2019[b/]	809	2,110	12,314	2,789	299	0	18,321	0	0	14,414	33,818	7,273	0	55,505

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.[a/] (Page 2 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 Leadbetter Pt. - Total[c/]														
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
2001-2005	20,775	20,732	19,159	13,599	3,895	23	78,159	2	3	8,751	20,198	11,125	66	40,079
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	1,809	12,214	3,272	7,168	3,838	1	28,301	0	18	1,216	4,478	10,181	0	15,893
2009	7,036	9,923	3,944	3,246	132	25	24,281	0	0	30,279	44,422	3,763	15	78,464
2010	10,145	34,482	13,056	16,960	1,946	10	76,589	2	63	3,100	5,802	4,447	15	13,414
2011	8,802	18,132	20,776	9,228	756	0	57,694	0	0	3,692	5,683	7,204	0	16,579
2012	14,831	31,067	15,456	21,048	6,992	10	89,394	1	101	3,515	19,906	17,186	0	40,709
2013	22,416	30,951	17,126	16,605	3,592	0	90,690	0	7	9,614	39,927	4,634	0	54,182
2014	25,396	19,559	28,741	14,457	3,335	0	91,488	0	30	13,312	45,281	10,580	0	69,203
2015	20,237	38,105	35,720	13,862	2,303	0	110,227	0	3	2,681	2,305	1,203	0	6,192
2016	9,339	17,716	8,454	3,272	5	0	38,786	0	0	29	15	0	1	44
2017	14,609	9,285	21,478	9,890	1,511	0	56,773	0	0	1,220	7,869	5,498	0	14,587
2018	7,972	20,698	13,924	3,566	1,168	0	47,328	0	15	2,166	5,968	4,912	0	13,061
2019[b/]	4,571	5,128	23,708	5,430	2,031	0	40,868	0	0	15,891	34,878	8,474	0	59,243
Leadbetter Pt. to Cape Falcon - Non-Indian														
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
2001-2005	3,031	1,512	1,802	2,684	599	-	9,388	-	-	1,802	2,877	3,932	-	6,678
2006	8,913	3,532	1	62	105	-	12,613	-	-	17	944	527	-	1,488
2007	950	600	158	213	22	-	1,943	-	-	1,400	12,736	283	-	14,419
2008	2,977	3,355	136	185	23	-	6,676	-	-	53	421	37	-	511
2009	265	281	260	163	4	-	973	-	-	9,648	5,125	165	-	14,938
2010	790	6,882	2,289	1,894	151	-	12,006	-	-	736	406	49	-	1,191
2011	1,529	1,943	115	251	30	-	3,868	-	-	235	172	95	-	502
2012	1,297	7,053	276	149	1,919	-	10,694	-	-	61	37	615	-	713
2013	534	1,062	178	298	433	-	2,505	-	-	67	375	137	-	579
2014	20,242	1,278	2,880	472	290	-	25,162	-	-	2,962	2,392	4,587	-	9,941
2015	9,487	2,177	1,389	1,037	817	-	14,907	-	-	369	582	1,952	-	2,903
2016	1,175	1,089	428	1,025	-	-	3,717	-	-	-	-	-	-	-
2017	1,228	874	124	632	343	-	3,201	-	-	30	355	216	-	601
2018	36	337	30	57	4	-	464	-	-	40	85	-	-	125
2019[b/]	156	62	420	121	28	-	787	-	-	1,187	400	81	-	1,668

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.[a/] (Page 3 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 - Non-Indian														
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
2001-2005	18,345	7,584	11,499	10,012	1,656	-	48,433	-	-	3,666	5,111	6,838	-	12,146
2006	13,648	7,080	1,074	3,520	1,936	-	27,258	-	-	139	1,760	780	-	2,679
2007	6,643	4,468	3,617	934	49	-	15,711	-	-	3,344	13,779	317	-	17,440
2008	4,428	6,705	1,309	1,346	282	-	14,070	-	-	404	1,338	398	-	2,140
2009	5,810	4,376	1,875	843	124	-	13,028	-	-	14,505	14,406	3,828	-	32,739
2010	9,009	29,214	8,402	9,161	433	-	56,219	-	-	1,821	1,150	173	-	3,144
2011	9,211	11,258	6,130	2,771	368	-	29,738	-	-	1,865	1,064	588	-	3,517
2012	11,663	17,424	5,588	6,547	4,077	-	45,299	-	-	807	1,153	1,932	-	3,892
2013	11,021	12,910	7,994	8,987	1,123	-	42,035	-	-	1,959	4,139	395	-	6,493
2014	33,030	3,835	10,978	6,136	910	-	54,889	-	-	5,869	8,442	8,798	-	23,109
2015	22,409	16,585	13,999	10,868	2,334	-	66,195	-	-	1,056	1,580	2,449	-	5,085
2016	7,609	5,053	3,753	2,987	-	-	19,402	-	-	-	-	-	-	-
2017	14,584	8,120	5,830	5,917	1,109	-	35,560	-	-	247	1,074	517	-	1,838
2018	6,689	9,279	5,468	1,740	713	-	23,889	-	-	455	541	388	-	1,384
2019[b/]	3,918	3,080	11,814	2,762	1,760	-	23,334	-	-	2,664	1,460	1,282	-	5,406
U.S./Canada Border to Cape Falcon - Treaty Indian[c/]														
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
2001-2005	5,461	14,660	9,462	6,271	3,260	-	39,114	2	3	7,259	17,964	9,381	-	34,611
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	358	8,864	2,099	6,007	3,579	1	20,907	0	18	865	3,561	9,820	0	14,264
2009	1,491	5,828	2,329	2,566	12	25	12,226	0	0	25,422	35,141	100	15	60,663
2010	1,926	12,150	6,943	9,693	1,664	10	32,376	2	63	2,015	5,058	4,323	15	11,461
2011	1,120	8,817	14,761	6,708	418	0	31,824	0	0	2,062	4,791	6,711	0	13,564
2012	4,465	20,696	10,144	14,650	4,834	10	54,789	1	101	2,769	18,790	15,869	0	37,530
2013	11,929	19,103	9,310	7,916	2,902	0	51,160	0	7	7,722	36,163	4,376	0	48,268
2014	12,608	17,002	20,643	8,793	2,715	0	61,761	0	30	10,405	39,231	6,369	0	56,035
2015	7,315	23,697	23,110	4,031	786	0	58,939	0	3	1,994	1,307	706	0	4,010
2016	2,905	13,752	5,129	1,310	5	0	23,101	0	0	29	15	0	1	44
2017	1,253	2,039	15,772	4,605	745	0	24,414	0	0	1,003	7,150	5,197	0	13,350
2018	1,319	11,756	8,486	1,883	459	0	23,903	0	15	1,751	5,512	4,524	0	11,802
2019[b/]	809	2,110	12,314	2,789	299	0	18,321	0	0	14,414	33,818	7,273	0	55,505

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.[a/] (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[c/]														
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
2001-2005	23,805	22,244	20,961	16,283	4,254	-	87,547	2	3	10,192	23,075	13,484	-	46,757
2006	16,469	15,421	8,810	10,210	6,893	15	57,803	16	102	10,614	12,394	11,491	5	34,617
2007	6,959	19,097	6,966	5,513	119	0	38,654	0	12	26,087	30,202	1,177	0	57,478
2008	4,786	15,569	3,408	7,353	3,861	1	34,977	0	18	1,269	4,899	10,218	0	16,404
2009	7,301	10,204	4,204	3,409	136	25	25,254	0	0	39,927	49,547	3,928	15	93,402
2010	10,935	41,364	15,345	18,854	2,097	10	88,595	2	63	3,836	6,208	4,496	15	14,605
2011	10,331	20,075	20,891	9,479	786	0	61,562	0	0	3,927	5,855	7,299	0	17,081
2012	16,128	38,120	15,732	21,197	8,911	10	100,088	1	101	3,576	19,943	17,801	0	41,422
2013	22,950	32,013	17,304	16,903	4,025	0	93,195	0	7	9,681	40,302	4,771	0	54,761
2014	45,638	20,837	31,621	14,929	3,625	0	116,650	0	30	16,274	47,673	15,167	0	79,144
2015	29,724	40,282	37,109	14,899	3,120	0	125,134	0	3	3,050	2,887	3,155	0	9,095
2016	10,514	18,805	8,882	4,297	5	0	42,503	0	0	29	15	0	1	44
2017	15,837	10,159	21,602	10,522	1,854	0	59,974	0	0	1,250	8,224	5,714	0	15,188
2018	8,008	21,035	13,954	3,623	1,172	0	47,792	0	15	2,206	6,053	4,912	0	13,186
2019[b/]	4,727	5,190	24,128	5,551	2,059	0	41,655	0	0	17,078	35,278	8,555	0	60,911

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).[a/] (Page 1 of 2)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season
U.S./Canada Border to Leadbetter Pt. - Non-Indian							
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
1997-2001	1	4	26	11	0	-	29
2003	0	0	142	63	10	-	215
2005	4	0	2	2	-	-	8
2007	8	19	119	1	0	-	147
2009	1	14	82	37	1	-	135
2011	0	0	3	118	93	-	215
2013	0	2	0	101	37	-	141
2015	0	1	20	47	0	-	68
2017	0	0	0	0	0	-	0
2019[c/]	0	0	280	29	0	-	309
U.S./Canada Border to Cape Falcon - Treaty Indian[b/]							
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
1997-2001	4	0	232	1,561	123	0	1,919
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	0	0	431	369	0	0	800
2011	0	6	718	334	16	0	1,074
2013	0	0	89	120	0	0	209
2015	0	6	98	18	0	0	122
2017	0	0	61	134	0	0	195
2019[c/]	0	0	243	270	0	0	513
U.S./Canada Border to Cape Falcon - Total[b/]							
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
1997-2001	5	4	249	1,568	123	0	1,948
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	1	14	513	406	1	0	935
2011	0	6	721	452	109	1	1,289
2013	0	2	89	221	37	1	350
2015	0	7	118	65	0	0	190
2017	0	0	61	134	0	0	195
2019[c/]	0	0	523	299	0	0	822
Leadbetter Pt. to Cape Falcon - Non-Indian							
1981-1985	5	4	842	2,327	0	0	3,178
1986-1990	0	0	109	1	1	-	111
1991-1995	0	0	0	55	0	-	55
1997-2001	65	17	17	17	0	-	115
2003	0	2	43	16	0	-	61
2005	0	0	1	1	1	-	3
2007	65	0	4	11	0	-	80
2009	0	0	2	8	8	-	18
2011	0	36	5	8	0	-	49
2013	0	0	0	0	0	-	0
2015	0	0	0	0	0	-	0
2017	0	0	0	0	0	-	0
2019[c/]	0	0	0	2	0	-	2

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).[a/] (Page 2 of 2)

Year or Avg.	May	June	July	Aug.	Sept.	Oct.	Season
U.S./Canada Border to Cape Falcon - Non-Indian							
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
1997-2001	66	21	34	24	0	-	145
2003	0	2	185	79	10	-	276
2005	4	0	3	3	1	-	11
2007	73	19	123	12	0	-	227
2009	1	14	84	45	9	-	153
2011	0	36	8	126	93	1	264
2013	0	2	0	101	37	1	141
2015	0	1	20	47	0	0	68
2017	0	0	0	0	0	0	0
2019[c/]	0	0	280	31	0	0	311
U.S./Canada Border to Cape Falcon - Treaty Indian[b/]							
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
1997-2001	4	0	232	1,561	123	0	1,919
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	0	0	431	369	0	0	800
2011	0	6	718	334	16	0	1,074
2013	0	0	89	120	0	0	209
2015	0	6	98	18	0	0	122
2017	0	0	244	271	0	0	515
2019[c/]	0	0	243	270	0	0	513
U.S./Canada Border to Cape Falcon - Total[b/]							
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
1997-2001	70	21	266	1,585	123	0	2,064
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	1	14	515	414	9	0	953
2011	0	42	726	460	109	1	1,338
2013	0	2	89	221	37	1	350
2015	0	7	118	65	0	0	190
2017	0	0	244	271	0	0	515
2019[c/]	0	0	523	301	0	0	824

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/ Season totals do not include October treaty troll catches.
c/ Preliminary.

TABLE A-27. U.S./Canada border to Cape Falcon ocean recreational fishing effort in salmon angler trips by area and month.[a/]

Year or Avg.	Apr.	May	June	July	Aug.	Sept.	Oct.	Season[b/]
U.S./Canada Border to Leadbetter Pt.[c/]								
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
2001-2005	-	2,496	5,660	29,924	24,054	6,828	132	65,964
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	-	-	9,451	18,380	19,546	6,282	154	53,813
2011	-	-	5,537	17,334	21,178	4,787	16	48,852
2012	-	-	9,627	17,413	19,168	8,128	353	54,689
2013	-	951	8,973	16,010	23,946	5,400	237	55,518
2014	-	1,643	10,331	28,529	24,393	10,089	365	75,349
2015	-	1,441	8,974	28,779	15,566	8,666	300	63,725
2016	-	-	-	17,792	9,391	-	-	27,183
2017	-	-	468	21,556	15,822	842	-	38,688
2018	-	-	1,249	14,408	17,017	410	-	33,084
2019[d/]	-	-	4,254	15,503	13,279	2,482	240	35,758
Leadbetter Pt. to Cape Falcon								
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
2001-2005	-	370	1,040	17,361	33,383	9,814	6	61,257
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	-	-	863	9,376	24,345	2,811	-	37,395
2011	-	-	1,133	6,760	19,772	4,463	-	32,127
2012	-	-	2,645	7,419	12,108	5,635	-	27,808
2013	-	-	4,436	6,162	16,293	3,740	-	30,632
2014	-	78	3,283	14,885	28,896	9,382	-	56,523
2015	-	269	3,046	11,243	18,589	8,872	-	42,018
2016	-	-	-	9,586	18,999	-	-	28,586
2017	-	-	975	11,229	19,128	-	-	31,333
2018	-	-	1,575	6,937	13,311	761	-	22,583
2019[d/]	-	-	3,730	15,642	23,532	1,700	-	44,604
U.S./Canada Border to Cape Falcon[c/]								
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	-	2,866	6,440	47,285	57,436	16,642	133	127,222
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	-	-	10,314	27,757	43,892	9,092	154	91,209
2011	-	-	6,670	24,094	40,950	9,249	16	80,979
2012	-	-	12,272	24,832	31,276	13,763	353	82,497
2013	-	951	13,409	22,173	40,240	9,140	237	86,150
2014	-	1,720	13,614	43,413	53,289	19,471	365	131,872
2015	-	1,710	12,019	40,022	34,155	17,537	300	105,743
2016	-	-	-	27,378	28,390	-	-	55,769
2017	-	-	1,444	32,785	34,950	842	-	70,021
2018	-	-	2,824	21,345	30,327	1,171	-	55,667
2019[d/]	-	-	7,985	31,145	36,811	4,181	240	80,362

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.[a/] (Page 1 of 2)

Year or Avg.	April	May	June	July	Aug.	Sept.	Oct.	Season[b/]	April	May	June	July	Aug.	Sept.	Oct.	Season
				CHINOOK								**COHO**				
U.S./Canada Border to Leadbetter Pt.[c/]																
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	12,706	5,373	1,161	-	20,256	-	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
2001-2005	-	-	-	13,147	8,805	2,033	51	28,307	-	-	-	22,401	22,887	6,994	10	53,416
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	-	-	4,893	11,814	12,753	1,960	45	31,465	-	-	46	5,817	6,275	5,297	37	17,473
2011	-	-	2,509	7,462	13,071	559	5	23,607	-	-	331	6,989	8,694	2,931	2	18,947
2012	-	-	8,472	8,020	8,325	1,366	133	26,315	-	-	211	7,240	7,521	6,722	21	21,715
2013	-	131	2,927	7,363	10,450	1,300	119	22,289	-	-	693	6,619	17,182	5,169	18	29,681
2014	-	585	5,110	12,890	11,155	1,133	110	30,984	-	-	6,225	20,342	22,382	15,578	199	64,725
2015	-	534	5,081	15,662	5,672	2,903	164	30,017	-	-	2,608	15,085	8,787	12,533	13	39,027
2016	-	-	-	7,431	4,520	-	-	11,951	-	-	-	63	38	-	-	101
2017	-	-	250	10,590	3,442	91	-	14,374	-	-	58	8,590	11,454	930	-	21,032
2018	-	-	378	4,908	3,025	34	-	8,344	-	-	574	4,902	15,530	257	-	21,262
2019[d/]	-	-	1,610	3,764	1,148	154	164	6,841	-	-	1,097	11,558	13,789	1,714	16	28,174
Leadbetter Pt. to Cape Falcon																
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
2001-2005	-	-	-	2,588	5,500	1,068	3	9,648	-	-	663	25,195	43,314	10,042	-	78,949
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	-	-	143	1,873	4,909	295	-	7,221	-	-	13	7,909	16,129	863	-	24,913
2011	-	-	481	955	5,371	408	-	7,215	-	-	467	6,085	16,810	3,319	-	26,680
2012	-	-	2,371	2,850	3,122	775	-	9,118	-	-	282	3,672	5,161	2,276	-	11,391
2013	-	-	2,031	1,679	4,076	760	-	8,547	-	-	3,430	4,998	10,305	1,739	-	20,472
2014	-	65	1,067	3,198	6,421	596	-	11,347	-	-	2,614	19,863	38,532	14,063	-	75,072
2015	-	89	1,216	1,853	5,866	3,146	-	12,171	-	-	3,339	16,089	18,628	6,494	-	44,551
2016	-	-	-	2,741	3,255	-	-	5,997	-	-	-	5,607	13,005	-	-	18,612
2017	-	-	649	2,758	4,164	-	-	7,571	-	-	43	7,973	13,609	-	-	21,625
2018	-	-	575	657	1,001	25	-	2,258	-	-	294	6,072	14,102	107	-	20,575
2019[d/]	-	-	341	2,201	1,373	122	-	4,038	-	-	5,359	20,934	25,540	1,642	-	53,475

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.[a/] (Page 2 of 2)

Year or Avg.	April	May	June	July	Aug.	Sept.	Oct.	Season[b/]	April	May	June	July	Aug.	Sept.	Oct.	Season
					CHINOOK								**COHO**			
U.S./Canada Border to Cape Falcon[c/]																
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	15,453	9,841	1,241	-	27,836	-	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
2001-2005	-	2,640	5,295	15,735	14,305	3,100	51	37,955	-	5	1,900	47,596	66,201	17,036	10	132,365
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	-	-	5,037	13,687	17,662	2,255	45	38,686	-	-	59	13,726	22,403	6,160	37	42,386
2011	-	-	2,990	8,418	18,442	968	5	30,822	-	-	798	13,074	25,504	6,249	2	45,628
2012	-	-	10,843	10,870	11,447	2,141	133	35,433	-	-	493	10,912	12,682	8,998	21	33,106
2013	-	131	4,957	9,042	14,526	2,061	119	30,836	-	-	4,123	11,617	27,488	6,908	18	50,153
2014	-	650	6,177	16,088	17,576	1,729	110	42,331	-	-	8,839	40,205	60,914	29,640	199	139,797
2015	-	623	6,298	17,515	11,539	6,049	164	42,188	-	-	5,947	31,174	27,416	19,027	13	83,577
2016	-	-	-	10,172	7,775	-	-	17,947	-	-	-	5,670	13,043	-	-	18,713
2017	-	-	899	13,348	7,607	91	-	21,945	-	-	101	16,563	25,063	930	-	42,657
2018	-	-	953	5,564	4,026	60	-	10,602	-	-	868	10,974	29,632	364	-	41,838
2019[d/]	-	-	1,951	5,965	2,522	276	164	10,878	-	-	6,455	32,492	39,329	3,356	16	81,649

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 in 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.

APPENDIX B
HISTORICAL RECORD OF ESCAPEMENTS TO INLAND FISHERIES AND SPAWNING AREAS

LIST OF TABLES

TABLE B-1. Sacramento River fall Chinook salmon escapement in numbers of fish.[a/b/]

Year or Average	Upper Sacramento Natural Areas[c/d/e/]		Lower Sacramento Natural Areas[c/]						Natural Area Totals[c/]		Sacramento Hatcheries									
			Feather River		Yuba River		American River[f/]				Coleman		Feather River		Nimbus		Hatchery Totals		Sacramento Totals	
	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults[g/]	Jacks	Adults	Jacks
1981-1985	57,913	22,432	36,252	5,243	12,825	5,146	32,803	5,142	139,793	37,963	11,557	3,734	6,845	884	10,072	2,257	29,832	7,689	169,625	45,651
1986-1990	87,396	17,244	38,709	6,426	9,261	2,444	25,663	3,917	161,029	30,031	11,507	2,288	5,837	1,947	5,685	1,349	23,028	5,584	184,057	35,616
1991-1995	60,151	11,496	32,578	4,355	8,309	2,131	29,804	4,367	130,842	22,350	11,948	2,295	10,537	2,762	6,414	1,447	28,899	6,505	159,741	28,855
1996-2000	153,777	8,383	54,225 [h/]	6,806	20,233	4,600	62,613	10,061	290,848	29,851	29,965	3,001	13,342	1,497	7,795	1,407	51,102	5,905	341,949	35,756
2001	179,198	11,853	169,588	9,114	21,567	1,825	169,023	16,144	539,376	38,936	23,710	988	24,001	871	9,688	1,956	57,399	3,815	596,775	42,751
2002	474,812 [i/]	11,259	93,766	11,397	18,406	4,796	97,242	15,195	684,226	42,647	61,895	4,029	17,516	2,991	6,231	3,586	85,642	10,606	769,868	53,253
2003	164,802	4,402	85,578	4,369	26,820	1,489	137,444	13,647	414,644	23,907	82,882	5,352	13,615	1,352	11,875	3,012	108,372	9,716	523,016	33,623
2004	70,548	7,220	48,580	5,591	9,260	5,208	77,842	21,505	206,230	39,524	52,145	17,027	15,769	5,535	12,741	13,659	80,655	36,221	286,885	75,745
2005	96,716	3,267	43,738	4,848	16,251	987	58,155	4,499	214,860	13,601	139,979	2,694	20,597	1,787	20,569	1,780	181,145	6,261	396,005	19,862
2006	89,933	2,874	75,545	1,869	7,891	230	23,120	1,420	196,489	6,393	56,819	1,013	13,400	634	8,322	406	78,541	2,053	275,030	8,446
2007	36,079	978	21,541	321	2,523	81	9,929	144	70,072	1,524	11,543	201	5,169	172	4,590	7	21,302	380	91,374	1,904
2008	36,274	2,074	5,703	236	3,084	424	2,255	259	47,316	2,993	10,181	458	5,031	323	2,836	348	18,048	1,129	65,364	4,122
2009	12,277	1,624	3,950	897	3,992	803	4,729	1,047	24,948	4,371	5,433	719	6,240	3,723	4,252	654	15,925	5,096	40,873	9,467
2010	25,688	6,872	40,981	3,933	12,074	1,023	12,383	2,305	91,126	14,133	8,666	8,572	17,215	2,757	7,269	1,826	33,150	13,155	124,276	27,288
2011	20,466	15,096	35,656	11,633	6,917	2,204	14,815	10,422	77,854	39,355	19,312	23,068	15,925	16,691	6,251	6,429	41,488	46,188	119,342	85,543
2012	67,190	7,125	57,507	6,142	6,009	1,722	35,527	3,296	166,233	18,285	77,318	8,198	33,628	8,533	8,250	1,007	119,196	17,738	285,429	36,023
2013	90,119	6,253	145,650	5,559	13,830	1,050	56,036	2,192	305,635	15,054	67,758	2,103	25,152	2,470	8,301	775	101,211	5,348	406,846	20,402
2014	80,407	7,193	55,480	5,241	9,885	1,819	22,895	3,580	168,667	17,833	17,937	903	18,824	4,596	7,048	1,295	43,809	6,794	212,476	24,627
2015	40,696	3,342	18,069	2,497	3,844	2,789	11,895	3,844	74,504	12,472	13,861	1,863	17,700	3,116	7,403	2,419	38,964	7,398	113,468	19,870
2016	10,563	803	34,054	4,727	2,143	1,422	9,537	4,936	56,297	11,888	8,306	225	17,594	2,962	7,502	1,922	33,402	5,109	89,699	16,997
2017	1,526	4,015	8,120	2,414	1,207	441	6,998	2,665	17,851	9,535	1,316	5,080	16,598	8,448	7,701 [k/]	1,661 [k/]	25,615	15,189	43,466	24,724
2018	18,317	11,998	39,210	6,616	2,140	933	12,022	9,070	71,689	28,617	8,272	5,920	21,084	7,272	4,486	1,726	33,842	14,918	105,531	43,535
2019[j/]	53,608	5,194	43,427	8,631	2,584	716	20,775	4,873	120,394	19,414	13,065	1,204	19,731	7,372	9,342	1,954	42,138	10,530	162,532	29,944
GOALS	-	-	-	-	-	-	-	-	-	-	12,000[l/]	-	6,000[l/]	-	4,000[l/]	-	22,000[l/]	-	122,000[m/]	-

a/ In 2004, CDFW reviewed and updated 1971-2003 escapement estimates to reflect final project reports.

b/ Chinook spawning during the fall; may include spring run fish in some survey areas.

c/ Most natural area estimates based on carcass surveys with a jack length cut-off.

d/ 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.

e/ 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.

f/ American River adult and jack ecapement estimates include fish taken at Nimbus Weir, 1979-current. In previous versions of this table, fish taken at Nimbus Weir were included in the Nimbus Fish Hatchery counts.

g/ Total adults in Sacramento hatcheries include Tehama-Colusa Fish Facility escapements, 1971-1985.

h/ Survey methodology was variable for 1998-99; may not be comparable to other surveys.

i/ Change in estimation methodology due to extremely high Battle Creek escapement.

j/ Preliminary.

k/ Nimbus Fish Hatchery opened three weeks early to collect anticipated stray Chinook originating from Coleman National Fish Hatchery. During this time, 2,886 fish were collected.

l/ Current hatchery-specific goals, not PFMC goals.

m/ Sacramento River fall Chinook S_{MSY}.

TABLE B-2. San Joaquin River fall Chinook salmon escapement in numbers of fish.[a/]

Year or Average	San Joaquin Natural Areas[b/]												San Joaquin Hatcheries						San Joaquin Totals	
	Mokelumne River		Stanislaus River		Tuolumne River		Merced River		Other Tributaries[c/d/]		Totals		Mokelumne River		Merced River		Totals			
	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults	Jacks
1981-1985	7,346	394	4,649	633	12,902	5,143	9,749	4,551	284	0	34,930	10,721	759	734	797	449	1,556	1,183	36,486	11,904
1986-1990	1,294	162	4,174	824	2,951	2,910	2,414	480	20	0	10,853	4,377	278	286	299	140	577	426	11,430	4,803
1991-1995	865	281	472	123	264	139	1,026	360	0	0	2,626	904	1,077	554	239	233	1,316	788	3,943	1,691
1996-2000	2,334	791	3,536	802	7,144	2,160	3,838	873	0	0	16,853	4,626	3,413	1,052	769	525	4,182	1,576	21,035	6,203
2001	1,755	467	6,140	719	7,852	1,369	8,084	1,133	0	0	23,831	3,688	4,467	1,427	1,137	523	5,604	1,950	29,435	5,638
2002	2,244	596	5,848	952	6,192	1,008	7,568	1,232	0	0	21,852	3,788	5,800	2,119	1,250	588	7,050	2,707	28,902	6,495
2003	1,571	552	6,707	889	2,620	234	3,621	489	0	0	14,519	2,164	5,108	3,009	392	157	5,500	3,166	20,019	5,330
2004	1,175	413	2,848	1,220	1,029	605	2,197	1,073	0	0	7,250	3,310	5,477	4,879	456	594	5,933	5,473	13,183	8,783
2005	9,574	832	2,984	332	647	72	1,900	211	738	130	15,843	1,577	5,035	528	346	75	5,381	603	21,224	2,180
2006	1,555	177	1,718	205	457	105	1,262	167	630	15	5,622	669	2,801	1,338	130	20	2,931	1,358	8,553	2,027
2007	461	9	368	75	193	31	446	49	53	0	1,521	164	1,004	40	70	9	1,074	49	2,595	213
2008	83	90	1,253	139	358	14	316	73	0	0	2,010	316	116	123	39	37	155	160	2,165	476
2009	320	360	554	194	130	70	390	64	0	0	1,394	688	730	823	109	137	839	960	2,233	1,648
2010	1,640	280	793	293	329	211	501	150	740	0	4,003	934	3,543	1,733	115	31	3,658	1,764	7,661	2,698
2011	705	1,962	433	630	231	647	640	975	518	0	2,527	4,214	2,409	13,513	99	338	2,508	13,851	5,035	18,065
2012	3,836	1,635	3,550	456	485	298	1,947	310	1,034	149	10,852	2,848	4,430	2,190	628	372	5,058	2,562	15,910	5,410
2013	5,806	1,265	2,562	283	1,798	128	2,673	153	0	0	12,839	1,829	3,698	1,483	918	180	4,616	1,663	17,455	3,492
2014	1,973	1,324	1,837	1,227	150	56	611	249	401	0	4,972	2,856	4,417	4,403	229	582	4,646	4,985	9,618	7,841
2015	3,075	1,506	4,050	2,086	42	71	860	387	180	0	8,207	4,050	5,170	3,128	556	642	5,726	3,770	13,933	7,820
2016	1,279	705	5,231	3,961	661	696	1,232	2,099	986	262	9,389	7,723	3,314	3,573	1,995	970	5,309	4,543	14,698	12,266
2017	4,626	1,018	2,225	1,274	690	428	2,349	832	575	95	10,465	3,647	4,651	9,668	602	1,099	5,253	10,767	15,718	14,414
2018	6,609	3,685	2,018	359	734	343	349	529	630	158	10,340	5,074	4,778	2,403	264	639	5,042	3,042	15,382	8,116
2019[e/]	7,294	5,564	1,203	279	824	103	1,952	259	275	0	11,548	6,205	5,796	2,696	628	339	6,424	3,035	17,972	9,240
GOALS[f/]	-	-	-	-	-	-	-	-	-	-	-	-	3,000[g/]	-	1,000	-	4,000	-	-	-

a/ In 2004, CDFW reviewed and updated 1971-2003 escapement estimates to reflect final project reports.

b/ Most natural area estimates based on carcass surveys with a jack length cut-off.

c/ Other San Joaquin tributary escapement includes Cosumnes and Calaveras Rivers when surveys were conducted. In some years no survey was conducted due to logistical or environmental limitations.

d/ Calculating jack proportions was not possible in some years due to sampling and/or environmental limitations. In those years jacks are included in the adult escapement values.

e/ Preliminary.

f/ Current hatchery-specific goals, not PFMC goals.

g/ Due to modernization of the hatchery facility and improved efficiencies, the Mokelumne Hatchery escapement goal was reduced from 5,000 to 3,000 adults in 2010.

TABLE B-3. Sacramento River late-fall, winter, and spring Chinook salmon spawning escapement in numbers of fish.

	Upper Sacramento River										
	Late-Fall[a/b/c/]		Winter[c/d/]				Spring				
			RBDD[a/]		Carcass Survey		Tributary[e/]	Sacramento River[a/f/]		Feather River[g/]	
Year or Average	Adults	Jacks	Adults	Jacks	Adults	Jacks	Adults and Jacks[h/]	Adults	Jacks	Adults	Jacks
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 [i/]	383 [i/]	586	78	--	--	2,813	410	165	3,441	465
1996-2000	16,061 [i/]	2,478 [i/]	940	1,032	--	--	7,768	242	160	4,393	503
2001	20,614	1,199	1,696	3,827	7,443	781	21,623 [j/]	981	0 [h/]	4,052	83
2002	39,818	765	7,614	1,555	7,047	417	20,198 [j/]	430	53	3,982	207
2003	8,122	613	6,172	3,585	7,675	543	21,798 [j/]	0	0	8,373	389
2004	12,458	1,574	2,588	4,604	5,786	2,083	12,556 [j/]	763	326	3,630	572
2005	14,047	2,141	3,521	1,778	14,684	1,155	21,319 [j/]	21	9	1,811 [k/]	24 [k/]
2006	14,709	351	4,792	2,623	16,911	379	10,669 [j/]	0	0	2,052 [k/]	9 [k/]
2007	11,954	714	3,004	3,140	2,402	139	8,951 [j/]	226	22	2,669 [k/]	5 [k/]
2008	9,946	381	1,504	2,131	2,623	207	11,943 [j/]	0	0	1,056 [k/]	10 [k/]
2009	9,515	460	l/	l/	4,483	54	3,517 [j/]	l/	l/	867 [k/]	122 [k/]
2010	8,894	1,001	l/	l/	1,554	42	2,951 [j/]	l/	l/	1,655 [k/]	6 [k/]
2011	7,129	1,161	l/	l/	637	187	5,547 [j/]	l/	l/	1,831 [k/]	138 [k/]
2012	5,153	909	m/	m/	2,527	144	18,694 [j/]	m/	m/	3,510 [k/]	228 [k/]
2013	8,365	644	m/	m/	5,622 [n/]	462	18,507 [j/]	m/	m/	4,247 [k/]	44 [k/]
2014	11,792	1,453	m/	m/	2,688	327	7,127 [j/]	m/	m/	2,599 [k/]	177 [k/]
2015	9,306	134	m/	m/	3,382	57	1,039 [j/]	m/	m/	3,333 [k/]	53 [k/]
2016	4,708	949	m/	m/	924	622	6,458 [j/]	m/	m/	1,595 [k/]	55 [k/]
2017	4,466	389	m/	m/	490	485	1,055 [j/]	m/	m/	266 [k/]	314 [k/]
2018	2,032	3,199	m/	m/	1,884	754	2,806 [j/]	m/	m/	1,870 [k/]	240 [k/]
2019[o/]	9,964	1,550	m/	m/	7,569	559 [p/]	16,145 [j/]	m/	m/	3,554 [k/]	313 [k/]

a/ Jacks and adults based on sampling at Red Bluff Diversion Dam (RBDD) from unpublished CDFW data. Beginning in 1987 for late-fall and winter run, estimates 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 National Fish Hatchery.

c/ Estimates of late-fall and winter run includes Chinook trapped at Keswick Dam for use as broodstock at Coleman or Livingston Stone National Fish 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, the 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 spawners at Coleman National Fish Hatchery 1991-97. No data available for natural spawners, RBDD gates were raised during 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 in 2005. Fish arriving prior to the spring Chinook spawning period were tagged and returned to the river. Spring Chinook escapement estimate is the number of these tagged fish that subsequently returned during the spring Chinook spawning period.

l/ RBDD did not go into operation until June 15, a month later than normal; thus RBDD winter and spring run estimates are unavailable.

m/ RBDD gates were permanently removed on September 1, 2012; thus RBDD winter and spring run estimates are no longer available.

n/ Includes 47 adults that were transferred from the Colusa Basin Drain to Livingston Stone National Fish Hatchery for use as broodstock.

o/ Preliminary.

p/ Includes 95 jacks that returned to Battle Creek as part of the Coleman National Fish Hatchery captive broodstock “jumpstart” reintroduction effort.

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			Nonlanded Fishery Mortality	Spawning Escapement								
							Klamath River			Trinity River			Total		
			Indian	Sport	Total		Hatchery	Natural	Total	Hatchery	Natural	Total	Hatchery	Natural	Total
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
1996-2000	Adults	123,856	24,565	6,817	31,382	2,275	24,549	32,279	56,828	11,421	21,950	33,371	35,970	54,229	90,199
	Jacks	10,332	170	1,805	1,976	52	1,413	2,628	4,042	872	3,391	4,262	2,285	6,019	8,304
2001-2005[a/]	Adults	136,848	25,414	7,659	33,074	2,366	23,476	34,971	58,447	15,476	21,375	36,851	38,952	56,346	95,298
	Jacks	7,271	161	1,391	1,552	43	785	2,000	2,785	596	1,894	2,490	1,381	3,894	5,275
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	1,974	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	7,798	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	Adults	90,860	29,887	3,035	32,922	2,661	10,278	15,170	25,448	7,774	22,055	29,829	18,052	37,225	55,277
	Jacks	16,640	428	1,831	2,259	74	1,069	1,811	2,880	1,432	9,995	11,427	2,501	11,806	14,307
2011	Adults	101,977	26,353	4,147	30,500	2,377	8,490	17,973	26,463	13,847	28,790	42,637	22,337	46,763	69,100
	Jacks	84,895	1,322	9,981	11,303	319	9,549	24,746	34,295	1,875	37,103	38,978	11,424	61,849	73,273
2012	Adults	295,322	95,386	13,876	109,262	8,578	38,478	72,786	111,264	17,461	48,757	66,218	55,939	121,543	177,482
	Jacks	21,433	177	3,875	4,052	94	1,537	8,289	9,826	92	7,369	7,461	1,629	15,658	17,287
2013	Adults	165,025	63,036	19,800	82,836	5,885	13,431	31,711	45,142	3,717	27,445	31,162	17,148	59,156	76,304
	Jacks	14,356	259	2,260	2,519	69	1,323	3,274	4,597	135	7,036	7,171	1,458	10,310	11,768
2014[b/]	Adults	160,396	25,967	5,386	31,353	2,392	24,300	70,709	95,009	6,975	24,395	31,370	31,276	95,104	126,380
	Jacks	22,321	348	3,364	3,712	100	1,039	10,520	11,559	221	6,719	6,940	1,259	17,239	18,498
2015[b/]	Adults	77,821	28,048	7,842	35,890	2,611	7,956	23,273	31,229	3,129	4,839	7,968	11,085	28,112	39,197
	Jacks	6,094	496	1,605	2,101	76	220	748	968	224	2,724	2,948	444	3,472	3,916
2016[b/]	Adults	24,582	5,160	1,310	6,470	486	2,436	10,376	12,812	1,142	3,561	4,703	3,578	13,937	17,515
	Jacks	2,787	160	162	322	17	151	554	705	401	1,340	1,741	552	1,894	2,446
2017	Adults	33,232	1,880	71	1,951	164	7,443	13,832	21,275	3,770	6,072	9,842	11,213	19,904	31,117
	Jacks	20,318	266	42	308	17	3,193	10,621	13,814	1,863	4,316	6,179	5,056	14,937	19,993
2018	Adults	91,060	14,769	4,110	18,879	1,262	11,425	37,505	48,930	7,142	14,847	21,989	18,567	52,352	70,919
	Jacks	10,872	308	2,237	2,545	58	435	3,491	3,926	171	4,172	4,343	606	7,663	8,269
2019[c/]	Adults	37,270	5,974	5,365	11,339	508	3,797	13,534	17,331	1,381	6,711	8,092	5,178	20,245	25,423
	Jacks	9,991	591	2,708	3,299	71	249	2,314	2,563	205	3,853	4,058	454	6,167	6,621
GOAL	Adults													≥40,700[d/e/]	

a/ Total inriver run includes an estimated 30,550 fish that died prior to spawning in September 2002.

b/ Total inriver run includes fish collected from the Klamath and Trinity rivers by the Yurok and Hoopa Valley tribes, respectively, to test for the presence of the parasite *Ichthyophthirius multifiliis* during the following years: 2014 - 282 fish; 2015 - 124 fish; 2016 - 113 fish.

c/ Preliminary.

d/ In December 2011, Amendment 16 to the Salmon Fishery Management Plan was approved, which replaced the 35,000 spawning escapement floor with an S_{MSY} management objective of 40,700 natural area adult spawners. The 35,000 spawner floor was in effect from 1989-2007 and in 2011. In 2008-2010, fisheries were managed for a natural area spawning escapement of 40,700 adults under requirements of a rebuilding plan.

e/ Annual escapement goals may be more or less than S_{MSY} in some years due to meeting S_{ACL} requirements and de minimis fishing provisions.

TABLE B-5. Estimates of Yurok and Hoopa Valley reservation Indian gillnet Chinook harvest in numbers of fish.

Year	Area[a/]	Spring Run			Fall Run		
		Jack	Adult	Total	Jack	Adult	Total
2014	Commercial:Estuary	0	0	0	0	11,431	11,431
	Middle Klamath	0	0	0	0	401	401
	Subsistence:Estuary	7	2,438	2,445	153	8,665	8,818
	Middle Klamath	0	64	64	72	1,584	1,656
	Upper Klamath[b/]	10	658	668	68	1,719	1,787
	Trinity River	85	1,733	1,818	65	2,440	2,504
	Total	102	4,893	4,995	358	26,240	26,597
2015	Commercial:Estuary	0	0	0	0	16,899	16,899
	Middle Klamath	0	0	0	0	163	163
	Subsistence:Estuary	0	1,816	1,816	405	5,609	6,014
	Middle Klamath	0	133	133	10	642	652
	Upper Klamath[b/]	17	628	645	35	2,818	2,853
	Trinity River[c/]	15	1,087	1,102	47	2,040	2,087
	Total	32	3,664	3,696	497	28,171	28,668
2016	Commercial:Estuary	0	0	0	0	0	0
	Middle Klamath	0	0	0	0	0	0
	Subsistence:Estuary	1	619	620	121	3,185	3,306
	Middle Klamath	1	264	265	7	405	412
	Upper Klamath[b/]	1	115	116	14	930	944
	Trinity River	14	679	693	20	751	771
	Total	17	1,677	1,694	162	5,271	5,433
2017	Commercial:Estuary	0	0	0	0	0	0
	Middle Klamath	0	0	0	0	0	0
	Subsistence:Estuary	0	243	243	66	208	274
	Middle Klamath	0	339	339	0	2	2
	Upper Klamath	3	304	307	6	10	16
	Trinity River	8	412	420	194	1,660	1,854
	Total	11	1,298	1,309	266	1,880	2,146
2018	Commercial:Estuary	0	0	0	0	0	0
	Middle Klamath	0	0	0	0	0	0
	Subsistence:Estuary	3	1,109	1,112	86	8,665	8,751
	Middle Klamath	0	62	62	17	1,518	1,535
	Upper Klamath	2	135	137	25	2,261	2,286
	Trinity River	49	481	530	180	2,325	2,505
	Total	54	1,787	1,841	308	14,769	15,077
2019[d/]	Commercial:Estuary	0	0	0	26	2,093	2,119
	Middle Klamath	0	0	0	1	9	10
	Subsistence:Estuary	1	36	37	15	1,229	1,244
	Middle Klamath	10	96	106	14	165	179
	Upper Klamath	6	52	58	36	413	449
	Trinity River	316	838	1,154	499	2,065	2,564
	Total	333	1,022	1,355	591	5,974	6,565

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/ Harvest includes fish collected from the Upper Klamath by the Yurok Tribe to test for the presence of the parasite *Ichthyophthirius multifiliis* during the following years: 2014 - 17 spring run and 282 fall run; 2015 - 26 spring run and 104 fall run; 2016 - 113 fall run.

c/ Harvest includes 20 fall run collected from the Trinity River by the Hoopa Valley Tribe to test for the presence of the parasite *Ichthyophthirius multifiliis* .

d/ Preliminary.

TABLE B-6. Shasta, Scott, and Salmon rivers fall Chinook salmon spawning escapement estimates in numbers of fish.[a/]

	Shasta River		Scott River		Salmon River	
Year	Adults	Jacks	Adults	Jacks	Adults	Jacks
1931-1940[b/]	31,820	10,457	-	-	-	-
1941-1950	6,191	1,817	-	-	-	-
1951-1960	3,608	683	-	-	-	-
1961-1970	12,819	2,899	-	-	-	-
1971-1975	6,297	2,866	-	-	-	-
1976-1980[c/]	6,506	3,194	2,950	1,527	1,467	583
1981-1985[d/]	4,560	1,942	3,373	1,929	1,287	389
1986-1990[e/]	2,403	318	4,010	1,512	3,361	537
1991-1995	3,751	539	4,497	1,032	2,510	552
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	1,259	87	2,114	394	2,478	356
2011	213	11,175	3,019	2,502	3,674	1,819
2012	27,600	1,944	7,569	1,783	3,561	829
2013	6,925	1,096	4,036	588	2,240	240
2014	14,412	3,945	10,419	2,051	2,706	527
2015	6,612	133	2,092	21	1,978	92
2016	2,754	135	1,376	139	1,032	26
2017	3,287	6,618	2,269	307	1,338	327
2018	18,675	2,017	1,208	71	1,228	285
2019[f/]	5,926	78	1,681	409	957	686

a/ Estimates are made from a combination of weir counts, carcass surveys, and redd counts. The methodology can change annually based on environmental conditions, logistical constraints, and/or the expert opinion of regional biologists.

b/ Commercial fishing in lower Klamath River closed by the state after the 1933 season.

c/ Gillnetting resumed in lower 20 miles of Klamath River by Hoopa Valley Indian Reservation fishers in 1976.

d/ Shasta adults include 276 females taken to Iron Gate Hatchery in 1981.

e/ Low water conditions appeared to hinder entry into the Shasta River in 1988.

f/ Preliminary.

TABLE B-7. Summary of California North Coast salmon spawning stock surveys in numbers of fish (adults and jacks combined) or redd counts. (Page 1 of 2)

CHINOOK Year	Redwood Creek[a/]	Mad River[a/b/]	Eel River (Mainstem)[a/b/]	South Fork Eel River[a/b/]	Mattole River[c/] (Redds)	Russian River[d/]
2000-2001	-	-	-	-	-	1,445
2001-2002	-	-	-	-	-	1,383
2002-2003	-	-	-	-	-	5,474
2003-2004	-	-	-	-	-	6,103
2004-2005	-	-	-	-	-	4,788
2005-2006	-	-	-	-	-	2,607
2006-2007	-	-	-	-	-	3,407
2007-2008	-	-	-	-	-	2,021
2008-2009	-	-	-	-	-	1,129
2009-2010	2,438	-	-	-	-	1,800
2010-2011	e/	-	-	-	-	2,502
2011-2012	1,455	-	-	-	-	3,173
2012-2013	3,401	-	-	-	418	6,730
2013-2014	3,487	2,169 f/	-	-	988	3,152
2014-2015	e/	7,489	-	-	535	1,420 g/
2015-2016	1,839 h/	5,786	-	-	331	3,020 g/
2016-2017	3,191	7,186	-	-	929	1,062 i/
2017-2018	4,541	12,667	-	-	2,202	2,093
2018-2019	2,820	k/	3,844	3,738	633	1,219
2019-2020[j/]	k/	k/	k/	k/	k/	909

COHO Year	Redwood Creek[c/] (Redds)	Humboldt Bay[c/l/] (Redds)	Freshwater Creek[m/]	South Fork Eel River[b/c/] (Redds)	Ten Mile River[n/]	Pudding Creek[m/]	Noyo River[n/]	Big River[n/]	Little River[n/]	Lagunitas Watershed[o/] (Redds)
1995-1996	-	-	-	-	-	-	-	-	-	86
1996-1997	-	-	-	-	-	-	-	-	-	254
1997-1998	-	-	-	-	-	-	-	-	-	253
1998-1999	-	-	-	-	-	-	-	-	-	184
1999-2000	-	-	-	-	-	-	-	-	-	203
2000-2001	-	-	-	-	-	-	-	-	20	204
2001-2002	-	-	-	-	-	524	-	-	88	286
2002-2003	-	-	1,807	-	-	367	-	-	45	158
2003-2004	-	-	731	-	-	1,204	-	-	91	383
2004-2005	-	-	974	-	-	1,167	-	-	152	496
2005-2006	-	-	789	-	-	709	-	-	14	190
2006-2007	-	-	396	-	-	401	-	-	14	338
2007-2008	-	-	262	-	-	50	182	-	5	148
2008-2009	-	-	399	-	-	50	e/	-	4	26
2009-2010	246	194	89	-	-	50	286	80	2	51
2010-2011	574	1,099	455	1,284	395	199	411	160	8	80
2011-2012	540	1,738	624	1,873	1,127	415	228	269	2	130
2012-2013	405	763	318	1,340	440	283	784	519	2	217
2013-2014	705	630	155	939	9	0	723	155	3	188
2014-2015	297	1,632	718	2,069	1,654	539	3,468	1,344	65	140
2015-2016	206	617	449	416	241	135	5,112	744	15	226
2016-2017	e/	522	466	465	397	573	2,196	222	31	158
2017-2018	523	443	535	1,633	1,451	479	2,284	1,054	33	103
2018-2019	554	922	420	990	1,106	755	1,269	e/	17	306
2019-2020[j/]	k/	k/	312	k/	k/	k/	k/	k/	k/	44

TABLE B-7. Summary of California North Coast salmon spawning stock surveys in numbers of fish (adults and jacks combined) or redd counts. (Page 2 of 2)

a/ Escapement estimates from expanded sonar fish counts.

b/ Previous versions of this table reported Chinook and coho counts for Cañon, Tomki (Chinook only), and Sprowl creeks, tributaries to the Mad, mainstem Eel, and South Fork Eel rivers, respectively. See the *Review of 2018 Ocean Salmon Fisheries* for these estimates.

c/ Expanded redd counts from design-based sample of reaches.

d/ Video counts of combined adults and jacks made at Mirabel Dam. These are minimum counts and are not comparable between years. Accuracy of counts may be affected by environmental conditions.

e/ No data available.

f/ Minimum count; sonar installed mid-season.

g/ Mirabel Dam video counts were unavailable due to construction of a new counting facility. The number recorded is the sum of minimum counts made at two facilities upstream of Mirabel Dam.

h/ Minimum abundance due to unexpanded, missing data.

i/ Monitoring at Mirabel Dam was complicated by operational challenges associated with the implementation of a new counting facility.

j/ Available estimates are incomplete and preliminary; surveys are still in progress at time of publication.

k/ Estimates not yet available; data analysis in progress.

l/ Redd surveys conducted in the four largest tributaries to Humboldt Bay: Jacoby Creek, Freshwater Creek, Elk River, and Salmon Creek.

m/ Escapement estimates from mark-recapture experiments.

n/ Escapement estimates derived by multiplying expanded redd counts from design-based sample of reaches by annual fish/redd ratios.

o/ Olema Creek is excluded.

TABLE B-8. Peak spawning counts in index areas for selected south/local migrating Oregon coastal fall Chinook stocks.

	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)	
Year or Avg.	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	11 [a/]	2	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	14	2	75	5	26	2	52	4
2011	12	2	49	6	17	3	35	5
2012	8	2	72	11	5	2	39	7
2013	10	5	38	11	3	1	23	8
2014	11	2	52	9	12	3	34	6
2015	34	1	77	7	22	2	60	5
2016	5	1	42	5	27	2	34	4
2017	9	3	34	7	15	2	26	5
2018	4	3	16	10	11	7	14	9
2019[b/]	7	3	15	2	1	0	10	2

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	Gold Ray Dam, Rogue River[a/]				Winchester Dam, Umpqua River[a/]			
Avg.	Natural[b/]	Hatchery	Total	Jacks[c/]	Natural	Hatchery	Total	Jacks[c/]
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	9.6	11.5	21.1	1.9	6.1	7.8	13.9	3.8
2011	9.9	NA	NA	NA	8.9	7.7	16.6	5.4
2012	14.4	NA	NA	NA	8.2	8.4	16.7	3.6
2013	12.1	NA	NA	NA	7.2	7.9	15.2	2.6
2014	5.6	NA	NA	NA	6.4	8.2	14.6	4.5
2015	15.3	NA	NA	NA	4.8	4.8	9.6	1.9
2016	9.6	NA	NA	NA	4.3	4.4	8.7	2.6
2017	10.2	NA	NA	NA	4.0	2.7	6.8	1.1
2018	10.4	NA	NA	NA	3.3	2.0	5.3	2.7
2019[d/]	5.4	NA	NA	NA	3.7	2.2	5.8	1.9

a/ Jacks included in natural, hatchery, and total counts.

b/ Gold Ray Dam removed October, 2010. Natural estimate derived using relationship of 2004-2010 spawning ground surveys to Gold Ray Dam passage. Estimate includes an unknown number of jacks.

c/ Jacks include all Chinook less than 20 inches prior to 1978 and all Chinook less than 24 inches beginning in 1978.

d/ Preliminary.

TABLE B-10. Rogue River fall Chinook carcass counts and Huntley Park passage of naturally produced fish.

	Carcass Counts[a/]			Huntley Park Passage		
Year or Avg.	Adults	Jacks	Total	Adults	Jacks	Total
1977-1980	5,256	1,004	6,259	99,881	30,425	130,307
1981-1985	3,906	1,009	4,915	55,907	25,683	81,590
1986-1990	16,797	1,527	18,324	84,435	29,553	113,988
1990-1995	4,387	316	4,703	45,489	15,499	60,988
1996	2,448	121	2,569	48,763	15,682	64,445
1997	1,643	68	1,711	41,072	17,788	58,860
1998	3,601	40	3,641	40,939	6,793	47,732
1999	2,493	157	2,650	37,587	18,763	56,350
2000	3,366	226	3,592	87,783	12,918	100,701
2001	6,380	772	7,152	76,376	26,650	103,026
2002	11,836	905	12,741	154,143	42,806	196,948
2003	14,620	983	15,603	204,793	19,347	224,139
2004	5,326 [b/]	250	5,576	132,296	19,785	152,081
2005	-	-	-	56,474	4,849	61,323
2006	-	-	-	35,075	6,770	41,845
2007	-	-	-	43,493	3,284	46,778
2008	-	-	-	24,309	15,186	39,495
2009	-	-	-	60,223	13,660	73,883
2010	-	-	-	49,390	14,459	63,849
2011	-	-	-	67,750	30,125	97,875
2012	-	-	-	69,060	10,400	79,460
2013	-	-	-	81,655	23,027	104,682
2014	-	-	-	53,546	11,901	65,447
2015	-	-	-	30,462	7,841	38,303
2016	-	-	-	27,278	16,762	44,040
2017	-	-	-	91,977	24,068	116,045
2018	-	-	-	39,497	23,921	63,418
2019[c/]	-	-	-	19,426	17,662	37,088

a/ Surveys were discontinued in 2005.

b/ 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.

c/ Preliminary.

TABLE B-11. Peak counts for north migrating Oregon coastal Chinook stocks on selected fall Chinook spawning index stream surveys.

	River Tributaries																			
Year or Average	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
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	76	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	57	0	24	1	27	2	56	3	a/	a/	75	6	301	7	46	14	a/	a/	87	5
2011	164	5	96	4	15	1	29	0	a/	a/	46	2	329	21	53	1	a/	a/	109	5
2012	144	3	38	2	34	0	57	3	a/	a/	56	4	611	17	38	1	a/	a/	146	4
2013	384	10	89	2	78	3	47	2	166	9	41	3	625	6	156	20	a/	a/	189	7
2014	176	2	55	0	54	2	109	1	216	40	60	7	556	21	92	6	a/	a/	157	9
2015	237	1	a/	a/	31	1	122	1	391	3	130	2	625	2	93	3	a/	a/	247	3
2016	154	2	a/	a/	24	0	162	3	159	9	39	1	224	1	19	0	a/	a/	118	2
2017	132	1	a/	a/	39	1	109	1	126	5	47	4	282	3	20	1	a/	a/	114	2
2018	107	6	a/	a/	11	0	86	2	220	11	31	3	94	5	57	5	a/	a/	92	5
2019[b/]	198	2	a/	a/	8	0	48	0	79	2	27	0	46	2	19	1	a/	a/	64	1

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.

		Lower River Catch[a/]		Tributary Runs							
				Willamette							
Year or Average	Minimum Columbia R. Return[b/]	Non-Indian Commercial	Sport	Run Size	L. Willamette Sport Catch	Will. Falls Escapement[b/]	Sandy	Cowlitz[c/]	Lewis[c/]	Kalama	Hatchery Escapement[d/]
1981-1985	93,220	6,680	1,840	67,700	15,620	35,580	1,940	19,960	4,220	3,740	28,840
1986-1990	123,834	11,980	4,330	103,100	21,140	58,760	2,425	10,691	11,340	1,877	32,460
1991-1995	85,837	3,680	2,300	66,039	18,180	32,580	4,920	6,801	5,870	1,976	23,700
1996-2000	54,552	409	60	43,953	5,060	31,239	3,803	1,797	1,961	787	21,380
2001-2005	137,416	5,080	6,040	104,933	9,940	70,811	7,439	9,721	4,664	3,383	48,866
2006	90,417	3,000	2,900	59,311	7,200	36,851	4,382	6,963	7,301	5,458	38,623
2007	68,796	1,900	2,600	39,943	5,700	22,818	2,813	3,975	7,596	8,030	27,756
2008	42,740	100	700	26,615	4,600	14,151	5,994	2,986	2,215	1,623	18,407
2009	48,907	300	2,000	35,432	4,500	25,795	2,429	6,034	1,493	404	22,496
2010	150,374	3,300	6,200	107,675	22,700	65,293	7,652	8,887	2,347	977	42,646
2011	98,605	2,300	2,500	76,549	22,800	43,748	5,721	5,860	1,310	776	31,030
2012	92,142	2,300	3,700	63,037	15,800	35,899	5,038	12,645	1,895	889	32,106
2013	66,729	1,800	1,798	44,880	7,400	27,897	5,700	8,656	1,574	1,014	26,892
2014	69,006	1,300	2,700	49,765	7,900	30,071	5,971	8,957	1,482	1,013	27,783
2015	131,394	2,649	4,266	84,532	13,552	53,088	4,000	23,933	1,006	3,149	52,237
2016	87,976	1,200	2,600	47,225	6,000	30,317	4,179	22,478	473	3,980	31,303
2017	96,060	1,300	1,800	50,774	7,400	34,186	7,803	14,639	2,338	3,515	25,445
2018	62,733	500	1,621	37,441	6,200	24,543	4,828	4,076	3,454	2,371	18,540
2019[e/]	36,843	300	239	27,292	4,700	18,882	3,260	1,563	1,047	997	10,468

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[a/] (Includes Snake River summer Chinook.)

		Lower River Catch[c/]			Catch Above Bonneville Dam						
Year or	Minimum Columbia	Non-Indian		Bonneville		Treaty	Non-Treaty	Snake River Escapement[f/]		Rock Island Dam Count	
Avg.	R. Return[b/]	Commercial	Sport	Dam Count[d/]	Sport[e/]	Indian[f/]	Tribal[g/]	Hatchery	Wild	Hatchery	Wild
1981-1985	70,440	1,706	393	68,342	0	3,569	0	7,508	10,791	7,473	4,798
1986-1990	108,167	2,378	1,356	104,433	0	6,957	0	19,701	10,192	9,669	4,891
1991-1995	63,404	511	710	62,183	0	3,745	0	7,260	6,880	7,005	1,702
1996-2000	90,792	81	36	90,675	0	5,359	0	16,816	5,390	5,284	510
2001-2005	269,274	4,941	14,594	249,740	2,331	26,037	30	69,242	27,861	18,319	2,369
2006	132,583	2,238	4,187	126,158	1,564	8,401	0	20,357	9,485	8,733	911
2007	86,247	1,491	3,927	80,829	1,857	5,627	0	23,402	7,088	5,136	438
2008	178,627	6,292	19,612	151,893	2,625	21,391	0	55,772	17,574	11,840	653
2009	169,296	4,543	15,246	147,489	1,237	13,101	0	50,441	14,947	11,510	1,125
2010	315,346	9,281	23,535	277,390	5,789	42,954	13	98,773	26,622	27,247	2,440
2011	221,158	3,930	9,506	205,431	4,516	15,533	0	72,531	24,526	11,084	2,005
2012	203,090	4,821	10,422	186,448	3,597	17,701	1	55,117	25,634	15,289	3,838
2013	123,136	1,853	5,343	112,934	1,413	9,282	8	29,835	14,576	11,524	1,821
2014	242,635	4,098	13,572	224,946	5,627	24,703	37	62,759	32,065	20,203	3,044
2015	288,994	6,818	15,689	265,558	3,101	31,181	58	98,819	22,577	27,830	3,918
2016	187,816	3,508	10,167	172,614	2,480	17,066	35	58,620	16,161	15,929	2,717
2017	115,821	1,083	7,198	107,524	84	8,109	35	32,229	4,425	6,785	1,295
2018	115,081	692	5,868	108,045	1,345	10,892	0	32,338	6,632	6,731	1,163
2019[h/]	73,101	301	1,478	71,235	613	4,702	11	19,605	4,183	7,723	1,065

a/ Chinook formerly managed separately as Snake River summer Chinook are now grouped with all upriver spring Chinook because of overlap in run timing.

b/ Includes adult upriver spring chinook and Snake River summer Chinook.

c/ 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 is from estimated miscellaneous fishery-related impacts from commercial shad and test fisheries, Select Area fisheries beginning in 1979, and catch and release mortalities from selective fisheries beginning in 2001. Sport catch, including any release mortalities, is from mainstem and Select Area fisheries downstream of Bonneville Dam.

d/ Spring counting period is January 1-June 15.

e/ Includes mainstem Columbia R. fisheries in Zone 6 (BON-MCN), McNary to Hwy I-395, Ringold sport (2001-2011), plus the Washington lower Snake River sport fishery.

f/ Includes ticketed commercial, over-the-bank sales, and ceremonial and subsistence catch. Spring season commercial fishery closed in 1975, 1976, and from 1978 to 2000. Spring Chinook landed during those years were from the winter season fishery and limited spring Ceremonial & Subsistence harvest. Includes below Bonneville Dam C&S starting in 2008 along with fish taken for tribal use from lower river test fishing.

g/ Mainstem catch. Wanapum tribal fishery.

h/ Preliminary.

TABLE B-14. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult upper Columbia summer Chinook destined for areas above Bonneville Dam[a/] (Excludes Snake River summer Chinook.)

	Minimum	Lower River Catch			Catch above Bonneville Dam			Escapement
Year or	Columbia R.	Non-Indian		Bonneville		Treaty	Non-Treaty	Rock Island
Avg.	Return	Commercial[b/]	Sport[c/]	Dam Count[d/]	Sport[e/]	Indian[f/]	Tribal[g/]	Dam Count[h/]
1981-1985	16,709	55	0	16,654	-	973	0	10,010
1986-1990	21,036	71	8	20,957	-	902	0	14,563
1991-1995	12,984	30	15	12,939	-	227	0	10,748
1996-2000	17,957	5	29	17,924	-	317	96	13,902
2001-2005	70,287	611	1,264	68,412	265	4,624	2,202	66,711
2006	77,573	4,828	4,926	67,819	295	16,319	1,556	61,821
2007	37,035	1,122	2,214	33,699	148	5,375	1,364	28,222
2008	55,532	1,429	2,140	51,963	997	9,029	2,049	38,171
2009	53,881	2,546	2,341	48,994	265	11,650	1,375	44,295
2010	72,116	4,740	2,738	64,638	886	15,799	3,572	47,220
2011	80,574	5,004	5,576	69,994	389	20,645	1,263	44,432
2012	58,300	1,715	3,281	53,304	296	7,824	3,423	52,184
2013	67,603	1,987	2,058	63,508	324	13,397	3,692	68,380
2014	78,254	2,788	2,385	72,871	453	19,389	3,724	77,982
2015	126,882	4,043	6,152	116,657	786	37,763	10,694	88,691
2016	91,048	3,050	3,706	84,192	565	20,515	4,199	79,253
2017	68,204	47	3,853	64,144	262	16,328	1,736	56,265
2018	42,120	24	1,140	40,906	134	9,498	1,336	38,816
2019[i/]	34,619	23	74	34,472	6	5,637	1,431	41,090
GOAL	29,000[j/]							12,143[k/]

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, Snake River summer Chinook have been moved from this table to Table B-13.

b/ Mainstem and Select Area Fisheries. 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 release mortality in selective fisheries beginning in 2002.

c/ Includes estimated catch and release mortalities from mainstem and Select Area recreational fisheries.

d/ Counting period June 16-July 31.

e/ Mainstem catch from Bonneville Dam upstream to Hwy 395 Bridge, and upstream of Priest Rapids Dam.

f/ Mainstem catch. Includes ticketed commercial, over-the-bank sales, and ceremonial and subsistence catch. No directed commercial summer Chinook fishery from 1965 to 2003. Landings during those years are bycatch from commercial sockeye fishery. Includes commercial and C&S catch. Includes catch downstream of Bonneville since 2010.

g/ Mainstem catch. Wanapum and Colville tribal fisheries.

h/ Summer counting period June 18 to August 17.

i/ Preliminary.

j/ Comanager goal established in 2004 associated with regrouping Snake River summer Chinook with Snake River spring Chinook.

k/ MSY spawning escapement objective adopted in 2011 under Amendment 16 based on Chinook Technical Committee Report 99-3.

TABLE B-15. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult lower river hatchery (LRH) stock fall Chinook.[a/]

Year or Ave.	Minimum Columbia R. Return	Catch			Escapement	
		Non-Indian Commercial[b/]	Sport[c/]	Treaty Indian[d/]	Natural[e/]	Hatchery[f/]
1981-1985	107,163	25,604	4,486	851	37,755	36,846
1986-1990	199,938	93,794	17,420	655	38,774	48,821
1991-1995	55,519	2,871	4,998	238	19,915	27,419
1996-2000	49,017	2,041	5,239	72	17,310	24,319
2001-2005	118,621	9,183	11,804	188	60,838	36,549
2006	58,319	5,919	9,449	237	26,633	15,957
2007	32,689	1,308	6,123	0	10,208	15,050
2008	61,559	5,701	6,543	502	21,528	27,265
2009	76,738	10,259	11,295	0	23,746	31,436
2010	102,955	14,981	13,046	0	33,962	40,964
2011	108,961	15,417	17,248	223	28,334	47,735
2012	84,978	16,340	16,362	457	21,556	30,259
2013	104,777	10,578	19,420	574	40,411	33,662
2014	101,906	12,810	16,347	135	33,264	39,333
2015	128,705	15,146	15,142	42	34,588	63,784
2016	81,860	11,050	11,418	78	21,974	37,340
2017	64,627	7,917	8,831	198	19,737	27,929
2018	52,963	5,348	7,417	68	19,093	21,037
2019[g/]	55,100	NA	NA	NA	NA	NA
GOAL						Hatchery Production

a/ Based on Columbia River fall Chinook database (Preliminary Big Sheets), WDFW, unpublished. Adult Aged fish.

b/ Includes Select Area fisheries.

c/ Includes tributary catches.

d/ Commercial, ceremonial, and subsistence.

e/ Includes Cowlitz, Kalama, Toutle, Lewis, and Washougal rivers.

f/ Does not include strays to hatcheries above Bonneville Dam or fish trapped at Bonneville Dam.

g/ Preliminary estimates based on preseason expectations and inseason data.

TABLE B-16. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult lower river wild (LRW) stock fall Chinook.[a/]

Year or Ave.	Minimum Columbia R. Return	Catch			Escapement	
		Non-Indian Commercial[b/]	Sport[c/]	Treaty Indian[d/]	Natural[e/]	Hatchery
1981-1985	16,287	1,940	1,320	0	12,480	480
1986-1990	32,600	10,689	3,251	60	18,383	181
1991-1995	14,761	2,159	2,433	0	10,101	68
1996-2000	9,545	189	397	0	8,865	94
2001-2005	21,201	2,231	3,041	32	15,801	44
2006	18,105	2,546	2,801	0	12,758	0
2007	4,276	258	138	0	3,857	23
2008	7,120	0	937	0	6,183	0
2009	7,533	293	347	0	6,893	0
2010	10,898	0	237	0	10,661	0
2011	15,180	674	3,636	0	10,601	269
2012	12,112	1,880	766	0	9,407	59
2013	25,841	2,095	5,071	0	18,675	0
2014	25,774	767	2,107	0	22,900	0
2015	32,403	3,126	2,106	0	27,169	2
2016	13,034	906	2,713	0	9,414	1
2017	7,838	0	1,255	0	6,583	0
2018	8,270	0	1,052	0	7,218	0
2019[f/]	14,100	NA	NA	NA	NA	NA
GOAL					5,700[g/]	

a/ Based on Columbia River fall Chinook database (Preliminary Big Sheets), WDFW, unpublished. Adult Aged fish.

b/ Includes Mainstem Select Area fisheries.

c/ Includes tributary catches.

d/ Includes mainstem commercial, ceremonial and subsistence.

e/ Natural escapement includes Sandy and Lewis rivers.

f/ Preliminary estimates based on preseason expectations and inseason data.

g/ 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-17. Estimates of inriver run size, catch, and escapement in numbers of Columbia River adult Spring Creek Hatchery (SCH) stock fall Chinook.[a/]

		Lower River Catch			Catch Above Bonneville Dam		Escapement	
Year or Ave.	Minimum Columbia R. Return	Non-Indian Commercial[b/]	Sport[c/]	Bonneville Dam Count[d/]	Sport[e/]	Treaty Indian[f/]	Natural[g/]	Hatchery[h/]
1981-1985	63,342	9,747	580	49,780	c/	24,637	2,711	15,955
1986-1990	16,673	2,920	769	10,200	133	6,080	1,500	4,600
1991-1995	30,192	2,067	1,133	25,564	126	11,360	1,460	9,700
1996-2000	30,278	659	1,682	27,180	306	14,824	3,213	8,071
2001-2005	148,523	6,540	4,626	137,108	629	51,618	11,955	52,389
2006	27,917	1,774	195	21,197	459	13,400	1,931	9,889
2007	14,549	474	0	13,072	306	5,034	2,870	5,899
2008	93,860	7,100	3,326	82,331	200	43,933	2,765	33,722
2009	48,970	5,262	1,098	40,268	425	21,622	4,103	13,680
2010	130,767	11,236	2,650	114,666	649	58,824	4,843	45,279
2011	70,096	12,196	802	53,655	440	28,801	10,283	17,092
2012	56,947	7,983	3,067	44,076	319	14,223	5,063	26,255
2013	86,707	15,823	3,087	62,525	113	29,746	10,074	16,307
2014	127,000	22,813	4,753	81,030	783	54,740	16,655	24,112
2015	166,370	22,767	8,309	111,900	360	67,922	22,319	43,246
2016	44,554	8,745	1,834	31,663	543	19,256	5,064	9,037
2017	48,227	4,949	5,266	38,012	707	21,332	1,547	12,443
2018	28,861	2,786	2,603	23,472	33	10,581	336	12,512
2019[i/]	34,000	NA	NA	NA	NA	NA	NA	NA
GOAL								7,000[j/]

a/ Based on Columbia River fall Chinook database (Preliminary Big Sheets), WDFW, unpublished. Adult Aged fish. This stock may also be referred to as Bonneville Pool Hatchery (BPH).

b/ Includes Select Area fisheries.

c/ Includes Bouy 10, Mainstem, and tributary catch downstream of Bonneville Dam. Includes estimates for release mortalities. 1970-1988 catch includes upriver catch.

d/ Fall counting period begins August 1.

e/ Includes mainstem and Zone 6 tributary catch. 1970-1988 catch included in lower river sport fisheries.

f/ Includes mainstem commercial, ands ceremonial and subsistance catch.

g/ Includes White Salmon, Klickitat, and Little White Salmon rivers.

h/ Does not include strays to hatcheries below Bonneville Dam. Includes fall Chinook tules trapped at Bonneville Dam, 1986-1994 and 1998.

i/ Preliminary estimates based on inseason run updates.

j/ Escapement goal was changed from 8,200 fish to 7,000 fish, or 4,000 females, in 1994.

TABLE B-18. 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[a/]

1982-1985	10,275	1,675	100	4,925	c/	1,875	0	3,450
1986-1990	60,894	26,547	2,041	24,780	581	16,288	4,253	9,194
1991-1995	32,352	4,151	958	19,360	664	6,014	7,327	10,631
1996-2000	48,787	2,994	3,110	34,120	1,897	9,475	14,052	11,059
2001-2005	111,515	10,532	8,612	68,642	2,791	23,112	24,372	23,405
2006	80,470	4,577	669	31,402	2,898	22,705	12,501	19,745
2007	47,556	6,665	1,155	29,029	1,373	13,369	5,559	13,053
2008	76,297	10,349	4,025	44,210	1,623	23,260	6,813	21,409
2009	73,069	8,508	3,965	41,298	3,468	21,213	9,320	22,003
2010	78,937	3,719	3,390	50,878	2,570	22,009	7,904	33,391
2011	87,262	7,596	7,232	58,775	963	27,569	12,399	24,923
2012	63,363	5,841	3,850	44,306	7,490	15,682	12,860	17,052
2013	243,508	16,947	10,875	187,748	16,508	55,876	65,999	58,045
2014	203,734	20,902	9,527	154,971	16,874	81,605	34,996	34,075
2015	170,620	14,536	11,910	123,722	14,037	62,520	31,305	30,744
2016	88,299	9,460	4,526	59,300	9,476	158,579	19,290	15,806
2017	47,367	1,087	5,914	33,820	5,347	18,956	6,261	7,750
2018	36,009	440	951	27,972	7,623	14,858	5,646	6,354
2019[h/]	71,800	NA	NA	NA	NA	NA	NA	NA

a/ Based on Columbia River fall Chinook database (Preliminary Big Sheets), WDFW, unpublished. Adult Aged fish. The MCB stock includes Bonneville upriver brights (BUBs) and Pool upriver brights (PUBs). A portion of the BUB stock includes lower river brights (LRBs) that spawn naturally downstream of Bonneville Dam. In 2013, hatchery production of BUBs was discontinued and production shifted to PUB. Since 2018, the MCB stock has consisted of PUB stock and the minor LCB component.

b/ Mainstem and Select Areas downstream of Bonneville Dam.

c/ Mainstem and tributary downstream of Bonneville Dam. 1982-88 includes catch from upriver sport

d/ Mainstem and tributary between Bonneville and McNary dam (Zone 6). 1982-88 catch from upriver sport included in lower river sport catch.

e/ Mainstem and tributary between Bonneville and McNary dam (Zone 6). Includes commercial, ceremonial, and subsistence catch.

f/ Includes Little White Salmon, Klickitat, and Umatilla rivers.

g/ Includes Little White Salmon, Bonneville, Umatilla, and Klickitat hatcheries.

h/ Preliminary.

TABLE B-19. 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.[a/]

		Lower River Catch			Above Bonneville Catch							
Year or Ave.	Minimum Columbia R. Return	Non-Indian Commercial[b/]	Sport[c/]	Bonneville Dam Count	Sport[d/]	Treaty Indian[e/]	Deschutes River above/below Sheares Falls[f/]	McNary Dam Count[g/]	Upper Columbia[h/]	Total L. Granite Dam Count	SRW L. Granite Dam Count[i/]
1981-1985	111,873	13,880	3,020	94,120	c/	26,700	5,551	51,042	NA	585	450
1986-1990	291,407	61,499	11,169	222,337	5,454	100,379	7,081	107,252	NA	690	289
1991-1995	105,302	5,000	1,151	99,028	3,945	20,813	7,342	61,362	NA	903	473
1996-2000	153,790	2,720	6,052	145,362	4,803	36,318	11,745	69,929	58,513	2,349	759
2001-2005	305,482	11,837	11,611	282,285	10,484	46,846	13,274	146,873	108,019	11,830	4,008
2006	230,390	8,757	8,767	132,632	5,748	44,565	10,955	89,081	62,567	8,048	4,669
2007	114,065	2,833	5,606	105,626	5,254	18,878	6,361	57,268	34,201	10,197	3,742
2008	197,295	7,574	6,477	183,242	7,846	39,988	6,908	101,869	51,757	16,628	3,930
2009	212,047	11,601	9,749	190,695	7,561	58,616	6,429	104,544	62,428	15,167	4,977
2010	324,908	13,536	11,009	300,319	13,615	59,115	9,275	146,924	114,230	41,815	7,995
2011	322,233	22,215	19,641	280,377	14,531	80,288	17,117	161,191	93,510	25,248	8,778
2012	294,947	16,895	23,033	255,420	16,778	61,422	17,624	173,472	94,925	34,688	12,797
2013	784,116	47,636	34,181	702,503	33,224	162,964	18,068	454,991	305,445	56,565	21,124
2014	684,228	53,296	30,262	599,580	32,504	153,685	17,933	410,786	233,934	60,687	14,172
2015	795,915	38,375	48,015	706,440	40,516	159,717	17,074	396,580	323,276	59,300	16,212
2016	406,572	32,608	24,904	348,990	21,812	89,840	11,628	239,791	151,373	34,714	9,772
2017	297,123	12,671	32,654	266,283	14,770	77,280	4,943	156,927	96,096	26,430	6,966
2018	149,044	3,344	10,515	135,185	9,207	30,491	4,553	100,801	58,540	16,904	6,133
2019[j/]	181,500	NA	NA	NA	NA	NA	NA	128,862	86,239	NA	6,558
GOAL								60,000[k/]	39,625[l/]		

a/ Based on Columbia River fall Chinook database (Preliminary Big Sheets), WDFW, unpublished. Does not include hatchery URB Chinook reared and released below McNary Dam. Adult Aged fish except for McNary, Ice Harbor and Total Lower Granite Dam Counts which are based on adult-sized passage.

b/ Includes, Mainstem,Select Areas, and test fishing.

c/ Includes Bouy 10, Mainstem, and Select Areas. 1971-1988 includes above Bonneville sport catch.

d/ Includes tributary and mainstem catch between Bonneville and Priest Rapids dams and Hanford Reach. Does not include Snake Basin sport harvest. 1971-1988 above Bonneville sport catch included in Lower River sport catch.

e/ Includes Mainstem Commercial and C&S, plus Deschutes Subsistence.

f/ Deschutes esc. time series revised in 2010 to match Deschutes R. Chinook Spawner Esc. Goal using U.S. v. OR Tech. Advisory Comm. Data (Sharma et al. 2009).

g/ Conting period August 9-December 31. Data from Fish Passage Center. Does not separate out any MCB fish that stray above McNary.

h/ Upper Columbia escapement only: Yakima River, Hanford Reach, and Priest Rapids Dam count.

i/ Snake River wild; adjusted for stray hatchery fish. Includes wild fish hauled to Lyons Ferry Hatchery.

j/ Preliminary based on inseason run update.

k/ The U.S. v. Oregon parties managed for a McNary Dam esc. of 60,000 beginning in 2008. Starting in 1994, inriver fisheries were managed for ESA consultation standards.

l/ MSY spawning escapement objective adoped in FMP Amendment 16 in 2011.

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 or Ave.	Minimum Columbia R. Return	Lower River Catch		Bonneville Dam Count	Above Bonneville Catch			Minimum escapement (natural and hatchery)
		Non-Indian Commercial	Sport		Sport	Treaty Indian	Non-Treaty Tribal	
				Spring Chinook[b/]				
'81-'85	163,660	8,386	2,233	68,342	-	3,569	-	59,410
'86-'90	232,001	14,358	5,685	104,433	-	6,957	-	76,913
'91-'95	149,241	4,191	3,010	62,183	-	3,745	-	46,547
'96-'00	145,344	490	96	90,675	-	5,359	-	49,380
'01-'05	406,690	10,021	20,634	249,740	2,331	26,037	30	166,658
2006	223,000	5,238	7,087	126,158	1,564	8,401	-	78,109
2007	155,043	3,391	6,527	80,829	1,857	5,627	-	63,820
2008	221,367	6,392	20,312	151,893	2,625	21,391	-	104,246
2009	218,203	4,843	17,246	147,489	1,237	13,101	-	100,519
2010	465,720	12,581	29,735	277,390	5,789	42,954	13	197,728
2011	319,763	6,230	12,006	205,431	4,516	15,533	0	141,176
2012	295,232	7,121	14,122	186,448	3,597	17,701	1	131,984
2013	189,865	3,653	7,141	112,934	1,413	9,282	8	84,648
2014	311,641	5,398	16,272	224,946	5,627	24,703	37	145,854
2015	420,388	9,467	19,955	265,558	3,101	31,181	58	205,381
2016	275,792	4,708	12,767	172,614	2,480	17,066	35	124,730
2017	211,881	2,383	8,998	107,524	84	8,109	35	70,179
2018	177,814	1,192	7,489	108,045	1,345	10,892	0	65,404
2019[e/]	109,944	NA	NA	NA	NA	NA	NA	NA
				Summer Chinook[c/]				
'81-'85	16,709	55	0	16,654	-	973	-	10,010
'86-'90	21,036	71	8	20,957	-	902	-	14,563
'91-'95	12,984	30	15	12,939	-	227	-	10,748
'96-'00	17,957	5	29	17,924	-	317	96	13,902
'01-'05	70,287	611	1,264	68,412	265	4,624	2,202	66,711
2006	77,573	4,828	4,926	67,819	295	16,319	1,556	61,821
2007	37,035	1,122	2,214	33,699	148	5,375	1,364	28,222
2008	55,532	1,429	2,140	51,963	997	9,029	2,049	38,171
2009	53,881	2,546	2,341	48,994	265	11,650	1,375	44,295
2010	72,116	4,740	2,738	64,638	886	15,799	3,572	47,220
2011	80,574	5,004	5,576	69,994	389	20,645	1,263	44,432
2012	58,300	1,715	3,281	53,304	296	7,824	3,423	52,184
2013	67,603	1,987	2,058	63,508	324	13,397	3,692	68,380
2014	78,254	2,788	2,385	72,871	453	19,389	3,724	77,982
2015	126,882	4,043	6,152	116,657	786	37,763	10,694	88,691
2016	91,048	3,050	3,706	84,192	565	20,515	4,199	79,253
2017	68,204	47	3,853	64,144	262	16,328	1,736	56,265
2018	42,120	24	1,140	40,906	134	9,498	1,336	38,816
2019[e/]	34,619	NA	NA	NA	NA	NA	NA	NA

TABLE B-20. Estimates of minimum inriver run size and catch in numbers of adult spring, summer, and fall Chinook from the Columbia River[a/]. (Page 2 of 3)

Year or Ave.	Minimum Columbia R. Return	Lower River Catch		Bonneville Dam Count	Above Bonneville Catch			Minimum escapement (natural and hatchery)
		Non-Indian Commercial	Sport		Sport	Treaty Indian	Non-Treaty Tribal	
				Fall Chinook[d/]				
'81-'85	306,886	52,511	9,486	147,840	NA	53,688	NA	115,123
'86-'90	601,513	195,448	34,650	257,317	2,467	123,462	NA	133,477
'91-'95	238,127	15,421	10,673	143,952	4,735	38,424	NA	94,866
'96-'00	291,417	8,604	16,480	206,662	7,006	60,689	NA	112,780
'01-'05	705,342	40,323	39,694	488,034	13,904	121,796	NA	358,476
2006	415,201	23,573	21,881	185,231	9,105	80,906	NA	180,984
2007	213,135	11,538	13,022	147,727	6,933	37,281	NA	107,278
2008	436,130	30,724	21,308	309,783	9,669	107,683	NA	194,978
2009	418,357	35,923	26,454	272,261	11,454	101,451	NA	195,205
2010	648,465	43,472	30,332	465,863	16,834	139,949	NA	342,324
2011	603,732	58,098	48,559	392,807	15,934	136,882	NA	287,511
2012	512,347	48,939	47,078	343,802	24,587	91,784	NA	269,748
2013	1,244,949	93,079	72,635	952,776	49,845	249,159	NA	623,251
2014	1,142,641	110,588	62,997	835,581	50,161	290,165	NA	517,889
2015	1,294,013	93,950	85,482	942,062	54,913	290,201	NA	652,807
2016	634,319	62,769	45,395	439,953	31,831	267,753	NA	315,641
2017	465,182	26,624	53,920	338,115	20,824	117,766	NA	209,719
2018	275,147	11,918	22,538	186,629	16,863	55,998	NA	152,193
2019[e/]	356,500	NA	NA	NA	NA	NA	NA	NA
				Total Chinook				
'81-'85	487,255	60,952	11,719	232,836	NA	58,231	NA	184,543
'86-'90	854,550	209,878	40,343	382,707	2,467	131,321	NA	224,953
'91-'95	400,352	19,641	13,698	219,074	4,735	42,396	NA	152,161
'96-'00	454,718	9,099	16,604	315,261	7,006	66,365	96	176,062
'01-'05	1,182,320	50,955	61,593	806,186	16,499	152,456	2,232	591,844
2006	715,774	33,639	33,894	379,208	10,964	105,626	1,556	320,914
2007	405,213	16,051	21,763	262,255	8,938	48,283	1,364	199,320
2008	713,029	38,545	43,760	513,639	13,291	138,103	2,049	337,395
2009	690,441	43,312	46,041	468,744	12,956	126,202	1,375	340,019
2010	1,186,301	60,793	62,806	807,891	23,509	198,702	3,585	587,272
2011	1,004,069	69,332	66,141	668,232	20,839	173,060	1,263	473,119
2012	865,879	57,775	64,480	583,554	28,480	117,309	3,424	453,916
2013	1,502,417	98,719	81,833	1,129,218	51,582	271,838	3,700	776,279
2014	1,532,537	118,774	81,654	1,133,398	56,241	334,257	3,761	741,725
2015	1,841,283	107,460	111,589	1,324,277	58,800	359,145	10,752	946,879
2016	1,001,159	70,527	61,867	696,759	34,877	305,334	4,234	519,624
2017	745,267	29,054	66,771	509,783	21,170	142,203	1,771	336,163
2018	495,081	13,134	31,167	335,580	18,342	76,388	1,336	256,413
2019[e/]	501,063	NA	NA	NA	NA	NA	NA	NA

TABLE B-20. Estimates of minimum inriver run size and catch in numbers of adult spring, summer, and fall Chinook from the Columbia River[a/]. (Page 3 of 3)

a/ As reported in Appendix B tables. Spring Chinook data in tables B-12 and B-13, Summer Chinook data in B-14, Fall Chinook data in Tables B-15-19.

b/ Includes lower river, Willamette, and upriver spring Chinook, which also includes Snake River summer Chinook. Excludes Select Area spring Chinook.

c/ Upper Columbia Summer Chinook destined for areas upstream of the Snake River.

d/ Includes LRH,LRW,SCH,MCB and URB stocks. Excludes Select Area Brights (SAB).

e/ Preliminary.

TABLE B-21. Estimates of minimum inriver run size, catch, and escapement in thousands of adult coho entering the Columbia River.[a/]

		Below Bonneville Dam					Above Bonneville Dam		
		Lower River Catch			Lower River Escapement				
			Recreational					Mainstem	
Year or Average	Minimum Inriver Run Size	Commercial	Buoy 10	Mainstem[b/]	Hatchery[c/]	Tributary Dam Counts[d/]	Bonneville Dam Counts[e/]	Commercial Treaty Catch	Zone 6 Escapement[f/]
1981-1985	305.3	132.1	30.6	11.4	101.0	4.6	31.9	2.6	29.2
1986-1990	705.0	392.2	82.3	13.9	147.6	5.8	46.3	5.5	40.7
1991-1995	315.1	115.8	55.9	10.7	96.0	3.7	23.6	2.0	21.6
1996-2000	259.4	63.4	11.7	16.0	126.6	2.4	42.5	2.3	40.3
2001-2005	639.1	177.6	42.9	30.6	221.9	6.4	134.5	5.6	128.9
2006	409.7	63.4	3.7	16.5	191.1	9.5	102.1	8.1	94.1
2007	349.0	40.3	8.4	24.2	161.0	10.5	92.5	8.0	84.5
2008	520.8	60.4	8.6	43.1	240.9	6.2	135.5	21.6	113.9
2009	760.2	124.2	48.1	40.5	260.4	32.3	244.9	8.9	236.0
2010	466.5	76.3	8.0	23.9	189.3	22.3	102.7	7.1	95.6
2011	378.0	62.3	7.6	18.0	108.3	8.7	146.5	33.3	113.2
2012	152.4	17.1	7.4	4.7	41.9	9.1	55.0	6.4	48.6
2013	252.7	48.4	7.6	10.7	81.9	21.6	59.6	8.8	50.8
2014	1,019.4	237.3	57.7	52.2	292.2	32.2	279.7	39.2	240.5
2015	169.5	31.1	36.9	7.9	43.4	4.6	37.4	2.3	35.1
2016	203.6	31.4	9.2	10.8	84.3	4.8	42.0	5.3	36.7
2017	235.9	37.8	18.8	11.1	60.0	12.5	75.9	7.0	68.9
2018	137.9	11.4	6.8	4.7	43.9	6.0	40.9	3.6	37.3
2019[g/]	210.9	21.3	22.8	5.8	50.9	12.2	74.0	3.9	70.0
GOAL					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.[a/]

Year	Angler Trips	Catch[b/]		Catch Per Trip
		Chinook	Coho	
1982-1985	30,996	4,040	30,547	0.97
1986-1990[c/d/]	130,633	22,107	82,910	0.78
1991-1995[e/]	79,475	5,689	55,895	0.50
1996-2000	45,171	7,256	11,682	0.40
2001-2005	84,634	14,754	42,952	0.60
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	52,300	6,807	7,980	0.28
2011	49,409	10,919	7,614	0.38
2012	65,070	18,550	7,385	0.40
2013	65,767	22,594	7,620	0.46
2014	107,522	26,788	57,744	0.79
2015	108,319	36,535	36,920	0.68
2016	94,950	17,780	9,182	0.28
2017	93,547	28,398	18,834	0.50
2018	67,318	11,620	6,761	0.27
2019[f/]	76,977	11,274	22,775	0.44

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/ Includes adults and jacks as determined by CWT analysis.

c/ 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 quota.

d/ 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.

e/ 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.

f/ 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 Gillnet Catch[a/]	Terminal Catch Gillnet	Terminal Catch Sport[b/d]	Spawning Escapement Natural[c/]	Spawning Escapement Hatchery	Terminal Run Size[d/]
1981-1985	672	7,675	589	1,588	5,398	14,906
1986-1990	2,167	18,483	1,578	5,576	22,458	47,805
1991-1995	1,121	28,252	2,823	2,819	17,086	50,981
1996-2000	-	12,449	2,182	2,564	9,168	26,363
2001-2005	76	6,604	3,323	2,288	15,588	27,803
2006	-	12,318	5,551	3,739	24,209	45,817
2007	-	4,108	2,579	1,907	13,400	21,994
2008	-	3,595	2,988	1,544	14,891	23,018
2009	-	6,929	4,623	2,345	19,831	33,728
2010[e/]	81	8,032	3,309	4,499	21,565	37,405
2011[e/]	778	18,129	8,348	3,811	21,838	52,126
2012[e/]	932	8,762	5,933	2,677	14,134	31,506
2013[e/]	1,080	12,886	5,815	1,904	14,483	35,088
2014[e]	1,178	12,838	7,368	2,075	18,367	40,648
2015[e/]	1,159	3,681	12,184	2,824	26,584	45,273
2016[e/]	713	2,429	7,869	1,887	12,898	25,083
2017[e/]	405	2,537	6,663	3,078	19,700	31,978
2018[e/f/]	347	1,187	4,669	2,853	18,271	26,980
2019[e/f/]	247	1,299	NA	NA	NA	NA
GOAL				3,393[g/]	9,800[h/]	

a/ Non-local gillnet is catch prior to Aug. 16. In 2010-13, 42% were considered non-local. In 2014, 28% were non-local based on genetic data samples. In 2015, non-local stock contribution based on genetic sampling throughout the duration of the commercial fishery.

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/ To calculate total gillnet catch, combine Non-local Stocks Gillnet Catch (column 1) and Terminal Catch Gillnet (column 2).

f/ Preliminary.

g/ MSY spawning escapement objective established in FMP Amendment 16; WDFW goal is 4,350.

h/ WDFW goal; not an FMP goal.

TABLE B-24. Willapa Bay coho terminal run size, catch, and spawning escapement in numbers of fish.

	Terminal Catch		Spawning Escapement		
Year or Average	Gillnet	Sport[a/]	Natural[b/]	Hatchery[c/]	Terminal Run Size[d/]
1976-1980	15,031	2,842	5,800	14,328	38,001
1981-1985	39,007	2,181	3,567	26,640	69,968
1986-1990	68,969	2,591	NA	35,811	107,371
1991-1995	34,255	2,802	4,582	27,205	65,178
1996-2000	13,756	2,065	21,167	22,531	59,519
2001-2005	44,656	4,695	51,114	49,171	149,635
2006	19,948	811	14,301	7,437	42,497
2007	8,189	955	18,310	10,345	37,799
2008	16,692	1,227	18,561	10,832	47,312
2009	75,095	6,461	50,650	21,759	153,965
2010	29,072	5,053	84,564	34,387	153,076
2011	47,985	5,717	31,737	22,022	107,461
2012	25,783	5,052	20,412	14,609	65,856
2013	11,560	4,235	26,303	13,490	55,588
2014	77,475	21,221	59,569	83,059	241,324
2015	1,926	11,096	17,086	21,297	51,405
2016	19,324	5,247	30,667	21,868	77,106
2017	4,615	3,210	10,878	6,459	25,162
2018[e/]	7,253	2,181	14,920	12,542	36,896
2019[e/]	8,200	NA	NA	NA	NA
GOAL			17,200[f/]	6,100[f/]	

a/ Adults. Sport catch since 1991 includes marine areas within Williapa 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 hatchery racks. Estimates from 1996 to present include both wild and naturally spawing hatchery fish.

c/ Hatchery rack number includes fish released upstream.

d/ Does not include natural spawning escapement between 1984 and 1994.

e/ Preliminary.

f/ Willapa Bay Coho were added to the FMP in 2011; the STT finalized the new FMP goal for use beginning in 2016.

TABLE B-25. Grays Harbor Chinook terminal catch, spawning escapement, and run size in numbers of fish. (Page 1 of 2)

Year or Average	Terminal Catch: Early Non-local Catch	Terminal Catch: Non-Indian Gillnet	Terminal Catch: Treaty Indian Gillnet	Terminal Catch: Chehalis Tribal Gillnet	Terminal Catch: Sport[a/]	Spawning Escapement: Natural[b/]	Spawning Escapement: Hatchery[c/]	Terminal Run Size[d/]
SPRING Chinook								
1981-1985	-	-	-	57	5	924	-	963
1986-1990	-	-	e/	143	6	1,875	-	2,024
1991-1995	-	-	0	94	15	1,566	-	1,675
1996-2000	-	-	36	165	100	3,146 [f/]	-	3,447
2001-2005	-	-	46	249	132	2,905	-	3,332
2006	-	-	5	249	128	2,481	-	2,863
2007	-	-	5	205	54	651	-	915
2008	-	-	2	0	0	995	-	997
2009	-	-	18	0	0	1,132	-	1,150
2010	-	-	0	0	0	3,495	-	3,495
2011	-	-	10	0	0	2,563	-	2,573
2012	-	-	6	201	66	878	-	1,151
2013	-	-	31	NA	148	2,459	-	2,638
2014	-	-	14	NA	62	1,583	-	1,659
2015	-	-	32	156	36	1,841	-	2,065
2016	-	-	7	104	19	926	-	1,056
2017[g/]	-	-	1	6	0	1,384	-	1,391
2018[g/]	-	-	0	26	7	493	-	526
2019[g/]	-	-	0	1	0	1,185	-	1,186
GOAL						1,400		

TABLE B-25. Grays Harbor Chinook terminal catch, spawning escapement, and run size in numbers of fish. (Page 2 of 2)

		Terminal Catch				Spawning Escapement		
Year or Average	Early Non-local Catch	Non-Indian Gillnet[j/]	Treaty Indian Gillnet	Chehalis Tribal Gillnet	Sport[a/]	Natural[b/]	Hatchery[c/]	Terminal Run Size[d/]
FALL Chinook								
1981-1985	602	964	3,524	465	268	10	742	5,973
1986-1990	694	4,122	10,414	597	1,340	20,730	1,319	38,522 [h/i/]
1991-1995	206	5,000	7,750	901	3,794	14,276	3,006	34,728 [h/i/]
1996-2000	170	1,048	4,010	74	2,977	14,134	2,184	24,426 [h/i/]
2001-2005	8	684	2,291	10	2,687	18,534	761	24,968 [i/]
2006	0	256	3,738	0	1,629	17,428	1,941	24,992 [i/]
2007	0	529	2,472	19	1,698	13,117	583	18,418 [i/]
2008	0	779	1,878	0	0	15,391	500	18,548 [i/]
2009	0	1,231	2,485	0	860	9,290	666	14,532 [i/]
2010	0	1,638	3,403	0	2,005	18,158	650	25,854 [i/]
2011	0	2,298	6,402	0	3,086	22,870	1,363	36,019 [i/]
2012	0	1,731	3,988	3	4,490	14,032	862	25,106 [i/]
2013	0	103	2,875	0	3,618	12,503	701	19,800 [i/]
2014	0	73	5,094	2	1,124	11,893	1,676	19,862
2015	0	166	10,496	0	3,644	17,305	2,182	33,793
2016	0	36	2,060	2	2,837	11,248	990	17,173
2017[g/]	0	107	3,578	0	2,781	17,145	2,404	25,939
2018[g/]	0	78	2,608	0	3,685	20,741	1,225	28,334
2019[g/]	0	98	2,374	0	NA	NA	1,295	NA
GOAL						13,326[i/]		

a/ Age-3 and older.

b/ Age-3 and older, including hatchery fish spawning naturally.

c/ Includes fish taken from the spawning grounds 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/ In 1996 and 1997 WDFW not able to differentiate spawning time and believes this includes fall Chinook.

g/ Preliminary.

h/ Rec. catch estimates by WDFW reflect a catch record card bias correction factor of 0.833. Quinault Indian Nation does not believe this factor is appropriate. 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.

i/ November 2014: Council adopted new spawning escapement objective. The SMSY estimate of 13,326 was accepted as an escapement goal by the Pacific Salmon Commission, PFMC and the co-managers. Previous objectives used for preseason planning were 1,400 (spring) and 14,600 (fall).

j/ Includes non-harvest mortalities.

TABLE B-26. Grays Harbor coho terminal catch, spawning escapement, and run size estimates in numbers of fish.

Year or Average	Terminal Catch: Non-Indian Gillnet	Terminal Catch: Treaty Indian Gillnet	Terminal Catch: Chehalis Tribal Gillnet	Terminal Catch: Sport[a/]	Spawning Escapement[b/]: Natural	Spawning Escapement[b/]: Hatchery	Terminal Run Size[c/]: Natural	Terminal Run Size[c/]: Hatchery	Terminal Run Size[c/]: Total[d/]
1981-1985	5,299	15,614	2,865	5,012	36,847	17,253	49,162	32,882	82,044
1986-1990	7,715	30,109	1,817	5,355	44,116	29,963	58,835	60,298	119,133
1991-1995	12,502	29,166	2,609	10,503	35,826	31,304	46,949	76,403	123,352
1996-2000	3,535	18,701	635	6,829	38,467	27,673	42,897	53,683	96,580
2001-2005	5,006	16,527	1,155	13,349	74,821	60,708	82,110	90,248	172,358
2006	649	8,685	127	2,151	17,767	17,223	21,779	25,142	46,921
2007	1,687	8,926	1,108	4,450	25,121	15,236	26,833	30,080	56,913
2008	7,766	10,204	869	3,266	34,054	20,039	41,999	34,808	76,807
2009	567	28,513	2,519	16,288	69,222	55,864	80,867	93,334	174,201
2010	4,090	25,163	1,542	12,455	102,237	74,069	112,930	107,644	220,574
2011	3,517	28,267	742	14,569	64,403	23,757	80,488	55,886	136,374
2012	10,279	30,670	2,470	18,069	66,836	22,301	94,191	58,048	152,239
2013	5,935	21,957	2,515	21,246	56,785	26,732	73,263	62,936	136,198
2014	5,504	67,252	7,322	28,595	105,039	59,840	140,428	134,341	274,769
2015	1,540	12,544	610	8,172	21,278	9,646	28,953	24,825	53,778
2016	232	2,063	891	3,868	38,595	24,464	33,284	36,248	69,532
2017	1,170	10,554	955	10,721	26,907	22,617	36,260	36,646	72,906
2018	802	8,950	177	4,087	49,622	16,199	57,980	22,043	80,023
2019[e/]	2,000	8,207	NA	NA	NA	NA	NA	NA	NA
GOAL					35,400 [f/]				

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 brood stock.

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.

f/ Council adopted a new Smsy of 24,426 under FMP Amendment 16. Previously, the escapement goal of 35,400 was designated as the 'conservation objective -- failure to meet this would trigger a 'conservation alert'. The co-manager escapement goal and conservation objective remains 35,400. The GOAL listed under the natural escapement time series in Table B-26 should be 35,400. The Smsy adopted by the PFMC in amendment 16 was a reference point for assessing status determination criteria.

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[a/]	Fall Chinook[a/]	Chum	Sockeye
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
1996-2000	29	4,446	1,536	1,458
2001-2005	60	6,848	2,220	12,235
2006	16	7,044	862	8
2007	20	2,126	1,173	1
2008	10	3,682	1,171	0
2009	43	5,455	1,156	1,441
2010	8	4,521	2,037	1,856
2011	26	5,998	7,421	9,177
2012	15	5,090	3,426	1,193
2013	20	7,148	3,834	969
2014	11	12,349	1,250	4,313
2015	6	11,574	4,879	16,639
2016	41	5,137	7,294	4,312
2017	59	6,813	2,986	3,524
2018	1	4,420	3,852	3
2019[b/]	0	5,232	1,677	0

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[a/]			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence	River Sport	Natural	Hatchery	Natural	Hatchery	Total
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
1996-2000	9,617	--	--	8,067	7,566	12,608	12,353	24,961
2001-2005	21,600	--	--	9,262	16,945	15,147	32,368	47,515
2006	9,785	336	325	1,107	3,198	3,429	11,023	14,452
2007	11,498	415	412	2,999	3,333	6,376	12,258	18,634
2008	25,227	961	978	14,920	14,959	26,544	29,774	56,318
2009	54,882	2,036	2,047	27,303	29,190	48,324	66,095	114,419
2010	41,726	1,449	1,450	17,286	15,433	34,209	41,680	75,889
2011	38,431	1,481	1,570	5,814	2,738	23,538	24,474	48,012
2012	19,166	656	798	10,018	5,176	21,299	14,171	35,470
2013	20,477	942	1,047	2,973	1,834	12,240	14,209	26,449
2014	50,299	2,061	2,268	29,720	16,024	52,606	46,326	98,932
2015	9,556	541	802	11,631	7,346	16,760	13,083	29,843
2016	37,258	1,360	1,522	10,523	14,778	25,347	38,904	64,251
2017	33,832	1,333	1,544	23,174	16,384	41,864	33,861	75,725
2018	12,071	508	549	12,402	6,594	20,073	11,742	31,815
2019[b/]	4,350	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[a/]	Natural[b/]	Hatchery	Natural	Hatchery	Total
1981-1985	243	20	27	890	52	1,164	74	1,209
1986-1990	646	46	67	1,527	-	2,287	-	2,287
1991-1995	64	5	10	610	-	689	-	690
1996-2000	36	17	70	486	-	559	-	559
2001-2005	-	13	-	475	-	488	-	488
2006	-	6	-	330	-	336	-	336
2007	-	6	-	352	-	358	-	358
2008	-	3	-	305	-	305	-	305
2009	-	0	-	495	-	495	-	495
2010	-	0	-	259	-	259	-	259
2011	-	0	-	373	-	373	-	373
2012	-	0	-	760	-	760	-	760
2013	-	<10	-	520	-	520	-	520
2014[e/]	75	<10	-	377	-	452	-	452
2015[c/e/]	44	<10	-	532	-	576	-	576
2016[c/e/]	73	<10	-	704	-	777	-	777
2017[c/e/]	90	<10	-	825	-	915	-	915
2018[c/]	25	<10	-	484	-	508	-	508
2019[c/]	-	<5	-	NA	-	NA	-	NA
GOAL				700[d/]				

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.

e/ A fishery targeting early fall coho at the tail end of August in weeks 33 and 34 caught a number of early Chinook.

TABLE B-30. Estimated inriver run size, catch, and escapement of Queets River fall Chinook in numbers of fish.

	Terminal Catch			Escapement	Terminal Run Size		
Average	Gillnet	Ceremonial & Subsistence	River Sport[a/]	Natural[b/]	Natural [c/]	Indicator [d/]	Total
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
1996-2000	1,006	20	188	3,324	4,092	567	4,659
2001-2005	1,690	82	279	4,077	4,505	1,610	6,115
2006	1,079	57	71	3,059	3,262	1,004	4,266
2007	634	20	74	872	1,288	307	1,595
2008	1,020	41	0	3,105	3,510	698	4,208
2009	1,522	65	209	3,135	4,062	856	4,918
2010	1,722	81	169	4,031	4,250	1,751	6,001
2011	2,327	83	412	3,857	4,877	1,772	6,649
2012	2,722	86	296	3,707	5,835	922	6,757
2013	1,943	63	369	2,582	4,070	887	4,957
2014	1,180	73	117	3,820	3,099	2,059	5,158
2015	1,314	102	567	5,313	4,825	2,627	7,452
2016	804	54	9	2,915	3,110	778	3,888
2017	1,568	59	20	2,702	3,582	880	4,462
2018	837	31	20	2,095	2,365	739	3,104
2019[e/]	1,387	NA	NA	NA	NA	NA	NA
GOAL				2,500[f/]			

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 fish of natural origin and hatchery origin (indicator stock) on the spawning grounds. 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. Brood stock 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[a/]			Escapement[c/]			Terminal Run Size[c/]			
	Gillnet	Ceremonial & Subsistence	River Sport[b/]	Natural	Supplemental	Hatchery	Natural	Supplemental	Hatchery	Total[d/]
1981-1985	2,385	20	104	5,460	-	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[e/]	4,420	211	273	4,945	1,025	3,455	5,981	1,169	6,928	13,843
1996-2000	7,114	509	173	5,502	1,275	3,643	6,243	1,813	8,496	16,189
2001-2005[e/f/]	15,903	1,044	942	12,345	977	5,512	15,723	1,368	17,995	35,086
2006[f/]	6,233	312	46	5,612	0	2,946	6,400	0	7,100	13,500
2007	2,261	187	153	4,600	0	1,954	6,003	0	2,901	8,905
2008	4,738	359	563	4,629	0	3,461	6,282	0	5,929	12,211
2009	25,004	1,677	865	9,204	0	14,151	16,557	0	30,511	47,068
2010	21,138	1,415	957	11,261	0	10,326	18,154	0	21,676	39,830
2011	16,641	1,229	1,491	8,588	0	12,887	13,477	0	20,190	33,668
2012	6,118	370	527	4,285	0	1,090	7,712	0	3,289	11,001
2013	4,519	522	1,285	5,684	0	9,680	8,019	0	11,801	19,820
2014	15,481	1,148	1,625	7,558	0	12,271	10,501	0	23,210	33,711
2015	2,268	215	300	2,028	0	3,315	2,201	0	5,296	7,496
2016	6,822	564	440	5,156	0	6,985	5,653	0	12,956	18,608
2017	7,583	669	111	5,232	0	9,947	6,469	0	15,381	21,851
2018	3,308	241	184	2,631	0	2,261	2,968	0	3,504	6,472
2019[g/]	2,560	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/ In 2004, 2005 and 2006 escapement estimates are from non-standard methods due to poor survey conditions during the coho spawning season.

g/ Preliminary.

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[a/]							Escapement		Terminal Run Size		
	Gillnet			Ceremonial & Subsistence			River Sport[b/]					
	Natural	Hatchery	Total	Natural	Hatchery	Total		Natural	Hatchery	Natural	Hatchery	Total
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
1996-2000	NA	NA	285	--	--	33	192	1,181	23	1,631	96	1,727
2001-2005	NA	NA	348	--	--	30	159	1,566	0	1,976	115	2,091
2006	NA	NA	576	--	--	37	109	904	0	1,061	571	1,632
2007	NA	NA	760	--	--	68	136	810	0	1,023	592	1,615
2008	22	227	249	10	40	50	7	671	0	703	274	977
2009	30	106	136	3	2	5	12	880	2	913	122	1,035
2010	24	83	107	0	0	0	6	828	0	852	89	941
2011	51	25	76	7	3	10	22	827	0	885	50	935
2012	135	263	398	9	11	20	36	915	1	1,059	311	1,370
2013	117	415	532	6	17	23	65	750	0	873	497	1,370
2014	67	264	331	8	20	28	0	744	0	819	284	1,103
2015	17	55	72	9	5	14	0	1,070	0	1,096	60	1,156
2016	4	2	6	10	16	26	0	1,144	0	1,158	18	1,176
2017	7	39	46	8	12	20	0	1,364	0	1,379	51	1,430
2018	15	43	58	--	--	34	18	793	0	808	61	869
2019[c/]	9	12	21	2	0	2	NA	NA	0	NA	NA	NA
GOAL								900[d/]				

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); begining in 2008, all Chinook must be marked with a healed adipose fin clip. Sport fishery closed to retention of wild adult spring/summer Chinook through August 31in 2001, 2002, and every year since 2008.

c/ Preliminary.

d/ 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[a/]	Natural[b/]	Hatchery	Natural[b/]	Hatchery	Total
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
1996-2000	759	29	303	2,545	0	3,611	25	3,636
2001-2005	942	30	316	3,217	31	4,350	155	4,505
2006	586	30	204	1,535	0	2,336	19	2,355
2007	660	30	192	1,556	0	2,427	11	2,438
2008	659	0	278	2,999	0	3,911	25	3,936
2009	553	0	134	2,081	0	2,747	21	2,768
2010	342	0	297	2,599	0	3,204	34	3,238
2011	528	0	400	1,293	0	2,163	58	2,221
2012	929	10	237	1,937	0	3,014	99	3,113
2013	1,683	10	477	1,269	0	3,297	142	3,439
2014	658	10	144	1,933	0	2,664	81	2,745
2015	493	11	198	1,795	0	2,439	58	2,497
2016	137	3	47	2,831	0	3,012	6	3,018
2017[c/]	518	20	223	1,808	0	2,547	22	2,569
2018[c/]	139	0	94	2,478	0	2,708	3	2,711
2019[c/]	768	0	NA	NA	0	NA	NA	NA
GOAL				1,200[d/]				

a/ Recreational catch of age-3 and older fish.

b/ Includes fish taken for hatchery brood stock.

c/ Preliminary.

d/ 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[a/]			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence	River Sport[b/]	Natural[c/]	Hatchery	Natural[c/]	Hatchery	Total
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
1996-2000[d/]	1,069	28	171	4,406	0	5,518	159	5,678
2001-2005[e/]	2,796	28	451	7,094	831	8,931	1,437	10,368
2006	1,313	30	108	1,282	0	2,267	466	2,733
2007	1,757	40	305	3,072	0	5,120	54	5,174
2008	1,788	4	204	2,461	67	4,237	220	4,457
2009	4,294	0	505	6,595	0	10,709	685	11,394
2010	2,638	0	515	8,231	0	10,916	468	11,384
2011	3,418	0	1,210	8,043	0	12,463	208	12,671
2012	2,706	10	444	4,072	0	7,106	126	7,232
2013	4,830	20	1,093	2,899	0	8,609	233	8,842
2014	3,879	20	432	4,565	0	8,656	240	8,896
2015	579	10	253	1,794	0	2,609	27	2,636
2016[f/]	297	2	40	5,009	0	5,324	24	5,348
2017[f/]	1,766	20	885	4,478	0	6,981	168	7,149
2018[f/]	560	0	408	2,463	0	3,395	36	3,431
2019[f/]	1,485	1	NA	NA	0	NA	NA	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 estimate include fish taken for hatchery brood stock.

d/ In 1997: Recreational fishermen were limited to Chinook only. Release of adult coho required. Tribal net fishery used large mesh to minimize coho impacts.

e/ In 2002: 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		
	Gillnet	Ceremonial & Subsistence[a/]	River Sport[b/]	Natural[c/]	Hatchery[d/]	Natural[c/]	Hatchery[d/]	Total
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
1996-2000	213	50	239	1,072	299	1,272	585	1,857
2001-2005	296	41	377	1,083	925	1,220	1,498	2,717
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	483	30	192	646	722	772	1,301	2,073
2010	567	0	233	815	880	941	1,554	2,495
2011	599	41	659	587	696	823	1,759	2,582
2012	880	20	640	785	437	881	1,881	2,762
2013	1,204	0	803	968	528	1,123	2,380	3,503
2014	714	0	481	625	342	832	1,330	2,162
2015	1,075	0	556	783	505	995	1,924	2,919
2016	1,374	15	480	871	745	1,142	2,343	3,485
2017	1,239	60	929	1,097	521	1,362	2,484	3,846
2018	1,426	10	820	990	602	1,203	2,645	3,848
2019[e/]	1,671	35	743	1,015	823	1,152	3,135	4,287
GOAL				1,200[f/]				

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 separtately.

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/ 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[a/]	River Sport[b/]	Natural[c/]	Hatchery[d/]	Natural[c/]	Hatchery[d/]	Total
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
1996-2000	831	90	338	5,307	0	6,566	0	6,566
2001-2005	1,602	80	547	5,768	0	8,196	13	8,209
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	2,434	0	352	3,130	0	5,874	42	5,916
2010	1,815	0	553	4,635	0	6,985	18	7,003
2011	1,972	3	868	3,963	0	6,765	41	6,806
2012	2,842	0	358	3,518	0	6,682	36	6,718
2013	2,001	0	1,024	3,901	0	6,877	49	6,926
2014	4,213	0	423	2,782	0	7,322	96	7,418
2015	2,387	0	868	3,440	0	6,676	19	6,695
2016	1,328	0	29	3,654	0	5,005	6	5,011
2017	3,999	0	396	3,604	0	7,957	42	7,999
2018[e/]	2,042	8	735	3,937	0	6,707	15	6,722
2019[e/]	1,532	0	844	7,256	0	9,627	5	9,632
GOAL				3,000[f/]				

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/ 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[a/]			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence[b/]	River Sport[c/]	Natural[d/]	Hatchery[e/]	Natural[d/]	Hatchery[e/]	Total
				SUMMER COHO				
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
1996-2000	1,213	50	173	638	3,574	830	4,817	5,648
2001-2005	4,040	40	379	993	7,436	1,897	10,992	12,888
2006	2,146	0	141	621	1,832	1,549	3,191	4,740
2007	645	0	200	805	4,778	1,029	5,399	6,428
2008	1,313	0	198	706	6,419	971	7,665	8,636
2009	3,227	0	233	1,337	8,085	2,210	10,672	12,882
2010	890	0	58	273	1,644	564	2,304	2,868
2011	757	0	220	1,654	3,800	2,069	4,362	6,431
2012	430	0	251	672	1,588	789	2,152	2,941
2013	1,028	0	331	451	2,504	990	3,324	4,314
2013	4,299	0	934	688	5,085	2,320	8,686	11,006
2013	444	0	274	668	4,570	876	5,080	5,956
2013	2,462	0	144	772	2,116	1,669	3,825	5,494
2013	4,443	0	845	688	7,245	1,640	11,581	13,221
2018	1,721	0	669	233	624	1,060	2,177	3,237
2019[g/]	619	18	553	499	815	882	1,622	2,504
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[a/]			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence[b/]	River Sport[c/]	Natural[d/]	Hatchery[e/]	Natural[d/]	Hatchery[e/]	Total
				FALL COHO				
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
1996-2000[f/]	8,407	100	1,336	11,009	11,515	14,596	17,783	32,379
2001-2005	21,801	50	38[f/]	4,623	2,645	5,021	2,791	7,812
2006	9,779	0	291	5,210	4,450	12,266	7,464	19,730
2007	10,152	0	826	6,252	5,423	10,942	11,711	22,653
2008	15,722	10	511	6,947	12,098	12,979	22,309	35,288
2009	37,112	0	4,620	7,863	23,373	24,653	48,315	72,968
2010	27,127	10	3,537	9,837	23,325	23,901	39,935	63,836
2011	21,983	11	3,955	8,070	22,487	20,887	35,634	56,521
2012	11,051	1	1,317	5,846	2,276	15,421	5,070	20,490
2013	12,611	0	4,370	7,072	5,111	18,125	11,039	29,164
2014	27,427	0	5,736	7,425	12,389	23,528	29,449	52,977
2015	5,291	0	2,706	2,571	3,595	6,978	7,185	14,163
2016	5,678	0	326	9,630	16,332	11,676	20,290	31,966
2017	15,629	0	2,599	7,474	18,299	13,034	30,967	44,001
2018	3,840	7	1,129	6,091	9,762	8,202	12,627	20,829
2019[g/]	3,151	0	2,145	6,506	4,712	9,003	7,511	16,514
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/ In 1997 river sport: Regulations required nonretention of coho.

g/ Preliminary.

TABLE B-38. Estimated inriver run size, catch, and escapement for Hoko River summer/fall Chinook in numbers of fish.

Year or Average	Terminal Catch			Escapement		Terminal Run Size		
	Gillnet	Ceremonial & Subsistence	River Sport[a/]	Natural[b/]	Supplemental	Natural[b/]	Supplemental	Total
1991-1995	-	-	5	362	432	362	432	795
1996	-	-	4	435	830	435	830	1,265
1997	-	-	8	365	529	365	529	894
1998	-	-	-	705	1,017	705	1,017	1,722
1999	-	-	-	734	954	734	954	1,688
2000	-	-	-	294	437	294	437	731
2001	-	-	-	496	450	496	450	946
2002	-	-	-	192	488	192	488	680
2003	-	-	-	402	696	402	696	1,098
2004	-	-	-	266	820	266	820	1,086
2005	-	-	-	72	212	72	212	284
2006	-	-	-	172	723	172	723	895
2007	-	-	-	251	317	251	317	568
2008	-	-	-	106	377	106	377	483
2009	-	-	-	38	347	38	347	385
2010	-	-	-	322	471	322	471	793
2011	-	-	-	1,081	423	1,081	423	1,504
2012	-	-	-	212	451	212	451	663
2013	-	-	-	726	680	726	680	1,406
2014	-	-	-	1,531	229	1,531	229	1,760
2015[c/]	-	-	-	1,500	1,377	1,500	1,377	2,877
2016[c/]	-	-	-	651	673	651	673	1,324
2017[c/]	-	-	-	913	275	913	275	1,188
2018[c/]	-	-	-	1,826	236	1,826	236	2,062
2019[c/]	-	-	-	1,551	264	1,551	264	1,815
GOAL				850[d/]	200[e/]			

a/ River recreational catch of age-3 and older fish.

b/ Includes both natural-origin and hatchery-origin chinook that spawned in the gravel when they returned to the Hoko.

c/ Preliminary.

d/ Goal in terms of naturally spawning fish and includes supplementation production.

e/ Comanagers goal. Not an FMP goal.

TABLE B-39. Puget Sound commercial net and troll fishery salmon catches in numbers of fish.[a/] (Page 1 of 2)

Year or Average	Fishery	Chinook	Coho	Pink[b/]	Chum	Sockeye
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
1996-2000	Non-Indian	12,870	15,204	174,163	307,799	240,088
	Treaty Indian	64,442	184,866	211,946	210,140	321,849
	Total	77,311	200,071	386,109	517,939	561,937
2001-2005	Non-Indian	11,100	26,008	258,211	852,710	92,830
	Treaty Indian	94,113	340,391	214,297	725,349	194,046
	Total	107,667	369,373	475,002	1,620,081	288,484
2006[c/]	Non-Indian	13,300	9,827	6	877,791	223,908
	Treaty Indian	104,956	259,779	411	790,603	548,661
	Total	118,256	269,606	417	1,668,394	772,569
2007[c/]	Non-Indian	6,785	13,435	200,687	680,385	6,266
	Treaty Indian	120,252	209,137	301,847	782,804	6,327
	Total	127,037	222,572	502,534	1,463,189	12,593
2008[c/]	Non-Indian	6,103	6,464	14	449,348	16,319
	Treaty Indian	103,181	227,273	744	575,947	44,865
	Total	109,284	233,737	758	1,025,295	61,184
2009[c/]	Non-Indian	2,753	20,091	2,789,870	294,841	1,605
	Treaty Indian	86,786	259,528	1,948,562	354,963	2,949
	Total	89,539	279,619	4,738,432	649,804	4,554
2010[c/]	Non-Indian	7,922	18,220	309	416,252	749,668
	Treaty Indian	87,510	153,683	1,759	545,795	1,222,590
		95,432	171,903	2,068	962,047	1,972,258
2011[c/]	Non-Indian	10,097	28,821	2,266,672	463,116	86,908
	Treaty Indian	100,798	223,800	2,264,446	600,149	198,299
	Total	110,895	252,621	4,531,118	1,063,265	285,207

TABLE B-39. Puget Sound commercial net and troll fishery salmon catches in numbers of fish.[a/] (Page 2 of 2)

Year or Average	Fishery	Chinook	Coho	Pink[b/]	Chum	Sockeye
2012[c/]	Non-Indian	9,053	35,628	417	576,660	41,048
	Treaty Indian	113,691	355,839	1,233	577,610	89,865
	Total	122,744	391,467	1,650	1,154,270	130,913
2013[c/]	Non-Indian	9,189	29,577	3,193,644	909,250	6,999
	Treaty Indian	104,479	298,503	2,703,304	818,691	31,063
	Total	113,668	328,080	5,896,948	1,727,941	38,062
2014[c/]	Non-Indian	4,343	11,815	29	543,192	234,200
	Treaty Indian	59,469	191,166	703	626,919	497,829
	Total	63,812	202,981	732	1,170,111	732,029
2015[c/]	Non-Indian	3,367	4,777	398,670	559,632	16,906
	Treaty Indian	65,758	47,118	580,679	618,446	56,055
	Total	69,125	51,895	979,349	1,178,078	72,961
2016[c/]	Non-Indian	6,599	14,486	-	444,586	-
	Treaty Indian	73,152	259,957	88	552,012	21,224
	Total	79,751	274,443	88	996,598	21,224
2017[c/]	Non-Indian	12,065	11,763	17,852	713,535	-
	Treaty Indian	136,699	191,478	124,346	704,338	18,957
	Total	148,764	203,241	142,198	1,417,873	18,957
2018[c/]	Non-Indian	13,700	9,645	3	388,943	397,671
	Treaty Indian	105,936	241,756	108	463,963	618,532
	Total	119,636	251,401	111	852,906	1,016,203
2019[c/]	Non-Indian	9,509	2,980	92,790	135,230	-
	Treaty Indian	106,430	89,205	240,190	149,366	9,381
	Total	115,939	92,185	332,980	284,596	9,381

a/ Data do not reflect treaty Indian allocations. Includes U.S. and Canadian-origin salmon and fish caught in test fisheries. Includes tribal commercial, cermonial, subsistence and taken home catch.

b/ Odd-year averages for pink salmon.

c/ Preliminary.

TABLE B-40. Summary of Puget Sound marine recreational salmon catch estimates in numbers of fish from catch record cards.[a/]

Year or Average	Chinook	Coho	Pink[b/]
1971-1975	225,650	119,301	14,855
1976-1980	253,763	202,983	47,029
1981-1985	156,183	196,632	14,910
1986-1990	127,860	251,087	40,884
1991-1995	77,310	137,637	71,030
1996	72,069	85,139	50
1997	60,425	137,571	35,197
1998	26,114	89,520	201
1999	28,739	22,055	23,780
2000	23,679	74,934	17
2001	44,422	193,454	117,367
2002	30,743	66,576	31
2003	30,349	92,114	143,248
2004	26,727	83,708	138
2005	22,879	58,309	68,546
2006	28,582	26,688	19
2007	48,726	65,306	93,251
2008	32,422	21,400	4
2009	31,305	75,719	156,901
2010	28,306	20,290	27
2011	27,507	56,775	142,781
2012	41,632	169,884	5
2013	41,036	115,934	134,539
2014	32,358	124,185	52
2015	29,168	142,669	198,931
2016	30,195	4,983	10
2017[c/]	44,040	36,240	11,555
2018[c/]	44,986	82,795	14
2019	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. 1981-

b/ Odd-year averages for pink salmon.

c/ Preliminary.

TABLE B-41. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound Chinook stocks.[a/] (Page 1 of 3)

Year or Average	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size[c/]		
	Hatchery	Natural[b/]	Total	Hatchery	Natural[b/]	Total	Hatchery	Natural[b/]	Total
				Strait of Juan de Fuca					
1981-1985	58	129	187	811	1,450	2,261	869	1,579	2,448
1986-1990	257	325	582	2,372	3,401	5,774	2,629	3,726	6,355
1991-1995	90	80	169	1,110	1,606	2,715	1,199	1,685	2,885
1996-2000	9	16	25	1,229	2,207	3,435	1,237	2,222	3,460
2001-2005	6	11	17	1,471	2,640	4,110	1,476	2,651	4,127
2006-2010	10	13	22	1,313	1,853	3,166	1,323	1,866	3,189
2011	10	9	19	1,633	1,696	3,329	1,643	1,705	3,348
2012	10	12	22	1,856	2,187	4,043	1,866	2,199	4,065
2013	12	11	23	3,050	2,993	6,043	3,062	3,004	6,066
2014	30	44	74	2,708	4,076	6,784	2,738	4,120	6,858
2015	33	47	80	2,932	4,332	7,264	2,965	4,379	7,344
2016	2	4	6	1,989	2,478	4,467	1,991	2,482	4,473
2017	2	3	6	1,823	3,190	5,013	1,825	3,193	5,019
2018[f/]	29	39	68	4,749	6,269	11,018	4,778	6,308	11,086
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL						5,300			
				Nooksack-Samish					
1981-1985	54,087	33,729	87,816	16,083	6,575	22,658	70,170	40,304	110,474
1986-1990	38,071	26,271	64,342	10,729	4,113	14,841	48,800	30,383	79,183
1991-1995	17,788	2,738	20,526	8,646	1,041	9,686	26,434	3,779	30,213
1996-2000	19,692	5,275	24,967	8,263	2,957	11,219	27,954	8,232	36,186
2001-2005	10,197	15,798	25,995	3,909	7,429	11,338	14,106	23,227	37,333
2006-2010	10,997	7,544	18,541	6,793	3,628	10,421	17,790	11,172	28,962
2011	20,466	3,907	24,373	8,520	669	9,189	28,986	4,576	33,562
2012	20,335	5,816	26,151	6,686	941	7,627	27,021	6,757	33,778
2013	19,254	4,307	23,562	9,002	621	9,623	28,256	4,928	33,185
2014	10,912	1,542	12,453	12,501	773	13,274	23,413	2,315	25,728
2015	8,348	3,680	12,029	6,218	592	6,810	14,566	4,273	18,839
2016	8,380	2,559	10,939	4,725	336	5,061	13,105	2,895	16,000
2017	9,404	1,822	11,226	5,454	520	5,974	14,858	2,342	17,200
2018[f/]	6,603	1,435	8,038	8,306	713	9,019	14,909	2,148	17,057
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL				1,800					

TABLE B-41. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound Chinook stocks. [a/]
(Page 2 of 3)

Year or Average	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size[c/]		
	Hatchery	Natural[b/]	Total	Hatchery	Natural[b/]	Total	Hatchery	Natural[b/]	Total
				Skagit					
1981-1985	599	9,200	9,798	787	11,109	11,896	1,385	20,309	21,694
1986-1990	251	4,044	4,295	815	12,398	13,213	1,067	16,442	17,508
1991-1995	464	1,587	2,051	2,402	6,280	8,682	2,866	7,867	10,733
1996-2000	10	462	472	316	10,390	10,705	326	10,852	11,178
2001-2005	12	806	818	221	17,503	17,725	233	18,309	18,542
2006-2010	40	2,697	2,737	210	11,742	11,952	250	14,438	14,689
2011	44	3,662	3,707	67	5,537	5,604	111	9,199	9,311
2012	12	1,941	1,952	82	13,818	13,900	94	15,759	15,852
2013	14	2,088	2,102	73	10,882	10,955	87	12,970	13,057
2014	14	1,579	1,593	94	10,457	10,551	108	12,036	12,144
2015	10	1,437	1,447	91	13,314	13,405	101	14,751	14,852
2016	8	1,805	1,813	81	19,290	19,371	89	21,095	21,184
2017	7	1,016	1,023	91	12,579	12,670	98	13,595	13,693
2018[f/]	11	1,383	1,394	86	10,903	10,989	97	12,286	12,383
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					14,900				
				Hood Canal[d/]					
1981-1985	7,870	731	8,601	4,786	1,037	5,823	12,656	1,769	14,424
1986-1990	14,701	686	15,387	7,699	390	8,089	22,400	1,076	23,476
1991-1995	2,667	140	2,807	4,915	440	5,355	7,582	579	8,162
1996-2000	3,688	19	3,707	11,915	649	12,564	15,604	667	16,271
2001-2005	17,908	106	18,014	16,678	976	17,653	34,586	1,082	35,668
2006-2010	19,639	99	19,738	16,231	347	16,578	35,870	446	36,316
2011	36,021	41	36,062	26,512	366	26,878	62,533	407	62,940
2012	55,217	132	55,349	29,652	609	30,261	84,869	741	85,610
2013	45,317	115	45,432	25,421	931	26,352	70,738	1,046	71,784
2014	15,975	69	16,044	14,418	304	14,722	30,393	373	30,766
2015	23,773	102	23,874	13,164	405	13,569	36,937	507	37,443
2016	38,924	96	39,021	30,120	547	30,667	69,044	643	69,688
2017	57,560	429	57,989	51,632	1,347	52,979	109,191	1,777	110,968
2018[f/]	43,430	87	43,516	30,978	211	31,189	74,408	298	74,705
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL				3,400					

TABLE B-41. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound Chinook stocks. [a/]
(Page 3 of 3)

Year or Average	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size[c/]		
	Hatchery	Natural[b/]	Total	Hatchery	Natural[b/]	Total	Hatchery	Natural[b/]	Total
				Stillaguamish-Snohomish[e/]					
1981-1985	3,289	7,476	10,765	1,990	4,830	6,821	5,279	12,307	17,585
1986-1990	3,817	3,733	7,549	1,187	5,469	6,656	5,004	9,202	14,205
1991-1995	4,313	1,331	5,644	2,581	4,375	6,957	6,894	5,707	12,601
1996-2000	6,062	4,142	10,203	8,246	4,585	12,831	14,308	8,727	23,035
2001-2005	2,998	3,923	6,921	4,756	7,981	12,737	7,754	11,904	19,658
2006-2010	3,804	181	3,985	6,432	4,945	11,377	10,235	5,126	15,362
2011	4,222	91	4,313	5,256	1,862	7,118	9,478	1,953	11,431
2012	420	29	449	9,201	4,382	13,583	9,620	4,411	14,032
2013	1,771	95	1,867	6,280	3,607	9,887	8,051	3,703	11,754
2014	1,788	53	1,841	6,539	2,639	9,178	8,327	2,693	11,019
2015	861	1,515	2,376	4,980	2,819	7,799	5,842	4,334	10,175
2016	2,253	4,102	6,355	10,163	4,157	14,320	12,416	8,259	20,675
2017	11,560	207	11,767	9,340	4,832	14,172	20,900	5,039	25,939
2018[f/]	10,091	238	10,329	6,515	3,296	9,811	16,606	3,534	20,140
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					7,300				
				South Puget Sound[g/]					
1981-1985	22,448	9,251	31,699	22,693	5,596	28,289	45,141	14,846	59,987
1986-1990	29,277	21,234	50,511	37,152	18,298	55,450	66,429	39,532	105,961
1991-1995	22,147	11,804	33,950	31,383	13,797	45,180	53,530	25,600	79,130
1996-2000	15,934	9,488	25,422	37,008	24,827	61,835	52,942	34,314	87,256
2001-2005	26,388	10,710	37,098	50,816	20,665	71,481	77,205	31,375	108,580
2006-2010	45,920	7,658	53,578	60,393	9,964	70,358	106,314	17,622	123,935
2011	29,582	4,377	33,959	46,643	7,920	54,563	76,225	12,297	88,522
2012	23,850	3,478	27,329	44,586	12,145	56,731	68,436	15,623	84,059
2013	22,227	9,800	32,026	52,760	6,828	59,588	74,986	16,628	91,614
2014	10,287	3,330	13,617	27,515	4,205	31,720	37,802	7,534	45,337
2015	9,468	4,609	14,077	32,770	7,202	39,973	42,238	11,812	54,050
2016	10,575	5,812	16,387	66,829	9,708	76,537	77,404	15,520	92,924
2017	36,139	9,204	45,343	93,881	15,199	109,080	130,020	24,403	154,423
2018[f/]	32,809	11,614	44,423	61,176	12,399	73,575	93,985	24,013	117,998
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL						NA			

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/ Natural escapement includes NORs and supplementation origin fish in the Mid Hood Canal management unit streams. Escapement management objectives in the Skokomish River are for total river spawners (HOR & NOR) and are not comparable to the natural escapement column in this table. NOR/HOR breakout of Skokomish R spawners from prior to mass adipose clipping (pre-2010) are based on the average pHOS from after mass adipose clipping (2010-2017) .

e/ Since 1999, numbers include Tulalip hatchery returns, which are not added into escapement since no broodstock is taken at the hatchery.

f/ Preliminary.

g/ Includes the following stock groups: miscellaneous Area 10 - Seattle, Lake Washington, Green-Duwamish, miscellaneous Area 10E - Port Orchard, Puyallup, miscellaneous Area 13 - south Puget Sound, Chambers Creek, Nisqually, miscellaneous Area 13A - Minter Creek, Deschutes, miscellaneous Area 13B streams.

TABLE B-42. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound coho stocks.[a/] (Page 1 of 4)

Year or Average	Commercial Net Catches[c/]			Spawning Escapement			Terminal Run Size[c/]		
	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total
				Strait of Juan de Fuca					
1981-1985	19,362	527	19,889	9,440	4,660	14,100	28,802	5,187	33,989
1986-1990	9,012	125	9,138	3,013	5,940	8,953	12,025	6,065	18,091
1991-1995	2,635	23	2,658	4,230	4,396	8,626	6,865	4,419	11,284
1996-2000	4,262	797	5,058	10,174	13,053	23,227	15,398	14,087	29,484
2001-2005	6,112	994	7,106	13,141	20,929	34,071	21,417	22,352	43,770
2006-2010	2,948	15	2,963	4,343	9,740	14,083	7,752	9,757	17,509
2011	5,607	1	5,608	11,056	10,731	21,787	18,808	10,732	29,540
2012	5,281	3	5,284	7,945	11,020	18,965	14,119	11,023	25,142
2013	2,057	42	2,099	6,765	8,458	15,223	10,260	8,500	18,760
2014	3,195	28	3,223	3,686	11,488	15,174	7,345	11,516	18,861
2015	298	34	332	1,018	3,859	4,877	1,619	3,893	5,512
2016	3,931	16	3,947	4,103	8,435	12,538	8,672	8,451	17,123
2017[d/]	4,842	9	4,851	5,763	5,530	11,293	11,635	5,539	17,174
2018[d/]	3,313	1	3,314	2,042	5,470	7,512	5,567	5,471	11,038
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					7,000-11,000				
				Nooksack-Samish					
1981-1985	121,448	17,429	138,877	24,420	7,200	31,620	145,868	24,629	170,497
1986-1990	140,733	21,761	162,494	21,087	7,420	28,507	161,821	29,181	191,002
1991-1995	48,056	13,872	61,928	17,793	10,320	28,113	65,849	24,192	90,042
1996-2000	36,169	5,272	41,441	36,920	7,611	44,530	75,056	13,577	88,633
2001-2005	43,483	15,589	59,072	35,805	15,712	51,517	80,456	32,263	112,720
2006-2010	29,808	12,896	42,708	9,469	7,896	17,365	39,657	20,943	60,600
2011	53,796	15,611	69,407	15,283	2,228	17,511	70,543	17,906	88,449
2012	32,842	26,291	59,133	16,370	9,600	25,970	51,699	36,095	87,794
2013	38,628	51,180	89,808	18,209	20,494	38,703	58,726	72,968	131,694
2014	20,038	8,616	28,654	16,117	5,455	21,572	37,189	14,118	51,307
2015	9,129	5,914	15,043	23,891	1,359	25,250	35,833	7,507	43,340
2016	37,734	5,301	43,035	11,818	7,212	19,030	50,295	12,513	62,808
2017[d/]	25,772	1,814	27,586	13,309	3,257	16,566	39,894	5,071	44,965
2018[d/]	35,030	19,267	54,297	11,826	7,622	19,448	50,809	27,880	78,689
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL				17,900					

TABLE B-42. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound coho stocks.[a/](Page 2 of 4)

Year or Average	Commercial Net Catches[c/]			Spawning Escapement			Terminal Run Size[c/]		
	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total	Hatchery[b/]	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	738	5,909	6,647	10,166	42,139	52,306	11,251	50,571	61,822
2001-2005	3,860	18,569	22,429	13,512	77,441	90,953	18,326	101,705	120,031
2006-2010	1,584	11,579	13,163	7,606	38,858	46,464	9,684	53,152	62,836
2011	4,184	17,500	21,684	9,488	43,916	53,404	14,887	67,043	81,930
2012	2,056	17,524	19,580	10,833	92,687	103,520	13,650	117,699	131,349
2013	4,721	21,812	26,533	14,996	85,751	100,747	22,194	121,659	143,853
2014	2,657	11,563	14,220	8,242	24,820	33,062	11,996	42,140	54,136
2015	808	2,188	2,996	2,108	5,794	7,902	4,232	12,939	17,171
2016	908	4,660	5,568	11,394	35,822	47,216	13,134	43,097	56,231
2017[d/]	263	780	1,043	6,831	20,184	27,015	7,094	20,964	28,058
2018[d/]	3,002	10,258	13,260	9,960	19,047	29,007	14,489	32,866	47,355
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					14,875-25,000				
				Hood Canal					
1981-1985	39,340	18,310	57,650	20,329	22,280	42,609	59,669	40,590	100,259
1986-1990	45,708	18,991	64,699	15,099	17,940	33,039	60,807	36,931	97,738
1991-1995	13,553	454	14,007	15,032	29,808	44,840	28,585	30,262	58,847
1996-2000	5,973	6,837	12,810	23,077	55,401	78,478	30,124	62,953	93,077
2001-2005	21,042	22,249	43,291	35,237	103,851	139,089	66,893	130,781	197,674
2006-2010	37,548	11,478	49,026	10,634	20,458	31,092	51,465	33,757	85,222
2011	58,757	15,735	74,492	20,586	24,389	44,975	87,819	42,405	130,224
2012	63,078	28,341	91,419	16,900	45,921	62,821	87,946	77,378	165,324
2013	35,929	6,886	42,815	18,255	16,064	34,319	59,942	24,277	84,219
2014	8,020	16,181	24,201	7,066	26,787	33,853	16,865	44,694	61,559
2015	4,755	3,303	8,058	9,593	26,926	36,519	16,498	31,213	47,711
2016	45,692	6,079	51,771	17,301	24,313	41,614	68,537	31,729	100,266
2017[d/]	26,696	5,091	31,787	10,677	23,283	33,960	41,009	29,657	70,666
2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					10,750-14,350				

TABLE B-42. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound coho stocks.[a/] (Page 3 of 4)

Year or Average	Commercial Net Catches[c/]			Spawning Escapement			Terminal Run Size[c/]		
	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total
				Stillaguamish					
1981-1985	1,923	11,014	12,937	1,080	13,200	14,280	3,003	24,214	27,217
1986-1990	0	18,931	18,931	0	15,600	15,600	0	34,531	34,531
1991-1995	28	3,012	3,040	108	13,720	13,828	136	16,732	16,868
1996-2000	4	1,210	1,214	34	16,537	16,571	45	18,790	18,835
2001-2005	10	3,996	4,006	71	47,628	47,699	85	53,446	53,531
2006-2010	8	2,358	2,365	61	19,514	19,575	74	23,086	23,160
2011	16	5,310	5,326	155	49,991	50,146	180	58,188	58,368
2012	78	6,843	6,921	101	45,156	45,257	249	56,091	56,340
2013	73	5,057	5,130	0	60,387	60,387	133	70,597	70,730
2014	30	5,620	5,650	180	35,829	36,009	233	44,182	44,415
2015	0	447	447	0	2,914	2,914	0	4,773	4,773
2016	0	2,152	2,152	0	13,048	13,048	0	15,206	15,206
2017[d/]	1	795	796	11	6,099	6,110	12	6,894	6,906
2018[d/]	0	2,906	2,906	0	23,937	23,937	0	28,970	28,970
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					6,100-10,000				
				Snohomish					
1981-1985	18,050	36,538	54,587	11,860	74,800	86,660	29,910	111,338	141,247
1986-1990	58,543	67,956	126,499	26,134	94,800	120,934	84,677	162,756	247,433
1991-1995	40,677	18,363	59,040	23,462	84,000	107,462	64,139	102,363	166,502
1996-2000	31,614	4,869	36,483	21,260	82,711	103,971	55,016	95,218	150,234
2001-2005	34,568	16,999	51,568	18,279	193,476	211,755	55,068	221,664	276,732
2006-2010	14,037	10,461	24,498	6,473	75,521	81,994	21,030	90,670	111,700
2011	8,069	7,947	16,016	8,375	111,374	119,749	17,210	129,235	146,445
2012	34,605	15,020	49,625	13,354	130,637	143,991	48,572	160,553	209,125
2013	37,929	10,176	48,105	10,277	125,870	136,147	49,591	156,856	206,447
2014	34,103	6,932	41,035	13,641	46,244	59,885	50,809	58,740	109,549
2015	5,462	2,207	7,669	3,945	12,804	16,749	10,026	23,571	33,597
2016	66,452	7,478	73,930	9,201	44,141	53,342	75,658	52,834	128,492
2017[d/]	42,154	2,597	44,751	6,371	18,195	24,566	49,163	22,922	72,085
2018[d/]	16,225	6,859	23,084	5,528	58,135	63,663	23,388	71,121	94,509
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL					31,000-50,000				

TABLE B-42. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound coho stocks.[a/] (Page 4 of 4)

Year or Average	Commercial Net Catches[c/]			Spawning Escapement			Terminal Run Size[c/]		
	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total
				South Puget Sound					
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	57,648	29,324	86,972	73,685	28,337	102,022	140,763	62,893	203,656
2001-2005	119,234	40,241	159,475	114,492	33,690	148,182	250,219	81,366	331,585
2006-2010	74,330	20,150	94,479	47,422	20,893	68,315	130,776	47,441	178,217
2011	31,583	11,106	42,689	45,721	36,567	82,288	86,625	59,779	146,404
2012	95,993	37,202	133,195	77,409	60,078	137,487	191,398	118,303	309,701
2013	68,652	16,570	85,222	59,791	30,746	90,537	146,275	66,946	213,221
2014	44,269	10,537	54,806	51,459	20,766	72,225	105,929	39,447	145,376
2015	7,404	3,697	11,101	18,994	16,408	35,402	34,297	29,926	64,223
2016[d/]	57,799	19,690	77,489	94,259	37,387	131,646	154,355	57,838	212,193
2017[d/]	52,466	21,477	73,943	48,710	26,555	75,265	124,170	53,280	177,450
2018[d/]	78,228	30,628	108,856	72,264	21,421	93,685	165,081	62,689	227,770
2019	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 and secondary wild stocks.

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 1997, 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.

e/ 2015 Hood Canal 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 1997, 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), including fish caught in Puget Sound troll and recreational fisheries.

TABLE B-43. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound pink stocks.[a/] (Page 1 of 3)

Year or Average (odd year)	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size[c/]		
	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total
Strait of Juan de Fuca									
1981-1989	1	507	507	9	5,175	5,185	10	5,681	5,692
1991-1999	2	426	428	34	6,421	6,455	36	6,847	6,883
2001	4	718	722	470	80,950	81,420	474	81,668	82,142
2003	0	346	346	0	15,149	15,149	0	15,495	15,495
2005	0	103	103	0	8,669	8,669	0	8,772	8,772
2007	0	131	131	0	6,252	6,252	0	6,383	6,383
2009	0	2,684	2,684	0	41,534	41,534	0	44,218	44,218
2011	0	2,013	2,013	0	27,616	27,616	0	29,629	29,629
2013	8	20,597	20,605	157	409,959	410,116	165	430,556	430,721
2015	0	18,485	18,485	0	337,724	337,724	0	356,209	356,209
2017	1	565	566	46	17,755	17,801	47	18,320	18,367
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL[d/]					Not Agreed Upon				
Nooksack-Samish									
1981-1989	40	14,458	14,458	0	54,201	54,441	40	68,659	39,499
1991-1999	3	9,779	9,782	89	84,206	84,295	92	93,985	174,077
2001	215	14,584	14,799	3,714	226,001	229,715	3,929	240,585	244,514
2003	304	3,177	3,481	7,264	51,012	58,276	7,568	54,189	61,757
2005	589	2,095	2,684	1,791	3,719	5,510	2,380	5,814	8,194
2007	15	1,006	1,021	276	9,302	9,578	291	10,308	10,599
2009	248	6,229	6,477	2,097	45,120	47,217	2,345	51,349	53,694
2011	49	12,483	12,532	285	53,852	54,137	334	66,335	66,669
2013	61	103,864	103,925	284	224,002	224,286	345	327,866	328,211
2015	25	88,620	88,645	90	247,358	247,448	115	335,978	336,093
2017	0	11,445	11,445	0	24,012	24,012	0	35,457	35,457
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL[d/]					50,000				

TABLE B-43. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound pink stocks.[a/] (Page 2 of 3)

Year or Average (odd-year)	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size[c/]		
	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total
Skagit									
1981-1989	319	316,772	317,093	393	455,052	455,445	711	771,825	772,538
1991-1999	0	247,256	247,256	0	423,600	423,600	0	670,856	670,856
2001	0	305,081	305,081	0	894,061	894,061	0	1,199,142	1,199,142
2003	0	309,851	309,851	0	567,080	567,080	0	876,931	876,931
2005	0	25,191	25,191	0	60,000	60,000	0	85,191	85,191
2007	0	14,723	14,723	0	300,000	300,000	0	314,723	314,723
2009	0	478,121	478,121	0	1,160,000	1,160,000	0	1,638,121	1,638,121
2011	0	470,769	470,769	0	560,000	560,000	0	1,030,769	1,030,769
2013	0	720,639	720,639	0	900,000	900,000	0	1,620,639	1,620,639
2015	0	121,662	121,662	0	290,000	290,000	0	411,662	411,662
2017	0	6,816	6,816	0	110,000	110,000	0	116,816	116,816
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL[d/]					330,000				
Hood Canal									
1981-1989	2,252	9,729	11,981	2,814	43,809	46,623	5,066	53,538	58,604
1991-1999	1,243	4,075	5,318	13,719	41,287	55,005	14,962	45,362	60,324
2001	4,401	5,956	10,357	71,539	98,338	169,877	75,940	104,294	180,234
2003	2,060	3,272	5,332	25,217	37,531	62,748	27,277	40,803	68,080
2005	401	691	1,092	14,107	17,481	31,588	14,508	18,172	32,680
2007	261	1,722	1,983	4,406	29,001	33,407	4,667	30,723	35,390
2009	3,552	893	4,445	22,455	11,093	33,548	26,007	11,986	37,993
2011	5,441	1,375	6,816	17,792	15,122	32,914	23,233	16,497	39,730
2013	2,159	12,379	14,538	4,904	195,601	200,505	7,063	207,980	215,043
2015	650	43,983	44,633	5,948	595,679	601,627	6,598	639,662	646,260
2017	957	2,387	3,397	2,544	32,988	35,532	3,554	35,375	38,929
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL[d/]					Not Agreed Upon				

TABLE B-43. Puget Sound commercial net fishery catches and spawning escapements in numbers of fish for hatchery and natural Puget Sound pink stocks.[a/] (Page 3 of 3)

Year or Average (odd-year)	Commercial Net Catches			Spawning Escapement			Puget Sound Run Size[c/]		
	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total	Hatchery[b/]	Natural	Total
Stillaguamish-Snohomish									
1981-1989	76	154,539	154,615	201	271,328	271,529	276	425,867	426,144
1991-1999	39	71,055	71,094	122	286,650	286,772	160	357,706	357,866
2001	0	199,908	199,908	0	1,847,648	1,847,648	0	2,047,556	2,047,556
2003	0	288,985	288,985	0	1,577,001	1,577,001	0	1,865,986	1,865,986
2005	0	66,615	66,615	0	600,124	600,124	0	666,739	666,739
2007	0	132,876	132,876	0	1,383,591	1,383,591	0	1,516,467	1,516,467
2009	0	849,860	849,860	0	2,882,373	2,882,373	0	3,732,233	3,732,233
2011	0	627,735	627,735	0	612,903	612,903	0	1,240,638	1,240,638
2013	0	1,281,642	1,281,642	0	2,153,569	2,153,569	0	3,435,211	3,435,211
2015	0	212,357	212,357	0	480,674	480,674	0	693,031	693,031
2017	0	15,088	15,088	0	78,953	78,953	0	94,041	94,041
2019	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL[d/] - Stillaguamish					155,000				
GOAL[d/] - Snohomish					120,000				
South Puget Sound									
1981-1989	651	17,149	17,800	282	32,803	33,085	933	49,952	50,885
1991-1999[e.]	88	3,847	3,935	90	10,483	10,573	178	14,330	14,508
2001[e/f/]	0	3,128	3,128	0	26,692	26,692	0	29,820	29,820
2003[e/f/]	0	30,795	30,795	0	391,702	391,702	0	422,497	422,497
2005[e/f/]	0	55,263	55,263	0	1,087,906	1,087,906	0	1,143,169	1,143,169
2007[e/f/]	0	84,180	84,180	0	1,218,896	1,218,896	0	1,303,076	1,303,076
2009[e/f/]	0	695,324	695,324	0	4,091,283	4,091,283	0	4,786,607	4,786,607
2011[f/]	0	500,308	500,308	0	2,422,575	2,422,575	0	2,922,883	2,922,883
2013[f/]	40	546,139	546,179	6	2,172,795	2,172,801	46	2,718,934	2,718,980
2015[f/]	66	285,504	285,570	115	941,673	941,788	181	1,227,177	1,227,358
2017[f/]	0	31,293	31,293	2	175,952	175,954	2	207,245	207,247
2019[f/]	NA	NA	NA	NA	NA	NA	NA	NA	NA
GOAL[d/]					25,000				

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/ Puget Sound run size is defined as the run available to Puget Sound fisheries; spawning escapement plus Puget Sound fishery catch. Includes fish caught by treaty net fisheries and non-Indian commercial and recreational fisheries inside Puget Sound.

d/ State-Tribal comanager goal; the only Council goal is for a total Puget Sound pink salmon spawning escapement of 900,000 natural spawners.

e/ Nisqually escapement estimate incomplete.

f/ Green river returns included in run reconstruction.

TABLE B-44. Puget Sound spring Chinook spawning escapement estimates in numbers of adult fish.

	Stock						
	Skagit		NF Nooksack		SF Nooksack	White River	Quilcene
Year or Average	Hatchery[a/]	Natural	Hatchery[a/]	Natural[b/]	Hatchery/ Natural	Hatchery[c/]	Hatchery[d/]
1981-1985	49	1,408	0	152	317	70	149
1986-1990	161	1,826	0	235	280	408	125
1991-1995	815	907	770	266	222	1,065	19
1996-2000	1,448	934	2,011	717	240	2,008	7
2001-2005	2,028	1,317	4,226	2,510	403	2,763	0
2006	1,487	1,896	732	1,184	515	3,864	0
2007	1,931	613	665	1,438	323	8,005	0
2008	1,462	1,470	1,194	1,266	443	3,575	0
2009	900	978	812	1,903	453	2,342	0
2010	1,371	1,361	1,279	2,048	548	2,071	0
2011	1,301	825	1,404	865	470	3,151	0
2012	1,579	2,774	1,215	758	508	3,819	0
2013	1,256	2,010	2,297	1,346	243	6,541	0
2014	1,109	1,608	1,998	1,398	208	2,131	0
2015	1,836	1,409	2,994	1,717	135	2,893	0
2016	2,441	2,445	1,806	922	958	6,585	0
2017	3,325	2,850	2,301	1,906	1,113	9,986	0
2018[e/]	2,333	2,376	1,778	NA	NA	6,530	0
2019[e/]	1,825	1,131	1,455	NA	NA	5,108	0
GOAL		2,000					

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/ Estimate includes adult returns to Hupp Springs, White R. Hatchery, and Buckley Trap. Data from 1999 - 2017 were updated using new "agreed-to" methodology for estimating unsampled portions of Spring Chinook back to Buckley Trap with Fall/Unknown origin fish removed from the estimate.

d/ Program has been discontinued.

e/ Preliminary.

APPENDIX C
HISTORICAL RECORD OF OCEAN SALMON FISHERY REGULATIONS AND A CHRONOLOGY OF 2019 EVENTS

LIST OF TABLES

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TABLE C-1. Summary of actual California commercial salmon seasons in state and federal (EEZ) waters.[a/] (Page 1 of 3)

Year	Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon	Number of Days: All-Salmon-Except-Coho	Number of Days: All Salmon	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2014	OR/CA Border to Humboldt South Jetty	Sept. 12-16, 19-23, 26-30	-	15	-	27	-	4,000 Chinook quota; 20 Chinook per vessel per day landing limit through Sept. 16, 30 Chinook thereafter.
	Horse Mt. to Pt. Arena	June 19-30	-	12	-	27	-	During Sept., all fish caught in the area must be landed north of Pt. Arena during Sept. When the KMZ fishery is open, all fish must be landed south of Horse Mt.
		July 15-Aug. 29	-	46	-	27	-	
		Sept. 1-30	-	30	-	27	-	
	Pt. Arena to Pigeon Pt.	May 1-June 30	-	61	-	27	-	During Sept., all fish caught in the area must be landed south of Pt. Arena.
		July 15-Aug. 29	-	46	-	27	-	
		Sept. 1-30	-	30	-	26	-	
	Pt. Reyes to Pt. San Pedro	Oct. 1-3, 6-10, 13-15	-	11	-	26	-	All fish must be landed between Pt. Arena and Pigeon Pt.
	Pigeon Pt. to U.S./Mexico Border	May 1-June 30	-	61	-	27	-	
		July 15-Aug. 13	-	30	-	27	-	
2015	OR/CA Border to Humboldt South Jetty	Sept. 11-15, 18-30	-	18	-	28	-	3,000 Chinook quota; 20 Chinook per vessel per day landing limit.
	Horse Mt. to Pt. Arena	May 1-31	-	31	-	27	-	
		June 15-30	-	16	-	27	-	
		July 12-Aug. 26	-	46	-	27	-	
		Sept. 1-30	-	30	-	27	-	All fish caught in the area must be landed north of Pt. Arena during Sept. When the KMZ fishery is open, all fish must be landed south of Horse Mt.
	Pt. Arena to Pigeon Pt.	May 1-31	-	31	-	27	-	
		June 7-30	-	24	-	27	-	
		July 8-Aug. 29	-	53	-	27	-	
		Sept. 1-30	-	30	-	26	-	All fish caught in the area must be landed south of Pt. Arena during Sept.
	Pt. Reyes to Pt. San Pedro	Oct. 1-2, 5-9, 12-15	-	11	-	26	-	All fish must be landed between Pt. Arena and Pigeon Pt. during Oct.
	Pigeon Pt. to Pt. Sur	May 1-31	-	31	-	27	-	
		June 7-30	-	24	-	27	-	
		July 8-Aug. 15	-	39	-	27	-	
	Pt. Sur to U.S./Mexico Border	May 1-31	-	31	-	27	-	
		June 7-30	-	24	-	27	-	
		July 8-31	-	24	-	27	-	

TABLE C-1. Summary of actual California commercial salmon seasons in state and Federal (EEZ) waters. (Page 2 of 3)

Year	Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon	Number of Days: All-Salmon-Except-Coho	Number of Days: All Salmon	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2016	OR/CA Border to Humboldt South Jetty	Sept. 9-13, 16-20, 23-27	-	15	-	28	-	1,000 Chinook quota; 20 Chinook per vessel per day landing limit.
	Horse Mt. to Pt. Arena	June 13-30	-	18	-	27	-	
		Aug. 3-27	-	25	-	27	-	
		Sept. 1-30	-	30	-	27	-	All fish caught in the area must be landed north of Pt. Arena during Sept. When the KMZ fishery is open, all fish must be landed south of Horse Mt.
	Pt. Arena to Pigeon Pt.	May 6-31	-	26	-	27	-	
		June 13-30	-	18	-	27	-	
		Aug. 3-28	-	26	-	27	-	
		Sept. 1-30	-	30	-	26	-	All fish caught in the area must be landed south of Pt. Arena during Sept.
	Pt. Reyes to Pt. San Pedro	Oct. 3-7, 10-14	-	10	-	26	-	All fish must be landed between Pt. Arena and Pigeon Pt. during Oct.
	Pigeon Pt. to U.S./Mexico Border	May 1-June 30	-	61	-	27	-	
2017	OR/CA Border to Humboldt South Jetty	Closed	-	-	-	-	-	
	Horse Mt. to Pt. Arena	Sept. 1-5, 8-12, 15-19, 22-26, 29-30	-	22	-	27	-	3,000 Chinook quota; 60 Chinook per vessel per open period landing limit. All fish caught in the area must be landed between the OR/CA border and Pt. Arena.
	Pt. Arena to Pigeon Pt.	Aug. 1-29	-	29	-	27	-	
		Sept. 1-30	-	30	-	26	-	All fish caught in the area must be landed south of Pt. Arena during Sept., unless the Fort Bragg commercial quota has been met and that fishery has closed for at least 24 hours.
	Pt. Reyes to Pt. San Pedro	Oct. 2-6, 9-13	-	10	-	26	-	All fish must be landed between Pt. Arena and Pigeon Pt. during Oct.
	Pigeon Pt. to U.S./Mexico Border	May 1-June 30	-	61	-	27	-	

TABLE C-1. Summary of actual California commercial salmon seasons in state and Federal (EEZ) waters. (Page 3 of 3)

Year	Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon	Number of Days: All-Salmon-Except-Coho	Number of Days: All Salmon	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2018	OR/CA Border to Humboldt South Jetty (California Klamath Management Zone, CA KMZ)	May 1-29,	-	21	-	26	-	Open 5 days per week (Fri.-Tue.). Chinook quotas: 3,600 in May, 6,650 in June, 6,612 in July, and 9,423 in Aug. Chinook landing and possession limits per vessel per day: 20 during May 1- July 19, 40 July 20-31, and 50 in Aug.
		June 1-July 31,	-	45	-	26	-	
		Aug. 3-31	-	21	-	26	-	
	Horse Mt. to Pt. Arena	July 26-31,	-	6	-	26	-	All fish caught in the area must be landed north of Pt. Arena during Sept. When the KMZ fishery is open, all fish must be landed south of Horse Mt.
		Aug. 3-29,	-	27	-	26	-	
		Sept. 1-30	-	30	-	26	-	
	Pt. Arena to Pigeon Pt.	July 26-31,	-	6	-	26	-	All fish caught in the area must be landed south of Pt. Arena during Sept. When the KMZ fishery is open, all fish must be landed south of Horse Mt.
		Aug. 3-29,	-	27	-	26	-	
		Sept. 1-30	-	30	-	26	-	
	Pt. Reyes to Pt. San Pedro	Oct. 1-5, 8-12	-	10	-	26	-	Open 5 days per week (Mon.-Fri.). All salmon caught in this area must be landed between Point Arena and Pigeon Point.
	Pigeon Pt. to U.S./Mexico Border	May 1-7,	-	7	-	26	-	When the KMZ fishery is open, all fish must be landed south of Horse Mt.
		June 19-30	-	12	-	26	-	
2019[a/]	OR/CA Border to Humboldt South Jetty (California Klamath Management Zone, CA KMZ)	June 1-30,	-	22	-	27	-	Open 5 days per week (Fri.-Tue.). Chinook quotas: 2,500 in June, 3,997 in July, and 4,293 in Aug. Chinook landing and possession limits per vessel per day: 20 through July 16, 50 July 19-Aug. 5, and 15 Aug. 12-31.
		July 1-30,	-	22	-	27	-	
		Aug. 2-5, 12-31	-	18	-	27	-	
	Horse Mt. to Pt. Arena	June 4-30,	-	27	-	27	-	When the KMZ fishery is open, all fish must be landed south of Horse Mt.
		July 11-31,	-	21	-	27	-	
		Aug. 1-28	-	28	-	27	-	
	Pt. Arena to Pigeon Pt.	May 16-31,	-	16	-	27	-	When the KMZ fishery is open, all fish must be landed south of Horse Mt.
		June 4-30,	-	27	-	27	-	
		July 11-31,	-	21	-	27	-	
		Aug. 1-28,	-	28	-	27	-	
		Sept. 1-30	-	30	-	27	-	
	Pt. Reyes to Pt. San Pedro	Oct. 1-4, 7-11, 14-15	-	11	-	27	-	Open 5 days per week (Mon.-Fri.). All salmon caught in this area must be landed between Point Arena and Pigeon Point.
	Pigeon Pt. to U.S./Mexico Border	May 1-31,	-	31	-	27	-	When the KMZ fishery is open, all fish must be landed south of Horse Mt.
		June 4-30,	-	27	-	27	-	
		July 11-31	-	21	-	27	-	

a/ For recent year detailed regulations and inseason adjustments, see Tables I-1 and C-9.

TABLE C-2. Summary of actual California recreational ocean salmon regulations [a/] (Page 1 of 2)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Coho	Other Restrictions
2011	OR/CA Border to Horse Mt.	May 14-Sept. 5	115	2	24	-	
	Horse Mt. to Pigeon Pt.	Apr. 2-Oct. 30	212	2	24	-	
	Pigeon Pt. to U.S./Mexico Border	Apr. 2-Sept.18	170	2	24	-	
2012	OR/CA Border to Horse Mt.	May 1-Sept. 9	132	2	20	-	
	Horse Mt. to Pt. Arena	Apr. 7-Nov. 11	219	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 7-July 5	90	2	24	-	
		July 6-Nov. 11	129	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	Apr. 7-July 5	90	2	24	-	
		July 6-Oct. 7	94	2	20	-	
2013	OR/CA Border to Horse Mt.	May 1-Sept. 8	131	2	20	-	
	Horse Mt. to Pt. Arena	Apr. 6-Nov. 10	219	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 6-July 31	105	2	24	-	Closed Monday-Tuesday June 1 through July 9.
		Aug. 1-Nov. 10	102	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	Apr. 6-Oct. 6	172	2	24	-	Closed Monday-Tuesday June 1 through July 9.
2014	OR/CA Border to Horse Mt.	May 10-Sept. 7	121	2	24	-	
	Horse Mt. to Pt. Arena	Apr. 5-Nov. 9	219	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 5-June 30	87	2	24	-	
		July 1-Nov. 9	132	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	Apr. 5-Oct. 5	184	2	24	-	
2015	OR/CA Border to Horse Mt.	May 1-Sept. 7	130	2	20	-	
	Horse Mt. to Pt. Arena	Apr. 4-Nov. 8	219	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 4-30	27	2	24	-	
		May 1-Oct. 31	184	2	20	-	
	Pigeon Pt. to Pt. Sur	Apr. 4-May 31	58	2	24	-	
		June 1-Sept. 7	99	2	20	-	
	Pt. Sur to U.S./Mexico Border	Apr. 4-May 31	58	2	24	-	
		June 1-July 19	49	2	20	-	

TABLE C-2. Summary of actual California recreational ocean salmon regulations.[a/] (Page 2 of 2)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Coho	Other Restrictions
2016	OR/CA Border to Horse Mt.	May 16-31	16	2	20	-	
		June 16-30	15	2	20	-	
		July 16-Aug. 16	32	2	20	-	
		Sept. 1-5	5	2	20	-	
	Horse Mt. to Pt. Arena	Apr. 2-Nov. 13	226	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 2-30	29	2	24	-	
		May 1-Oct. 31	184	2	20	-	
	Pigeon Pt. to Pt. Sur	Apr. 2-July 15	105	2	24	-	
	Pt. Sur to U.S./Mexico Border	Apr. 2-May 31	60	2	24	-	
2017	OR/CA Border to Horse Mt.	Closed	-	-	-	-	
	Horse Mt. to Pt. Arena	Apr. 1-May 31	61	2	20	-	
		Aug. 15-Nov. 12	90	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 1-30	30	2	24	-	
		May 15-Oct. 31	170	2	20	-	
	Pigeon Pt. to Pt. Sur	Apr. 1-July 15	106	2	24	-	
	Pt. Sur to U.S./Mexico Border	Apr. 1-May 31	61	2	24	-	
2018	OR/CA Border to Horse Mt.	June 1-Sept. 3	95	2	20	-	
	Horse Mt. to Pt. Arena	June 17-Oct. 31	137	2	20	-	
	Pt. Arena to Pigeon Pt.	June 17-Oct. 31	137	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	Apr. 7-July 2	87	2	24	-	
2019[a/]	OR/CA Border to Horse Mt.	May 25-Sept. 2	101	2	20	-	
	Horse Mt. to Pt. Arena	Apr. 13-30, May 18-Oct. 31	185	2	20	-	
	Pt. Arena to Pigeon Pt.	Apr. 13-30	18	2	24	-	
		May 18-Oct. 31	167	2	20	-	
	Pigeon Pt. to U.S./Mexico Border	Apr. 6-Aug. 28	145	2	24	-	

a/ For detailed regulations and inseason adjustments, see Tables I-3 and C-9.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and federal (EEZ) waters.[a/] (Page 1 of 5)

Year	Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon		Number of Days	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2014	WA/OR Border to Cape Falcon	May 1-20	-	-	20	28	-	Seven days per week, no landing limits.
		May 23-27	-	-	5	28	-	60 Chinook per vessel per open period.
		May 30-June 3	-	-	5	28	-	50 Chinook per vessel per open period.
		June 6-10	-	-	5	28	-	40 Chinook per vessel per open period.
		June 13-17, 20-24, 27-30	-	-	14	28	-	20 Chinook per vessel per open period.
			July 1-8	-	8	28	16	60 Chinook and 60 marked coho per vessel per open period.
		-						
			July 11-15, 18-22, 25-29	-	15	28	16	35 Chinook and 60 marked coho per vessel per open period.
		-						
			Aug. 1-5	-	5	28	16	50 Chinook and 80 marked coho per vessel per open period.
		-						
			Aug. 8-12, 15-19	-	10	28	16	75 Chinook and 150 marked coho per vessel per open period.
		-						
			Aug. 22-26	-	5	28	16	35 Chinook and 150 marked coho per vessel per open period.
		-						
			Aug. 29-Sept. 2	-	5	28	16	20 Chinook and 150 marked coho per vessel per open period.
		-						
			Sept. 5-9	-	5	28	16	15 Chinook and 100 coho (non-mark-selective) per vessel per open period.
		-						
			Sept. 12-16	-	5	28	16	15 Chinook and 200 coho (non-mark-selective) per vessel per open period.
		-						
	Cape Falcon to Humbug Mt.	Apr. 1-July 31, Aug. 6-29	-	-	146	28	-	
		-	Sept. 3-30	-	28	28	16	Non-mark-selective coho quota of 6,300. 65 Chinook and one coho for each Chinook landed up to 20 coho per vessel per landing week (Wed.-Tues.).
		Oct. 1-31	-	-	31	28	-	65 Chinook per vessel per landing week (Wed.-Tues.)
	Cape Blanco to Humbug Mt. (Elk River Area)	Nov. 1-30	-	-	30	26	-	Inside of a line from Cape Blanco to Black Rock to Best Rock to 42º40'30" N Lat. 124º29'00" W Long. to Humbug Mt. 20 Chinook per day vessel limit. Landings restricted to Port Orford.
	Humbug Mt. to OR/CA Border	Apr. 1-May 31	-	-	61	28	-	Landings restricted to the State of Oregon.
		June 15-18	-	-	4	28	-	1,500 quota; 30 Chinook per day vessel limit.
		July 1-2	-	-	2	28	-	574 quota; 15 Chinook per day vessel limit.
		Aug. 6-7, 13-15, 20-21, 27-28	-	-	9	28	-	580 quota; 15 Chinook per day vessel limit.
		Sept. 12-27	-	-	16	28	-	500 quota; 20 Chinook per day vessel limit. June-Sept.: Landings restricted to the area or Port Orford; mandatory phone or email trip reports.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 12-31	-	-	20	28	-	600 Chinook quota; 20 Chinook per day per vessel landing limit; landings restricted to Brookings; mandatory phone or email trip reports.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters. (Page 2 of 5)

Year	Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon		Number of Days	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2015	WA/OR Border to Cape Falcon	May 1-29	-	-	29	28	-	Seven days per week, no landing limits.
		June 5-9, 12-16	-	-	10	28	-	40 Chinook per vessel per open period.
		June 19-23	-	-	5	28	-	80 Chinook per vessel per open period.
		-	July 1-7	-	7	28	16	50 Chinook and 50 marked coho per open period vessel limit.
		-	July 10-14, 17-21, 24-28, July 31-Aug.4, Aug 7-11	-	25	28	16	75 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 14-18	-	5	28	16	50 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 21-25	-	5	28	16	40 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 28-Sept. 1	-	5	28	16	35 Chinook and 50 marked coho per open period vessel limit.
		-	Sept. 4-8, 11-15	-	10	28	16	40 Chinook and 50 marked coho per open period vessel limit.
		-	Sept. 18-22	-	5	28	16	40 Chinook and 80 coho (non-mark-selective) per open period vessel limit.
	Cape Falcon to Humbug Mt.	Apr. 1-Aug.27	-	-	149	28	-	
		Sept. 2-30	-	-	29	28	-	60 Chinook per vessel per landing week (Thurs.-Wed.).
	Twin Rocks to Pyramid Rock Inside 3 nm (Tillamook Area)	Oct. 1-31	-	-	31	28	-	20 Chinook per day vessel limit. Landings restricted to Garibaldi.
	Cape Blanco to Humbug Mt. (Elk River Area)	Oct. 15-Nov. 30	-	-	47	26	-	Inside of a line from Cape Blanco to Black Rock to Best Rock to 42º40'30" N Lat. 124º29'00" W Long. to Humbug Mt. 20 Chinook per day vessel limit. Landings restricted to Port Orford.
	Humbug Mt. to OR/CA Border	Apr. 1-May 31	-	-	61	28	-	Landings restricted to the State of Oregon.
		June 1-26	-	-	26	28	-	1,800 quota; 30 Chinook per day vessel limit. Landings restricted to the area or Port Orford.
		July 1-2, 5-31	-	-	29	28	-	1,184 quota; 15 Chinook per day vessel limit July 1-2, 25 therafter. Landings restricted to the area or Port Orford.
		Aug. 1-27	-	-	27	28	-	772 quota; 25 Chinook per day vessel limit. Landings restricted to the area or Port Orford.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 12-17, 21, 23-24, 27-31	-	-	14	28	-	600 quota; 20 Chinook per day per vessel landing limit through Oct. 17, 10 Chinook thereafter; landings restricted to Brookings.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters. (Page 3 of 5)

Year	Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon		Number of Days	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2016	WA/OR Border to Cape Falcon	May 1-3, 6-31	-	-	23	28	-	5 days per week, Fri.-Tues. 40 Chinook per vessel per open period.
		June 3-5	-	-	3	28	-	40 Chinook per vessel per open period.
		June 10-16	-	-	7	28	-	65 Chinook per vessel per open period.
		June 24-30	-	-	7	28	-	40 Chinook per vessel per open period.
		July 8-14	-	-	7	28	-	80 Chinook per vessel per open period.
		July 22-28	-	-	7	28	-	150 Chinook per vessel per open period.
		Aug. 1-7	-	-	7	28	-	225 Chinook per vessel per open period.
		Aug. 15-23	-	-	9	28	-	300 Chinook per vessel per open period.
	Cape Falcon to Humbug Mt.	Apr. 8-May 31	-	-	54	28	-	
		June 5-10, 15-30	-	-	22	28	-	
		July 8-31	-	-	24	28	-	
		Aug. 8-12, 18-24	-	-	12	28	-	
		Sept. 1-7,15-30, Oct. 1-31	-	-	54	28	-	45 Chinook per vessel per landing week (Thurs.-Wed.) and only open shoreward of the 40 fathom regulatory line in October.
	Cape Blanco to Humbug Mt. (Elk River Area)	Nov. 1-30	-	-	30	26	-	Inside of a line from Cape Blanco to Black Rock to Best Rock to 42º40'30" N Lat. 124º29'00" W Long. to Humbug Mt. 20 Chinook per day vessel limit. Landings restricted to Port Orford.
	Humbug Mt. to OR/CA Border (Oregon KMZ)	Apr. 8-30	-	-	23	28	-	
		May 1-31	-	-	31	28	-	
		June 5-10,15-30	-	-	22	28	-	720 Chinook quota; 15 Chinook per day per vessel landing limit.
		July 8-31	-	-	24	28	-	594 Chinook quota; 15 Chinook per day per vessel landing limit.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 10-31	-	-	22	28	-	300 Chinook quota; 5 Chinook per day per vessel landing limit through Oct. 25, 10 thereafter; landings restricted to Brookings.

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters. (Page 4 of 5)

Year	Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon		Number of Days	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2017	WA/OR Border to Cape Falcon	May 1-June 30	-	-	61	28	-	27,000 Chinook quota (capped at 9,000 south of Leadbetter Point).
		-	July 1-4	-	4	28	16	
		-	July 7-18, July 21-Sept. 19	-	71	28	16	5 days per week, Fri. -Tues. through July 18; 7 days a week thereafter. Landing and possession limits: 75 Chinook and 10 marked coho per vessel per open period through July 19, then 150 Chinook and 10 marked coho thereafter.
	Cape Falcon to Florence South Jetty	Apr. 15-May 31	-	-	47	28	-	
		June 7-12, 15-30	-	-	22	28	-	
		July 8-31	-	-	24	28	-	
		Sept. 1-Oct. 31	-	-	61	28	-	45 Chinook per vessel per landing week (Thurs.-Wed.) and only open shoreward of the 40 fathom regulatory line.
	Florence South Jetty to Humbug Mt.	Closed	-	-	-	-	-	
	Cape Blanco to Humbug Mt. (Elk River Area)	Oct. 15-Nov. 30	-	-	47	26	-	Inside of a line from Cape Blanco to Black Rock to Best Rock to 42º40'30" N Lat. 124º29'00" W Long. to Humbug Mt. 20 Chinook per day vessel limit. Landings restricted to Port Orford.
	Humbug Mt. to OR/CA Border (Oregon KMZ)	Closed	-	-	-	-	-	
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 9-13, 16-17, 26-27	-	-	9	28	-	300 Chinook quota; 5 Chinook per day per vessel landing limit; landings restricted to Brookings.
2018	WA/OR Border to Cape Falcon	May 1-June 30	-	-	61	28	-	16,500 Chinook quota (capped at 4,600 south of Leadbetter Point). 50 Chinook per vessel per landing week (Thurs.-Wed.) through May 30, 100 Chinook per vessel per landing week (Thurs.-Wed.) thereafter.
		-	July 1-Sept. 19	-	81	28	16	Quota: 11,000 Chinook (capped at 1,300 south of Leadbetter Point), and 4,600 marked coho. Landing and possession limits per vessel per landing week (Thurs.-Wed.) : 50 Chinook and 10 marked coho through July 25, 75 Chinook and 10 marked coho July 26-Aug. 22, 85 Chinook and 10 marked coho during Aug. 23-29, and 85 Chinook and 25 marked coho thereafter.
	Cape Falcon to Humbug Mt.	May 4-14, and 19-31	-	-	24	28	-	Beginning September 1 no more than 50 Chinook allowed per vessel per landing week (Thurs.-Wed.); and only open shoreward of the 40 fathom management line beginning October 1.
		June 4-12, and 16-30	-	-	24	28	-	
		July 5-12, and 16-31	-	-	24	28	-	
		Aug. 3-7, 13-17, and 25-29	-	-	15	28	-	
		Sept. 1-Oct. 31	-	-	61	28	-	

TABLE C-3. Summary of actual Oregon commercial salmon seasons in state and Federal (EEZ) waters. (Page 5 of 5)

Year	Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon		Number of Days	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2018 cont.	Cape Blanco to Humbug Mt. (Elk River Area)	Nov. 1-30	-	-	30	26	-	Inside of a line from Cape Blanco to Black Rock to Best Rock to 42º40'30" N Lat. 124º29'00" W Long. to Humbug Mt. 10 Chinook per day vessel limit. Landings restricted to Port Orford.
	Humbug Mt. to OR/CA Border (Oregon Klamath Mangement Zone, OR KMZ)	May 4-14, 19-31	-	-	24	28	-	Chinook Quotas: 1,500 in June, 1,975 in July, and 1,430 in August. Beginning June 4 - landing and possession limit per vessel per week (Thurs.-Wed.): 50 Chinook through Aug. 12, and 80 Chinook thereafter.
		June 4-12	-	-	9	28	-	
		July 5-12, 16-31	-	-	24	28	-	
		Aug. 3-7, 13-17, 25-29	-	-	15	28	-	
		Sept. 1-Oct. 31	-	-	61	28	-	
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 8-12, 15-23	-	-	14	28	-	5 Chinook per day per vessel landing limit; landings restricted to Brookings.
2019[b/]	WA/OR Border to Cape Falcon	May 6-June 28	-	-	54	28	-	Quota: 13,200 Chinook (capped at 1,800 south of Leadbetter Point). Landing and possession limit: 100 Chinook per vessel May 6-15; 50 Chinook per vessel per landing week (Thurs.-Weds.) thereafter.
		-	July 1-Sept. 30	-	92	28	16	Quota: 19,257 Chinook and 30,400 marked coho. Landing and possession limits per vessel per landing week (Thurs.-Wed.): 150 marked coho through July 18, 125 Chinook and 150 marked coho July 19-Aug. 15, 160 Chinook and 150 marked coho thereafter.
	Cape Falcon to Humbug Mt.	Apr. 20-30	-	-	11	28	-	Beginning September 1 no more than 75 Chinook allowed per vessel per landing week (Thurs.-Wed.).
		May 6-30,	-	-	24	28	-	
		June 1-Aug. 29	-	-	90	28	-	
		Sept. 1-Oct. 31	-	-	61	28	-	
	Humbug Mt. to OR/CA Border (Oregon Klamath Mangement Zone, OR KMZ)	Apr. 20-30	-	-	10	28	-	Chinook Quotas: 3,200 in June, 4,495 in July, and 4,330 in August. Landing and possession limit per vessel per week (Thurs.-Wed.): 50 Chinook June 1-July 3, and 125 Chinook thereafter.
		May 6-30	-	-	26	28	-	
		June 1-July 31	-	-	61	28	-	
		Aug. 1-29	-	-	29	28	-	

a/ For earlier years see Review of 2013 Ocean Salmon Fisheries, Appendix C, Table C-3.
b/ For detailed regulations and inseason adjustments, see Tables I-1 and C-3.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations.[a/] (Page 1 of 5)

Year	Area[a/]	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Minimum Size Limit (in.) Coho[b/]	Other Restrictions[c/]
2014	WA/OR Border to Cape Falcon	May 31-June 13	14	2	24	-	9,000 marked Chinook quota Cape Falcon, OR to U.S. Canada Border.
	92,400 coho quota and 13,100 Chinook guideline south of Leadbetter Pt. WA	June 14-Sept. 5	84	2	24	16	Seven Days per week; no more than one Chinook.
		Sept. 6-21	16	2	24	16	Seven days per week, non-mark-selective coho fishery with remaining quota converted to an impact neutral quota of 13,100.
	Cape Falcon to Humbug Mt.	Mar. 15-June 20, Aug. 11-29, Sept. 20-Oct. 31	159	2	24	-	All salmon except coho.
		June 21-Aug. 10	51	2	24	16	All salmon; 80,000 marked coho quota.
		Aug. 30-Sept. 19	21	2	24	16	All salmon; 35,000 non-mark-selective coho quota (includes rollover from mark-selective coho quota).
	Cape Blanco to Humbug Mt.: (Elk R. Area see footnote a/)	Nov. 1-30	30	2	24	-	Two Chinook daily, one of which can be unmarked; no more than 10 unmarked per season in aggregate with Elk R., Sixes R., and Floras Ck./New R.
	Humbug Mt. to OR/CA Border	May 10-June 20, Aug. 11-Sept. 7	70	2	24	-	All salmon except coho.
		June 21-Aug. 10	51	2	24	16	All salmon, shared quota with June 21-Aug. 10 Cape Falcon to Humbug Mt. fishery.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-12	12	2	24	-	Two Chinook daily, one of which can be unmarked; no more than five unmarked per season.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations. (Page 2 of 5)

Year	Area[a/]	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Minimum Size Limit (in.) Coho[b/]	Other Restrictions[c/]
2015	WA/OR Border to Cape Falcon	May 30-June 12	14	2	24	-	10,000 marked Chinook quota Cape Falcon, OR to U.S. Canada Border.
	79,400 coho quota and 15,225 Chinook guideline south of Leadbetter Pt. WA	June 13-Sept. 3	83	2	24	16	Seven days per week. All salmon; two fish per day, no more than one Chinook June 13-Aug.28.
		Sept. 4-30	27	2	24	16	Seven days per week. All salmon; unmarked coho retention allowed. Remaining coho quota converted to impact neutral quota of 15,300.
	Cape Falcon to Humbug Mt.	Mar. 15-June 26, Aug. 10-Sept. 3, Oct. 1-31	159	2	24	-	All salmon except coho.
		June 27-Aug. 9	44	2	24	16	All salmon; 55,000 marked coho quota shared with June 27-Aug. 9 Humbug Mt. to OR/CA Border fishery.
		Sept. 4-30	27	2	24	16	All salmon; 20,700 non-mark-selective coho quota (includes rollover from mark-selective coho quota).
	Cape Blanco to Humbug Mt.: (Elk R. Area see footnote a/)	Nov. 1-30	30	2	24	-	Two Chinook daily, one of which can be unmarked; no more than 10 unmarked per season in aggregate with Elk R., Sixes R., and Floras Ck./New R.
	Humbug Mt. to OR/CA Border	May 1-June 26, Aug. 10-Sept. 7	86	2	24	-	All salmon except coho.
		June 27-Aug. 9	44	2	24	16	All salmon, shared quota with June 27-Aug. 9 Cape Falcon to Humbug Mt. fishery.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-11	11	2	24	-	Two Chinook daily, one of which can be unmarked; no more than five unmarked per season.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations. (Page 3 of 5)

Year	Area[a/]	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Minimum Size Limit (in.) Coho[b/]	Other Restrictions[c/]
2016	WA/OR Border to Cape Falcon	July 1-Aug. 27	58	2	24	16	All salmon. 10,200 Chinook guideline and 18,900 marked coho quotafrom Leadbetter Point, WA to Cape Falcon. No more than 1 Chinook through Aug. 15.
	Cape Falcon to Humbug Mt.	Mar. 15-June 24, Aug. 8-Sept. 2, Oct. 1-31	159	2	24	-	All salmon except coho.
		June 25-Aug. 7	44	2	24	16	All salmon; 26,000 marked coho quota shared with June 25-Aug. 7 Humbug Mt. to OR/CA Border fishery.
		Sept. 3-30	28	2	24	16	All salmon; 7,500 non-mark-selective coho quota.
	Cape Blanco to Humbug Mt.: (Elk R. Area see footnote a/)	Nov. 1-30	30	2	24	-	Two Chinook daily, one of which can be unmarked; no more than 10 unmarked per season in aggregate with Elk R., Sixes R., Floras Ck. and New R.
	Humbug Mt. to OR/CA Border	May 28-June 24, Sept. 3-5	31	2	24	-	All salmon except coho.
		June 25-Aug. 7	44	2	24	16	All salmon. Shared 26,000 marked coho quota with Cape Falcon to Humbug Mt. fishery.
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 1-3, 8-9	5	2	24	-	Two Chinook daily, one of which can be unmarked.
2017	WA/OR Border to Cape Falcon	June 24-Aug. 22	60	2	24	16	All salmon. 13,200 Chinook guideline and 22,527 marked coho quota from Leadbetter Point, WA to Cape Falcon. No more than 1 Chinook.
	Cape Falcon to Humbug Mt.	Mar. 15-June 23, Aug. 1-Sept. 1, Sept. 8-Oct. 31	187	2	24	-	All salmon except coho. In Oct., only open shoreward of the 40 fathom line.
		June 24-July 31	38	2	24	16	All salmon; 18,000 marked coho quota.
		Sept. 2-7	6	2	24	16	All salmon; 7,900 non-mark-selective coho quota.

TABLE C-4. Summary of actual Oregon recreational ocean salmon regulations. (Page 4 of 5)

Year	Area[a/]	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Minimum Size Limit (in.) Coho[b/]	Other Restrictions[c/]
2017 *(cont.)*	Cape Blanco to Humbug Mt.: (Elk R. Area, see footnote a/)	Nov. 1-30	30	2	24	-	Two Chinook daily, one of which can be unmarked; no more than 10 unmarked per season in aggregate with Elk R., Sixes R., Floras Ck. and New R.
	Humbug Mt. to OR/CA Border	Closed	-	-	-	-	
	Twin Rocks to OR/CA Border Inside 3 nm (Chetco River Area)	Oct. 7-8, 14-15	4	1	28	-	One Chinook daily.
2018	WA/OR Border to Cape Falcon	June 23-Aug.12, Sept. 2-3	53	2	24	16	8,000 Chinook guideline and 21,000 marked coho quota. Two salmon daily, no more than one Chinook through Aug. 12, then any two salmon daily thereafter.
	Cape Falcon to Humbug Mt.	Mar. 15-June 29, Sept. 4-6, 9-13, 16-20, Sept. 22-Oct. 31,	160	2	24	-	In Oct., only open shoreward of the 40 fathom line.
		June 30-Sept. 3,	66	2	24	16	35,000 marked coho quota.
		Sept. 7-8,14-15, 21	5	2	24	16	7,600 non-mark-selective coho quota.
	Cape Blanco to Humbug Mt.: (Elk R. Area, see footnote a/)	Nov. 1-30	30	2	24	-	Two Chinook daily, one of which can be unmarked; no more than 10 unmarked per season in aggregate with Elk R., Sixes R., Floras Ck. and New R.
	Humbug Mt. to OR/CA Border (Oregon KMZ)	May 19-Aug. 26	100	2	24	-	
	Chetco River Terminal Area: Twin Rocks to OR/CA Border Inside 3 nm	Oct. 6-7, 13-14	4	1	28	-	One Chinook daily.

Year	Area[a/]	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Coho[b/]	Other Restrictions[c/]
2019[d/]	WA/OR Border to Cape Falcon	June 22-Sept. 30	101	2	24	16	Subarea guideline of 7,150 Chinook and 79,800 marked coho quota. Daily limit includes only one Chinook.
	Cape Falcon to Humbug Mt.	Mar. 15-June 21, Aug. 26-30, Sept. 2-5, 9-12, Sept. 30-Oct. 31	148	2	24	-	
	Cape Falcon to OR/CA Border	June 22-Aug. 25	65	2	24	16	90,000 marked coho quota.
	Cape Falcon to Humbug Mt.	Aug. 31-Sept. 1, Sept. 6-8, 13-15, 20-29	18	2	24	16	15,640 non-mark-selective coho quota.
	Humbug Mt. to OR/CA Border (Oregon KMZ)	May 25-June 21, Aug. 26-Sept. 2	36	2	24	-	

a/ Elk River area is 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.

b/ Mark-selective coho fishery unless otherwise noted; 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 and inseason adjustments, see Tables I-3 and C-9.

TABLE C-5. Summary of actual Washington commercial salmon seasons in state and federal (EEZ) waters.[a/] (Page 1 of 5)

		Seasons		Number of Days		Minimum Size Limit (in.)		
Year	Area	All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho	Other Restrictions
2014	U.S./Canada Border to WA/OR Border	**Areas 1 & 2**						
		May 1-20	-	20	-	28	-	Seven days per week, no landing limits.
		May 23-27	-	5	-	28	-	60 Chinook per vessel per open period.
		May 30-June 3	-	5	-	28	-	50 Chinook per vessel per open period.
		June 6-10	-	5	-	28	-	40 Chinook per vessel per open period.
		June 13-17, 20-24, 27-30	-	14	-	28	-	20 Chinook per vessel per open period.
		Areas 3 & 4						
		May 1-8	-	8	-	28	-	Seven days per week, no landing limits.
		May 10-13, 16-20	-	9	-	28	-	50 Chinook per vessel per open period.
		May 23-27, May 30-June 3	-	10	-	28	-	40 Chinook per vessel per open period.
		June 6-10	-	5	-	28	-	30 Chinook per vessel per open period.
		June 13-17, 20-24, 27-30	-	14	-	28	-	20 Chinook per vessel per open period.
			Areas 1 & 2					
		-	July 1-8	-	8	28	16	60 Chinook and 60 marked coho per open period vessel limit.
		-	July 11-15, 18-22, 25-29	-	15	28	16	35 Chinook and 60 marked coho per open period vessel limit.
		-	Aug. 1-5	-	5	28	16	50 Chinook and 80 marked coho per open period vessel limit.
		-	Aug. 8-12, 15-19	-	10	28	16	75 Chinook and 150 marked coho per open period vessel limit.
		-	Aug. 22-26	-	5	28	16	35 Chinook and 150 marked coho per open period vessel limit.
		-	Aug. 29-Sept. 2	-	5	28	16	20 Chinook and 150 marked coho per open period vessel limit.
		-	Sept. 5-9	-	5	28	16	15 Chinook and 100 coho (non-mark-selective) per open period vessel limit.
		-	Sept. 12-16	-	5	28	16	15 Chinook and 200 coho (non-mark-selective) per open period vessel limit.
			Areas 3 & 4					
		-	July 1-8	-	8	28	16	60 Chinook and 40 marked coho per open period vessel limit.
		-	July 11-15, 18-22, 25-29	-	15	28	16	35 Chinook and 40 marked coho per open period vessel limit.
		-	Aug. 1-5	-	5	28	16	50 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 8-12, 15-19	-	10	28	16	75 Chinook and 150 marked coho per open period vessel limit.
		-	Aug. 22-26	-	5	28	16	35 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 29-Sept. 2	-	5	28	16	20 Chinook and 50 marked coho per open period vessel limit.
		-	Sept. 5-9, 12-16	-	10	28	16	15 Chinook and 20 marked coho per open period vessel limit.

TABLE C-5. Summary of actual Washington commercial salmon seasons in state and federal (EEZ) waters. (Page 2 of 5)

		Seasons		Number of Days		Minimum Size Limit (in.)		
Year	Area	All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho	Other Restrictions
2015	U.S./Canada Border to WA/OR Border	**Area 1**						
		May 1-29	-	29	-	28	-	Seven days per week, no landing limits.
		June 5-9, 12-16	-	10	-	28	-	40 Chinook per vessel per open period.
		June 19-23	-	5	-	28	-	80 Chinook per vessel per open period.
		Area 2						
		May 1-June 25	-	56	-	28	-	Seven days per week, no landing limits.
		Area 3						
		May 1-June 30						
		May 1-16	-	16	-	28	-	Seven days per week, no landing limits.
		Area 4						
		May 1-16	-	16	-	28	-	60 Chinook per vessel per open period.
		May 22-26	-	5	-	28	-	15 Chinook per vessel per open period.
		May 29-June 23	-	20	-	28	-	20 Chinook per vessel per open period.
		June 26-27	-	2	-	28	-	12 Chinook per vessel per open period.
			Areas 1 & 2					
		-	July 1-7	-	7	28	16	50 Chinook and 50 marked coho per open period vessel limit.
		-	July 10-14, 17-21, 24-28, July 31-Aug.4, Aug 7-11.	-	25	28	16	75 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 14-18	-	5	28	16	50 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 21-25	-	5	28	16	40 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 28-Sept. 1	-	5	28	16	35 Chinook and 50 marked coho per open period vessel limit.
		-	Sept. 4-8, 11-15	-	10	28	16	40 Chinook and 50 marked coho per open period vessel limit.
		-	Sept. 18-22	-	5	28	16	40 Chinook and 80 coho (non-mark-selective) per open period vessel limit.
			Areas 3 & 4					
		-	July 1-7	-	7	28	16	50 Chinook and 50 marked coho per open period vessel limit.
		-	July 10-14, 17-21, 24-28, July 31-Aug.4, Aug 7-11	-	30	28	16	60 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 14-18	-	5	28	16	50 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 21-25	-	5	28	16	40 Chinook and 50 marked coho per open period vessel limit.
		-	Aug. 28-Sept. 1	-	5	28	16	35 Chinook and 50 marked coho per open period vessel limit.
		-	Sept. 4-8, 11-15	-	10	28	16	40 Chinook and 50 marked coho per open period vessel limit.
		-	Sept. 18-22	-	5	28	16	40 Chinook and 80 non-mark-selective coho per open period vessel limit.

TABLE C-5. Summary of actual Washington commercial salmon seasons in state and federal (EEZ) waters. (Page 3 of 5)

		Seasons		Number of Days		Minimum Size Limit (in.)		
Year	Area	All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho	Other Restrictions
2016	U.S./Canada Border to WA/OR Border	**Areas 1 & 2**						
		May 1-3	-	3	-	28	-	40 Chinook per vessel per open period.
		May 6-31	-	20	-	28	-	5 days per wk. 40 Chinook per vessel per open period.
		June 3-5	-	3	-	28	-	40 Chinook per vessel per open period.
		June 10-16	-	7	-	28	-	65 Chinook per vessel per open period.
		June 24-30	-	7	-	28		40 Chinook per vessel per open period.
		July 8-14	-	7	-	28	-	80 Chinook per vessel per open period.
		July 22-28	-	7	-	28	-	125 Chinook per vessel per open period.
		Aug. 1-7	-	7	-	28	-	225 Chinook per vessel per open period.
		Aug. 15-23	-	9	-	28	-	300 Chinook per vessel per open period.
		Area 3						
		May 1-3	-	3	-	28	-	40 Chinook per vessel per open period.
		May 6-31	-	20	-	28	-	5 days per wk. 40 Chinook per vessel per open period.
		June 3-5	-	3	-	28	-	40 Chinook per vessel per open period.
		July 8-14	-	7	-	28	-	60 Chinook per vessel per open period.
		July 22-28	-	7	-	28	-	150 Chinook per vessel per open period.
		Aug. 1-7	-	7	-	28	-	225 Chinook per vessel per open period.
		Aug. 15-23	-	9	-	28	-	300 Chinook per vessel per open period.
		Area 4						
		May 1-3	-	3	-	28	-	40 Chinook per vessel per open period.
		May 6-31	-	20	-	28	-	5 days per wk. 40 Chinook per vessel per open period.
		June 3-5	-	3	-	28	-	40 Chinook per vessel per open period.
		June 10-16	-	7	-	28	-	15 Chinook per vessel per open period.
		June 24-30	-	7	-	28		14 Chinook per vessel per open period.
		July 8-14	-	7	-	28	-	60 Chinook per vessel per open period.
		July 22-28	-	7	-	28	-	150 Chinook per vessel per open period.
		Aug. 1-7	-	7	-	28	-	225 Chinook per vessel per open period.
		Aug. 15-23	-	9	-	28	-	300 Chinook per vessel per open period.

TABLE C-5. Summary of actual Washington commercial salmon seasons in state and federal (EEZ) waters. (Page 4 of 5)

		Seasons		Number of Days		Minimum Size Limit (in.)		
Year	Area	All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho	Other Restrictions
2017	U.S./Canada Border to WA/OR Border	**Areas 1 & 2**						
		May 1-June 30	-	61	-	28	-	
		-	July 1-4	-	4	28	16	75 Chinook and 10 marked coho per vessel per open period.
		-	July 7-20	-	10	28	16	75 Chinook and 10 marked coho per vessel per open period (5 days per wk. Fri-Tues).
		-	July 21-Sept. 19	-	61	28	16	150 Chinook and 10 marked coho per vessel per calendar week.
		Areas 3 & 4						
		May 1-June 20	-	51	-	28	-	60 Chinook per vessel per open period.
		June 21-30	-	10	-	28	-	
		-	July 1-4	-	4	28	16	60 Chinook and 10 marked coho per vessel per open period.
		-	July 7-20	-	10	28	16	60 Chinook and 10 marked coho marked per vessel per open period (5 days per wk. Fri-Tues).
		-	July 21-Aug. 20	-	31	28	16	75 Chinook and 10 marked coho per vessel per open period (5 days per wk. Fri-Tues).
		-	Aug. 21- Sept. 19	-	30	28	16	100 Chinook and 10 marked coho per vessel per calendar week.
2018	U.S./Canada Border to WA/OR Border	**Area 1**						
		May 1-June 30	-	61	-	28	-	Chinook landing and possession limit per vessel per landing week (Thurs.-Weds.): 50 through May 30, and 100 thereafter.
		-	July 1- Sept. 19	-	81	28	16	Landing and possession limit per vessel per landing week (Thurs.-Weds.): 50 Chinook and 10 marked coho through Aug. 22, 85 Chinook and 10 marked coho Aug. 23-29, and 85 Chinook and 25 marked coho thereafter.
		Area 2						
		May 1-June 30	-	61	-	28	-	Chinook landing and possession limit per vessel per landing week (Thurs.-Weds.): 100 through May 30, and 200 thereafter.
		-	July 1- Sept. 19	-	81	28	16	Landing and possession limit per vessel per landing week (Thurs.-Weds.): 10 marked coho through Aug. 29, and 25 thereafter.
		Areas 3 & 4						
		May 1-27	-	27	-	28	-	50 Chinook per vessel per landing week (Thurs.-Weds.).
		May 31-June 4	-	5	-	28	-	35 Chinook per vessel per open period
		June 8-11	-	4	-		-	30 Chinook per vessel per open period
		-	July 1- Sept. 19	-	81	28	16	Landing and possession limit per vessel per landing week (Thurs.-Weds.): 50 Chinook and 10 marked coho through July 25, 75 Chinook and 10 marked coho July 26-Aug. 1. 50 Chinook and 10 marked coho Aug. 2-22, 85 Chinook and 10 marked coho Aug. 23-29, and 85 Chinook and 25 marked coho thereafter.

TABLE C-5. Summary of actual Washington commercial salmon seasons in state and federal (EEZ) waters. (Page 5 of 5)

Year	Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon	Number of Days: All-Salmon-Except-Coho	Number of Days: All Salmon	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2019[a/]	U.S./Canada Border to WA/OR Border.	**Area 1** *(Col. R. subarea)*						
		May 6-June 28	-	54		28	-	Landing and possession limit: 100 Chinook per vessel May 6-15, 50 Chinook per vessel per landing week (Thurs.-Weds.) thereafter.
	AREA QUOTAS: Spring (May-June) Chinook quota:13,200, capped at 1,800 in Area 1 (Col.R.) and 5,000 in Areas 3 & 4 (LaPush and Neah Bay). Summer (July-Sept.) Quota: 19,527 Chinook and 30,400 marked coho.	-	July 1-Sept. 30	-	92	28	16	Landing and possession limits per vessel per landing week (Thurs.-Wed.): 150 marked coho through July 18, 125 Chinook and 150 marked coho July 19-Aug. 15, 160 Chinook and 150 marked coho thereafter.
		Area 2 *(Wesport subarea)*						
		May 6-June 28	-	54	-	28	-	
		-	July 1- Sept. 30	-	92	28	16	Landing and possession limits per vessel per landing week (Thurs.-Wed.): 150 marked coho through July 18, 125 Chinook and 150 marked coho July 19-Aug. 15, 160 Chinook and 150 marked coho thereafter.
		Area 3 (LaPush) **& Area 4** *(Neah Bay)*						
		May 6-15,	-	10	-	28	-	100 Chinook per vessel for the open period.
		May 16-June 19,	-	35	-	28	-	50 Chinook per vessel per landing week (Thurs.-Weds.).
		June 24-28	-	5	-	28	-	20 Chinook per vessel for the open period.
			July 1-Sept. 30	-	92	28	16	Landing and possession limits per vessel per landing week (Thurs.-Wed.): 150 marked coho through July 18, 125 Chinook and 150 marked coho July 19-Aug. 15, 160 Chinook and 150 marked coho thereafter.

a/ For detailed regulations and inseason adjustments, see Tables I-1 and C-9.

TABLE C-6. Summary of actual Washington recreational ocean salmon regulations.[a/] (Page 1 of 4)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Minimum Size Limit (in.) Coho[a/]	Other Restrictions
2014	U.S./Canada Border to Queets R. WA (Neah Bay and La Push subareas)	May 16-17, 23-24, May 31-June 13	18	2	24	-	Coastwide quota: 9,000 marked Chinook.
	Queets R. to Leadbetter Pt. WA (Westport subarea)	May 31-June 13	14	2	24	-	Coastwide quota: 9,000 marked Chinook.
	Leadbetter Pt. WA to Cape Falcon OR (Columbia River subarea)	May 31-June 13	14	2	24	-	Coastwide quota: 9,000 marked Chinook.
	U.S./Canada Border to Cape Alava: 19,200 coho quota and 7,000 Chinook guideline.	June 14-Aug. 31	79	2	24	16	Seven days per week. All salmon; two fish per day.
		Sept. 1-21	21	2	24	16	Seven days per week. All salmon; unmarked coho retention allowed. Remaining coho quota converted to impact neutral quota of 1,600.
	Cape Alava to Queets River 4,750 coho quota and 2,350 Chinook guideline.	June 14-Aug. 31	79	2	24	16	Seven days per week. All salmon; two fish per day.
		Sept. 1-21	21	2	24	16	Seven days per week. All salmon; unmarked coho retention allowed. Remaining coho quota converted to impact neutral quota of 1,500.
	48º00' N. Lat. to 47º50' N. Lat.	Sept. 27-Oct. 12	16	2	24	16	Seven days per week. Two salmon per day. Quotas of 50 Chinook and 50 coho.
	Queets River to Leadbetter Point 68,380 coho quota and 27,600 Chinook guideline.	June 14-Aug. 31	79	2	24	16	Seven days per week. All salmon; two fish per day, no more than one Chinook June 14-Aug.17.
		Sept. 1-19	19	2	24	16	Seven days per week. All salmon; unmarked coho retention allowed. Remaining coho quota converted to impact neutral quota of 13,750.
	Leadbetter Point to WA/OR Border. 92,400 coho quota and 13,100 Chinook guideline.	June 14-Sept. 5	84	2	24	16	Seven days per week. All salmon; two fish per day, no more than one Chinook.
		Sept. 6-21	16	2	24	16	Seven days per week. All salmon; unmarked coho retention allowed. Remaining coho quota converted to impact neutral quota of 13,100.

TABLE C-6. Summary of actual Washington recreational ocean salmon regulations. (Page 2 of 4)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Minimum Size Limit (in.) Coho[a/]	Other Restrictions
2015	U.S./Canada Border to Queets R. WA (Neah Bay and La Push subareas)	May 15-16, 22-23, May 30-June 12	18	2	24	-	Coastwide quota: 10,000 marked Chinook.
	Queets R. to Leadbetter Pt. WA (Westport subarea)	May 30-June 12	14	2	24	-	Coastwide quota: 10,000 marked Chinook.
	Leadbetter Pt. WA to Cape Falcon OR (Columbia River subarea)	May 30-June 12	14	2	24	-	Coastwide quota: 10,000 marked Chinook.
	U.S./Canada Border to Cape Alava: 14,850 coho quota and 8,820 Chinook guideline, plus 1,700 mark-selective coho quota transferred from the commercial fishery.	June 13-Sept 3	83	2	24	16	Seven days per week. All salmon; two fish per day. One Chinook allowed June 24-July 27, Aug. 14-15 and after Aug. 20, Chinook retention prohibited July 28- Aug. 13 and Aug. 16-20.
		Sept 4-10	7	2	24	16	Seven days per week. All salmon except Chinook; unmarked coho retention allowed. Remaining coho quota converted to impact neutral quota of 4,100.
		Sept 11-30	20	2	24	16	Seven days per week. All salmon except Chinook; two fish per day. 1,700 mark-selective coho quota transferred from the commercial fishery.
	Cape Alava to Queets River 3,610 coho quota and 2,735 Chinook guideline.	June 13-Sept. 3	83	2	24	16	Seven days per week. All salmon; two fish per day; July 24-Sept. 30 limited to one Chinook.
		Sept. 4-30	27	2	24	16	Seven days per week. All salmon; two fish per day, only one Chinook, unmarked coho retention allowed. Remaining coho quota converted to quota of 625.
	48º00' N. Lat. to 47º50' N. Lat.	Oct. 1-11	11	2	24	16	Seven days per week. Two salmon per day. Quotas of 100 Chinook and 100 coho.
	Queets River to Leadbetter Point 52,840 coho quota and 28,320 Chinook guideline.	June 13-Sept. 3	83	2	24	16	Seven days per week. All salmon; two fish per day, no more than one Chinook June 13-Aug.14.
		Sept. 4-30	27	2	24	16	Seven days per week. All salmon; unmarked coho retention allowed. Remaining coho quota converted to impact neutral quota of 13,000.
	Leadbetter Point to WA/OR Border. 79,400 coho quota and 15,225 Chinook guideline.	June 13-Sept. 3	83	2	24	16	Seven days per week. All salmon; two fish per day, no more than one Chinook June 13-Aug.28.
		Sept. 4-30	27	2	24	16	Seven days per week. All salmon; unmarked coho retention allowed. Remaining coho quota converted to impact neutral quota of 15,300.

TABLE C-6. Summary of actual Washington recreational ocean salmon regulations. (Page 3 of 4)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Minimum Size Limit (in.) Coho[a/]	Other Restrictions
2016	U.S./Canada Border to Cape Alava WA (Neah Bay subarea)	July 1- Aug. 21	52	2	24	-	All salmon except coho. Chinook guideline: 6,200
	Cape Alava to Queets R. (La Push sub area)	July 1- Aug. 21	52	2	24	-	All salmon except coho. Chinook guideline: 2,000
	Queets R. to Leadbetter Pt. WA (Westport subarea)	July 1-22	22	1	24	-	All salmon except coho. Chinook guideline: 16,600
		July 23-Aug. 21	30	2	24	-	
	Leadbetter Pt. WA to Cape Falcon OR (Columbia River subarea)	July 1- Aug. 27	58	2	24	16	All salmon. 10,200 Chinook guideline, 18,900 coho quota. Daily bag limit allows only 1 Chinook through Aug 15.
2017	U.S./Canada Border to Cape Alava WA (Neah Bay subarea)	June 24-Sept. 4	73	2	24	16	All salmon. 7,900 Chinook guideline, 3,970 coho quota. Two fish daily.
	Cape Alava to Queets R. (La Push sub area)	June 24-Sept. 4	73	2	24	16	All salmon. 2,500 Chinook guideline, 1,490 coho quota. Two fish daily.
	Queets R. to Leadbetter Pt. WA (Westport subarea)	July 1-Aug.22	53	2	24	16	All salmon. 21,400 Chinook guideline, 17,113 coho quota. Two salmon daily, no more than one Chinook through July 21, then any two salmon daily thereafter.
	Leadbetter Pt. WA to Cape Falcon OR (Columbia River subarea)	June 24-Aug.22	60	2	24	16	All salmon. 13,200 Chinook guideline, 22,527 coho quota. Two salmon daily, no more than one Chinook.
2018[c/]	U.S./Canada Border to Cape Alava WA (Neah Bay subarea)	June 23-Aug 12	51	2	24	16	3,024 Chinook guideline, 5,370 coho quota. Daily limit includes only one Chinook through July 13.
	Cape Alava to Queets R. (La Push sub area)	June 23-Sept. 3	73	2	24	16	1,500 Chinook guideline, 1,090 coho quota
	Queets R. to Leadbetter Pt. WA (Westport subarea)	July 1-Sept. 3	51	2	24	16	13,100 Chinook guideline, 15,540 coho quota. Open five days per week (Sun.-Thurs.), through Aug.23, then seven days per week thereafter. Daily limit includes only one Chinook through Aug. 23.
	Leadbetter Pt. WA to Cape Falcon OR (Columbia River subarea)	June 23-Aug.12, Sept. 2-3	53	2	24	16	8,000 Chinook guideline, 21,000 coho quota. Daily limit includes only one Chinook through Aug. 12.

TABLE C-6. Summary of actual Washington recreational ocean salmon regulations. (Page 4 of 4)

Year	Area	Season	Days	Bag Limit	Minimum Size Limit (in.) Chinook	Minimum Size Limit (in.) Coho[a/]	Other Restrictions
2019[b/]	U.S./Canada Border to Cape Alava WA (Neah Bay subarea)	June 22-Sept. 30	101	2	24	16	5,200 Chinook guideline, 16,600 coho quota. Daily limit includes only one Chinook July 8-13. No Chinook retention allowed thereafter.
	Cape Alava to Queets R. (La Push sub area)	June 22-Sept. 30	101	2	24	16	1,100 Chinook guideline, 4,050 coho quota. Daily limit includes only one Chinook beginning July 15.
	48º00' N. Lat. to 47º50' N. Lat.	Oct. 1-13	13	2	24	16	100 Chinook guideline, 100 coho quota.
	Queets R. to Leadbetter Pt. WA (Westport subarea)	June 22-Sept. 30	101	2	24	16	12,700 Chinook guideline, 59,050 coho quota. Daily limit includes only one Chinook through Aug. 9.
	Leadbetter Pt. WA to Cape Falcon OR (Columbia River subarea)	June 22-Sept. 30	101	2	24	16	7,150 Chinook guideline, 79,800 coho quota. Daily limit includes only one Chinook.

a/ Mark-selective coho fishery unless otherwise noted; all retained coho must be marked with a healed adipose fin clip.
b/ For detailed regulations and inseason adjustments, see Tables I-1 and C-9.

TABLE C-7. Summary of actual Washington treaty Indian ocean and Area 4B troll salmon seasons. [a/] (Page 1 of 6)

		Seasons		Number of Days		Minimum Size Limit (in.)		
Year	Tribe/Area	All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho	Other Restrictions
2013	**Quinault, Quileute, and Hoh**							
	Sand Point to Point Chehalis	May 1-June 18	-	49	-	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
	Makah							
	Ocean waters north of 48º02'15" N. Lat. and east of 125º44'00" W. Long.	May 1-June 18	-	49	-	24	-	
		-	July 2-8	-	7	24	16	50 Chinook per vessel per open period
		-	July 9-15	-	7	24	16	100 Chinook per vessel per open period
		-	July 16-29	-	14	24	16	75 Chinoook per vessel per open period
		-	July 30-Aug. 11	-	13	24	16	50 Chinook per vessel per open period
		-	Aug. 12-25	-	14	24	16	35 Chinook per vessel per open period
		-	Aug. 26	-	1	24	16	50 Chinook and 200 coho per vessel per open period
		-	Aug. 27	-	0	24	16	Closed
		-	Aug. 28-Sept. 3	-	7	24	16	100 Chinook and 100 coho per vessel per open period
		-	Jan. 1-Apr. 15	-	105	22	16	
	Area 4B inside waters	May 1-June 18	-	49	-	24	-	
		-	July 2-8	-	7	24	16	50 Chinook per vessel per open period
		-	July 9-15	-	7	24	16	100 Chinook per vessel per open period
		-	July 16-29	-	14	24	16	75 Chinoook per vessel per open period
		-	July 30-Aug. 11	-	13	24	16	50 Chinook per vessel per open period
		-	Aug. 12-25	-	14	24	16	35 Chinook per vessel per open period
		-	Aug. 26	-	1	24	16	50 Chinook and 200 coho per vessel per open period
		-	Aug. 27	-	0	24	16	Closed
		-	Aug. 28-Sept. 3	-	7	24	16	100 Chinook and 100 coho per vessel per open period
		-	Nov. 1-Dec. 31	-	61	22	16	
	S'Klallam							
	Area 4B inside waters	-	Jan. 1-Apr. 15	-	105	22	16	
		May 1-June 18	-	49	-	24	-	
		-	July 1-Sept. 4	-	66	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. (Page 2 of 6)

		Seasons		Number of Days		Minimum Size Limit (in.)		
Year	Tribe/Area	All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho	Other Restrictions
2014	**Quinault, Quileute, and Hoh**							
	Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	
	Quileute and Hoh	-	July 1-Sept. 15	-	77	24	16	
	Quinault	-	July 1-Sept. 4	-	66	-	-	
		-	Sept 5-10	-	6	24	16	40 Chinook and 120 coho per vessel per open period
		-	Sept 11-15	-	5	24	16	45 Chinook and 135 coho per vessel per open period
	Sand Point to Queets River (Quileute only)	-	Sept. 16-Oct. 15	-	30	24	16	Ceremonial and subsistence only
	Makah							
	Ocean waters north of 48º02'15" N. Lat. and east of 125º44'00" W. Long.							
		May 1-June 23		54	-	24	-	
		June 25-30		6	-	24	-	75 Chinook per vessel per open period
		-	July 1-31	-	31	24	16	
		-	Aug. 2-Aug. 9	-	8	24	16	70 Chinook per vessel per open period
		-	Aug. 11-13	-	3	24	16	70 Chinook per vessel per open period
		-	Aug. 15-20	-	6	24	16	100 Chinook and 315 coho per vessel per open period
		-	Aug. 22-27	-	6	24	16	120 Chinook and 360 coho per vessel per open period
		-	Aug. 29-Sept 3	-	7	24	16	120 Chinook and 200 coho per vessel per open period
		-	Sept 5-10	-	6	24	16	35 Chinook and 110 coho per vessel per open period
		-	Sept 11-15	-	5	-		45 Chinook and 135 coho per vessel per open period
	Area 4B inside waters	-	Jan. 1-Apr. 15	-	105	22	16	
		May 1-June 23		54	-	24	-	
		June 25-30		6		24	-	75 Chinook per vessel per open period
		-	July 1-31	-	31	24	16	
		-	Aug. 2-Aug. 9	-	8	24	16	70 Chinook per vessel per open period
		-	Aug. 11-13	-	3	24	16	70 Chniook per vessel per open period
		-	Aug. 15-20	-	6	24	16	100 Chinook and 315 coho per vessel per open period
		-	Aug. 22-27	-	6	24	16	120 Chinook and 360 coho per vessel per open period
		-	Aug. 29-Sept 3	-	7	24	16	120 Chinook and 200 coho per vessel per open period
		-	Sept 5-10	-	6	24	16	35 Chinook and 110 coho per vessel per open period
		-	Sept 11-15	-	5			45 Chinook and 135 coho per vessel per open period
		-	Nov. 1-Dec. 31	-	61	22	16	
	S'Klallam							
	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	

TABLE C-7. Summary of actual Washington treaty Indian ocean and Area 4B troll salmon seasons. (Page 3 of 6)

		Seasons		Number of Days		Minimum Size Limit (in.)		
Year	Tribe/Area	All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho	Other Restrictions
2015	**Quinault, Quileute, and Hoh**							
	Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	
	Quileute and Hoh	-	July 1-Sept. 15	-	77	24	16	
	Quinault	-	July 1-Sept. 15	-	77	-	-	
	Sand Point to Queets River (Quileute only)	-	Sept. 16-Oct. 15	-	30	24	16	Ceremonial and subsistence only
	Makah							
	Ocean waters north of 48º02'15" N. Lat. and east of 125º44'00" W. Long.							
		May 1-June 23		54	-	24	-	
		June 25-30		6	-	24	-	75 Chinook per vessel per open period
		-	July 6-11	-	6	24	16	75 Chinook per vessel per open period
		-	July 13-23	-	11	24	16	
		-	July 25-29	-	6	24	16	30 Chinook per vessel per open period
		-	July 31-Aug. 5	-	6	24	16	30 Chinook per vessel per open period
		-	Aug. 7-12	-	6	24	16	35 Chinook per vessel per open period
		-	Aug. 14-19; 21-26; 28-Sept 2	-	17	24	16	20 Chinook per vessel per open period
		-	Sept. 3-9	-	7	24	16	25 Chinook per vessel per open period
		-	Sept. 10-15	-	6			40 Chinook per vessel per open period
	Area 4B inside waters	-	Jan. 1-Apr. 15	-	105	22	16	
		May 1-June 23		54	-	24	-	
		June 25-30		6	-	24	-	75 Chinook per vessel per open period
		-	July 6-11	-	6	24	16	75 Chinook per vessel per open period
		-	July 13-23	-	11	24	16	
		-	July 25-29	-	6	24	16	30 Chinook per vessel per open period
		-	July 31-Aug. 5	-	6	24	16	30 Chinook per vessel per open period
		-	Aug. 7-12	-	6	24	16	35 Chinook per vessel per open period
		-	Aug. 14-19; 21-26; 28-Sept 2	-	17	24	16	20 Chinook per vessel per open period
		-	Sept. 3-9	-	7	24	16	25 Chinook per vessel per open period
		-	Sept. 10-15	-	6			40 Chinook per vessel per open period
		-	Nov. 1-Dec. 31	-	61	22	16	
	S'Klallam							
	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	

TABLE C-7. Summary of actual Washington treaty Indian ocean and Area 4B troll salmon seasons. (Page 4 of 6)

		Seasons		Number of Days		Minimum Size Limit (in.)		
Year	Tribe/Area	All-Salmon-Except-Coho	All Salmon	All-Salmon-Except-Coho	All Salmon	Chinook	Coho	Other Restrictions
2016	**Quinault, Quileute, and Hoh**							
	Sand Point to Point Chehalis	May 1-June 30	-	61	-	24	-	
	Quileute and Hoh	-	July 1-Aug. 31	-	62	24	16	No coho retention
	Quinault	-	July 1-Aug. 31	-	62	24	16	No coho retention
	Makah							
	North of 48º02'15" N. Lat.	May 1-June 4	-	35	-	24	-	Area closure: Swiftsure
	(Norwegian Memorial) and east of	June 5-30	-	26	-	24	-	All Areas Open
	125º44'00" W. Long.	-	July 1-Aug. 6	-	37	24	16	No coho retention; Gear restriction plugs only
		-	Aug. 7-31	-	25	-	-	No coho retention; No gear restrictions
	Area 4B (inside waters)	-	Jan. 1-Apr. 15	-	105	22	16	
	(Tootosh line east to Sieku R.)	May 1-June 30	-	61	-	24	-	
		-	July 1-Aug. 6	-	37	24	16	No coho retention; Gear restriction plugs only
		-	Aug. 7-31	-	25	24	-	No coho retention; No gear restrictions
		-	Nov. 1-Dec. 31	-	61	22	16	
	S'Klallam/Area 4B	-	Jan. 1-Apr. 15	-	105	22	16	
	(Tootosh line east to Sieku R.)	May 1-June 30	-	61	-	24	-	
		-	July 1-Aug. 31	-	62	24	16	No coho retention
		-	Nov. 1-Dec. 31	-	61	22	16	
2017	**Quinault, Quileute, and Hoh**							
	Cape Alava to Point Chehalis	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Makah							
	North of 48º02'15" N. Lat. (Norwegian	May 1-June 30	-	61	-	24	-	
	Memorial) and east of	-	July 1- Aug. 14	-	45	24	16	
	125º44'00" W. Long.	-	Aug. 15-21	-	7	24	16	100 coho per vessel per week
		-	Aug. 22-31	-	10	24	16	175 coho per vessel per week
		-	Sept. 1-8	-	8	24	16	50 coho per vessel per week
		-	Sept. 9-10	-	2	24	16	75 coho per vessel per week
		-	Sept. 11-14	-	4	24	16	100 coho per vessel per week
	Area 4B (inside waters)	-	Jan. 1-Apr. 15		105	22	16	
	(Tootosh line east to Sieku R.)	May 1-June 30	-	61	-	24	-	
		-	July 1- Aug. 14	-	45	24	16	
		-	Aug. 15-21	-	7	24	16	100 coho per vessel per week
		-	Aug. 22-31	-	10	24	16	175 coho per vessel per week
		-	Sept. 1-8	-	8	24	16	50 coho per vessel per week
		-	Sept. 9-10	-	2	24	16	75 coho per vessel per week
		-	Sept. 11-14	-	4	24	16	100 coho per vessel per week
		-	Nov. 1-Dec. 31	-	61	22	16	
	S'Klallam/Area 4B	-	Jan. 1-Apr. 15	-	105	22	16	
	(Tootosh line east to Sieku R.)	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	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. (Page 5 of 6)

Year	Tribe/Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon	Number of Days: All-Salmon-Except-Coho	Number of Days: All Salmon	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2018[b/]	**Quinault, Quileute, and Hoh**							
	Cape Alava to Point Chehalis	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
	Makah							
	North of 48º02'15" N. Lat.	May 1-June 30	-	61	-	24	-	
	(Norwegian Memorial) and east of	-	July 1- Aug. 14	-	45	24	16	
	125º44'00" W. Long.	-	Aug. 15-21	-	7	24	16	100 coho per vessel per week
		-	Aug. 22-26	-	5	24	16	250 coho per vessel per week
		-	Aug. 27-Sept. 2	-	7	24	16	300 coho per vessel per week
		-	Sept. 3	-	1	24	16	
		-	Sept. 4-8	-	5	24	16	100 coho per vessel per week
		-	Sept 9-15	-	5	24	16	200 coho per vessel per week
	Area 4B (inside waters)	-	Jan. 1-Apr. 15		105	22	16	
	(Tootosh line east to Sieku R.)	May 1-June 30	-	61	-	24	-	
		-	July 1- Aug. 14	-	45	24	16	
		-	Aug. 15-21	-	7	24	16	100 coho per vessel per week
		-	Aug. 22-26	-	5	24	16	250 coho per vessel per week
		-	Aug. 27-Sept. 2	-	7	24	16	300 coho per vessel per week
		-	Sept. 3	-	1	24	16	
		-	Sept. 4-8	-	5	24	16	100 coho per vessel per week
			Sept 9-15	-	5	24	16	200 coho per vessel per week
	S'Klallam/Area 4B	-	Jan. 1-Apr. 15	-	105	22	16	
	(Tootosh line east to Sieku R.)	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	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. (Page 6 of 6)

Year	Tribe/Area	Seasons: All-Salmon-Except-Coho	Seasons: All Salmon	Number of Days: All-Salmon-Except-Coho	Number of Days: All Salmon	Minimum Size Limit (in.): Chinook	Minimum Size Limit (in.): Coho	Other Restrictions
2019[a/]	**Quinault, Quileute, and Hoh**							
	Cape Alava to Point Chehalis	May 1-June 30	-	61	-	24	-	
		-	July 1-Aug. 28	-	59	24	16	
			Aug 31-Sept 13	-	14	24	16	
	Makah							
	North of 48º02'15" N. Lat.	May 1-June 30	-	61	-	24	-	
	(Norwegian Memorial) and east of	-	July 1- Aug. 27	-	58	24	16	
	125º44'00" W. Long.	-	Aug. 31 - Sept. 6	-	7	24	16	125 coho per vessel per week
		-	Sept. 7-11	-	5	24	16	140 coho per vessel per week
		-	Sept. 12-13	-	2	24	16	50 coho per vessel per week
		-						
	Area 4B (inside waters)	-	Jan. 1-Apr. 15		105	22	16	
	(Tootosh line east to Sieku R.)	May 1-June 30	-	61	-	24	-	
		-	July 1- Aug. 27	-	58	24	16	
		-	Aug. 31 - Sept. 6	-	7	24	16	125 coho per vessel per week
		-	Sept. 7-11	-	5	24	16	140 coho per vessel per week
		-	Sept. 12-13	-	2	24	16	50 coho per vessel per week
	S'Klallam/Area 4B	-	Jan. 1-Apr. 15	-	105	22	16	
	(Tootosh line east to Sieku R.)	May 1-June 30	-	61	-	24	-	
		-	July 1-Sept. 15	-	77	24	16	
		-	Nov. 1-Dec. 31	-	61	22	16	

a/ For detailed regulatations 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 3)

	Chinook				Coho			
		Catch Quota				Catch Quota		
Year	Critical Stocks	Treaty Indian	Non-Indian Commercial	Sport	Critical Stocks	Treaty Indian	Non-Indian Commercial	Sport
1979	None	-	-	-	None	-	-	-
1980	None	-	-	-	Washington coastal coho	-	-	-
1981	None	-	-	-	Hoh and Skagit[a/]	-	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[b/]	-	164.0	318.0
1984	Lower Columbia 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[c/]	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[d/]	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[e/]	100.0
1989	Columbia River upriver stocks	32.0	47.5	47.5	Queets and Skagit	77.0	75.0	225.0
1990	Lower Columbia River Hatchery tules	31.2	37.5	37.5	Queets and Skagit	90.0	105.0	245.0
1991	Lower Columbia 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[f/]
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[g/]

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 3)

	Chinook				Coho			
		Catch Quota				Catch Quota		
Year	Critical Stocks	Treaty Indian	Non-Indian Commercial	Sport	Critical Stocks	Treaty Indian	Non-Indian Commercial	Sport
2000	Columbia River Lower River Wild (Lewis River)	25.5	12.5	12.5	Queets, Skagit, Stillaguamish, Snohomish, Strait of Juan de Fuca, and OCN	20.0	25.0[g/]	75.0[g/]
2001	Columbia River Lower River natural tules	37.0	30.0	30.0	Oregon Coast Natural	90.0	75.0[g/]	225.0[g/]
2002	Columbia River Lower River natural tules	60.0	82.5	67.5	Oregon Coast Natural	60.0	5.0[g/i/]	115.0[g/i/]
2003	Columbia River Lower River natural tules and Snake River Fall	60.0	64.4	59.6	Oregon Coast Natural	90.0	75.0[g/]	225.0[g/]
2004	Columbia River Lower River natural tules and Snake River Fall	49.0	44.5	44.5	Interior Fraser (B.C.), Oregon Coast Natural, and upper Columbia River escapement	75.0	67.5[g/]	202.5[g/]
2005	Snake River Fall	48.0	43.3	43.3	Interior Fraser (B.C.) and Skagit River	50.0	23.2[g/]	121.8[g/]
2006	Columbia River Lower River natural tules[h/]	42.2	34.0	31.0	Lower Columbia River natural and Interior Fraser (B.C.)	37.5	6.8[g/]	73.2[g/]
2007	Columbia River Lower River natural tules[h/]	35.0	16.3	16.3	Lower Columbia River natural and Interior Fraser (B.C.)	38.0	22.4[g/]	117.6[g/]
2008	Lower River wild (Lewis River)[h/] and Columbia River natural tules	37.5	20.0	20.0	Lower Columbia River natural and Hood Canal Natural	20.0	4.0[g/]	20.35[g/]
2009	Columbia River Lower River natural tules	39.0	20.5	20.5	Lower Columbia River, Skagit, Stillaguamish, and Interior Fraser Natural	60.0	33.6[g/]	176.4[g/]
2010	Columbia River Lower River natural tules	55.0	56.0	61.0[j/]	Lower Columbia River, Strait of Juan de Fuca, and Interior Fraser Natural	41.5	12.8[g/]	67.2[g/]
2011	Columbia River Lower River natural tules	41.0	30.9	33.7[j/]	Lower Columbia River and Interior Fraser Natural	42.0	12.8[g/]	67.2[g/]
2012	Columbia River Lower River natural tules	55.0	47.4	51.5[j/]	Lower Columbia River and Interior Fraser Natural	47.5	11.8[g/]	71.2[g/]
2013	Columbia River Lower River natural tules	52.5	44.0	48.0[j/]	Lower Columbia River and Interior Fraser Natural	47.5	14.2[g/]	74.8[g/]
2014	Columbia River natural tules and Puget Sound	62.5	56.9	59.1[j/]	Lower Columbia River and Interior Fraser Natural	57.5	35.2[g/]	184.8[g/]

TABLE C-8. Council preseason adopted catch quotas (thousands of fish) for ocean fisheries north of Cape Falcon and critical stocks driving management. (Page 3 of 3)

	Chinook				Coho			
		Catch Quota				Catch Quota		
Year	Critical Stocks	Treaty Indian	Non-Indian Commercial	Sport	Critical Stocks	Treaty Indian	Non-Indian Commercial	Sport
2015	Columbia River natural tules and Puget Sound	60.0	67.0	64.0[j/]	Lower Columbia River, Queets River and Interior Fraser Natural coho.	42.5	19.2[g/]	150.8[g/]
2016	Columbia River natural tules and Puget Sound	40.0	35.0	35.0[j/]	Lower Columbia River, Queets River and Interior Fraser Natural coho.	0.0	0.0	18.9[g/]
2017	Columbia River natural tules and Puget Sound	40.0	45.0	45.0	Lower Columbia River, Queets River and Interior Fraser Natural coho.	12.5	5.6[g/]	42.0[g/]
2018	Columbia River natural tules and Puget Sound	40.0	27.5	27.5	Lower Columbia River, Grays Harbor, Queets River and Interior Fraser Natural coho.	12.5	5.6[g/]	42.0[g/]
2019	Columbia River natural tules and Puget Sound	35.0	26.3	26.3	Lower Columbia River, Grays Harbor, Queets River and Interior Fraser Natural coho.	55.0	30.4[g/]	159.6[g/]

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).

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/ Includes mark-selective fishery quotas of: 12,000 (5,000 non-mark selective quota) in 2010, 4,800 (2,000 non-mark selective quota) in 2011, 8,000 in 2012 and 2013 (4,000 non-mark selective quota), 9,000 (4,500 non-mark selective) in 2014, and 10,000 in 2015 (4,000 non-mark selective).

TABLE C-9. 2019 sequence of events in ocean salmon fishery management.[a/] (Page 1 of 5)

GENERAL MANAGEMENT ACTIONS AND INSEASON CONFERENCES

March 5: National Marine Fisheries Service (NMFS) provides the Council with a letter outlining the 2019 management guidance for stocks listed under the Endangered Species Act (ESA) and stocks of concern.

March 11: Commercial and recreational ocean salmon fisheries south of Cape Falcon, OR, that were previously scheduled to open in March and April 2019 (84 FR 19005, May 1, 2018) were modified or cancelled. The fisheries effected were:

- Effective March 15: The commercial fishery from Cape Falcon, OR, to Humbug Mountain, OR, previously scheduled to open March 15; was delayed until April 20; additional review at April Council meeting.
- Effective March 15: The commercial fishery from Humbug Mountain, Oregon, to the Oregon/California border, previously scheduled to open March 15; was delayed until April 20; additional review at April Council meeting.
- Effective April 15: The commercial fishery from Horse Mountain, CA, to Point Arena, CA, previously scheduled to be open April 16-30 was cancelled.
- Effective April 6: The recreational fishery from Horse Mountain, CA, to Point Arena, CA, previously scheduled to open April 6 was delayed until April 13.
- Effective April 6: The recreational fishery from Point Arena, CA to Pigeon Point, CA, previously scheduled to open April 6 was delayed until April 13.

March 19: North of Cape Falcon Salmon Forum meets in Olympia, WA to initiate consideration of recommendations for treaty Indian and non-Indian salmon management alternatives.

March 25-26: Council holds public hearings on proposed 2019 management alternatives in Westport, WA; Coos Bay, OR; and Ukiah, CA.

April 3: North of Cape Falcon (NOF) Salmon Forum meets in Lynnwood, WA to further consider recommendations for treaty Indian and non-Indian salmon management alternatives.

June 14: effective June 19. The commercial salmon fishery from the US-Canada border to Queets River, WA state marine areas 3 and 4, is closed to Chinook salmon retention. Fishers have 24 hours to land their catch after the June 19 closure.

June 24: effective July 1. Retention of halibut caught incidental to the commercial salmon fishery off Washington, Oregon, and California will be extended with a landing and possession limit of 15 halibut per vessel per trip. Other landing restrictions remain as set preseason, including license holders may land or possess no more than one Pacific halibut per two Chinook, except one halibut may be possessed or landed without meeting the ratio requirement.

June 24: effective June 24. The commercial ocean salmon fishery from the U.S./Canada border to Queets River, WA reopens from 1 pm, June 24 through 11:59 pm, June 28 with a landing and possession limit of 20 Chinook salmon per vessel for the open period. All other regulations for the May-June commercial salmon fishery remain as set preseason.

July 3: effective July 4. Unutilized June quota in the Oregon Klamath management zone (KMZ, Humbug Mountain, OR to the OR/CA border) commercial ocean salmon fishery has been rolled over to July on an impact-neutral basis. The revised July quota for the commercial ocean salmon fishery in the Oregon KMZ is adjusted from 2,500 to 4,495 Chinook salmon.

July 3: effective July 4. The landing limit in the commercial ocean salmon fishery in the Oregon KMZ (Humbug Mountain, OR to the OR/CA border) is increased to 125 Chinook salmon per vessel per landing week, effective 12:01 a.m., July 4, 2019.

July 3: effective July 4. Unutilized June quota in the California KMZ (OR/CA border to Horse Mountain, CA) commercial ocean salmon fishery has been rolled over to July on an impact-neutral basis. The revised July quota for the commercial ocean salmon fishery is adjusted from 2,500 to 3,997 Chinook salmon.

July 3: effective July 8. The recreational bag limit in the Neah Bay subarea (U.S./Canada border to Cape Alava) is two salmon per day, only one of which may be a Chinook salmon.

July 12: effective July 12. Remaining Chinook quota from the May-June commercial fishery north of Cape Falcon, OR is rolled over to the July-September fishery on an impact-neutral basis. The new July-September quota is increased from 13,050 to 19,257 Chinook salmon.

TABLE C-9. 2019 sequence of events in ocean salmon fishery management.[a/] (Page 2 of 5)

GENERAL MANAGEMENT ACTIONS AND INSEASON CONFERENCES *(continued)*

July 12: effective July 14. The daily bag limit in the recreational ocean salmon fishery from the U.S./Canada border to Cape Alava WA state marine area 4 (Neah Bay), is changed to two salmon per day, release all Chinook salmon.

July 12: effective July 15. The daily bag limit in the recreational ocean salmon fishery from Cape Alava to Queets River, WA state marine area 3 (La Push), is changed to two salmon per day, only one of which may be a Chinook salmon.

July 17: effective July 19. The landing and possession limit for halibut caught incidental to the commercial ocean salmon fishery off Washington, Oregon, and California is reduced from 15 to 4 halibut per vessel per trip, all other restrictions remain as set preseason: IPHC license holders may land or possess no more than one Pacific halibut per two Chinook, except one halibut may be possessed or landed without meeting the ratio requirement. Any vessel in possession of greater than 4 halibut and up to 15 halibut (the landing limit set inseason, July 1) must land their halibut by 11:59 p.m. July 19.

July 17: effective July 19. The landing limit in the commercial ocean salmon fishery from the OR/CA border to Humboldt South Jetty (California KMZ) is increased from 20 Chinook to 50 Chinook per vessel per day for the remainder of July and for the month of August unless further adjusted by inseason action.

July 17: effective July 19. The landing limit in the commercial ocean salmon fishery north of Cape Falcon, OR, is modified to 125 Chinook and 150 marked coho per vessel per open period (Thursday through Wednesday).

July 24: effective July 27. The landing and possession limit for halibut caught incidental to the commercial ocean salmon fishery off Washington, Oregon, and California is reduced from 4 to 2 halibut per vessel per trip, all other restrictions remain as set preseason: IPHC license holders may land or possess no more than one Pacific halibut per two Chinook, except one halibut may be possessed or landed without meeting the ratio requirement. Any vessel in possession of greater than 2 halibut and up to 4 halibut (the landing limit set inseason, July 19) must land their halibut by 12:00 p.m. July 27.

August 2: effective August 2. Unutilized July quota in the California KMZ commercial ocean salmon fishery has been rolled over to August on an impact-neutral basis. The revised August quota for the commercial ocean salmon fishery is adjusted from 2,000 to 4,293 Chinook salmon.

August 2: effective August 2. Unutilized July quota in the Oregon KMZ commercial ocean salmon fishery has been rolled over to August on an impact-neutral basis. The revised August quota for the commercial ocean salmon fishery is adjusted from 1,200 to 4,330 Chinook salmon.

August 5: effective August 5. The commercial ocean salmon fishery in the California KMZ (OR/CA border to Humboldt South Jetty, CA) closes at 11:59 p.m., August 5.

August 7: effective August 10. The daily bag limit in the recreational ocean salmon fishery in the Westport subarea (Queets River to Leadbetter Point) is modified to: two salmon per day, both of which can be Chinook salmon. Reminder that all coho retained in this fishery must be marked with a healed adipose fin clip.

August 8: effective August 12. The commercial ocean salmon fishery in the California KMZ (OR/CA border to Humboldt South Jetty, CA) will reopen Monday and Tuesday, August 12 and 13, 2019, with a landing and possession limit of 15 Chinook salmon per vessel per day. The fishery will resume the Friday through Tuesday schedule beginning August 16, with a landing and possession limit of 15 Chinook salmon per vessel per day, so long as sufficient quota remains.

August 15: effective August 16. The landing and possession limit in the commercial ocean salmon fishery north of Cape Falcon is 160 Chinook salmon and 150 marked coho per vessel per landing week (Thursday through Wednesday).

TABLE C-9. 2019 sequence of events in ocean salmon fishery management.[a/] (Page 3 of 5)

TREATY INDIAN COMMERCIAL TROLL SEASONS

January 1 All-salmon fisheries in Area 4B for Makah and S'Klallam tribes open through April 15.

May 1 All-salmon-except-coho fisheries open through the earlier of June 30 or attainment of 17,500 Chinook quota.

June 30 All-salmon-except-coho fisheries close as scheduled (see Table C-7).

July 1 All-salmon fisheries open through the earlier of September 15, or attainment of 17,500 Chinook quota or 55,000 coho quota. Inseason action includes various landing/possession limits per vessel per week for coho.

August 28 Makah All-salmon fisheries close.

August 29 Quinault, Quileute, and Hoh All-salmon fisheries close.

August 31 Makah, Quinault, Quileute, and Hoh All-salmon fisheries re-open.

September 14 Makah, Quinault, Quileute, and Hoh All-salmon fisheries close.

September 15 S'Klallam All-salmon fisheries close as scheduled.

November 1 All-salmon fisheries in Area 4B for Makah and S'Klallam tribes open through December 31.

NON-INDIAN COMMERCIAL TROLL SEASONS

April 20 Cape Falcon to OR/CA Border non-Indian commercial all-salmon-except-coho fishery opens through April 30.

May 1 Pigeon Point to U.S./Mexico border non-Indian commercial all-salmon-except-coho fishery opens May 1-31, June 4-30, and July 11-31.

May 6 U.S./Canada border to Cape Falcon, OR non-Indian commercial all-salmon-except-coho fishery opens until the earlier of June 28 or attainment of 13,200 preseason Chinook guideline, of which no more than 5,000 may be caught north of the Queets River, WA and no more than 1,800 may be caught south of Leadbetter Point, WA. Landing/possession limits north of the Queets River, WA and south of Leadbetter Point, WA are 100 Chinook per vessel through May 15, and 50 Chinook per vessel per landing week (Thurs.- Wed.) thereafter. Landing and possession limits were modified by in-season action; see descriptions above.

May 6 Cape Falcon to OR/CA Border non-Indian commercial all-salmon-except-coho fishery opens 7 days a week through May 30. Landing and possession limits were modified by in-season action; see descriptions above.

May 16 Point Arena to Pigeon Point non-Indian commercial all-salmon-except-coho fishery opens May 16-31, June 4-30, July 11-31, August 1-28, and September 1-30.

June 1 Cape Falcon to Humbug Mt. non-Indian commercial all-salmon-except-coho fishery opens June 1 through August 29, and September 1 through October 31. Beginning September 1, a 75 Chinook weekly limit (Thursday through Wednesday) in place.

June 1 Humbug Mt. to the OR/CA Border non-Indian commercial all-salmon-except-coho fishery opens June 1 through August 29. Monthly quotas of 3,200 in June, 4,495 in July, and 4,330 in August. Unused quota may be transferred forward to the next open quota period on an impact neutral basis. Weekly (Thursday-Wednesday) landing limits of 50 Chinook June 1- July 3, and 125 Chinook thereafter.

June 1 OR/CA Border to Humboldt South Jetty non-Indian commercial all-salmon-except-coho fishery opens 5 days per week (Fri.-Tue.) from June 1 through July 30, August 2-5, and August 12-31. Chinook quotas: 2,500 in June, 3,997 in July, and 4,293 in August Chinook landing and possession limits per vessel per day: 20 through July 16, 50 July 19-August. 5, and 15 August 12-31.

June 4 Horse Mountain to Point Arena commercial all-salmon-except-coho fishery opens June 4 30, July 11-31, and August 1-28.

TABLE C-9. 2019 sequence of events in ocean salmon fishery management.[a/] (Page 4 of 5)

NON-INDIAN COMMERCIAL TROLL SEASONS *(continued)*

July 1 U.S./Canada border to Cape Falcon, OR non-Indian commercial all-salmon fishery opens until the earlier of September 30 or attainment of 13,040 preseason Chinook guideline or 30,400 marked coho quota. Landing/possession limit is 150 marked coho per vessel per landing week (Thurs.- Wed.). No chum retention north of Cape Alava, WA in August and September. Landing and possession limits were modified by in-season action; see descriptions above.

October 1 Point Reyes to Point San Pedro non-Indian commercial all-salmon-except-coho fishery opens October 1-4, 7-11, and 14-15.

RECREATIONAL SEASONS

March 15 Cape Falcon, OR to Humbug Mountain, OR all-salmon-except-coho fishery opens through October 31. Seven days per week. Daily bag limit: 2 salmon per day. Chinook minimum size limit: 20-inches.

April 6 Pigeon Point, CA to US/Mexico Border all-salmon-except-coho fishery opens through August 28. Seven days per week. Daily bag limit: 2 salmon per day. Chinook minimum size limit: 24-inches.

April 13 Horse Mountain, CA to Pigeon Point, CA all-salmon-except-coho fishery opens through April 30, and May 18 through October 31. Seven days per week. Daily bag limit: 2 salmon per day. Chinook minimum size limit between Horse Mountain and Point Arena: 20-inches. Chinook minimum size limit between Point Arena and Pigeon Point: 24-inches through April 30, and 20-inches thereafter.

May 25 Humbug Mountain, OR to OR/CA Border all-salmon-except-coho fishery opens through June 21, and August 26 through September 2. Seven days per week. Daily bag limit: 2 salmon per day. Chinook minimum size limit: 24-inches.

May 25 OR/CA Border to Horse Mountain, CA all-salmon-except-coho fishery opens through September 2, Seven days per week. Daily bag limit: 2 salmon per day. Chinook minimum size limit: 20-inches. Klamath Control Zone closed in August.

June 22 U.S./Canada border to Cape Alava, WA (Neah Bay Subarea), all-salmon fishery opens through the earlier of September 30 or attainment of a subarea quota of 16,600 marked coho and/or a subarea guideline of 5,200 Chinook. Open seven days per week. Daily salmon bag limit: two fish per day, no more than one of which may be a Chinook during July 8-13, no Chinook retention thereafter. All coho must be marked with a healed adipose fin clip. No chum retention beginning August 1. Minimum size limit is 24 inches for Chinook and 16 inches for coho. Chinook non-retention east of the Bonilla-Tatoosh line in Council area fisheries beginning August 1.

June 22 Cape Alava, WA to Queets River, WA (La Push Subarea), all-salmon fishery opens through the earlier of September 30 or attainment of a subarea quota of 4,050 marked coho and/or a subarea guideline of 1,100 Chinook. Open seven days per week. Daily salmon bag limit: two fish per day; beginning July 15, no more than one Chinook allowed in the daily bag limit. All coho must be marked with a healed adipose fin clip. Minimum size limit is 24 inches for Chinook and 16 inches for coho.

June 22 Queets River, WA to Leadbetter Point, WA (Westport Subarea), all-salmon fishery opens though the earlier of September 30 or attainment of a subarea quota of 59,050 marked coho and/or a subarea guideline of 12,700 Chinook. Open seven days per week. Daily salmon bag limit: two fish per day; no more than one of which may be a Chinook during June 22-August 9. All coho must be marked with a healed adipose fin clip. Minimum size limit is 24 inches for Chinook and 16 inches for coho. Grays Harbor Control Zone closed beginning August 12.

June 22 Leadbetter Point, WA to Cape Falcon, OR (Columbia River Subarea), all-salmon fishery opens though the earlier of September 30 or attainment of a subarea quota of 79,800 marked coho and/or a subarea guideline of 7,150 Chinook. Open seven days per week. Bag limit is two fish per day, no more than one of which can be a Chinook. All coho must be marked with a healed adipose fin clip. Minimum size limit is 24 inches for Chinook and 16 inches for coho

June 22 Cape Falcon, OR to OR/CA Border., all-salmon mark-selective-coho fishery opens through earlier of August 25 or attainment of a subarea quota of 90,000 marked coho. Open seven days per week. Bag limit is two fish per day. All coho must be marked with a healed adipose fin clip. Minimum size limit is 24 inches for Chinook and 16 inches for coho.

TABLE C-9. 2019 sequence of events in ocean salmon fishery management.[a/] (Page 5 of 5)

RECREATIONAL SEASONS *(continued)*

August 31 Cape Falcon, OR to Humbug Mountain, OR all-salmon non-mark-selective coho fishery opens each Friday-Sunday through September 30 or attainment of a 9,000 coho quota adjusted inseason to 15,640 coho. Bag limit is two fish per day. Minimum size limit is 24 inches for Chinook and 16 inches for coho. Actual open periods include August 31- September 1, September 6-8, 13-15, 20-29.

October 1 Cape Alava, WA to Queets River, WA (La Push Subarea), in the area north of 47.50'00 N Lat. and south of 48.00'00N Lat. all-salmon fishery opens through the earlier of October 13 or attainment of a 100 marked coho quota or a 100 Chinook guideline. Open seven days per week. Daily salmon bag limit: two fish per day. All coho must be marked with a healed adipose fin clip. Minimum size limit is 24 inches for Chinook and 16 inches for coho.

a/ Unless stated otherwise, season openings or modifications of restrictions are effective at 00:01 hours of the listed date. Closures are effective at 23:59 hours of the listed date. NMFS inseason actions are results of conference calls between state, federal and tribal fishery managers.

APPENDIX D
HISTORICAL ECONOMIC DATA

LIST OF TABLES

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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)

Year	Apr.	May	June	July	Aug.	Sept.	Oct.	Season [a/]	May	June	July	Aug.	Sept.	Season
	CHINOOK								COHO					
Crescent City														
1981-1985	-	7.7	8.3	8.6	8.7	9.2	-	8.5	3.9	4.6	5.4	6.4	6.8	5.9
1986-1990	-	-	9.6	9.5	9.2	9.4	-	9.6	-	5.0	5.0	4.5	5.6	5.0
1991-1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996-2000	-	-	-	-	8.3	10.2	-	10.0	-	-	-	-	-	-
2001-2005	11.1	12.0	10.9	11.6	12.7	12.2	10.1	12.6	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	13.7	-	13.7	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	15.5	16.0	-	-	16.0	-	-	-	-	-	-
2012	-	-	-	-	-	11.7	-	11.7	-	-	-	-	-	-
2013	-	11.7	11.2	14.6	11.9	13.9	-	12.7	-	-	-	-	-	-
2014	-	-	-	-	-	11.8	-	11.8	-	-	-	-	-	-
2015	-	-	-	-	-	12.7	-	12.7	-	-	-	-	-	-
2016	-	-	-	-	-	14.3	-	14.3	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	8.6	9.7	9.5	9.8	-	-	9.6	-	-	-	-	-	-
2019[b/]	-	-	8.3	9.1	9.2	-	-	9.2	-	-	-	-	-	-
Eureka														
1981-1985	-	7.4	8.2	8.9	9.2	9.6	-	6.6	4.6	4.7	5.9	6.2	6.6	5.7
1986-1990	-	-	9.0	10.1	10.2	9.2	9.6	9.3	-	5.1	5.6	5.5	6.2	5.3
1991-1995	-	-	-	-	-	9.5	17.7	10.1	-	-	-	-	6.2	6.2
1996-2000	-	-	-	-	11.9	10.1	-	10.2	-	-	-	-	-	-
2001-2005	-	-	-	-	11.4	11.3	-	11.3	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	12.3	-	12.3	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	13.7	11.7	-	-	13.3	-	-	-	-	-	-
2012	-	-	-	-	-	10.5	-	10.5	-	-	-	-	-	-
2013	-	9.1	11.2	11.0	11.9	11.2	-	10.7	-	-	-	-	-	-
2014	-	-	-	-	-	11.9	-	11.9	-	-	-	-	-	-
2015	-	-	-	-	-	12.5	-	12.5	-	-	-	-	-	-
2016	-	-	-	-	-	11.9	-	11.9	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	7.1	8.3	10.6	10.1	-	-	9.4	-	-	-	-	-	-
2019[b/]	-	-	7.9	9.2	8.9	-	-	8.5	-	-	-	-	-	-

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 [a/]	May	June	July	Aug.	Sept.	Season
	CHINOOK								COHO					
Fort Bragg														
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	-	-	-	-	-	-
2001-2005	-	13.6	-	12.1	12.5	13.0	-	12.6	-	-	-	-	-	-
2006	-	-	-	-	-	15.9	-	15.9	-	-	-	-	-	-
2007	12.5	-	-	-	15.8	12.9	-	15.6	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	15.8	14.6	-	-	15.2	-	-	-	-	-	-
2011	-	-	-	14.3	14.7	12.5	-	14.5	-	-	-	-	-	-
2012	-	-	-	11.3	12.1	12.2	-	11.6	-	-	-	-	-	-
2013	-	12.2	13.4	13.3	12.9	12.8	-	13.2	-	-	-	-	-	-
2014	-	-	14.3	13.8	14.7	14.4	-	14.0	-	-	-	-	-	-
2015	-	10.3	11.0	10.6	11.9	12.1	-	10.6	-	-	-	-	-	-
2016	-	-	10.5	-	11.2	12.1	-	10.8	-	-	-	-	-	-
2017	-	-	-	-	-	10.5	-	10.5	-	-	-	-	-	-
2018	-	-	-	12.6	10.3	10.0	-	11.6	-	-	-	-	-	-
2019[b/]	-	-	8.2	8.7	10.6	-	-	9.2	-	-	-	-	-	-
San Francisco														
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	-	-	-	-	-	-
2001-2005	-	11.9	13.2	12.5	14.0	14.4	14.2	12.9	-	-	-	-	-	-
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	-	-	-	14.9	-	-	-	14.9	-	-	-	-	-	-
2011	-	13.2	13.1	13.8	13.9	12.9	15.0	13.5	-	-	-	-	-	-
2012	-	10.4	11.4	11.8	12.8	13.1	12.9	11.6	-	-	-	-	-	-
2013	-	11.4	13.0	12.7	15.1	12.3	13.7	12.4	-	-	-	-	-	-
2014	-	11.3	12.9	13.9	15.0	13.5	13.7	12.9	-	-	-	-	-	-
2015	-	9.1	9.8	11.3	13.2	11.8	11.8	11.2	-	-	-	-	-	-
2016	-	9.6	10.0	-	12.9	11.5	12.5	12.0	-	-	-	-	-	-
2017	-	-	-	-	11.8	11.9	12.5	11.8	-	-	-	-	-	-
2018	-	-	-	12.4	12.0	12.1	12.1	12.1	-	-	-	-	-	-
2019[b/]	-	8.4	8.7	10.3	10.5	12.5	12.8	9.6	-	-	-	-	-	-

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 [a/]	May	June	July	Aug.	Sept.	Season
	CHINOOK								COHO					
Monterey														
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	-	-	-	-	-	-
2001-2005	-	12.1	13.1	13.7	14.0	13.8	-	12.7	-	-	-	-	-	-
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	-	-	-	14.2	-	-	-	14.2	-	-	-	-	-	-
2011	-	14.9	14.4	14.5	12.5	12.6	-	14.6	-	-	-	-	-	-
2012	-	10.7	13.3	13.9	12.5	11.6	-	12.2	-	-	-	-	-	-
2013	-	12.4	13.6	16.0	14.7	12.3	-	13.3	-	-	-	-	-	-
2014	-	11.2	13.7	14.4	14.4	-	-	12.6	-	-	-	-	-	-
2015	-	9.8	10.5	11.4	12.5	-	-	10.4	-	-	-	-	-	-
2016	-	9.6	10.8	-	-	-	-	9.9	-	-	-	-	-	-
2017	-	10.5	12.8	-	-	-	-	11.8	-	-	-	-	-	-
2018	-	11.1	13.2	-	-	-	-	12.7	-	-	-	-	-	-
2019[b/]	-	9.1	9.9	10.9	-	-	-	9.5	-	-	-	-	-	-
Total Statewide[a/]														
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	-	-	-	-	-	-
2001-2005	11.1	12.1	13.1	12.7	13.4	13.0	13.8	12.7	-	-	-	-	-	-
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	-	-	-	15.4	14.6	-	-	15.1	-	-	-	-	-	-
2011	-	13.8	13.5	14.2	14.6	12.8	15.0	14.2	-	-	-	-	-	-
2012	-	10.5	12.3	12.1	12.5	12.0	12.9	11.7	-	-	-	-	-	-
2013	-	11.6	13.1	13.2	13.5	12.5	13.7	12.7	-	-	-	-	-	-
2014	-	11.2	13.7	13.8	14.9	13.5	13.7	13.4	-	-	-	-	-	-
2015	-	10.0	10.6	11.0	12.7	11.8	11.8	10.8	-	-	-	-	-	-
2016	-	9.6	10.6	-	12.5	11.6	12.5	11.2	-	-	-	-	-	-
2017	-	10.5	12.8	-	11.8	11.6	12.5	11.8	-	-	-	-	-	-
2018	-	10.5	12.6	12.2	11.4	12.0	12.1	11.9	-	-	-	-	-	-
2019[b/]	-	9.0	9.1	10.3	10.4	12.5	12.8	9.6	-	-	-	-	-	-

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).

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
2001-2005	10.2	10.3	10.8	10.3	10.5	10.7	9.8	10.3	13.8	13.2	10.5
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	-	-	11.0	13.1	12.2	13.0	12,5	15.5	-	-	13.3
2010	-	-	12.4	12.3	12.7	13.7	13.6	17.6	-	-	12.8
2011	-	11.4	11.9	13.1	14.1	13.5	13.1	14.5	11.8	-	12.5
2012	-	9.5	10.3	10.3	10.9	10.5	9.8	9.6	11.3	-	10.1
2013	-	9.9	11.2	12.3	12.6	12.2	10.5	10.8	12.2	-	11.5
2014	-	12.2	12.5	11.7	13.1	12.5	11.3	13.2	12.6	-	12.4
2015	-	10.9	10.4	11.1	12.1	12.4	12.1	13.9	11.9	-	11.4
2016	-	11.7	11.5	11.4	12.6	13.1	13.1	14.4	12.6	-	12.3
2017	-	13.8	11.4	11.8	12.1	13.3	12.6	13.0	11.1	-	12.1
2018	-	-	11.0	11.6	12.3	11.6	11.6	13.1	12.3	-	11.8
2019[a/]	-	9.7	10.1	11.0	10.8	10.6	11.0	11.3	-	-	10.8
						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
2001-2005	-	-	-	-	5.3	6.9	7.2	-	-	-	5.6
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	-	-	-	-	4.7	6.0	7.1	-	-	-	6.0
2010	-	-	-	-	6.1	7.3	12.0	-	-	-	6.7
2011	-	-	-	-	4.9	6.0	6.9	-	-	-	5.6
2012	-	-	-	-	4.2	5.6	6.3	-	-	-	6.1
2013	-	-	-	-	5.6	5.5	6.9	-	-	-	5.9
2014	-	-	-	-	4.7	5.0	6.9	-	-	-	6.1
2015	-	-	-	-	4.8	4.8	5.2	-	-	-	5.1
2016	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	5.4	5.8	6.3	-	-	-	6.0
2018	-	-	-	-	5.7	6.8	6.9	-	-	-	6.6
2019[a/]	-	-	-	-	4.6	5.1	5.1	-	-	-	4.7

a/ Preliminary.

TABLE D-3. Washington monthly troll Chinook and coho salmon average dressed weights (pounds).[a/]

	May		June		July		Aug.		Sept.		Oct.		Season	
Year	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[b/]	Non-Indian
							CHINOOK							
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[c/]	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	8.4	11.2	8.5	12.0	7.1	12.3	8.4	11.0	7.5	10.7	-	-	8.5	11.5
2001-2005	9.5	11.3	10.7	12.6	13.5	15.0	14.2	15.4	11.9	13.6	-	-	11.4	13.2
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
2011	8.9	10.3	9.1	11.4	12.2	13.6	14.1	15.0	15.0	17.2	-	-	11.0	12.0
2012	7.6	10.2	7.9	10.8	10.9	13.6	11.9	14.7	8.6	11.9	-	-	9.5	11.8
2013	7.6	9.6	7.9	10.5	12.1	12.4	13.1	13.0	10.5	12.2	-	-	9.3	11.2
2014	8.3	10.9	9.9	12.6	12.0	13.1	11.1	13.4	9.1	12.8	-	-	10.1	12.0
2015	7.6	9.8	8.1	10.9	12.7	12.6	12.4	12.3	12.5	13.1	-	-	9.9	11.3
2016	7.7	10.2	9.7	11.6	9.7	13.2	8.6	13.3	9.8	-	-	-	9.3	11.6
2017	5.8	9.3	6.3	10.0	8.5	10.8	9.3	12.0	7.8	12.3	-	-	8.1	10.2
2018	6.1	9.4	6.5	10.7	9.1	11.2	8.6	13.0	7.1	13.5	-	-	7.5	10.8
2019	7.3	10.7	11.2	12.1	9.4	13.8	10.8	14.5	10.3	14.4	-	-	9.7	13.2
							COHO							
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
2001-2005	7.0	-	4.8	-	5.1	6.4	6.3	6.4	6.1	7.1	-	-	5.9	6.3
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
2011	-	-	-	-	5.2	5.2	5.8	5.9	5.9	6.3	-	-	5.7	5.6
2012	5.0	-	9.6	-	5.0	4.2	5.3	5.2	5.2	6.2	-	-	5.2	5.4
2013	-	-	9.4	-	4.5	4.5	4.9	5.4	7.0	6.5	-	-	5.1	5.2
2014	-	-	6.0	-	5.4	5.0	5.6	5.6	5.9	6.3	-	-	5.6	5.7
2015	-	-	7.0	-	5.3	4.9	5.0	5.4	4.6	5.6	-	-	5.1	5.4
2016	-	-	-	-	7.3	-	8.0	-	-	-	-	-	7.6	-
2017	-	-	-	-	5.2	5.0	6.1	6.8	6.0	7.3	-	-	6.0	6.5
2018	-	-	-	-	5.3	5.3	5.9	6.9	6.1	7.5	-	-	5.9	6.7
2019	-	-	-	-	5.0	5.0	4.9	5.6	5.8	6.2	-	-	5.1	5.6

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.[a/]

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 (2019 dollars)
1960	6,221	3,339	1,365	-	2,446	16,528
1961-1965	8,463	4,536	1,713	-	2,652	15,444
1966-1970	7,316	4,350	2,101	-	2,084	10,590
1971-1975	7,977	6,713	2,759	-	2,409	9,443
1976-1980	7,052	13,318	4,315	-	3,102	8,568
1981-1985	4,799	11,499	3,243	4,658	3,542	6,961
1986-1990	8,360	21,641	2,449	3,523	8,735	14,704
1991-1995	3,523	7,478	1,244	2,754	6,149	8,771
1996-2000	4,037	6,813	783	1,940	8,820	11,500
2001	2,409	4,773	689	1,650	6,927	9,761
2002	5,008	7,776	708	1,586	10,982	15,233
2003	6,392	12,181	584	1,521	20,858	28,403
2004	6,230	17,895	741	1,511	24,150	32,024
2005	4,347	12,913	680	1,477	18,990	24,421
2006	1,043	5,350	477	1,408	11,216	14,000
2007	1,525	7,902	601	1,390	13,149	15,983
2008	-	-	-	1,306	-	-
2009	-	-	-	1,281	-	-
2010	228	1,246	215	1,239	5,794	6,777
2011	992	5,133	464	1,188	11,062	12,675
2012	2,530	13,521	616	1,172	21,950	24,677
2013	3,793	23,632	671	1,163	35,219	38,911
2014	2,253	12,521	653	1,135	19,175	20,800
2015	1,188	8,347	587	1,131	14,219	15,265
2016	615	5,312	438	1,105	12,129	12,888
2017	497	4,925	400	1,083	12,312	12,841
2018	930	7,932	456	1,072	17,396	17,711
2019[b/]	2,603	17,201	570	1,053	30,177	30,177

a/ Derived from vessel permit database 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.[a/]

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 (2019 dollars)
1974	-	7,937	2,253	-	3,523	12,916
1975	-	5,808	2,304	-	2,521	8,444
1976-1980[b/]	6,679	8,185	3,875	4,314	2,112	4,973
1981-1985[c/d/]	2,969	5,774	2,050	2,993	2,817	5,142
1986-1990	5,688	6,641	1,557	2,528	4,265	6,641
1991-1995[e/]	1,265	3,294	476	1,465	6,920	9,542
1996-2000	1,428	3,063	399	1,062	7,677	9,736
2001[f/]	2,949	4,721	449	1,175	10,515	14,815
2002[f/]	3,498	5,391	468	1,175	11,519	15,978
2003[f/]	3,681	7,222	494	1,178	14,620	19,909
2004[f/]	2,920	9,919	595	1,181	16,670	22,106
2005[f/]	2,691	8,503	565	1,168	15,050	19,354
2006[f/]	499	2,701	357	1,127	7,565	9,443
2007	565	2,822	436	1,009	6,473	7,868
2008	70	494	138	1,092	3,579	4,267
2009	146	345	225	1,062	1,531	1,812
2010	513	2,791	370	1,021	7,543	8,823
2011	404	2,401	304	1,003	7,899	9,051
2012	745	4,271	369	990	11,576	13,014
2013	1,293	7,611	399	977	19,075	21,075
2014	2,639	14,760	493	977	29,938	32,476
2015	1,200	7,334	488	980	15,028	16,134
2016	518	4,261	313	972	13,613	14,465
2017	267	2,129	176	956	12,099	12,619
2018	288	2,442	230	946	10,618	10,811
2019[g/]	320	2,103	220	923	9,559	9,559

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 Cape 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.[a/]

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 (2019 dollars)
1978	4,746	10,025	3,041	3,291	3,297	9,174
1979	5,262	15,091	2,778	3,068	5,432	13,956
1980	3,398	7,114	2,626	2,797	2,709	6,378
1981-1985[b/c/]	1,433	3,225	1,675	2,233	1,696	3,406
1986-1990	752	1,670	913	1,349	1,997	3,335
1991-1995[d/e/f/g/]	345	834	397	586	1,607	2,333
1996-2000[h/i/j/]	126	197	54	270	4,188	5,445
2001	290	383	57	169	6,718	9,465
2002	679	758	75	165	10,102	14,012
2003	875	991	82	163	12,087	16,459
2004	594	1,185	86	160	13,779	18,271
2005	481	1,290	91	158	14,170	18,223
2006	231	1,045	84	158	12,440	15,528
2007	217	953	79	158	12,062	14,662
2008	114	709	86	158	8,244	9,830
2009	291	1,169	97	158	12,051	14,261
2010	537	3,115	116	158	26,856	31,413
2011	339	1,687	112	158	15,066	17,262
2012	452	2,358	105	158	22,457	25,246
2013	481	2,838	108	157	26,275	29,029
2014	551	2,709	116	156	23,351	25,330
2015	640	3,448	122	153	28,266	30,346
2016	201	1,606	107	151	15,009	15,948
2017	343	2,919	108	155	27,031	28,191
2018	263	2,350	108	155	21,759	22,154
2019	322	1,925	88	155	21,878	21,878

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/ 312 licenses and delivery permits purchased by buyback program in 1984.

c/ 118 licenses and delivery permits purchased by buyback program in 1985.

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/ 190 licenses and delivery permits purchased by buyback program in 1995.

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.[a/] (Page 1 of 5)

	Vessels			Catch[c/]		
Year	Length Category (feet)	Number[b/]	Percent of Total	Average Pounds Per Vessel	Total (pounds)	Percent of Total
2019[d/]	<20	33	6%	1,328	43,810	2%
	21-25	117	21%	2,331	272,727	10%
	26-30	90	16%	2,383	214,441	8%
	31-35	108	19%	5,125	553,545	21%
	36-40	91	16%	5,995	545,515	21%
	41-45	76	13%	7,702	585,362	22%
	46-50	38	7%	7,319	278,136	11%
	51-55	10	2%	7,425	74,247	3%
	>56	7	1%	5,015	35,102	1%
	TOTAL	570		4,566	2,602,885	
2018	<20	25	5%	543	13,572	1%
	21-25	100	22%	913	91,294	10%
	26-30	74	16%	1,538	113,826	12%
	31-35	99	22%	1,804	178,642	19%
	36-40	70	15%	3,210	224,704	24%
	41-45	56	12%	4,464	249,986	27%
	46-50	24	5%	1,817	43,610	5%
	51-55	8	2%	1,832	14,652	2%
	>56	e/	e/	e/	e/	e/
	TOTAL	456		2,040	930,286	
2017	<20	31	8%	442	13,693	3%
	21-25	95	24%	764	72,575	15%
	26-30	68	17%	919	62,491	13%
	31-35	90	23%	1,292	116,305	23%
	36-40	58	15%	1,900	110,225	22%
	41-45	35	9%	2,408	84,275	17%
	46-50	18	5%	1,991	35,836	7%
	51-55	5	1%	395	1,976	0%
	>56	e/	e/	e/	e/	e/
	TOTAL	400		1,243	497,376	
2016	<20	20	5%	924	18,480	3%
	21-25	96	22%	821	78,851	13%
	26-30	78	18%	1,108	86,397	14%
	31-35	102	23%	1,426	145,463	24%
	36-40	74	17%	1,963	145,229	24%
	41-45	37	8%	2,557	94,623	15%
	46-50	23	5%	1,663	38,239	6%
	51-55	5	1%	1,313	6,565	1%
	>56	3	1%	493	1,479	0%
	TOTAL	438		1,405	615,326	
2015	<20	35	6%	484	16,928	1%
	21-25	119	20%	1,146	136,353	11%
	26-30	93	16%	1,592	148,075	12%
	31-35	128	22%	1,908	244,190	21%
	36-40	99	17%	2,878	284,969	24%
	41-45	62	11%	3,706	229,802	19%
	46-50	34	6%	2,560	87,029	7%
	51-55	11	2%	1,812	19,933	2%
	>56	6	1%	3,460	20,761	2%
	TOTAL	587		2,024	1,188,040	

TABLE D-7. California salmon troll boat-size catch statistics in pounds of dressed salmon.[a/] (Page 2 of 5)

	Vessels			Catch[c/]		
Year	Length Category (feet)	Number[b/]	Percent of Total	Average Pounds Per Vessel	Total (pounds)	Percent of Total
2014	<20	39	6%	554	21,622	1%
	21-25	117	18%	1,669	195,278	9%
	26-30	106	16%	1,999	211,870	9%
	31-35	139	21%	3,792	527,109	23%
	36-40	109	17%	5,152	561,516	25%
	41-45	81	12%	5,836	472,719	21%
	46-50	41	6%	4,298	176,231	8%
	51-55	13	2%	4,256	55,324	2%
	>56	8	1%	3,958	31,660	1%
	TOTAL	653		3,451	2,253,329	
2013	<20	41	6%	1,429	58,595	2%
	21-25	121	18%	2,082	251,950	7%
	26-30	113	17%	2,792	315,498	8%
	31-35	128	19%	5,147	658,858	17%
	36-40	111	17%	7,490	831,408	22%
	41-45	89	13%	10,578	941,458	25%
	46-50	51	8%	10,696	545,502	14%
	51-55	11	2%	10,361	113,969	3%
	>56	6	1%	12,697	76,183	2%
	TOTAL	671		5,653	3,793,421	
2012	<20	42	7%	890	37,386	1%
	21-25	112	18%	1,877	210,275	8%
	26-30	99	16%	2,556	253,024	10%
	31-35	122	20%	4,249	518,329	20%
	36-40	104	17%	5,638	586,352	23%
	41-45	82	13%	7,292	597,924	24%
	46-50	41	7%	6,171	252,996	10%
	51-55	8	1%	5,634	45,072	2%
	>56	6	1%	4,838	29,026	1%
	TOTAL	616		4,108	2,530,384	
2011	<20	27	6%	252	6,795	1%
	21-25	86	19%	733	63,062	6%
	26-30	79	17%	889	70,270	7%
	31-35	91	20%	1,748	159,080	16%
	36-40	86	19%	3,175	273,088	28%
	41-45	64	14%	4,348	278,295	28%
	46-50	23	5%	4,782	109,992	11%
	51-55	5	1%	3,416	17,078	2%
	>56	3	1%	4,679	14,037	1%
	TOTAL	464		2,137	991,697	
2010	<20	9	4%	419	3,772	2%
	21-25	46	21%	524	24,124	11%
	26-30	31	14%	1,161	35,990	16%
	31-35	46	21%	637	29,289	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/	e/	e/
	TOTAL	215		1,059	227,582	

TABLE D-7. California salmon troll boat-size catch statistics in pounds of dressed salmon.[a/] (Page 3 of 5)

	Vessels			Catch[c/]		
Year	Length Category (feet)	Number[b/]	Percent of Total	Average Pounds Per Vessel	Total (pounds)	Percent of Total
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	
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	

TABLE D-7. California salmon troll boat-size catch statistics in pounds of dressed salmon.[a/] (Page 4 of 5)

	Vessels			Catch[c/]		
Year	Length Category (feet)	Number[b/]	Percent of Total	Average Pounds Per Vessel	Total (pounds)	Percent of Total
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	
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	

TABLE D-7. California salmon troll boat-size catch statistics in pounds of dressed salmon.[a/] (Page 5 of 5)

	Vessels			Catch[c/]		
Year	Length Category (feet)	Number[b/]	Percent of Total	Average Pounds Per Vessel	Total (pounds)	Percent of Total
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	

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 5)

	Vessels			Catch		
Year	Length Category (feet)	Number[a/]	Percent of Total	Average Per Boat (pounds)	Total (pounds)	Percent of Total
2019[b/]	<20	4	2%	399	1,595	0%
	20-29	52	24%	730	37,972	12%
	30-39	62	28%	1,769	109,708	34%
	40-49	82	37%	1,788	146,576	46%
	>50	20	9%	1,229	24,575	8%
	TOTAL	220		1,456	320,426	
2018	<20	6	3%	260	1,559	1%
	20-29	54	23%	488	26,370	9%
	30-39	74	32%	1,540	113,937	40%
	40-49	80	35%	1,612	128,954	45%
	>50	16	7%	1,083	17,327	6%
	TOTAL	230		1,253	288,147	
2017	<20	-	-	-	-	-
	20-29	40	23%	615	24,605	9%
	30-39	56	32%	1,793	100,416	38%
	40-49	68	39%	1,954	132,872	50%
	>50	12	7%	748	8,981	3%
	TOTAL	176		1,516	266,874	
2016	<20	-	-	-	-	-
	20-29	74	24%	664	49,106	9%
	30-39	96	31%	1,546	148,422	29%
	40-49	120	38%	2,371	284,563	55%
	>50	24	8%	1,489	35,744	7%
	TOTAL	314		1,649	517,835	
2015	<20	4	1%	1,066	4,265	3%
	20-29	102	21%	1,094	111,553	9%
	30-39	156	32%	2,133	332,726	28%
	40-49	174	36%	3,395	590,784	50%
	>50	51	10%	2,874	146,575	12%
	TOTAL	487		2,435	1,185,903	
2014	<20	3	1%	1,201	3,603	1%
	20-29	115	23%	2,487	286,062	11%
	30-39	159	32%	5,220	829,910	31%
	40-49	169	34%	7,377	1,246,690	47%
	>50	47	10%	5,870	275,913	10%
	TOTAL	493		5,359	2,642,178	

TABLE D-8. Oregon salmon troll boat-size catch statistics in pounds of dressed salmon. (Page 2 of 5)

	Vessels			Catch		
Year	Length	Number[a/]	Percent of	Average Per	Total	Percent of
2013	<20	4	1%	1,215	4,858	7%
	20-29	102	26%	1,825	186,110	14%
	30-39	127	32%	4,015	509,844	39%
	40-49	138	35%	3,794	523,542	40%
	>50	28	7%	2,524	70,679	5%
	TOTAL	399		3,246	1,295,033	
2012	<20	c/	c/	c/	c/	c/
	20-29	93	25%	919	85,423	11%
	30-39	124	34%	2,290	283,943	38%
	40-49	122	33%	2,697	329,070	44%
	>50	30	8%	1,558	46,727	6%
	TOTAL	369		2,019	745,163	
2011	<20	3	1%	1,157	3,472	2%
	20-29	80	26%	602	48,146	147%
	30-39	102	34%	1,308	133,379	33%
	40-49	97	32%	1,927	186,892	46%
	>50	22	7%	1,491	32,792	8%
	TOTAL	304		1,331	404,681	
2010	<20	4	1%	498	1,990	0%
	20-29	86	23%	620	53,298	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	370		1,386	512,660	
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	

TABLE D-8. Oregon salmon troll boat-size catch statistics in pounds of dressed salmon. (Page 3 of 5)

	Vessels			Catch		
Year	Length	Number[a/]	Percent of	Average Per	Total	Percent of
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	
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	

TABLE D-8. Oregon salmon troll boat-size catch statistics in pounds of dressed salmon. (Page 4 of 5)

	Vessels			Catch		
Year	Length	Number[a/]	Percent of	Average Per	Total	Percent of
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	
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	

TABLE D-8. Oregon salmon troll boat-size catch statistics in pounds of dressed salmon. (Page 5 of 5)

	Vessels			Catch		
Year	Length	Number[a/]	Percent of	Average Per	Total	Percent of
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	

a/ Number of boats includes only those with at least one landing containing troll-caught salmon.

b/ Preliminary.

c/ Fewer than three vessels. Values combined with next category below to preserve confidentiality.

TABLE D-9. Washington non-Indian salmon troll boat-size catch statistics in pounds of dressed salmon.[a/b/] (Page 1 of 3)

	Vessels			Catch		
Year	Length Category (feet)	Number[c/]	Percent of Total	Average Pounds Per Vessel	Total (pounds)	Percent of Total
2019	<25	4	5%	253	1,012	0%
	25-36	22	25%	2,906	63,935	20%
	>36	62	70%	4,165	258,243	80%
	Unknown	0	0%	-	-	0%
	TOTAL	88		3,673	323,190	
2018	<25	5	5%	615	3,077	1%
	25-36	25	25%	2,284	57,104	22%
	>36	72	71%	2,812	202,448	77%
	Unknown	0	0%	-	-	0%
	TOTAL	102		2,575	262,629	
2017	<25	6	6%	1,666	9,995	3%
	25-36	24	22%	3,114	74,729	22%
	>36	78	72%	3,834	258,577	75%
	Unknown	e/	e/	e/	e/	e/
	TOTAL	108		3,179	343,301	
2016	<25	10	9%	982	9,822	5%
	25-36	26	24%	2,314	60,169	30%
	>36	71	66%	1,840	130,671	65%
	Unknown	0	0%	-	-	0%
	TOTAL	107		1,875	200,662	
2015	<25	11	9%	4,496	49,459	8%
	25-36	30	25%	5,471	164,138	26%
	>36	81	66%	6,857	427,116	67%
	Unknown	e/	e/	e/	e/	e/
	TOTAL	122		5,252	640,713	
2014	<25	11	9%	3,456	38,021	7%
	25-36	34	29%	4,772	162,253	29%
	>36	71	61%	4,936	350,480	64%
	Unknown	0	0%	-	-	0%
	TOTAL	116		4,748	550,754	
2013	<25	9	8%	1,993	17,937	4%
	25-36	34	31%	3,616	122,956	26%
	>36	60	56%	5,623	337,374	70%
	Unknown	5	5%	599	2,993	1%
	TOTAL	108		4,456	481,260	
2012	<25	8	8%	2,389	19,110	4%
	25-36	32	30%	3,687	117,999	26%
	>36	65	62%	4,849	315,197	70%
	Unknown	e/	e/	e/	e/	e/
	TOTAL	105		4,308	452,306	
2011	<25	12	11%	1,329	15,946	5%
	25-36	33	29%	3,002	99,059	29%
	>36	67	60%	3,363	225,317	66%
	Unknown	e/	e/	e/	e/	e/
	TOTAL	112		3,039	340,322	

TABLE D-9. Washington non-Indian salmon troll boat-size catch statistics in pounds of dressed salmon.[a/b/] (Page 2 of 3)

	Vessels			Catch		
Year	Length Category (feet)	Number[c/]	Percent of Total	Average Pounds Per Vessel	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		4,739	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		3,012	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		1,330	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		2,759	217,934	
2006	<25	3	4%	2,398	7,194	3%
	25-36	24	29%	1,983	47,593	21%
	>36	57	68%	3,103	176,873	76%
	Unknown	e/	e/	e/	e/	e/
	TOTAL	84		2,758	231,660	
2005	<25	6	7%	4,309	25,854	5%
	25-36	24	26%	4,801	115,228	24%
	>36	61	67%	5,565	339,488	71%
	Unknown	e/	e/	e/	e/	e/
	TOTAL	91		5,281	480,570	
2004	<25	8	9%	4,463	35,700	6%
	25-36	20	23%	5,797	115,933	20%
	>36	58	67%	7,636	442,879	74%
	Unknown	e/	e/	e/	e/	e/
	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	
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	

TABLE D-9. Washington non-Indian salmon troll boat-size catch statistics in pounds of dressed salmon.[a/b/] (Page 3 of 3)

	Vessels			Catch		
Year	Length Category (feet)	Number[c/]	Percent of Total	Average Pounds Per Vessel	Total (pounds)	Percent of Total
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	14	61%	4,493	62,907	77%
	Unknown	e/	e/	e/	e/	e/
	TOTAL	23		3,547	81,591	
1997	<25	7	14%	322	2,253	3%
	25-36	16	31%	1,468	23,491	29%
	>36	28	55%	1,972	55,203	68%
	Unknown	e/	e/	e/	e/	e/
	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	
1994[d/]	<25	0	-	-	-	-
	25-36	0	-	-	-	-
	>36	e/	e/	e/	e/	e/
	Unknown	0	-	-	-	-
	TOTAL	e/	e/	e/	e/	e/

a/ All values in this table are based on preliminary information available at the start of each year's review.

b/ Includes 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.

e/ Fewer than three vessels. Values combined with nearest category to preserve confidentiality.

TABLE D-10. Preliminary 2019 California salmon landings (in pounds of dressed salmon) and exvessel values by vessel size categories and port from Crescent City to Morro Bay south.

Port	Length Category (feet)	Number of Deliveries	Total Dressed Pounds Landed	Total Exvessel Value (dollars)	Percent Exvessel Value Landed in Port
Crescent City	<26	-	-	-	-
	26-36	33	6,538	38,126	17%
	>36	112	32,243	189,118	83%
	TOTAL	145	38,781	227,244	
Eureka	<26	14	908	5,536	6%
	26-36	30	3,553	24,095	28%
	>36	98	9,405	56,513	66%
	TOTAL	142	13,866	86,144	
Shelter Cove	<26	70	4,760	29,079	100%
	26-36	a/	a/	a/	a/
	>36	-	-	-	-
	TOTAL	70	4,760	29,079	
Fort Bragg[b/]	<26	16	3,015	21,608	3%
	26-36	184	27,556	203,978	33%
	>36	140	62,101	401,258	64%
	TOTAL	340	92,672	626,844	
Bodega Bay	<26	300	36,848	259,628	7%
	26-36	471	166,811	987,607	28%
	>36	516	383,441	2,296,853	65%
	TOTAL	1,287	587,100	3,544,088	
San Francisco	<26	290	29,866	231,214	7%
	26-36	313	130,320	860,414	24%
	>36	559	380,125	2,442,811	69%
	TOTAL	1,162	540,311	3,534,439	
Half Moon Bay	<26	20	2,584	19,741	1%
	26-36	282	113,680	796,695	23%
	>36	576	378,509	2,590,560	76%
	TOTAL	878	494,773	3,406,996	
Santa Cruz	<26	410	42,768	303,350	23%
	26-36	348	73,166	505,560	38%
	>36	162	75,690	515,923	39%
	TOTAL	920	191,624	1,324,833	
Moss Landing	<26	476	61,123	430,448	35%
	26-36	528	79,603	512,162	41%
	>36	166	47,450	300,688	24%
	TOTAL	1,170	188,176	1,243,298	
Monterey	<26	503	49,721	313,500	54%
	26-36	213	36,940	231,032	40%
	>36	70	5,424	32,628	6%
	TOTAL	786	92,085	577,160	
Morro Bay south	<26	436	85,896	644,900	25%
	26-36	392	128,869	964,584	37%
	>36	248	143,972	991,487	38%
	TOTAL	1,076	358,737	2,600,971	

a/ Fewer than three vessels. Values combined with nearest category to preserve confidentiality.

b/ Fort Bragg includes minor landings made in Mendocino County areas.

TABLE D-11. Preliminary 2019 Washington non-Indian troll salmon landings (in pounds of dressed salmon) and exvessel value by vessel size category and port area.[a/b/]

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	c/	c/	c/	c/	c/
	25-36	8	88	17,499	96,458	12%
	>36	34	530	120,459	703,359	88%
	Unknown	-	-	-	-	-
	TOTAL	42	618	137,958	799,817	
La Push	<25	c/	c/	c/	c/	c/
	25-36	6	146	24,688	144,584	40%
	>36	11	171	36,622	216,847	60%
	Unknown	-	-	-	-	-
	TOTAL	17	317	61,310	361,430	
Westport	<25	3	11	413	1,871	< 1%
	25-36	15	181	21,898	134,739	18%
	>36	37	506	96,908	595,317	81%
	Unknown	-	-	-	-	-
	TOTAL	55	698	119,219	731,928	
Ilwaco	<25	-	-	-	-	-
	25-36	c/	c/	c/	c/	c/
	>36	14	85	4,703	32,534	87%
	Unknown	-	-	-	-	-
	TOTAL	14	85	4,703	32,534	
Puget Sound[d/]	<25	-	-	-	-	-
	25-36	-	-	-	-	-
	>36	-	-	-	-	-
	Unknown	-	-	-	-	-
	TOTAL	-	-	-	-	-

a/ Includes pink salmon landings.
b/ Total pounds and exvessel values reported in this table may be less than are reported in other tables of the Review. The differences are generally one percent or less and likely related to vessel information missing for certain landings.
c/ Fewer than three vessels. Values combined with next category to preserve confidentiality.
d/ Landed on the coast and transported to Puget Sound for processing.

TABLE D-12. California number of vessels landing 50 percent and 90 percent of total pounds of salmon troll catch by year.

		50 Percent of Pounds Landed		90 Percent of Pounds Landed	
Year	Total Vessels	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	215	21	9.8%	84	39.1%
2011	464	58	12.5%	204	44.0%
2012	616	100	16.2%	312	50.6%
2013	671	103	15.4%	328	48.9%
2014	653	98	15.0%	306	46.9%
2015	587	86	14.7%	291	49.6%
2016	438	61	13.9%	215	49.1%
2017	400	52	13.0%	193	48.3%
2018	456	56	12.3%	219	48.0%
2019[a/]	570	89	15.6%	285	50.0%

a/ Preliminary.

TABLE D-13. Oregon number of vessels landing 50 percent and 90 percent of total pounds of salmon troll catch by year.[a/]

		50% of Pounds Landed		90% of Pounds Landed	
Year	Total Vessels	Number of Vessels	Percent of Fleet	Number of Vessels	Percent of Fleet
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	370	43	11.6%	139	37.6%
2011	304	32	10.5%	113	37.2%
2012	369	41	11.1%	144	39.0%
2013	399	52	13.0%	158	39.6%
2014	493	63	12.8%	184	37.3%
2015	487	75	15.4%	250	51.3%
2016	313	36	11.5%	134	42.8%
2017	176	22	12.5%	81	46.0%
2018	230	27	11.7%	104	45.2%
2019[b/]	220	31	14.1%	106	48.2%

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, 2010 - 0.05 percent, and 2011 - 0.02 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.[a/]

		50% of Fish Landed		90% of Fish Landed	
Year	Total Vessels	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[b/]	<3	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%
2011	112	27	24.1%	70	62.5%
2012	105	24	22.9%	67	63.8%
2013	108	25	23.1%	67	62.0%
2014	116	31	26.7%	79	68.1%
2015	122	31	25.4%	80	65.6%
2016	107	29	27.1%	75	70.1%
2017	108	25	23.1%	70	64.8%
2018	102	24	23.5%	66	64.7%
2019	88	16	18.2%	47	53.4%

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 2019 California, Oregon, and Washington troll fleet by home state and salmon landings and exvessel value.[a/]

Home State	Number of Vessels	Percent	Landings (Pounds)	Percent	Total Value (Dollars)	Percent
			CALIFORNIA			
California	533	94%	2,381,958	92%	15,729,096	91%
Oregon	18	3%	96,511	4%	621,743	4%
Washington	12	2%	81,739	3%	558,477	3%
Unknown/Other	7	1%	42,677	2%	291,779	2%
TOTAL	570		2,602,885		17,201,095	
			OREGON			
Oregon	171	78%	252,963	79%	1,680,410	80%
California	18	8%	10,387	3%	63,901	3%
Washington	22	10%	42,944	13%	274,232	13%
Unknown/Other	9	4%	13,427	4%	84,090	4%
TOTAL	220		319,721		2,102,633	
			WASHINGTON			
Washington	75	85%	270,717	84%	1,616,301	84%
Oregon	10	11%	48,025	15%	282,488	15%
California	1	1%	2,663	1%	15,723	1%
Unknown/Other	2	2%	1,785	1%	11,197	1%
TOTAL	88		323,190		1,925,709	

a/ Pink salmon included in Oregon and Washington.

TABLE D-16. Vessels landing salmon in California by vessel length and skipper's state of residence.

	Home State[a/]															
	California (length)				Oregon (length)				Washington (length)				Total (length)[b/]			Grand
Year	<26	26-36	>36	Subtotal	<26	26-36	>36	Subtotal	<26	26-36	>36	Subtotal	<26	26-36	>36	Total[c/]
81-85[d/]	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	143	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	55	74	81	210	0	1	2	3	0	0	0	0	55	77	83	215
2011	110	166	169	445	0	2	9	11	1	0	2	3	113	170	181	464
2012	151	213	218	582	0	4	14	18	0	1	8	9	154	221	241	616
2013	158	233	243	634	1	3	16	20	1	1	9	11	162	241	268	671
2014	151	237	235	623	1	3	9	13	1	1	6	8	156	245	252	653
2015	149	209	188	546	2	4	13	19	1	1	8	10	154	221	212	587
2016	114	173	132	419	0	2	2	4	1	1	7	9	116	180	142	438
2017	124	152	106	382	1	1	3	5	1	1	5	7	126	158	116	400
2018	124	164	145	433	0	5	5	10	0	1	8	9	125	173	158	456
2019[e/]	147	188	198	533	1	5	12	18	0	3	9	12	150	198	222	570

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 ≥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	80.3%	9.7%	9.2%	0.8%
2011	84.2%	5.6%	9.2%	1.0%
2012	82.4%	4.3%	11.9%	1.4%
2013	79.4%	8.5%	11.0%	1.0%
2014	73.2%	14.4%	11.0%	1.4%
2015	70.1%	12.9%	13.9%	3.1%
2016	76.4%	6.6%	14.1%	2.9%
2017	74.4%	8.0%	12.5%	5.1%
2018	77.4%	9.1%	10.0%	3.5%
2019[a/]	77.7%	8.2%	10.0%	4.1%

a/ Preliminary.

TABLE D-18. Percentages of vessels landing non-Indian troll salmon in Washington by license holder's state of residence.[a/]

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[b/]	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%
2011	91.1%	8.0%	0.0%	0.0%	0.9%
2012	85.7%	11.4%	1.9%	0.0%	1.0%
2013	86.1%	9.3%	0.0%	0.0%	4.6%
2014	94.0%	6.0%	0.0%	0.0%	0.0%
2015	86.1%	10.7%	0.8%	0.0%	2.5%
2016	89.7%	9.3%	0.0%	0.0%	0.9%
2017	86.1%	10.2%	1.9%	0.0%	1.9%
2018	85.3%	11.8%	0.0%	0.0%	2.9%
2019	85.2%	11.4%	1.1%	0.0%	2.3%

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[a/]	Port Area: Monterey	San Francisco	Fort Bragg	Eureka	Crescent City	Total
2019[b/]	Active	8	39	6	6	0	59
	Casual	7	35	4	8	2	56
	TOTAL	15	74	10	14	2	115
2018	Active	0	53	8	4	0	65
	Casual	11	34	5	10	2	62
	TOTAL	11	87	13	14	2	127
2017	Active	0	37	0	-	-	37
	Casual	11	32	13	-	-	56
	TOTAL	11	69	13	-	-	93
2016	Active	0	28	5	5	0	38
	Casual	12	41	11	5	2	71
	TOTAL	12	69	16	10	2	109
2015	Active	0	31	5	5	0	41
	Casual	17	44	7	8	2	78
	TOTAL	17	75	12	13	2	119
2014	Active	10	39	10	9	0	68
	Casual	10	34	3	4	2	53
	TOTAL	20	73	13	13	2	121
2013	Active	5	44	9	10	0	68
	Casual	11	25	3	3	1	43
	TOTAL	16	69	12	13	1	111
2012	Active	14	38	7	8	1	68
	Casual	11	24	3	3	0	41
	TOTAL	25	62	10	11	1	109
2011	Active	9	35	8	7	0	59
	Casual	8	23	1	3	0	35
	TOTAL	17	58	9	10	0	94
2010	Active	7	13	1	0	0	21
	Casual	12	38	7	7	0	64
	TOTAL	19	51	8	7	0	85
2009	Active	-	-	-	0	0	0
	Casual	-	-	-	14	0	14
	TOTAL	-	-	-	14	0	14
2008	Active	-	-	0	-	-	0
	Casual	-	-	3	-	-	3
	TOTAL	-	-	3	-	-	3

a/ Active vessels landed more than 100 salmon; casual vessels landed 100 salmon or less.
b/ Preliminary.

TABLE D-20. Number of charter boats licensed in Oregon.

Year	Total Number of Licensed Charter Boats[a/]	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[b/]	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
2011	260	209	46	5
2012	252	204	42	6
2013[c/]	NA	NA	NA	NA
2014	64	60	4	0
2015	69	46	6	17
2016	69	41	8	20
2017	72	42	8	22
2018	66	37	9	20
2019	71	42	9	20

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/ Beginning 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.

c/ Beginning in 2013, only vessels of over 6 passengers with a valid USCG Certificate of Inspection can obtain an Oregon Charter Boat License due to change in Oregon law. Smaller vessels, previously included as charter boats, are categorized as guides/outfitters.

TABLE D-21. Number of salmon charter boats licensed in Washington (including Puget Sound).

Year	Number of Licenses Issued	Washington Resident License Holders	Other State Resident License Holders	Buyback
1975	404	351	53	-
1976	427	362	65	-
1977[a/]	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	142	137	5	0
2010	142	137	5	0
2011	142	136	6	0
2012	142	135	7	0
2013	142	137	5	0
2014	141	138	3	0
2015	142	139	3	0
2016	142	138	4	0
2017	142	139	3	0
2018	142	139	3	0
2019[b/]	142	140	2	0

a/ First year moratorium in effect.

b/ Preliminary.

TABLE D-22. Price index.[a/]

Year	Price Index
1970	21.6
1971	22.7
1972	23.7
1973	25.0
1974	27.3
1975	29.9
1976	31.6
1977	33.6
1978	35.9
1979	38.9
1980	42.5
1981	46.5
1982	49.3
1983	51.2
1984	53.2
1985	54.8
1986	56.0
1987	57.6
1988	59.6
1989	61.8
1990	64.2
1991	66.5
1992	68.1
1993	69.6
1994	71.0
1995	72.5
1996	73.9
1997	75.2
1998	76.1
1999	77.2
2000	78.9
2001	71.0
2002	72.1
2003	73.4
2004	75.4
2005	77.8
2006	80.1
2007	82.3
2008	83.9
2009	84.5
2010	85.5
2011	87.3
2012	89.0
2013	90.5
2014	92.2
2015	93.1
2016	94.1
2017	95.9
2018	98.2
2019	100.0

a/ Based on gross domestic product implicit price deflator.