

CHAPTER IV

SOCIOECONOMIC ASSESSMENT OF THE 2013 OCEAN SALMON FISHERIES

SUMMARY: Total 2013 exvessel value of the Council-managed non-Indian troll commercial salmon fishery was \$34.1 million, the highest total since an inflation-adjusted \$34.7 million in 2004, largely thanks to California's highest value commercial salmon fishery since 1988. The exvessel value of the coastwide commercial fishery in 2013 was more than triple the 2008-2012 inflation-adjusted average of \$8.1 million (which includes two zero years for California, 2008 and 2009), but still 40 percent below the 1979 through 1990 inflation-adjusted average of \$56.8 million. The coastwide average exvessel price for Chinook in 2013 was \$6.14 per pound, 12 percent above last year's inflation-adjusted average. At \$2.18 per pound, average 2013 West Coast coho prices were six percent higher than last year's inflation-adjusted average. The preliminary number of vessel-based ocean salmon recreational angler trips taken on the West Coast in 2013 was 307,100, an increase of 6 percent from last year, but 49 percent below the 1979 through 1990 average. Total West Coast income impacts associated with recreational and commercial ocean salmon fisheries for all three states combined in 2013 were estimated at \$79.3 million, the highest level since an inflation-adjusted \$101.1 million in 2004. While total income impacts in 2013 were 40 percent above the prior year's inflation-adjusted level, they were still 56 percent below the 1979-1990 inflation-adjusted average. The four lowest total income impacts (adjusted for inflation) were recorded during 2008-2011.

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 more stable 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.

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 higher rate there than in other areas. 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 which shaped the 2013 season is provided in Chapter I; and an assessment of success in meeting the objectives is provided in Chapters II and III.

COMMERCIAL SALMON FISHERIES

West Coast Non-Indian Commercial Ocean Fishery

In-season Price Trends

Coastwide average exvessel prices for troll caught Chinook and coho in 2013 were \$6.14 and \$2.18 per pound, respectively. Monthly average exvessel price data provide information on price trends over the season (Table IV-1). California Chinook prices were at their highest in May and October, averaging \$7.89 and \$7.21 per pound, respectively. Oregon Chinook prices were highest in April and May, averaging \$8.07 and \$7.89 per pound, respectively. In Washington, average Chinook prices were highest in May at \$7.65 per pound (There were no Washington landings in April). California and Washington average Chinook exvessel prices were at their lowest in July, while Oregon average Chinook prices were lowest in September, slightly lower than in July. For the season, exvessel Chinook prices in Washington, Oregon and California averaged \$6.16, \$5.88 and \$6.23 per pound, respectively. Coho prices in Washington and Oregon averaged \$2.17 and \$2.56 per pound, 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 terms and inflation-adjusted 2013 dollars, 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). Landings 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 describe the non-Indian commercial fishery in Council management areas and associated state territorial ocean area waters.

Total 2013 coastwide exvessel value of the Council-managed non-Indian commercial troll salmon fishery was \$34.1 million, 67 percent higher than the prior year (\$20.4 million), and more than three-and-a-half times the 2011 level of \$9.5 million (adjusted for inflation). Coastwide exvessel value was more than 26 times its all-time low level of \$1.3 million recorded in 2008 (including pinks, adjusted for inflation).

In 2013 California achieved \$23.6 million in commercial troll exvessel landings value of Chinook, 72 percent above the prior year's level (\$13.7 million), and nearly four-and-a-half times the 2011 California commercial ocean salmon harvest value of \$5.3 million (adjusted for inflation). 2013 saw California's highest inflation-adjusted landings value since 1988 (\$66.7 million), although landings revenues in 2013 were still 21 percent below the 1979-1990 inflation-adjusted average of \$29.9 million.

The 2013 exvessel value of the Oregon commercial troll Chinook and coho harvest of \$7.6 million was the highest level since 2005 (\$9.8 million), 75 percent higher than in 2012 (\$4.3 million), and three-and-a-half times the 2008-2012 average of \$2.1 million (inflation-adjusted). Still Oregon's 2013 commercial troll harvest value was 58 percent below the 1979-1990 average of \$18 million, and 16 percent below the 1979-2012 average of \$9 million (inflation-adjusted).

The 2013 exvessel value of Washington's non-Indian troll Chinook and coho harvest of \$2.8 million was 19 percent above last year's inflation-adjusted value of \$2.4 million. Average exvessel value of Washington's commercial landings over the past four years (2010-2013) of \$2.6 million is higher in inflation-adjusted terms than any single year's total since 1988 (\$3.7 million). However the 2010-2013 average value is still 68 percent below the 1979-1990 inflation-adjusted average of \$8.1 million.

The 2013 average West Coast ocean harvest Chinook price of \$6.14 per pound is the third highest in inflation-adjusted terms since 1979, and reverses a mostly downward trend over the prior four years. Adjusted for inflation, the average Chinook price over the last eight years (2006-2013) was \$6.01 per pound (which includes the highest recorded inflation-adjusted average price of \$7.47 in 2008). The average Chinook price over those years is higher in inflation-adjusted terms than any single year except 1979 and 2008, when the average inflation-adjusted prices were \$6.44 and \$7.47 per pound, respectively. Part of the reason exvessel prices may have been high in recent years may be due to the relatively restricted fishing opportunities (see Chapter I and Appendix C for details). The 2013 coastwide average Chinook price was 12 percent above last year's value (\$5.50), one percent above the previous five-year (2008-2012) average of \$6.08 per pound, and 54 percent above the 1979-2012 average of \$3.99 per pound (inflation-adjusted). At \$2.18 per pound, 2013 average West Coast coho prices were six percent higher than last year and one percent higher than two years ago, but four percent below the previous five year average (2008-2012) of \$2.28, and 25 percent below the 1979-1990 average of \$2.91 (inflation-adjusted).

In terms of numbers of fish, the 2013 coastwide, non-Indian commercial troll Chinook harvest of 450,100 fish was 38 percent above last year and nearly three-and-a-half times 2011 (Figure IV-1). The number of Chinook harvested commercially in 2013 was the highest level since 2005, but still 28 percent below that number (627,200), and 31 percent below the 1976-2012 long-term average of 649,400 fish. The 2013 coastwide average weight per Chinook (12.3 pounds) was eight percent above last year's average (11.4 pounds), eight percent below the 2011 average weight, and approximately equal to the previous five year (2008-2012) average (Appendix D Tables D-1, D-2, and D-3).

The non-Indian commercial fishery caught 6,500 coho coastwide in 2013, an increase of 66 percent over the prior year (3,900), and 84 percent above the 2011 catch (3,500), but 85 percent below the 2009 recent year peak coho harvest level of 42,000 fish. The coastwide average weight per coho (5.2 pounds), although only six percent and seven percent below the prior two years' average weights, respectively, was the lowest average weight recorded in a coho harvest year since the mid 1990s. The 2013 average weight was about 38 percent below the highest average coho weights recorded since 1980, i.e., 8.5 pounds in 2006 and 8.4 pounds in 2008. Coastwide coho exvessel value was \$73,700 in 2013, 67 percent above the inflation-adjusted value for the prior year (\$44,200), but 87 percent below the inflation-adjusted \$578,300 recorded in 2009 (Figure IV-4).

West Coast port areas with the highest commercial Chinook landings (by weight) in 2013 were San Francisco (32 percent), Fort Bragg (26 percent), Coos Bay (14 percent) and Monterey (7 percent). In 2012 the leading ports were San Francisco (32 percent), Monterey (18 percent), Fort Bragg (17 percent), Newport (7 percent) and Coos Bay (6 percent). In 2013, the ports north of Cape Falcon accounted for only about 9 percent of coastwide Chinook harvest by weight, their lowest share since 2005 (8 percent). In comparison, ports north of Cape Falcon accounted for 14 percent of landings in 2012, 21 percent in 2011, 51 percent in 2010, 95 percent in 2009 and 84 percent in 2008. Between 2000 and 2007, ports north of Cape Falcon accounted for an average of about nine percent of coastwide Chinook landings by weight.

Compared with last year, commercial Chinook harvest by weight in 2013 was up 50 percent in California, 74 percent in Oregon, and less than four percent in Washington. Compared with last year, the 2013 commercial Coho harvest by weight was down 47 percent in Oregon but up 77 percent 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 1,099 vessels participated in the West Coast commercial salmon fishery in 2013. This is eight percent more than participated in

2012 (1,021), 31 percent greater than the number participating in 2011 (842), and 66 percent greater than the number that participated in 2010 (664). The number of vessels making landings in 2013 was the highest vessel participation total since 1,222 vessels participated in 2005. Note that these coastwide vessel counts are less than totals derived by summing values in the state-level tables (Tables D-4, D-5, and D-6) because a given vessel may be counted in more than one state and also due to variation in the degree of completeness at the time data were extracted for this report.

In 2013, 670 commercial vessels made salmon landings in California compared with 616 vessels in 2012, 464 vessels in 2011, and 215 vessels in 2010. Zero vessels landed salmon in California in 2008 and 2009. In 2007, there were 601 vessels active in California (Table D-4). In Oregon, the active fleet increased by 30 vessels in 2013, to 399 vessels compared to 369 vessels the prior year (Table D-5). The number of active vessels in Washington increased by three from 105 vessels last year to 108 vessels in 2013 (Table D-6). Coastwide, the number of limited entry salmon permits issued in 2013 decreased by 49 from the previous year to 2,270. Landings were made on 52 percent of all permits in 2013, up from 47 percent in 2012, 37 percent in 2011 and 29 percent in 2010. Note: Years 2008 and 2009 are the two lowest vessel participation years on record (1982-2013). 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 purchased in a buyback program.

In 2013, coastwide average inflation-adjusted exvessel value of salmon landings per vessel increased 54 percent compared to 2012, to \$29,000 per vessel. Compared to last year, average exvessel revenue per vessel in 2013 was up 58 percent in California, 62 percent in Oregon, and 15 percent in Washington. Note that some caution needs to be exercised in interpreting average per vessel exvessel revenue. For example, the averages may be influenced as much by a disproportionate change in the number of small or large harvesters from one year to the next as by a change in the average revenues of those vessels remaining in the fishery.

Additional historical information on landings by vessel size, percentages of the fleet responsible for the majority of harvest, and harvest by residence of participants in each state's fisheries is included in Appendix D.

West Coast Treaty Indian Commercial Ocean Fishery

Treaty Indian commercial fisheries off Washington operate under regulations established by the Council. While some of the treaty Indian harvest 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 2013 the treaty Indian ocean troll fishery harvested 52,500 Chinook (497,900 pounds) and 47,700 coho (241,000 pounds), compared with 56,400 Chinook (529,700 pounds) and 37,500 coho (198,600 pounds) in 2012, 34,700 Chinook (382,200 pounds) and 13,600 coho (77,600 pounds) in 2011, and 34,300 Chinook (298,800 pounds) and 11,500 coho (80,300 pounds) in 2010 (Tables A-15 and D-3). The preliminary exvessel value of Chinook and coho landed in the treaty Indian ocean troll fishery was \$6.4 million in 2013 compared with inflation-adjusted values of \$2.4 million in 2012, \$1.8 million in 2011, \$1.4 million in 2010, and \$1.1 million in 2009 (revenue values based on January 27, 2014 PacFIN data).

Columbia River Commercial Fishery

Harvest in the ocean salmon fisheries impacts the inriver fisheries by affecting the number of fish available for harvest in inside 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 values in the table and the following discussion are reported in inflation-

adjusted dollars. Exvessel prices for inriver commercial salmon catch varies 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 2013 was \$11.8 million. This was 80 percent above the 2012 level of \$6.5 million, and nine percent above the inflation-adjusted 2011 level of \$10.8 million. Of these amounts, the total inflation-adjusted exvessel value of non-Indian commercial salmon harvested in the Columbia River was \$5.4 million in 2013, \$3.4 million in 2012, \$5 million in 2011, and \$5.4 million recorded in 2010 (Table IV-9).

Total 2013 exvessel value of treaty Indian salmon harvested in the Columbia River and sold on fish tickets was \$6.4 million. This is more than double the inflation-adjusted level of \$3.1 million in 2012, nine percent above the \$5.8 million landed in 2011, and 24 percent above the inflation-adjusted 2010 value of \$5.2 million. Note that these values include only sales made to licensed fish buyers. Treaty Indian fisher 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 2013 Puget Sound and Washington coastal inside fisheries is preliminary. Based on PacFIN data (as of January 27, 2014), 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 2013 was \$34.0 million. This was the highest value in inflation-adjusted terms since \$35 million in 1989. Of the total landings in 2013, \$4.2 million were Chinook and coho (compared with \$6.3 million in 1989). By way of comparison, in 2012 the total inflation-adjusted exvessel value of the commercial non-Indian salmon fisheries in these areas was \$6.1 million, of which \$1.6 million were Chinook and coho. In 2011 the total inflation-adjusted exvessel value in these areas was \$12.6 million, of which \$2.1 million were Chinook and coho. In 2010 the total was \$11.4 million for all salmon species, of which \$1.2 million were Chinook and coho. The 1981 through 2012 inflation-adjusted average annual exvessel value from these fisheries was \$16.1 million, of which on average approximately \$4.0 million were Chinook and coho.

The preliminary 2013 exvessel value reported to PacFIN (as of January 27, 2014) for all salmon species taken in the commercial treaty Indian fisheries in Puget Sound and Washington coastal inside fisheries (excluding the Columbia River) was \$22.0 million, of which \$11.4 million were Chinook and coho. In previous years, substantial additional landing reports have come in after publication of this review. The updated value for 2012 commercial treaty Indian harvest in Puget Sound and Washington coastal inside fisheries is \$13.3 million for all salmon species, of which \$8.3 million were Chinook and coho (inflation-adjusted). The exvessel value of the 2011 commercial treaty Indian harvest in Puget Sound and Washington coastal inside fisheries was \$20.8 million for all salmon species, of which \$7.8 million were Chinook and coho (inflation-adjusted). From 1981 through 2012 the inflation-adjusted average annual exvessel value of commercial treaty Indian fisheries in Puget Sound and Washington coastal inside areas is \$20.8 million, of which on average \$7.9 million were Chinook and coho.

Klamath River Fisheries

Commercial sales in the Yurok and Hoopa Valley Reservation Indian fall gillnet fisheries in the Klamath River occurred in 1987-1989, 1996, 1999-2004, and 2007-2013. Average commercial catch of fall Chinook was about 22,900 fish over those years, most of which were taken in the estuary. Commercial sales also occurred in spring Chinook gillnet fisheries in 1989, 1996, 2000-2004, and 2007-2013, with an annual average of about 1,100 fish sold. The 1989 total harvest of 27,700 fall Chinook reportedly had an

average weight of 15.4 pounds per fish and sold for \$852,000 (\$1.3 million adjusted to 2013 dollars). In 1996, 3,129 spring Chinook and 40,147 fall Chinook were harvested, with an average weight per fish landed of 13.5 pounds and value at first sale of an estimated \$525,000 (\$673,000 adjusted to 2013 dollars). Records are not available for the weight and value of harvests for years after 1996 as each Indian fisher now markets their fish independently. The fishery has occurred in most recent years with the exception of 2005 and 2006. In 2013 approximately 51,400 commercial fall Chinook were harvested, which although the second highest total since 1987, was 36 percent below the 2012 harvest of 80,900 fish. The 2012 fall Chinook harvest was more than double the previously highest total of 40,147 taken in 1996. By comparison, only 15,600 fall Chinook were harvested in 2011, and 15,300 were harvested in 2010. The spring Chinook commercial harvest in 2013 was 971 fish, 13 percent higher than last year and the highest total since 2,300 were harvested in 2007. By comparison, only 33 spring Chinook were taken in 2011, and 259 were harvested in 2010 (Appendix B, Table B-5).

CEREMONIAL AND SUBSISTENCE SALMON FISHERIES

In addition to the commercial Indian fisheries discussed above, fish are taken in Indian fisheries each year for ceremonial and subsistence purposes. Estimates of the amount of salmon used for ceremonial and subsistence purposes are documented in Appendix B. Discussion of the importance of ceremonial and subsistence fish to Indian communities is presented in Appendix B to Amendment 14 of the salmon FMP.

RECREATIONAL SALMON FISHERIES

Ocean

The preliminary number of vessel-based ocean salmon recreational angler trips taken on the West Coast in 2013 was 307,100, an increase of six percent over 2012, and 45 percent above the 2011 level, but 49 percent below the 1979-1990 annual average of 599,700. Compared with 2012, preliminary estimates of the number of trips taken in 2013 decreased by three percent in California, but increased by 28 percent in Oregon and by three percent in Washington. (Note that Washington effort estimates shown in Tables IV-10 and IV-13 may differ from those in Tables I-4 and (Appendix A) Table A-17 because the former exclude bank fishers on the Columbia River north jetty.)

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 2013 (27 percent) fell six percent from 29 percent of trips in 2012, but was virtually the same proportion as in 2011. Underlying this coastwide trend were a slight increase over last year in the proportion of charter trips in California, a decrease of 12 percent in Oregon, and decrease of two percent in Washington. Figure IV-5 and Tables IV-10, IV-11, IV-12, and IV-13 display details of recreational effort and catch by port area and mode for each state.

California

The number of ocean recreational salmon trips in California in 2013 (143,800) reversed an upward trend that had continued since 2008. The 2013 total was three percent below 2012 (148,000), but still higher than in any other year since 2005 (172,100). The number of salmon trips in 2013 was 16 percent higher than in the prior year in Fort Bragg and 15 percent higher in San Francisco, but lower than last year's total in Crescent City (-10 percent), Eureka (-3 percent), and Monterey (-31 percent). A total of 113,300 Chinook were caught in California on a total of 143,800 trips, for an average success rate of 0.79 fish per trip. The charter industry's share of California recreational salmon trips in 2013 was about 36 percent, which was slightly above last year's share, and the highest proportion since 2005 (Table IV-10, Table IV-11 and Figure IV-5).

Oregon

Ocean recreational salmon trips in Oregon in 2013 were up 28 percent to 86,300 trips compared with an estimated 67,300 angler trips in 2012 (Tables IV-10 and IV-12). Total trips in 2013 were also 77 percent higher than 2011, and 52 percent above the most recent five year average (2008-2012). Compared with last year, effort was higher in ports both north and south of Cape Falcon: up 27 percent in Astoria, 20 percent in Tillamook, four percent in Newport, 81 percent in Coos Bay, and seven percent in Brookings. The charter industry's share of Oregon recreational salmon trips in 2013 was about nine percent, which is 12 percent lower than last year, and about 18 percent below the recent five year (2008-2012) average share (Table IV-10, Table IV-12 and Figure IV-5).

From 1984 to 1993, on average coho accounted for 87 percent of the annual Oregon 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. With the opportunity to retain coho in mark-selective fisheries south of Cape Falcon beginning in 1999, salmon retention rates increased. From 2002 through 2011, retention rates ranged between 0.44 and 1.08 salmon per angler-day. The 2013 Oregon salmon retention rate of 0.52 was toward the lower end of this range and virtually the same as last year's value. The 2013 value was also the highest since a retention rate of 1.08 was recorded in 2009, and it continues a rising trend exhibited since a recent low of 0.44 in 2010. In 2013, coho's contribution to the total Oregon recreational ocean salmon catch was only 32 percent, the second lowest share recorded since at least 1979, and the lowest since 1994.

Washington

In 2013, 77,000 ocean angler trips were taken on vessels on the Washington coast, an increase of three percent from the 75,000 trips taken in 2012, and six percent above the recent five year (2008-2012) average of 72,500. About 32 percent of Washington angler trips were taken on charter vessels in 2013, down two percent from 2012, and three percent below the recent five year average share of 33 percent (Table IV-10, Table IV-13 and Figure IV-5).

The angler success rate in Washington (in terms of retained fish per angler-trip) was 0.97 in 2013, up 12 percent from 0.86 in 2012, but six percent below the recent five year (2008-2012) average success rate of 1.03. 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).

In order to increase angler participation in non-salmon recreational fishing (e.g., bottomfish) and to extend the length of the salmon season, partial-week closures were instituted in the recreational fishery north of Cape Falcon beginning in 1985. Sunday through Thursday salmon openings were used beginning in 1996 in the Westport and Columbia River port areas. Until relatively recently, the Neah Bay and La Push areas were generally open seven days per week. In 2013 the main-season recreational salmon fishery in the Columbia River area (south of Leadbetter Point and north of Cape Falcon) was open seven days per week. Most open areas north of Leadbetter Point were also open seven days per week throughout the season, with the exception of Queets River to Leadbetter Point, which was open Sunday through Thursday during June 23–July 18 but seven days per week thereafter. In 2013 there were 45,500 bottomfish trips north of Cape Falcon, a two percent increase from 44,500 trips in 2012 and continuing an upward trend exhibited since the 2009 low point of 37.2 (Table IV-14). Compared with 2012, the Columbia River and Neah Bay areas both showed increases in total bottomfish effort, while Westport and La Push were both slightly lower.

Buoy 10 and Area 4B Add-On Fisheries

In 2013 salmon anglers fishing from private and charter boats from Oregon and Washington made a total of 64,000 trips in the Buoy 10 fishery. This effort level is slightly above the 63,700 trips in 2012 and 34

percent above the 47,700 trips in 2011. Angler success/retention rates in the Buoy 10 fishery increased to 0.47 salmon per day in 2013 from 0.41 in 2012, 0.38 in 2011 and 0.29 in 2010 (Table IV-15).

In 2000, about 3,400 trips were made in the late-season Area 4B add-on fishery. Since that time there have been no late season Area 4B add-on fisheries (Table IV-15), with the exception of 2008, when there were an estimated 782 private trips and no charter trips. There was no Area 4B add-on fishery in 2013.

There were numerous other inside recreational salmon fishing opportunities in Puget Sound and coastal streams and estuaries that are not discussed in this chapter of the Review. See Appendix B for estimates of harvest in some of those other fisheries.

SALMON FISHERY INCOME IMPACTS AND COMMUNITY DEPENDENCE

Coastal community income impacts provide information on the effects of fluctuations in salmon harvest on local economies and small businesses. Income impacts are based on commercial landings and recreational fishing days (angler-trip), and were estimated using the Fishery Economic Assessment Model (FEAM). The income impact estimation process is discussed and results presented below. More detailed information on these procedures is available from the Council on request.

Estimated state and local community income impacts of commercial and recreational ocean salmon fisheries and selected state-managed fisheries are shown in Tables IV-16 through IV-20. These impacts represent estimates of total personal income associated with harvesting, processing and first level distribution activities in the commercial salmon fisheries along with trip-related expenditures made by recreational salmon anglers, expressed at the local community (county) and state levels. Income impacts are estimated based on several components: reported commercial landings and exvessel prices by port or area, an inventory of local harvesters and processors, estimates of harvester and processor expenditures, surveys of the expenditure patterns of recreational anglers, and local and state-level total income impact coefficients generated by IMPLAN[®] models constructed for each port or area. Under this modeling framework, most of the benefit of higher than average commercial fishery exvessel prices is assumed to go to the harvesters. Commercial ocean harvests that are landed outside of coastal areas (e.g., landings of troll caught salmon in Puget Sound ports) are not included in these estimates of coastal community impacts, but are 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 nonfishing and fishing-dependent sectors. As such they represent likely upper bounds on the local community and state income impacts generated by West Coast salmon fisheries. All income impact estimates reported in this review are in terms of inflation-adjusted 2013 dollars.

West Coast Ocean Fishery Commercial and Recreational Income Impacts

Total state level income impacts associated with recreational and commercial ocean salmon fisheries for all three states combined in 2013 were \$79.3 million, the highest level since \$101.1 million in 2004 (in inflation-adjusted terms). The 2013 total was 40 percent above the inflation-adjusted 2012 level of \$56.6 million, but still less than half (44 percent) of the inflation-adjusted average for 1979-1990 of \$179.7 million (Note: The 1979-1990 period includes the ten largest values in the data series). (Tables IV-16, IV-17 and IV-18). West Coast income impacts associated with the 2013 non-Indian commercial ocean fishery were \$54.5 million, 68 percent higher than the estimate for 2012 (\$32.5 million), and more than

quadruple the recent five year (2008-2012) average of \$12.8 million in inflation-adjusted terms^{1/}. Income impacts generated by the three states' 2013 ocean recreational fisheries were estimated at \$24.9 million, three percent above last year's level of \$24.1 million, and 59 percent above the 2008-2012 inflation-adjusted average of \$15.6 million. Note that these coastwide values may mask effects in individual communities. Tables IV-16, IV-17 and IV-18 provide greater detail on the estimated impacts in 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 the Oregon and Washington communities on the Columbia River. An inflation-adjusted average of \$32.0 million was generated annually from these fisheries during 1986-1990. In 2013, income impacts associated with the Columbia River commercial catch (combined non-Indian and treaty Indian) were estimated at \$22.7 million. This value is 82 percent above last year's level of \$12.5 million, and also 37 percent above the 2008-2012 inflation-adjusted average of \$16.6 million, over which time total inflation-adjusted income impacts of these fisheries ranged from a low of \$12.5 million in 2012 to a high of \$20.8 million in 2011 (Table IV-19).

Buoy 10 and Area 4B Add-On

Estimated local community income impacts associated with the 2013 Buoy 10 recreational salmon fishery were \$2.6 million, slightly below the estimate for last year's fishery, and 32 percent higher than the estimated value of \$2 million for 2011. The estimate for 2013 was also 20 percent higher than the inflation-adjusted average of \$2.2 million during 2008-2012 (Table IV-20). There was no late-season Area 4B add-on fishery in 2013. The most recent Area 4B add-on fishery occurred in 2008, the first since 2000. Inflation-adjusted local community income impacts associated with the 2008 area 4B add-on fishery were an estimated \$31,700. In the five out of six years between 1995 and 2000 when the Area 4B add-on fishery occurred, an annual average 3,500 angler trips generated estimated (inflation-adjusted) annual state-level income impacts averaging \$171,600 in years the fishery occurred (Table IV-20).

1/ Income impact estimates for the commercial fishery do not include postseason settlement payments fishers may have received from buyers. These postseason settlements may be particularly significant for the California fishery.

TABLE IV-1. Average monthly exvessel troll salmon price in dollars per dressed pound for California, Oregon, and Washington in 2013.

Species/Grade	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
CALIFORNIA											
Chinook ^{a/}	-	-	7.89	5.88	5.40	6.00	6.52	7.21	-	-	6.23
Coho	-	-	-	-	-	-	-	-	-	-	-
OREGON											
Chinook											
Large (>11 Pounds)	-	8.16	7.88	5.92	5.29	5.68	5.65	6.03	6.98	-	5.93
Medium (7-11 Pounds)	-	8.04	7.69	6.00	5.15	5.24	5.01	5.31	6.48	-	5.54
Small (<7 Pounds)	-	8.02	7.88	6.97	6.00	5.45	5.59	5.74	6.76	-	6.74
Ungraded Chinook	-	8.05	8.17	6.75	5.65	5.67	5.64	5.88	6.88	-	6.21
Weighted Average	-	8.07	7.89	6.18	5.37	5.56	5.33	5.79	6.88	-	5.88
Mixed Coho	-	-	-	-	2.71	2.49	2.62	2.53	-	-	2.56
WASHINGTON^{b/}											
Chinook											
Large (>11 Pounds)	-	-	7.88	6.44	5.46	5.66	5.70	-	-	-	6.31
Medium (8-11 Pounds)	-	-	7.58	6.11	5.21	5.49	5.57	-	-	-	6.10
Small (<8 Pounds)	-	-	4.82	4.85	4.26	3.53	3.50	-	-	-	4.60
Ungraded Chinook	-	-	-	-	-	-	-	-	-	-	-
Weighted Average	-	-	7.65	6.25	5.43	5.64	5.64	-	-	-	6.16
Mixed Coho	-	-	-	-	1.72	2.31	2.82	-	-	-	2.15

a/ Chinook salmon typically sold in two size categories. Prices paid in these categories are not extracted from dealer ticket information.

b/ Non-Indian data only.

TABLE IV-2. Troll Chinook and coho landed in California, estimates of exvessel value, and average price (dollars per dressed pound) in nominal and real (inflation adjusted, 2013) dollars.^{a/}

Year or Avg.	Chinook				Coho				Total ^{b/}	
	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	42,246	2.53	6.16	2,303	5,606	2.19	5.33	19,659	47,851
1980	12,741	28,421	2.27	5.06	408	910	1.36	3.03	13,149	29,331
1981-1985	10,945	20,661	2.42	4.51	554	1,057	1.94	3.96	11,499	21,718
1986-1990	21,151	33,796	2.56	4.05	490	770	1.36	2.61	21,641	34,567
1991-1995	7,335	9,955	2.28	3.12	143	203	1.25	2.31	7,478	10,158
1996	5,984	7,671	1.44	1.85	-	-	-	-	5,984	7,671
1997	7,288	9,181	1.38	1.74	-	-	-	-	7,288	9,181
1998	3,060	3,812	1.66	2.07	-	-	-	-	3,060	3,812
1999	7,429	9,120	1.93	2.37	-	-	-	-	7,429	9,120
2000	10,304	12,381	2.01	2.42	-	-	-	-	10,304	12,381
2001	4,773	6,069	1.98	2.52	-	-	-	-	4,773	6,069
2002	7,776	9,738	1.55	1.94	-	-	-	-	7,776	9,738
2003	12,181	14,956	1.91	2.35	-	-	-	-	12,181	14,956
2004	17,895	21,385	2.87	3.43	-	-	-	-	17,895	21,385
2005	12,913	14,952	2.97	3.44	-	-	-	-	12,913	14,952
2006	5,350	6,010	5.13	5.76	-	-	-	-	5,350	6,010
2007	7,902	8,648	5.18	5.67	-	-	-	-	7,902	8,648
2008	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-
2010	1,246	1,311	5.47	5.76	-	-	-	-	1,246	1,311
2011	5,133	5,298	5.18	5.35	-	-	-	-	5,133	5,298
2012	13,521	13,716	5.34	5.42	-	-	-	-	13,521	13,716
2013 ^{c/}	23,614	23,614	6.23	6.23	-	-	-	-	23,614	23,614

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, 2013) dollars.

Year or Avg.	Chinook				Coho				Total ^{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)
1971-1975	2,036	7,319	0.89	3.25	3,658	13,471	0.64	2.32	5,694	20,790
1976-1980	5,290	13,777	2.17	5.63	6,389	17,149	1.51	3.92	11,679	30,926
1981-1985	3,582	6,726	2.46	4.59	2,248	4,404	1.45	2.71	5,830	11,130
1986-1990	9,381	14,965	2.47	3.91	3,203	5,122	1.54	2.44	12,584	20,087
1991-1995	1,971	2,681	2.24	3.07	326	463	0.64	0.89	2,297	3,144
1996	3,007	3,855	1.56	2.00	-	-	-	-	3,007	3,855
1997	2,469	3,110	1.60	2.02	-	-	-	-	2,469	3,110
1998	2,297	2,862	1.64	2.04	-	-	-	-	2,297	2,862
1999	1,400	1,719	1.94	2.38	1	1	1.03	1.26	1,401	1,720
2000	2,988	3,590	2.02	2.43	75	90	1.06	1.27	3,063	3,680
2001	4,680	5,951	1.61	2.05	41	53	0.79	1.00	4,721	6,003
2002	5,383	6,741	1.54	1.93	8	10	0.75	0.94	5,391	6,751
2003	7,186	8,823	1.97	2.42	36	45	0.85	1.04	7,222	8,868
2004	9,832	11,750	3.45	4.12	86	103	1.24	1.48	9,919	11,854
2005	8,466	9,803	3.17	3.67	37	43	1.87	2.17	8,503	9,846
2006	2,663	2,991	5.48	6.16	38	43	2.90	3.26	2,701	3,034
2007	2,630	2,878	5.66	6.19	193	211	1.90	2.08	2,822	3,088
2008	484	519	7.31	7.85	10	11	2.82	3.03	494	530
2009	77	82	5.06	5.39	267	285	2.04	2.17	345	367
2010	2,775	2,921	5.49	5.78	16	16	2.23	2.35	2,791	2,937
2011	2,396	2,473	5.96	6.15	5	5	2.01	2.07	2,401	2,479
2012	4,263	4,325	5.75	5.83	8	9	2.20	2.23	4,271	4,333
2013 ^{b/}	7,598	7,598	5.88	5.88	7	7	2.56	2.56	7,604	7,604

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, 2013) dollars.^{a/}

Year or Avg.	Chinook				Coho				Total ^{b/}	
	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	9,883	0.89	3.26	3,060	11,169	0.66	2.42	5,775	21,052
1976-1980	5,313	14,131	2.39	6.16	6,086	16,148	1.67	4.32	11,399	30,278
1981-1985	1,954	3,776	2.46	4.59	1,272	2,468	1.32	2.46	3,225	6,244
1986-1990 ^{c/}	1,310	2,085	2.61	4.15	360	564	1.62	2.57	1,670	2,649
1991-1995 ^{d/}	550	766	2.17	2.97	120	167	0.86	1.18	670	933
1996	d/	d/	d/	d/	59	75	0.86	1.10	d/	d/
1997	125	157	1.55	1.95	-	-	-	-	125	157
1998	123	153	1.51	1.88	-	-	-	-	123	153
1999	377	463	1.90	2.33	19	23	0.88	1.08	396	486
2000	224	270	1.71	2.05	34	41	1.09	1.31	258	311
2001	349	444	1.44	1.83	34	43	0.69	0.88	383	487
2002	756	947	1.11	1.39	2	2	1.58	1.98	758	949
2003	951	1,167	1.15	1.41	40	49	0.74	0.91	991	1,217
2004	1,079	1,290	2.14	2.56	106	126	1.16	1.39	1,185	1,416
2005	1,273	1,474	2.70	3.13	16	19	1.65	1.91	1,290	1,493
2006	1,029	1,155	4.64	5.21	16	18	1.69	1.90	1,045	1,174
2007	905	990	4.90	5.36	48	53	1.46	1.60	953	1,043
2008	673	723	6.73	7.22	36	38	2.49	2.67	709	761
2009	893	951	5.76	6.14	276	294	2.02	2.15	1,169	1,245
2010	3,083	3,245	5.61	5.90	32	34	2.14	2.25	3,115	3,279
2011	1,652	1,705	5.12	5.28	35	37	2.10	2.17	1,687	1,742
2012	2,323	2,356	5.34	5.42	35	36	1.99	2.02	2,358	2,392
2013	2,771	2,771	6.16	6.16	67	67	2.15	2.15	2,838	2,838

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, 2013) dollars.

Year or Avg. ^{a/}	Oregon				Washington				Total ^{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	455	0.75	1.94	1,200	3,082	0.54	1.41	1,367	3,537
1981-1985	129	246	0.74	1.38	287	554	0.41	0.77	416	800
1986-1990	41	67	0.77	1.22	57	88	0.66	1.05	98	155
1991-1995	1	2	0.88	1.19	38	53	0.64	0.87	39	55
1997	b/	b/	0.56	0.71	b/	b/	0.20	0.25	b/	b/
1999	b/	b/	0.67	0.82	b/	b/	0.38	0.47	b/	b/
2001	1	1	0.58	0.74	b/	b/	0.22	0.28	1	1
2003	b/	b/	0.85	1.04	b/	b/	0.30	0.37	b/	b/
2005	b/	b/	1.25	1.45	b/	b/	0.52	0.60	b/	b/
2007	b/	b/	1.11	1.21	b/	b/	0.33	0.36	b/	b/
2009	b/	b/	0.51	0.54	b/	b/	0.33	0.35	b/	b/
2011	b/	b/	1.31	1.35	1	1	0.83	0.86	1	1
2013 ^{c/}	b/	b/	1.35	1.35	b/	b/	0.61	0.61	b/	b/

a/ Odd year averages.

b/ Less than \$500.

c/ Preliminary.

TABLE IV-6. Pounds of salmon landed by the commercial troll ocean fishery for major California port areas.^{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	3	61	192	1,735	418	2,409
2002	54	108	872	3,060	912	5,008
2003	38	7	3,096	2,753	498	6,392
2004	308	65	1,292	3,712	853	6,230
2005	25	77	889	2,258	1,098	4,347
2006	-	-	273	684	87	1,043
2007	34	81	357	888	165	1,525
2008	-	-	-	-	-	-
2009	-	-	-	-	-	-
2010	-	4	186	16	20	228
2011	8	53	622	215	94	992
2012	5	78	611	1,189	648	2,530
2013 ^{c/}	24	202	1,427	1,772	366	3,791
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	d/	4	11	56	23	94
1996-2000	-	-	-	-	-	-
2001	-	-	-	-	-	-
2002	-	-	-	-	-	-
2003	-	-	-	-	-	-
2004	-	-	-	-	-	-
2005	-	-	-	-	-	-
2006	-	-	-	-	-	-
2007	-	-	-	-	-	-
2008	-	-	-	-	-	-
2009	-	-	-	-	-	-
2010	-	-	-	-	-	-
2011	-	-	-	-	-	-
2012	-	-	-	-	-	-
2013	-	-	-	-	-	-

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, and Mendocino; San Francisco includes Bodega Bay, Sausalito, Berkeley, and Half Moon Bay; Monterey includes Santa Cruz, Moss Landing, Morro Bay, Avila, and all ports south of Pt. Conception.

b/ Prior to 2005 landings were based on catch area, not port of landing.

c/ Preliminary.

d/ Less than 500 pounds.

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

Year or Avg.	Astoria	Tillamook	Newport	Coos Bay	Brookings	State Total
CHINOOK (thousands of dressed pounds)						
1976-1980	171	118	530	908	700	2,427
1981-1985	92	45	271	638	386	1,432
1986-1990	52	264	829	2,118	468	3,731
1991-1995	7	86	580	235	31	940
1996-2000	25	70	790	435	92	1,414
2001	73	223	1,673	776	152	2,897
2002	330	275	1,442	1,223	218	3,488
2003	265	245	1,634	1,353	142	3,639
2004	134	113	1,121	1,214	267	2,850
2005	130	214	1,034	1,054	239	2,671
2006	99	67	218	56	45	486
2007	22	37	76	232	98	464
2008	39	19	-	-	8	66
2009	7	4	-	-	5	15
2010	116	40	185	122	43	506
2011	30	14	68	231	59	402
2012	84	64	275	221	97	741
2013 ^{c/}	34	76	232	783	166	1,291
COHO (thousands of dressed pounds)						
1976-1980	385	660	1,190	1,661	357	4,252
1981-1985	133	293	451	550	111	1,537
1986-1990	73	473	693	648	69	1,957
1991-1995	17	93	110	104	1	325
1996-2000	14	-	-	-	-	14
2001	50	b/	2	-	-	52
2002	6	5	-	-	-	11
2003	32	11	-	-	-	43
2004	47	22	-	-	-	70
2005	9	11	-	-	-	20
2006	8	5	-	-	-	13
2007	37	34	13	14	3	101
2008	3	1	-	-	-	4
2009	48	43	35	5	b/	131
2010	6	1	-	-	-	7
2011	2	1	-	-	-	3
2012	3	1	-	-	-	4
2013 ^{c/}	2	-	-	-	-	2

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		State Total ^{c/}
					Total	Puget Sound	
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	97	-	138	6	241	-	241
2002	262	33	322	61	678	-	678
2003	470	67	243	29	810	12	821
2004	250	74	158	15	497	7	504
2005	170	100	181	20	471	e/	471
2006	86	64	40	26	216	5	222
2007	38	31	105	8	182	2	184
2008	20	17	49	13	99	1	100
2009	31	25	92	3	153	2	155
2010	48	62	402	10	522	-	522
2011	113	44	155	11	322	-	322
2012	172	92	147	23	435	-	435
2013	85	83	275	7	450	e/	450
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	2	-	39	9	49	-	49
2002	-	-	e/	1	1	-	1
2003	11	12	21	8	52	2	54
2004	12	20	53	4	89	1	91
2005	2	1	3	5	10	-	10
2006	3	3	3	1	10	e/	10
2007	3	3	9	17	33	-	33
2008	2	3	8	1	14	e/	14
2009	29	34	54	14	131	5	136
2010	1	2	12	1	15	-	15
2011	6	2	9	e/	17	-	17
2012	7	5	6	1	18	-	18
2013	5	8	18	1	31	e/	31

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, 2013 dollars) of inriver commercial harvest of Columbia River salmon.^{a/} (Page 1 of 2)

Year or Avg.	Non-Indian Gillnet ^{b/}					Treaty Indian ^{c/} - All Gears					Columbia River Total By State		
	Chinook		Coho	Chum	TOTAL	Chinook		Coho	Chum	TOTAL			
	Fall					Fall							
	Spring	Brights ^{d/}	Tules	Spring	Brights ^{d/}	Tules	Spring	Brights ^{d/}	Tules				
Oregon													
Average Price Per Landed Pound ^{e/} (dollars)													
1987-2003	4.11	1.40	0.38	1.22	0.53	4.27	1.33	0.34	0.93	-			
2004	4.45	1.64	0.26	1.08	0.30	2.21	1.35	0.12	0.71	-			
2005	3.95	1.88	0.30	1.24	0.36	-	1.20	0.20	1.08	-			
2006	5.26	2.40	0.31	1.47	0.29	3.37	1.72	0.29	1.40	-			
2007	5.90	3.10	0.05	1.77	0.82	4.10	2.86	0.03	1.17	-			
2008	6.63	2.68	0.61	1.41	0.70	4.98	2.75	0.48	1.25	0.97			
2009	4.80	2.19	0.58	1.29	0.55	3.63	1.49	0.38	0.98	-			
2010	5.19	2.23	0.63	1.46	0.71	4.44	2.13	0.66	1.99	-			
2011	5.24	2.35	0.60	1.70	0.79	3.68	2.44	0.73	1.58	-			
2012	5.90	2.24	0.55	1.63	0.50	5.60	2.60	0.75	1.88	-			
2013 ^{g/}	6.49	2.53	0.57	1.84	-	5.19	2.06	0.64	1.34	-			
Exvessel Value (thousands of dollars)													
1987-2003	498	1,673	99	1,079	2	3,350	6	685	18	6	714	4,065	
2004	1,227	670	59	812	f/	2,768	177	643	36	20	876	3,644	
2005	364	512	40	978	f/	1,894	-	241	13	1	255	2,148	
2006	690	716	20	704	f/	2,130	f/	355	3	16	374	2,505	
2007	837	386	1	337	f/	1,561	69	396	1	16	482	2,043	
2008	767	1,107	68	719	f/	2,662	346	1,006	62	54	f/	1,469	4,131
2009	465	957	96	1,091	f/	2,610	152	600	38	26	-	815	3,425
2010	1,986	948	162	819	1	3,916	622	482	93	34	-	1,230	5,146
2011	1,205	1,493	140	747	f/	3,585	189	617	32	31	-	869	4,454
2012	1,071	913	111	151	f/	2,247	75	355	5	12	-	446	2,693
2013 ^{g/}	919	2,133	108	491	-	3,651	90	1,029	23	6	-	1,148	4,799
Pounds (thousands)													
1987-2003	116	749	156	785	2	1,807	3	337	62	5	-	407	2,213
2004	276	409	224	755	f/	1,664	80	476	299	29	-	884	2,548
2005	92	273	132	789	f/	1,286	-	200	67	1	-	267	1,554
2006	131	298	65	478	f/	971	f/	206	11	12	-	229	1,200
2007	142	135	f/	189	f/	466	17	138	25	14	-	194	660
2008	116	413	112	512	f/	1,152	70	366	129	44	f/	609	1,761
2009	97	436	168	846	f/	1,547	42	403	100	26	-	571	2,118
2010	382	426	257	560	1	1,626	140	226	140	17	-	524	2,150
2011	230	635	234	439	f/	1,537	51	253	43	20	-	367	1,905
2012	181	407	204	92	f/	885	13	137	7	6	-	163	1,048
2013 ^{g/}	142	843	190	267	-	1,442	17	499	35	5	-	557	1,999

TABLE IV-9. Landings, exvessel values and average prices (inflation adjusted, 2013 dollars) of inriver commercial harvest of Columbia River salmon.^{a/} (Page 2 of 2)

Year or Avg.	Non-Indian Gillnet ^{b/}					Treaty Indian ^{c/} - All Gears					Columbia River Total By State	
	Chinook		Coho	Chum	TOTAL	Chinook			Coho	Chum		TOTAL
	Spring	Brights ^{d/}				Fall						
						Brights ^{d/}	Tules					
Washington^{g/h/i/}												
Average Price Per Landed Pound ^{e/} (dollars)												
1987-2003	5.05	1.30	1.22	0.46		3.61	0.91		0.86	-		
2004	4.70	1.54	1.12	0.30	-	1.88	0.65		0.26	-		
2005	4.15	1.61	1.19	0.93	-	1.96	0.59		0.35	-		
2006	4.12	2.17	1.49	-	-	2.64	1.57		0.63	0.56		
2007	7.34	2.79	1.38	1.06	-	4.87	1.49		0.88	0.98		
2008	7.20	2.74	1.35	1.04	-	4.78	1.46		0.86	0.97		
2009	5.63	1.90	1.20	0.63	-	3.21	0.99		0.61	-		
2010	5.26	2.05	1.38	0.63	-	3.97	1.20		0.93	-		
2011	4.63	1.97	1.56	0.60	-	3.62	1.88		1.48	3.23		
2012	6.36	2.07	1.65	0.44	-	4.82	1.75		1.28	-		
2013	6.13	2.14	1.83	-	-	4.57	1.89		1.17	-		
Exvessel Value (thousands of dollars)												
1987-2003	236	647	448	1	1,318	59	1,054		15	-	1,125	2,443
2004	325	521	416	f/	1,262	197	520		11	-	728	1,990
2005	255	379	227	f/	861	131	829		12	-	971	1,833
2006	359	472	309	-	1,140	476	1,423		28	f/	1,927	3,067
2007	139	252	274	f/	664	f/	1,357		57	f/	1,414	2,079
2008	337	546	297	f/	1,180	1,041	1,712		158	f/	2,911	4,091
2009	334	572	316	f/	1,223	657	872		27	-	1,555	2,778
2010	571	538	341	2	1,451	2,086	1,825		23	-	3,935	5,386
2011	364	770	246	1	1,380	1,720	2,999		240	1	4,959	6,339
2012	334	738	63	f/	1,135	935	1,729		36	-	2,700	3,836
2013	195	1,352	218	-	1,764	874	4,250		109	-	5,233	6,997
Pounds (thousands)												
1987-2003	46	333	369	1	747	37	914		18	-	966	1,713
2004	69	338	370	f/	777	105	806		43	-	954	1,731
2005	62	235	191	f/	487	67	1,404		34	-	1,504	1,992
2006	87	218	207	-	512	180	905		45	f/	1,130	1,642
2007	18	91	154	f/	263	f/	638		66	f/	705	968
2008	47	199	219	f/	466	218	1,172		184	f/	1,574	2,040
2009	59	302	262	1	624	205	880		44	-	1,129	1,753
2010	108	262	247	2	620	526	1,521		25	-	2,072	2,693
2011	78	391	158	1	628	475	1,596		163	f/	2,234	2,862
2012	53	355	38	f/	446	194	980		28	-	1,202	1,648
2013	32	630	119	-	781	191	2,244		93	-	2,528	3,309

a/ Excluding pink, sockeye, and steelhead.

b/ Mainstem below Bonneville and select areas (Youngs Bay, Tongue Point, Blind Slough, and Deep River).

c/ Treaty Indian landings and values do not include direct sales to consumers.

d/ For Washington, this column includes fall brights, tules, and jacks. Price changes may reflect a change in the mix of brights, tules, and jacks rather than annual price changes.

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

f/ Less than \$500 or 500 pounds.

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

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

i/ Treaty Indian values are primarily mainstem Columbia set gillnet but also include Klickitat dipnet, Drano Lake (Little White Salmon River mouth), and Priest Rapids Pool fisheries.

TABLE IV-10. California, Oregon, and Washington ocean recreational salmon effort in thousands of angler trips and catch in thousands of fish by boat type. (Page 1 of 2)

Year or Avg.	Angler Trips		Chinook Catch ^{a/}		Coho Catch ^{a/}	
	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	69.9	95.2	43.2	55.6	0.1	1.2
2002	86.6	123.4	85.1	96.9	b/	0.8
2003	59.4	75.3	48.3	46.4	0.1	0.6
2004	97.7	121.0	124.7	96.5	b/	1.4
2005	69.1	103.0	61.3	81.9	b/	0.7
2006	44.9	81.6	35.3	61.0	b/	1.6
2007	31.4	74.5	12.4	35.4	b/	0.7
2008	0.1	0.3	0.0	b/	-	-
2009	0.6	4.7	0.1	0.6	-	b/
2010	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 ^{c/}	51.4	92.3	46.4	66.9	b/	0.3
OREGON^{d/e/}						
1979	73.7	187.7	5.4	13.3	59.8	101.8
1980	79.0	218.9	5.1	11.9	98.3	207.5
1981-1985	45.7	187.9	6.2	26.9	48.0	117.6
1986-1990	56.5	184.6	7.0	28.8	71.6	148.4
1991-1995	18.0	81.8	1.3	8.0	27.1	76.2
1996-2000	5.3	40.3	1.5	9.7	3.4	9.1
2001	18.2	102.3	6.4	20.8	19.3	75.0
2002	15.7	91.9	7.9	39.5	9.0	27.5
2003	23.4	121.1	8.8	31.8	23.7	90.0
2004	21.1	124.6	14.6	41.8	13.1	58.8
2005	9.9	66.1	4.5	23.4	3.1	10.6
2006	8.0	54.4	1.5	10.1	3.6	12.0
2007	11.4	76.9	0.6	6.4	10.6	50.1
2008	1.9	28.5	0.2	1.4	1.0	11.1
2009	12.6	71.9	0.2	1.3	14.2	75.4
2010	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 ^{c/}	7.4	78.9	1.8	28.6	3.5	11.1

TABLE IV-10. California, Oregon, and Washington ocean recreational salmon effort in thousands of angler trips and catch in thousands of fish by boat type. (Page 2 of 2)

Year or Avg.	Angler Trips		Chinook Catch ^{a/}		Coho Catch ^{a/}	
	Charter	Private	Charter	Private	Charter	Private
	WASHINGTON^{f/g/}					
1979	220.8	89.8	61.1	15.7	227.9	62.4
1980	193.9	86.2	41.1	12.5	288.4	73.1
1981-1985	102.0	69.7	42.6	13.8	113.3	69.2
1986-1990	53.5	59.4	16.0	10.0	78.0	77.6
1991-1995	28.0	45.1	4.5	4.2	41.5	54.8
1991-1995	13.6	20.6	2.7	2.2	17.4	20.8
2001	41.2	72.4	11.9	10.8	66.2	98.2
2002	37.0	57.4	30.9	27.0	30.4	43.7
2003	44.5	75.5	16.0	18.1	53.4	84.9
2004	36.5	73.1	10.3	14.6	37.6	75.1
2005	31.7	58.9	15.9	20.4	19.2	32.6
2006	24.5	39.1	4.0	6.7	16.2	19.9
2007	26.7	45.9	3.1	5.9	33.7	50.1
2008	14.2	22.2	6.0	8.6	8.3	10.5
2009	29.4	69.5	3.1	9.2	47.9	90.0
2010	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 ^{c/}	24.7	52.3	9.2	19.6	17.9	27.9

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						
1976-1980	1.5	1.2	2.4	63.5	4.0	72.7
1981-1985	0.7	1.3	1.8	62.1	3.0	68.9
1986-1990	1.0	3.5	4.0	74.3	13.1	95.9
1991-1995	0.4	0.8	2.8	55.7	22.0	81.7
1996-2000	a/	0.7	4.2	55.2	22.1	82.1
2001	a/	1.4	9.7	43.4	15.4	69.9
2002	0.0	1.6	10.7	54.9	19.4	86.6
2003	0.0	1.1	8.2	38.7	11.4	59.4
2004	0.1	1.9	10.7	63.4	21.5	97.7
2005	0.0	0.9	8.9	45.8	13.5	69.1
2006	0.0	0.7	6.9	29.2	8.0	44.9
2007	0.0	1.6	5.4	20.9	3.5	31.4
2008	-	-	0.1	-	-	0.1
2009	0.0	0.6	-	-	-	0.6
2010	0.0	0.3	1.8	8.0	3.6	13.6
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 ^{b/}	a/	4.1	5.4	37.1	4.8	51.4
PRIVATE TRIPS						
1976-1980	18.4	22.7	9.3	34.4	6.0	90.8
1981-1985	22.4	21.8	7.8	16.8	9.3	78.1
1986-1990	38.6	34.4	11.4	24.3	36.1	144.8
1991-1995	13.9	14.0	17.6	37.1	49.3	131.9
1996-2000	6.8	10.9	15.0	38.8	40.9	112.5
2001	8.6	14.7	21.1	28.1	22.7	95.2
2002	3.9	16.1	21.1	33.9	48.5	123.4
2003	2.2	12.5	15.5	27.9	17.1	75.3
2004	3.1	20.5	19.8	42.7	35.0	121.0
2005	2.5	13.9	15.4	39.0	32.2	103.0
2006	1.5	14.2	14.1	32.1	19.7	81.6
2007	2.1	16.8	11.7	22.2	21.7	74.5
2008	-	-	0.3	-	-	0.3
2009	1.1	3.6	-	-	-	4.7
2010	0.2	3.7	4.8	11.4	15.0	35.0
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 ^{b/}	7.0	18.7	11.7	29.2	25.7	92.3
TOTAL TRIPS						
1976-1980	20.0	23.9	11.7	97.9	10.0	163.5
1981-1985	23.1	23.1	9.6	78.9	12.2	147.0
1986-1990	39.6	37.9	15.4	98.6	49.2	240.7
1991-1995	14.3	14.8	20.4	92.8	71.2	213.6
1996-2000	6.8	11.7	19.1	94.0	63.0	194.6
2001	8.6	16.0	30.8	71.5	38.2	165.1
2002	3.9	17.7	31.8	88.8	67.9	210.1
2003	2.2	13.6	23.7	66.6	28.5	134.6
2004	3.2	22.4	30.6	106.1	56.5	218.7
2005	2.5	14.8	24.3	84.8	45.7	172.1
2006	1.5	15.0	21.0	61.4	27.7	126.5
2007	2.1	18.4	17.1	43.1	25.2	105.9
2008	-	-	0.4	-	-	0.4
2009	1.1	4.3	-	-	-	5.4
2010	0.2	4.0	6.6	19.4	18.5	48.7
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 ^{b/}	7.0	22.8	17.2	66.3	30.5	143.8

a/ Fewer than 50 angler trips.

b/ Preliminary.

TABLE IV-12. Estimates of Oregon recreational ocean salmon angler trips (thousands) by port area and boat type.

Year or Avg.	Astoria	Tillamook	Newport	Coos Bay	Brookings	State Total
CHARTER TRIPS						
1979	18.5	2.8	26.7	22.7	3.0	73.7
1980	26.3	3.7	26.7	19.6	2.8	79.1
1981-1985	10.3	3.0	17.2	11.9	3.3	45.7
1986-1990	7.1	5.3	27.5	13.0	3.6	56.5
1991-1995 ^{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	4.3	1.4	8.8	3.0	0.7	18.2
2002	3.1	1.6	7.1	3.5	0.3	15.7
2003	3.9	2.0	13.0	4.0	0.5	23.4
2004	3.0	2.5	11.1	3.8	0.6	21.1
2005	2.3	1.0	3.7	2.6	0.3	9.9
2006	2.1	0.6	3.0	2.0	0.3	8.0
2007	2.6	1.1	5.6	1.9	0.2	11.4
2008	0.7	0.1	0.9	0.1	0.1	1.9
2009	2.7	1.3	8.1	0.3	0.2	12.6
2010	1.8	0.4	2.8	0.1	0.1	5.0
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 ^{b/}	1.7	0.6	4.2	0.3	0.6	7.4
PRIVATE TRIPS						
1979	24.3	16.3	45.4	52.9	48.8	187.7
1980	20.1	29.3	56.6	65.2	47.7	218.9
1981-1985	15.6	27.1	40.4	51.8	53.0	187.9
1986-1990	10.6	23.7	47.1	48.4	54.8	184.5
1991-1995 ^{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	19.0	15.1	14.8	28.1	25.4	102.4
2002	9.0	22.8	10.9	29.9	19.4	91.9
2003	15.4	26.0	26.5	38.9	14.3	121.1
2004	15.6	26.8	27.9	36.7	17.7	124.6
2005	11.0	11.1	9.7	22.1	12.3	66.1
2006	6.2	15.3	7.4	15.2	10.4	54.4
2007	9.8	20.0	15.2	21.0	10.9	76.9
2008	2.9	9.0	4.6	7.3	4.7	28.5
2009	9.5	21.1	21.5	14.1	5.8	71.9
2010	8.5	13.1	12.2	8.6	5.9	48.3
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 ^{b/}	4.5	14.3	11.1	29.5	19.5	78.9
TOTAL TRIPS						
1979	42.8	19.1	72.1	75.6	51.8	261.4
1980	46.4	33.0	83.3	84.8	50.5	298.0
1981-1985	26.0	30.0	57.5	63.7	56.3	233.5
1986-1990	17.7	29.0	74.6	61.4	58.4	241.0
1991-1995 ^{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	23.3	16.5	23.6	31.1	26.1	120.6
2002	12.1	24.4	18.1	33.4	19.7	107.6
2003	19.3	28.0	39.6	42.9	14.8	144.5
2004	18.6	29.3	39.0	40.5	18.3	145.7
2005	13.3	12.1	13.4	24.6	12.6	76.0
2006	8.2	15.9	10.4	17.2	10.6	62.3
2007	12.4	21.0	20.8	23.0	11.1	88.3
2008	3.7	9.1	5.4	7.4	4.8	30.4
2009	12.3	22.4	29.6	14.4	5.9	84.5
2010	10.3	13.5	15.0	8.6	6.0	53.3
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 ^{b/}	6.2	14.9	15.3	29.8	20.1	86.3

a/ The fishery north of Cape Falcon was closed in 1994, and it is assumed that no trips were taken out of Astoria into the south of Cape Falcon area. No samplers were stationed in Astoria.

b/ Preliminary.

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

Year or Avg.	Neah Bay ^{a/}	La Push	Westport	Ilwaco ^{b/}	State Total
CHARTER TRIPS					
1984 ^{c/}	0.3	-	11.6	18.0	29.9
1985 ^{c/}	2.0	-	42.2	20.7	64.9
1986-1990	2.0	-	35.7	15.9	53.5
1991-1995	0.7	0.1	19.4	7.9	28.0
1996-2000	0.3	0.1	9.7	3.6	13.6
2001	1.4	0.3	25.6	13.9	41.2
2002	1.5	0.4	24.5	10.6	37.0
2003	2.0	0.9	27.3	14.3	44.5
2004	1.9	0.6	22.5	11.4	36.5
2005	1.2	0.6	20.5	9.4	31.7
2006	0.5	0.5	15.4	8.0	24.5
2007	0.6	0.4	15.7	10.1	26.7
2008	0.3	0.2	9.9	3.7	14.2
2009	0.5	0.7	18.5	9.7	29.4
2010	0.4	0.6	18.4	7.0	26.5
2011	0.5	0.7	14.1	6.9	22.2
2012	0.8	0.7	16.2	6.9	24.5
2013 ^{d/}	0.9	0.7	15.9	7.1	24.7
PRIVATE TRIPS					
1984 ^{c/}	8.3	0.2	2.3	36.0	46.8
1985 ^{c/}	15.2	1.5	13.7	19.4	49.8
1986-1990	16.9	2.5	16.6	23.4	59.4
1991-1995	16.4	2.8	18.5	25.4	63.1
1996-2000	8.8	1.6	12.7	12.8	35.8
2001	16.6	3.1	24.1	28.7	72.4
2002	12.2	3.0	16.9	25.3	57.4
2003	18.4	3.5	20.7	32.9	75.5
2004	24.2	3.9	15.7	29.3	73.1
2005	17.2	4.4	14.7	22.6	58.9
2006	12.9	3.6	9.1	13.5	39.1
2007	12.8	2.9	10.2	20.0	45.9
2008	5.3	1.9	8.8	6.3	22.2
2009	16.0	4.4	19.3	29.8	69.5
2010	11.1	3.2	20.0	20.1	54.4
2011	10.6	3.6	19.4	15.7	49.2
2012	12.7	3.3	21.1	13.4	50.5
2013 ^{d/}	14.4	3.6	20.0	14.4	52.3
TOTAL TRIPS					
1984 ^{c/}	8.6	0.2	13.9	54.0	76.7
1985 ^{c/}	17.2	1.5	55.9	40.1	114.7
1986-1990	18.9	2.5	52.3	39.3	113.0
1991-1995	17.1	2.9	37.9	33.3	91.1
1996-2000	9.1	1.6	22.4	16.4	49.4
2001	17.9	3.4	49.7	42.5	113.6
2002	13.7	3.4	41.4	35.9	94.4
2003	20.4	4.4	48.0	47.1	120.0
2004	26.1	4.6	38.2	40.6	109.5
2005	18.5	4.9	35.2	32.1	90.6
2006	13.4	4.1	24.5	21.5	63.6
2007	13.4	3.3	25.9	30.1	72.7
2008	5.6	2.1	18.7	10.0	36.4
2009	16.5	5.1	37.8	39.5	98.9
2010	11.5	3.8	38.4	27.0	80.8
2011	11.1	4.2	33.5	22.5	71.4
2012	13.4	3.9	37.3	20.3	75.0
2013 ^{d/}	15.4	4.3	35.9	21.5	77.0

a/ Does not include effort from the late-season state water Area 4B fishery, when open.

b/ Does not include effort from the Columbia River Jetty.

c/ Values for 1984 and 1985 include some Columbia River fishing after closure of the ocean fishery.

d/ Preliminary.

TABLE IV-14. Oregon and Washington recreational salmon, bottomfish, and sturgeon angler trips (thousands) by ocean port area and boat type for the area north of Cape Falcon. (Page 1 of 3)

Year	Columbia River and Buoy 10					Westport			La Push			Neah Bay and Area 4B Add-On		
	Charter	Private	Subtotal	Jetty	Total	Charter	Private	Total	Charter	Private	Total	Charter	Private	Total
SALMON EFFORT														
1984	NA	NA	-	NA	54.0	11.6	2.3	13.9	0.0	0.2	0.2	0.3	8.3	8.6
1985	NA	NA	-	NA	90.3	42.2	13.7	55.9	0.0	1.5	1.5	2.0	15.2	17.2
1986	NA	NA	-	NA	144.3	36.6	14.8	51.4	0.0	1.7	1.7	2.4	17.4	19.8
1987	39.5	130.0	169.5	12.4	181.9	34.1	9.8	43.9	0.0	2.0	2.0	1.9	17.8	19.7
1988	34.5	154.4	188.9	16.9	205.8	23.5	13.9	37.4	0.0	2.8	2.8	2.0	14.8	16.8
1989	40.4	169.2	209.6	22.9	232.5	40.8	18.7	59.5	0.0	1.6	1.6	2.8	25.5	28.3
1990	32.8	128.7	161.5	5.7	167.2	43.4	25.9	69.3	0.0	4.2	4.2	3.0	30.8	33.8
1991	37.9	172.7	210.6	35.5	246.1	28.6	24.2	52.8	0.2	3.3	3.5	1.9	23.5	25.4
1992	22.3	116.6	138.9	28.4	167.3	28.1	25.6	53.7	0.2	2.3	2.5	1.1	18.6	19.7
1993	20.2	103.3	123.5	24.6	148.1	27.4	23.5	50.9	0.1	2.8	2.9	1.6	25.7	27.3
1994	0.5	6.3	6.8	3.6	10.4	-	-	-	-	-	-	-	-	-
1995	9.0	43.4	52.4	8.5	60.9	12.7	9.0	21.7	0.1	1.4	1.5	0.3	9.2	9.5
1996	7.3	26.8	34.1	7.5	41.6	10.3	5.2	15.5	a/	1.3	1.3	0.3	10.6	10.9
1997	8.4	53.0	61.3	7.4	68.7	10.0	7.3	17.3	0.1	0.9	0.9	0.2	4.6	4.8
1998	3.2	30.7	33.9	3.6	37.5	4.5	3.5	8.0	0.0	0.6	0.6	0.1	6.3	6.4
1999	8.7	63.9	72.6	6.2	78.8	11.5	7.6	19.1	0.1	2.9	2.9	0.5	7.6	8.1
2000	9.8	82.2	92.0	7.0	99.0	12.2	7.7	19.8	0.1	1.8	2.0	1.1	10.3	11.4
2001	22.5	165.0	187.5	17.0	204.5	25.6	24.1	49.7	0.3	3.1	3.4	1.4	16.8	18.1
2002	15.2	115.1	130.3	2.8	133.1	44.5	16.9	41.4	0.4	3.0	3.4	1.5	12.2	13.7
2003	19.3	133.3	152.7	7.2	159.8	27.3	20.7	48.0	0.9	3.5	4.4	2.0	18.4	20.4
2004	15.8	113.3	129.2	3.2	132.3	22.5	15.7	38.2	0.6	3.9	4.6	1.9	24.2	26.1
2005	12.0	88.5	100.5	c/	100.5	20.5	14.7	35.2	0.6	4.4	4.9	1.2	17.2	18.5
2006	10.4	59.8	70.2	1.7	71.9	15.4	9.1	24.5	0.5	3.6	4.1	0.5	12.9	13.4
2007	13.6	64.2	77.8	c/	77.8	15.7	10.2	25.9	0.4	2.9	3.3	0.6	12.8	13.4
2008	5.5	40.7	46.1	0.4	46.5	9.9	8.8	18.7	0.2	1.9	2.1	0.3	6.1	6.4
2009	13.1	109.9	122.9	2.6	125.5	18.5	19.3	37.8	0.7	4.4	5.1	0.5	16.0	16.5
2010	8.9	79.9	88.9	0.1	89.0	18.4	20.0	38.4	0.6	3.2	3.8	0.4	11.1	11.5
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 ^{b/}	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

TABLE IV-14. Oregon and Washington recreational salmon, bottomfish, and sturgeon angler trips (thousands) by ocean port area and boat type for the area north of Cape Falcon. (Page 2 of 3)

Year	Columbia River and Buoy 10					Westport			La Push			Neah Bay and Area 4B Add-On		
	Charter	Private	Subtotal	Jetty	Total	Charter	Private	Total	Charter	Private	Total	Charter	Private	Total
BOTTOMFISH EFFORT^{d/}														
1984	2.1	0.1	2.2	-	-	12.4	0.5	12.9	0.0	0.0	0.0	1.8	12.3	14.1
1985	1.9	0.2	2.1	-	-	15.3	1.0	16.3	0.0	0.1	0.1	3.0	10.6	13.6
1986	1.7	0.2	1.9	-	-	19.6	0.8	20.4	0.0	0.2	0.2	3.5	11.4	14.9
1987	1.7	0.3	2.0	0.5	2.5	21.1	1.2	22.3	0.0	0.5	0.5	5.6	16.0	21.6
1988	2.1	0.2	2.3	0.8	3.1	24.4	1.1	25.5	0.0	0.7	0.7	5.7	14.8	20.5
1989	1.2	0.6	1.8	1.5	3.3	19.3	1.0	20.3	0.0	0.6	0.6	6.8	16.3	23.1
1990	1.4	0.3	1.7	2.4	4.1	21.8	0.8	22.6	0.0	0.8	0.8	6.4	18.1	24.5
1991	1.3	0.4	1.7	1.8	3.5	23.5	1.1	24.6	0.0	0.9	0.9	5.9	18.2	24.1
1992	1.4	0.5	1.9	2.3	4.1	20.5	2.2	22.7	0.0	1.5	1.5	4.8	19.1	23.9
1993	2.2	0.6	2.8	2.6	5.4	21.5	1.8	23.0	0.1	1.1	1.2	5.1	19.2	24.3
1994	2.7	0.7	3.3	2.7	6.0	26.0	1.7	27.7	0.2	1.9	2.1	4.1	15.0	19.1
1995	1.3	0.9	2.3	2.2	4.4	21.1	1.6	22.7	a/	1.6	1.6	4.1	19.2	23.3
1996 ^{e/f/}	1.2	0.5	1.7	1.7	3.4	21.4	1.2	22.6	0.0	1.6	1.6	4.8	21.0	25.8
1997	1.2	0.7	2.0	2.5	4.4	19.2	1.4	20.6	0.0	2.2	2.2	4.9	22.7	27.7
1998	1.8	0.5	2.3	0.9	3.2	21.5	1.3	22.8	0.0	1.2	1.2	5.1	23.9	29.0
1999	1.0	0.5	1.5	0.5	2.0	17.1	1.2	18.3	0.1	1.0	1.1	4.5	20.3	24.9
2000	1.2	0.6	1.8	0.5	2.3	16.7	0.9	17.6	0.2	1.3	1.5	4.5	20.1	24.6
2001	2.8	0.4	3.2	0.9	4.1	13.9	1.2	15.1	0.3	0.9	1.2	4.7	16.5	21.2
2002	14.3	0.5	1.9	0.8	2.8	14.9	1.2	16.1	0.3	1.2	1.6	4.0	15.7	19.7
2003	2.4	0.5	2.9	0.9	3.8	16.3	1.8	18.2	1.0	2.5	3.6	5.2	21.4	26.6
2004	2.4	0.8	3.2	0.3	3.5	14.8	1.7	16.5	0.4	1.7	2.1	3.5	15.2	18.7
2005	2.5	1.1	3.7	c/	3.7	15.5	1.8	17.3	0.5	2.5	3.0	3.5	18.8	22.4
2006	3.6	1.2	4.9	0.9	5.7	17.7	1.8	19.5	0.3	2.8	3.1	4.4	16.9	21.3
2007	3.1	1.5	4.6	c/	4.6	16.2	1.6	17.7	0.5	2.5	3.0	4.3	15.7	20.0
2008	2.9	2.0	4.9	0.4	5.3	15.5	1.7	17.2	1.0	2.3	3.3	2.3	16.2	18.5
2009	2.1	1.3	3.3	0.3	3.6	13.0	2.2	15.2	0.7	2.7	3.4	1.5	13.6	15.1
2010	2.9	1.7	4.7	0.5	5.2	11.7	1.8	13.5	0.7	3.6	4.3	1.2	15.4	16.6
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 ^{b/}	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

TABLE IV-14. Oregon and Washington recreational salmon, bottomfish, and sturgeon angler trips (thousands) by ocean port area and boat type for the area north of Cape Falcon. (Page 3 of 3)

Year	Columbia River and Buoy 10					Westport			La Push			Neah Bay and Area 4B Add-On		
	Charter	Private	Subtotal	Jetty	Total	Charter	Private	Total	Charter	Private	Total	Charter	Private	Total
STURGEON EFFORT^{g/}														
1984	1.7	28.4	30.1	-	30.1	-	-	-	-	-	-	-	-	-
1985	5.0	31.2	36.2	-	36.2	-	-	-	-	-	-	-	-	-
1986	5.7	35.7	41.4	-	41.4	-	-	-	-	-	-	-	-	-
1987	6.0	43.2	49.2	-	49.2	-	-	-	-	-	-	-	-	-
1988	6.2	32.4	38.5	-	38.5	-	-	-	-	-	-	-	-	-
1989	4.3	22.0	26.3	-	26.3	-	-	-	-	-	-	-	-	-
1990	3.9	28.0	31.9	-	31.9	-	-	-	-	-	-	-	-	-
1991	3.6	26.0	29.7	-	29.7	-	-	-	-	-	-	-	-	-
1992	5.0	38.3	43.3	-	43.3	-	-	-	-	-	-	-	-	-
1993	6.1	48.6	54.6	-	54.6	-	-	-	-	-	-	-	-	-
1994	7.5	40.4	47.8	-	47.8	-	-	-	-	-	-	-	-	-
1995	7.7	55.2	62.9	-	62.9	-	-	-	-	-	-	-	-	-
1996	11.1	45.2	56.3	-	56.3	-	-	-	-	-	-	-	-	-
1997	12.2	48.4	60.7	-	60.7	-	-	-	-	-	-	-	-	-
1998	14.2	64.3	78.5	-	78.5	-	-	-	-	-	-	-	-	-
1999	13.2	57.1	70.3	-	70.3	-	-	-	-	-	-	-	-	-
2000	11.6	52.1	63.7	-	63.7	-	-	-	-	-	-	-	-	-
2001	10.8	40.9	51.7	-	51.7	-	-	-	-	-	-	-	-	-
2002	9.9	45.9	55.8	-	55.8	-	-	-	-	-	-	-	-	-
2003	6.6	38.1	44.7	-	44.7	-	-	-	-	-	-	-	-	-
2004	7.4	32.2	39.6	-	39.6	-	-	-	-	-	-	-	-	-
2005	8.7	51.2	59.9	-	59.9	-	-	-	-	-	-	-	-	-
2006	6.7	37.3	44.0	-	44.0	-	-	-	-	-	-	-	-	-
2007	7.9	39.8	47.7	-	47.7	-	-	-	-	-	-	-	-	-
2008	7.5	38.5	46.0	-	46.0	-	-	-	-	-	-	-	-	-
2009	6.1	43.0	49.1	-	49.1	-	-	-	-	-	-	-	-	-
2010	5.4	31.4	36.8	-	36.8	-	-	-	-	-	-	-	-	-
2011	3.6	21.7	25.3	-	25.3	-	-	-	-	-	-	-	-	-
2012	2.4	16.5	18.9	-	18.9	-	-	-	-	-	-	-	-	-
2013 ^{b/}	1.5	14.8	16.3	-	16.3	-	-	-	-	-	-	-	-	-

a/ Fewer than 50 angler trips.

b/ Preliminary.

c/ Columbia River north jetty was not sampled in 2005 and 2007 due to construction limiting access.

d/ Oregon data is a minimum estimate, as the jetty is not sampled, and bottomfish sampling of vessels only occurs when the ocean is open for salmon.

e/ No Oregon bottomfish trips are included.

f/ Includes tuna trips: Ilwaco - 9 charter, 14 private; Westport - 784 charter, 0 private.

g/ Annual sturgeon angler trips for the lower Columbia River from the western tip of Puget Island to mouth.

TABLE IV-15. Buoy 10^{ab/} and Area 4B add-on recreational salmon angler trips and catch by boat type. (Page 1 of 2)

Year or Avg.	Angler Trips			Chinook Catch			Coho Catch			Pink Catch	
	Charter	Private	Jetty	Charter	Private	Jetty	Charter	Private	Jetty	Charter	Private
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	1,616	54,444	4,115	47	5,578	10	1,481	56,403	523	0	0
2002	512	39,943	1,589	31	10,728	-	2	3,058	52	0	0
2003	991	45,461	2,315	47	7,903	-	624	28,518	526	0	0
2004	66	33,092	1,170	19	9,191	-	17	7,585	47	0	0
2005	135	33,051	935	18	6,875	6	51	4,785	36	0	0
2006	37	24,194	1,457	1	1,350	-	-	2,800	-	0	0
2007	156	19,983	793	6	2,511	-	38	4,841	97	0	0
2008	198	19,020	-	43	5,608	-	69	4,487	-	0	0
2009	182	39,425	1,684	1	3,550	16	164	27,000	466	0	0
2010	82	30,159	710	2	4,537	11	8	5,171	22	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 ^{c/}	459	40,648	1,754	81	15,448	41	50	4,638	148	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	2,765	62,944	-	-	6,791	-	3,282	70,349	-	0	0
2002	1,001	40,927	485	232	8,424	26	98	3,023	-	0	0
2003	216	39,844	-	22	8,344	-	139	24,633	-	0	0
2004	685	33,805	-	45	6,791	-	139	7,381	-	0	0
2005	183	20,879	-	5	2,383	-	34	1,972	-	0	0
2006	421	14,597	-	5	351	-	8	879	-	0	0
2007	711	14,421	-	33	1,226	-	343	3,037	-	0	0
2008	804	12,445	-	154	2,544	-	436	3,581	-	0	0
2009	389	31,123	-	4	2,369	-	312	20,185	-	0	0
2010	106	21,241	-	7	2,250	-	11	2,767	-	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 ^{c/}	93	22,813	-	6	7,018	-	27	2,757	-	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)

Year or Avg.	Angler Trips			Chinook Catch			Coho Catch			Pink Catch	
	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	4,381	117,388	4,115	47	12,369	10	4,763	126,752	523	0	0
2002	1,513	80,870	2,074	263	19,152	26	100	6,081	52	0	0
2003	1,207	85,305	2,315	69	16,247	0	763	53,151	526	0	0
2004	751	66,897	1,170	64	15,982	0	156	14,966	47	0	0
2005	318	53,930	935	23	9,258	6	85	6,757	36	0	0
2006	458	38,791	1,457	6	1,701	0	8	3,679	0	0	0
2007	867	34,404	793	39	3,737	0	381	7,878	97	0	0
2008	1,002	31,465	0	197	8,152	0	505	8,068	0	0	0
2009	571	70,548	1,684	5	5,919	16	476	47,185	466	0	0
2010	188	51,400	710	9	6,787	11	19	7,938	22	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 ^{c/}	552	63,461	1,754	87	22,466	41	77	7,395	148	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	36	1,511	-	-	5	-	61	2,266	-	0	0
1997	136	1,788	-	-	4	-	65	1,429	-	139	412
1998	71	6,296	-	5	98	-	125	7,937	-	0	3
1999 ^{e/}	-	-	-	-	-	-	-	-	-	0	0
2000	373	3,046	-	-	8	-	614	3,796	-	0	0
2001-2005 ^{f/}	-	-	-	-	-	-	-	-	-	0	0
2006 ^{e/}	-	-	-	-	-	-	-	-	-	0	0
2007 ^{f/}	-	-	-	-	-	-	-	-	-	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 because the Area 4 ocean quota was not attained.

f/ There has been no Area 4B add-on fishery in these years or planned after 2009.

TABLE IV-16. Estimates of California coastal community and state personal income impacts in thousands of real (inflation adjusted, 2013) 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 Total
OCEAN TROLL^{c/}							
1976-1980	6,383	16,213	15,898	20,855	8,952	68,301	87,809
1981-1985	3,233	3,900	9,128	17,231	5,871	39,363	49,008
1986-1990	1,216	3,010	16,010	31,086	11,626	62,947	77,253
1991-1995	10	143	1,006	11,699	6,665	19,523	23,526
1996-2000	11	170	711	12,247	7,426	20,564	21,758
2001	15	313	1,033	10,857	2,297	14,514	15,065
2002	273	524	3,730	15,516	4,179	24,222	25,731
2003	221	38	15,160	15,795	2,491	33,705	37,486
2004	1,944	429	7,434	23,356	5,257	38,420	39,228
2005	145	437	5,420	13,496	7,083	26,582	27,247
2006	-	-	2,471	6,389	985	9,845	10,151
2007	332	824	3,407	8,131	1,658	14,352	14,607
2008	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-
2010 ^{e/}	-	35	1,780	140	161	2,116	2,198
2011	68	437	4,952	2,225	979	8,662	8,946
2012	39	686	4,706	10,653	5,759	21,843	22,395
2013 ^{d/}	223	1,923	12,909	19,181	4,010	38,247	39,121
RECREATIONAL							
1976-1980	1,238	1,436	836	12,566	842	16,918	18,977
1981-1985	1,356	1,398	670	11,129	889	15,442	17,381
1986-1990	2,298	2,395	1,168	13,601	3,655	23,116	26,940
1991-1995	833	897	1,355	11,504	5,509	20,100	23,599
1996-2000	386	711	1,384	11,534	5,066	19,081	22,198
2001	358	778	2,101	7,683	3,079	13,998	14,912
2002	160	866	2,221	9,646	4,752	17,645	18,740
2003	91	652	1,677	6,990	2,288	11,698	12,392
2004	137	1,092	2,175	11,310	4,439	19,153	20,261
2005	103	691	1,759	8,554	3,234	14,342	15,164
2006	61	682	1,450	5,812	1,947	9,952	10,563
2007	86	891	1,170	4,119	1,427	7,692	8,230
2008	-	-	26	-	-	26	31
2009	46	230	-	-	-	276	322
2010	9	192	421	1,712	1,140	3,473	3,704
2011	32	712	972	3,367	1,778	6,861	7,353
2012	336	1,278	970	6,069	2,947	11,600	12,376
2013 ^{d/}	294	1,287	1,172	6,818	1,778	11,349	12,049

a/ Per pound and per day estimates of income impacts are provided from output of the Fishery Economic Assessment Model (FEAM). 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. It is assumed that all fish landed at a port are processed in the port area. 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. Beginning in 2001, values are from a FEAM run based on 2000 PacFIN landings and 1998 IMPLAN data.

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

c/ Excluding pink salmon.

d/ Preliminary.

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

TABLE IV-17. Estimates of Oregon coastal community and state personal income impacts in thousands of real (inflation adjusted, 2013) 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 Total
OCEAN TROLL^{c/}							
1976-1980	4,098	5,275	12,373	19,041	7,916	48,703	66,033
1981-1985	1,327	1,708	4,005	7,063	3,066	17,169	23,333
1986-1990	613	3,573	7,952	15,328	2,905	30,371	41,017
1991-1995	86	666	2,729	1,326	135	4,942	6,663
1996-2000	142	279	2,888	1,668	402	5,379	6,555
2001	385	786	5,886	3,093	635	10,785	13,128
2002	1,102	934	5,040	4,456	806	12,337	14,942
2003	1,079	978	6,525	5,932	699	15,214	18,408
2004	911	728	6,446	7,014	1,502	16,600	17,940
2005	754	1,256	5,370	5,319	1,259	13,958	15,083
2006	987	614	1,613	435	378	4,027	4,320
2007	291	413	672	1,959	780	4,115	4,417
2008	415	203	-	-	72	690	727
2009	170	159	140	19	42	530	566
2010	945	274	1,372	931	367	3,890	4,184
2011	235	99	546	1,872	504	3,257	3,499
2012	682	479	2,049	1,796	698	5,703	6,140
2013 ^{d/}	287	586	1,882	5,974	1,252	9,981	10,739
RECREATIONAL							
1979	3,435	1,097	5,223	5,289	2,546	17,590	22,678
1980	4,147	1,822	5,767	5,543	2,474	19,753	25,441
1981-1985	2,025	1,633	3,900	3,977	2,767	14,302	18,566
1986-1990	1,386	1,734	5,396	3,931	2,881	15,328	19,956
1991-1995	941	758	1,716	1,532	1,082	6,029	7,818
1996-2000	364	418	412	454	873	2,521	3,324
2001	1,415	762	1,799	1,508	1,052	6,537	8,012
2002	825	1,082	1,418	1,653	775	5,754	7,082
2003	1,204	1,251	2,837	2,066	608	7,966	9,799
2004	1,082	1,360	2,620	1,952	751	7,765	9,563
2005	785	561	890	1,213	501	3,951	4,842
2006	563	661	699	868	426	3,217	3,954
2007	791	897	1,357	1,086	437	4,567	5,614
2008	227	353	294	295	189	1,358	1,672
2009	797	967	1,957	584	241	4,545	5,596
2010	610	544	853	338	229	2,573	3,156
2011	476	532	825	411	241	2,486	3,057
2012	388	503	944	683	732	3,250	4,012
2013 ^{d/}	437	620	1,012	1,178	814	4,062	5,012

a/ Per pound and per day estimates of income impacts are provided from output of the Fishery Economic Assessment Model (FEAM). 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. It is assumed that all fish landed at a port are processed in the port area. 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. Beginning in 2001, values are from a FEAM run based on 2000 PacFIN landings and 1998 IMPLAN data.

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

c/ Excluding pink salmon.

d/ Preliminary.

TABLE IV-18. Estimates of Washington coastal community and state personal income impacts in thousands of real (inflation adjusted, 2013) 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		State Total
					Total ^{c/d/}	Puget Sound	
OCEAN TROLL^{e/f/}							
1976-1980	5,918	8,080	16,018	5,736	35,752	7,963	57,035
1981-1985	1,163	471	4,389	1,050	7,073	1,699	11,118
1986-1990	643	169	2,016	438	3,268	984	5,353
1991-1995 ^{g/}	474	105	674	48	1,302	190	1,916
1996-2000	159	3	192	19	373	98	513
2001	316	0	656	44	1,016	0	1,099
2002	652	85	1,143	190	2,070	0	2,282
2003	1,184	200	977	143	2,504	45	2,903
2004	872	276	1,084	106	2,338	27	2,702
2005	715	427	1,100	136	2,378	1	2,687
2006	532	431	414	278	1,655	36	1,959
2007	235	239	976	121	1,571	21	1,747
2008	153	203	579	155	1,090	13	1,228
2009	312	321	1,121	78	1,831	36	2,088
2010	336	528	3,991	87	4,941	-	5,161
2011	767	303	1,433	85	2,588	-	2,871
2012	1,144	660	1,461	203	3,469	-	3,927
2013	705	656	2,799	68	4,227	0	4,607
RECREATIONAL							
1976-1980	2,180	1,082	21,686	10,615	35,562	-	48,075
1981-1985	1,319	135	8,532	4,385	14,371	-	19,448
1986-1990	1,012	116	4,842	2,610	8,580	-	11,620
1991-1995	537	105	2,988	1,516	5,147	-	6,960
1996-2000	285	77	1,399	685	2,446	-	3,298
2001	796	162	5,920	3,751	10,629	-	12,417
2002	677	173	5,453	2,985	9,289	-	10,853
2003	984	276	6,142	3,978	11,380	-	13,313
2004	1,154	245	5,010	3,284	9,692	-	11,364
2005	791	248	4,573	2,659	8,270	-	9,685
2006	519	218	3,376	2,067	6,180	-	7,234
2007	529	169	3,465	2,702	6,864	-	8,025
2008	229	101	2,279	962	3,572	-	4,174
2009	618	271	4,348	2,975	8,211	-	9,604
2010	445	222	4,353	2,082	7,103	-	8,300
2011	440	241	3,482	1,909	6,072	-	7,103
2012	558	230	3,956	1,836	6,580	-	7,702
2013	648	246	3,857	1,912	6,663	-	7,807

a/ Per pound and per day estimates of income impacts are provided from output of the Fishery Economic Assessment Model (FEAM). 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. It is assumed that all fish landed at a port are processed in the port area. 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. Beginning in 2001, values are from a FEAM run based on 2000 PacFIN landings and 1998 IMPLAN data.

b/ Recreational values exclude recreational shorebased effort from the Columbia River north jetty.

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

d/ Through 1993, commercial values include a very small amount of fish landed in Washington coastal areas not included in the major port groups.

e/ Excluding pink salmon.

f/ All commercial values in this table are based on preliminary information available at the start of each year's Salmon Review.

g/ The non-Indian commercial and recreational fisheries were closed north of Cape Falcon in 1994. Some commercial catch taken south of Cape Falcon was landed in the Puget Sound area.

TABLE IV-19. Local personal income impacts in real (inflation adjusted, 2013) dollars of the inriver commercial salmon fishery on Oregon and Washington Columbia River communities.^{a/}

Year or Avg.	Non-Indian - Gillnet ^{b/}						Treaty Indian - All Gears ^{c/}						Columbia River Total
	Chinook			Coho	Chum	TOTAL	Chinook			Coho	Chum	TOTAL	
	Spring	Brights ^{d/}	Tules				Spring	Brights ^{d/}	Tules				
Oregon													
1987-2003	967	2,518	255	1,879	3	5,622	13	1,061	75	11	e/	1,160	6,782
2004	2,249	1,492	318	1,810	1	5,869	375	1,532	368	57	-	2,332	8,201
2005	676	1,083	189	1,981	e/	3,929	-	571	87	1	-	660	4,589
2006	1,224	1,407	92	1,329	e/	4,052	1	762	15	31	-	809	4,862
2007	1,460	773	e/	588	e/	2,821	127	743	e/	32	-	902	3,722
2008	1,319	2,101	197	1,360	e/	4,978	615	1,900	206	108	-	2,829	7,807
2009	830	1,898	286	2,130	e/	5,144	282	1,327	146	57	-	1,812	6,956
2010	3,501	1,869	454	1,515	2	7,341	1,119	960	253	57	-	2,388	9,729
2011	2,117	2,892	400	1,299	e/	6,707	349	1,185	81	56	-	1,671	8,378
2012	1,854	1,780	331	265	e/	4,230	130	670	13	19	-	832	5,062
2013 ^{f/}	1,572	4,038	313	824	-	6,747	157	2,041	61	12	-	2,271	9,017
Washington^{g/h/}													
1987-2003	426	1,085		855	2	2,368	132	2,189		35	-	2,356	4,724
2004	590	1,185		927	e/	2,703	438	1,742		63	-	2,243	4,946
2005	470	840		458	e/	1,768	284	2,867		51	-	3,203	4,971
2006	660	951		581	-	2,193	951	3,147		82	e/	4,180	6,373
2007	235	477		478	e/	1,191	1	2,731		136	e/	2,868	4,059
2008	576	1,031		570	1	2,177	1,860	3,822		373	e/	6,055	8,232
2009	584	1,179		634	1	2,399	1,248	2,285		76	-	3,609	6,008
2010	1,005	1,082		645	4	2,735	3,816	4,335		53	-	8,203	10,939
2011	649	1,556		441	2	2,648	3,183	6,138		440	e/	9,761	12,409
2012	574	1,461		110	1	2,145	1,655	3,570		70	-	5,295	7,440
2013	335	2,651		366	-	3,351	1,555	8,598		215	-	10,367	13,719
Columbia River													
1987-2003	1,393	3,858		2,735	5	7,990	145	3,326		46	e/	3,516	11,506
2004	2,839	2,995		2,737	1	8,572	813	3,641		120	-	4,575	13,146
2005	1,147	2,112		2,439	e/	5,697	-	3,525		52	-	3,862	9,559
2006	1,884	2,450		1,911	-	6,245	952	3,925		113	-	4,990	11,234
2007	1,695	1,250		1,066	e/	4,012	128	3,474		168	-	3,769	7,781
2008	1,894	3,330		1,930	1	7,155	2,475	5,928		481	-	8,884	16,039
2009	1,414	3,363		2,764	1	7,543	1,530	3,758		133	-	5,421	12,965
2010	4,505	3,404		2,159	7	10,076	4,934	5,548		110	-	10,592	20,668
2011	2,766	4,848		1,740	2	9,355	3,532	7,405		495	-	11,432	20,787
2012	2,427	3,573		374	1	6,375	1,785	4,253		89	-	6,127	12,502
2013 ^{f/}	1,907	7,001		1,190	-	10,098	1,712	10,699		227	-	12,638	22,736

a/ Excluding pink, sockeye, and steelhead. 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. Beginning in 2001, values are from a FEAM run based on 2000 PacFIN landings and 1998 IMPLAN data.

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, 2013) dollars of the Buoy 10 recreational fishery in Oregon and Washington and the Area 4B add-on fishery in Washington.

Year or Avg.	Total Angler Trips (thousands)	Income Impacts (thousands of dollars)		
		Oregon	Washington	Total
BUOY 10 (including bank fishing)				
1987-1990	136	2,562	4,466	7,028
1991-1995	79	1,457	2,479	3,936
1996-2000	45	933	1,277	2,210
2001	126	2,608	2,754	5,362
2002	84	1,754	1,650	3,404
2003	89	2,079	1,439	3,518
2004	69	1,394	1,320	2,714
2005	55	1,393	768	2,161
2006	41	1,042	595	1,637
2007	36	863	646	1,509
2008	32	798	595	1,393
2009	73	1,688	1,168	2,855
2010	52	1,259	765	2,024
2011	49	1,294	676	1,970
2012	65	1,731	896	2,627
2013 ^{b/}	66	1,782	818	2,600
AREA 4B ADD-ON ^{c/}				
1989-1990	12	-	633	633
1991-1995	6	-	369	369
1996-2000	3	-	132	132
2001	-	-	-	-
2002	-	-	-	-
2003	-	-	-	-
2004	-	-	-	-
2005	-	-	-	-
2006	-	-	-	-
2007	-	-	-	-
2008	1	-	32	32
2009	-	-	-	-
2010	-	-	-	-
2011	-	-	-	-
2012	-	-	-	-
2013 ^{b/}	-	-	-	-

a/ Per pound and per day estimates of income impacts are provided from output of the Fishery Economic Assessment Model (FEAM). 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. It is assumed that all fish landed at a port are processed in the port area. 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. Beginning in 2001, values are from a FEAM run based on 2000 PacFIN landings and 1998 IMPLAN data.

b/ Preliminary

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

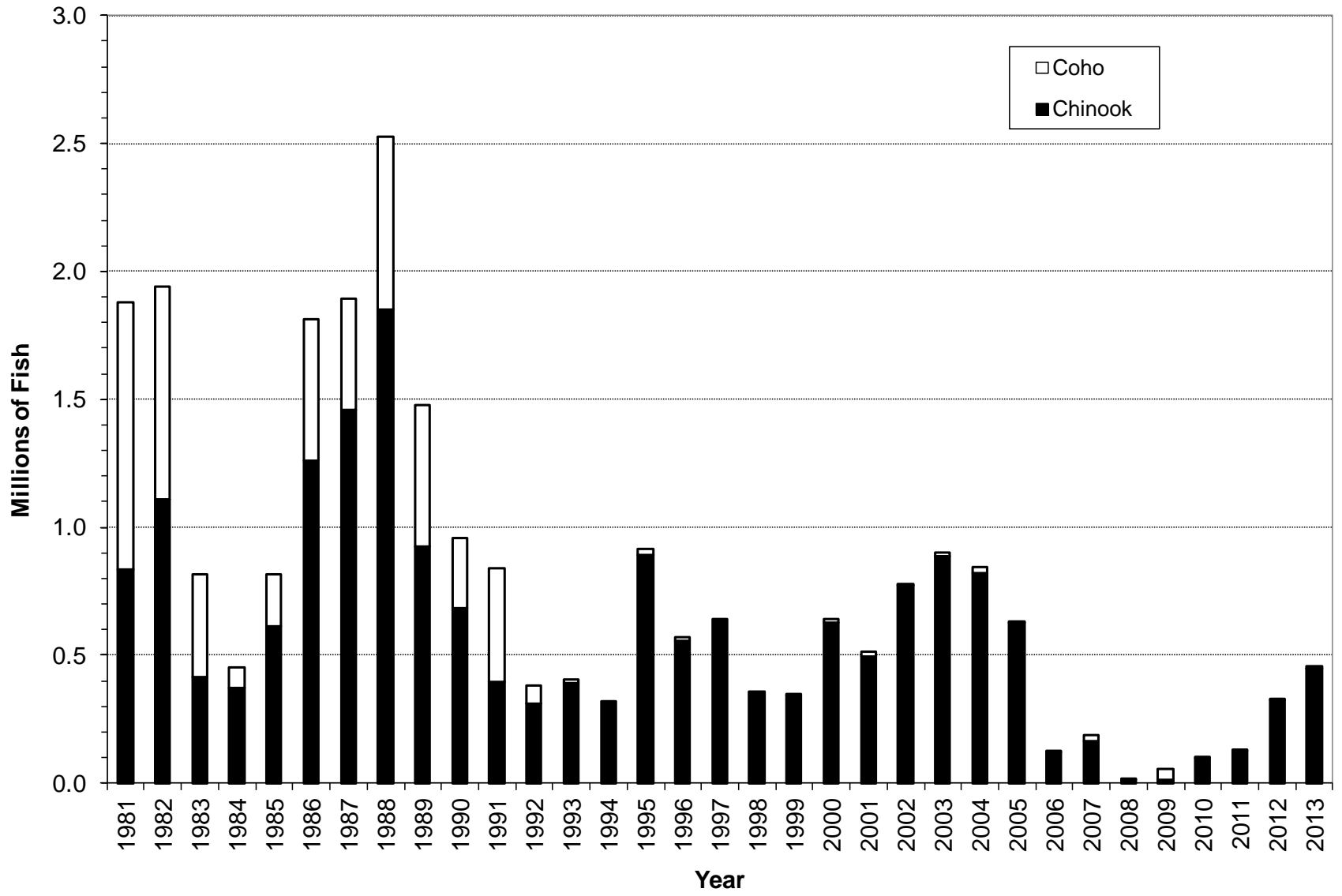


Figure IV-1. West Coast ocean non-Indian commercial Chinook and coho harvest.

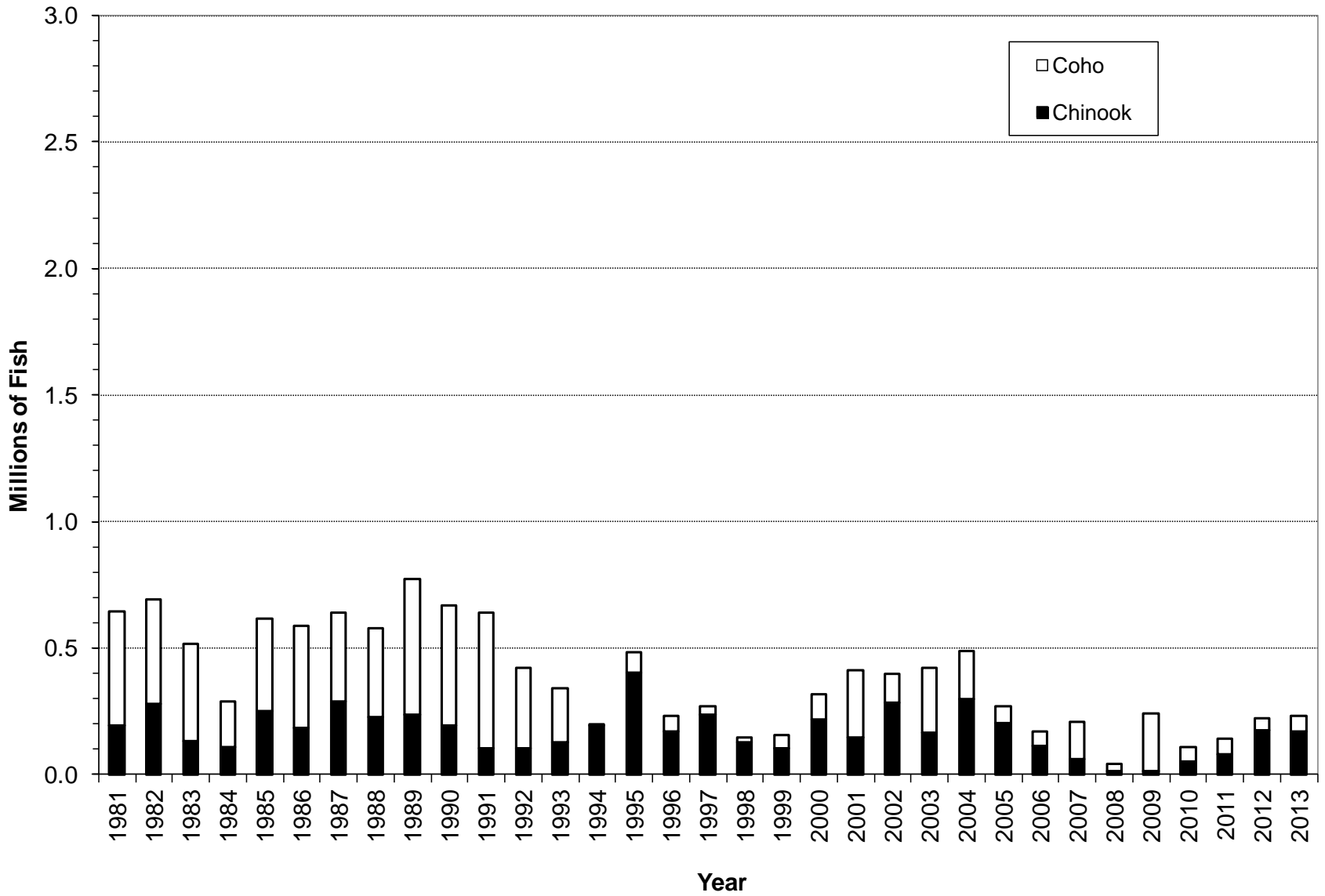


Figure IV-2. West Coast ocean recreational Chinook and coho harvest.

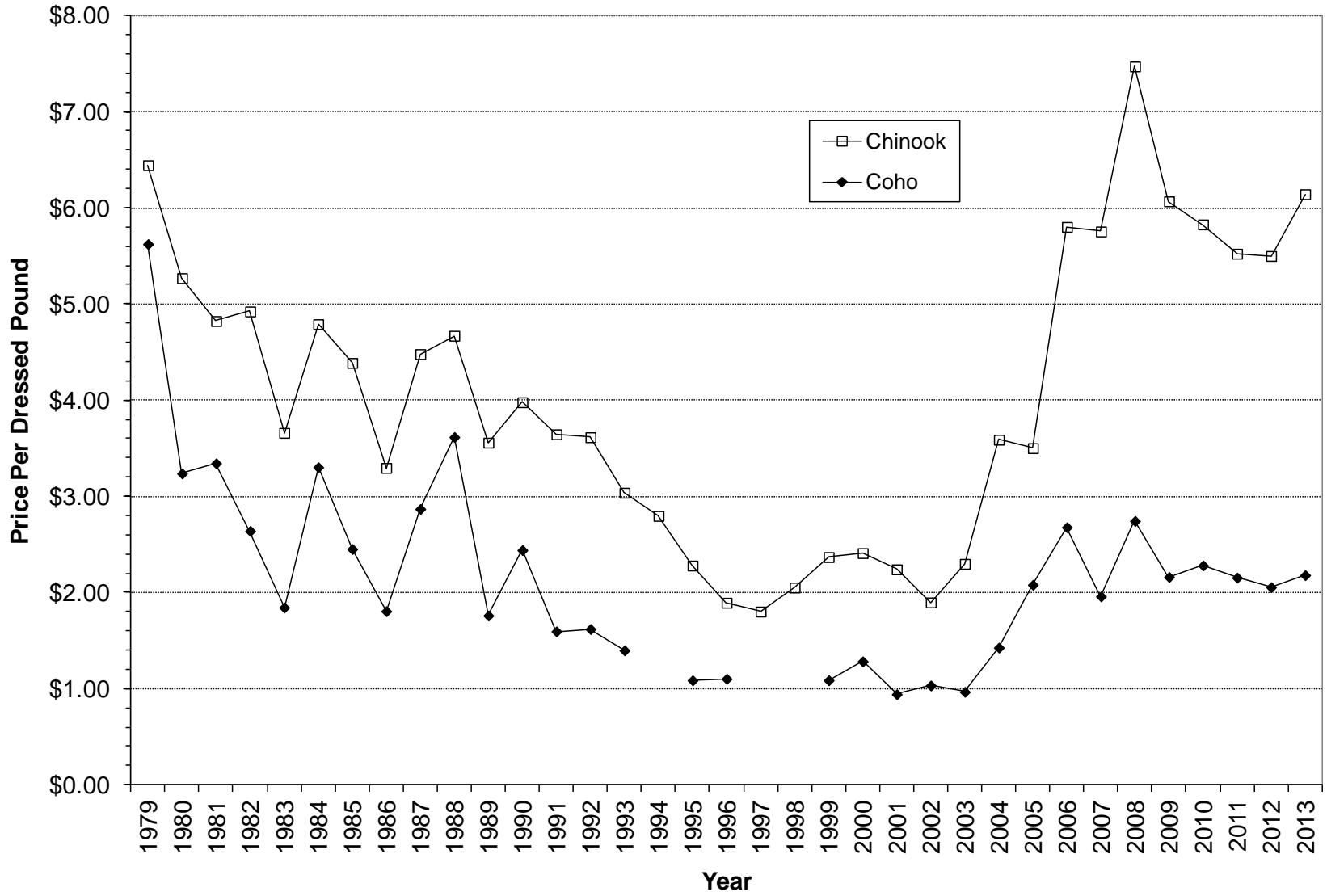


Figure IV-3. West Coast non-Indian ocean commercial salmon average annual exvessel prices (inflation adjusted, 2013 dollars).

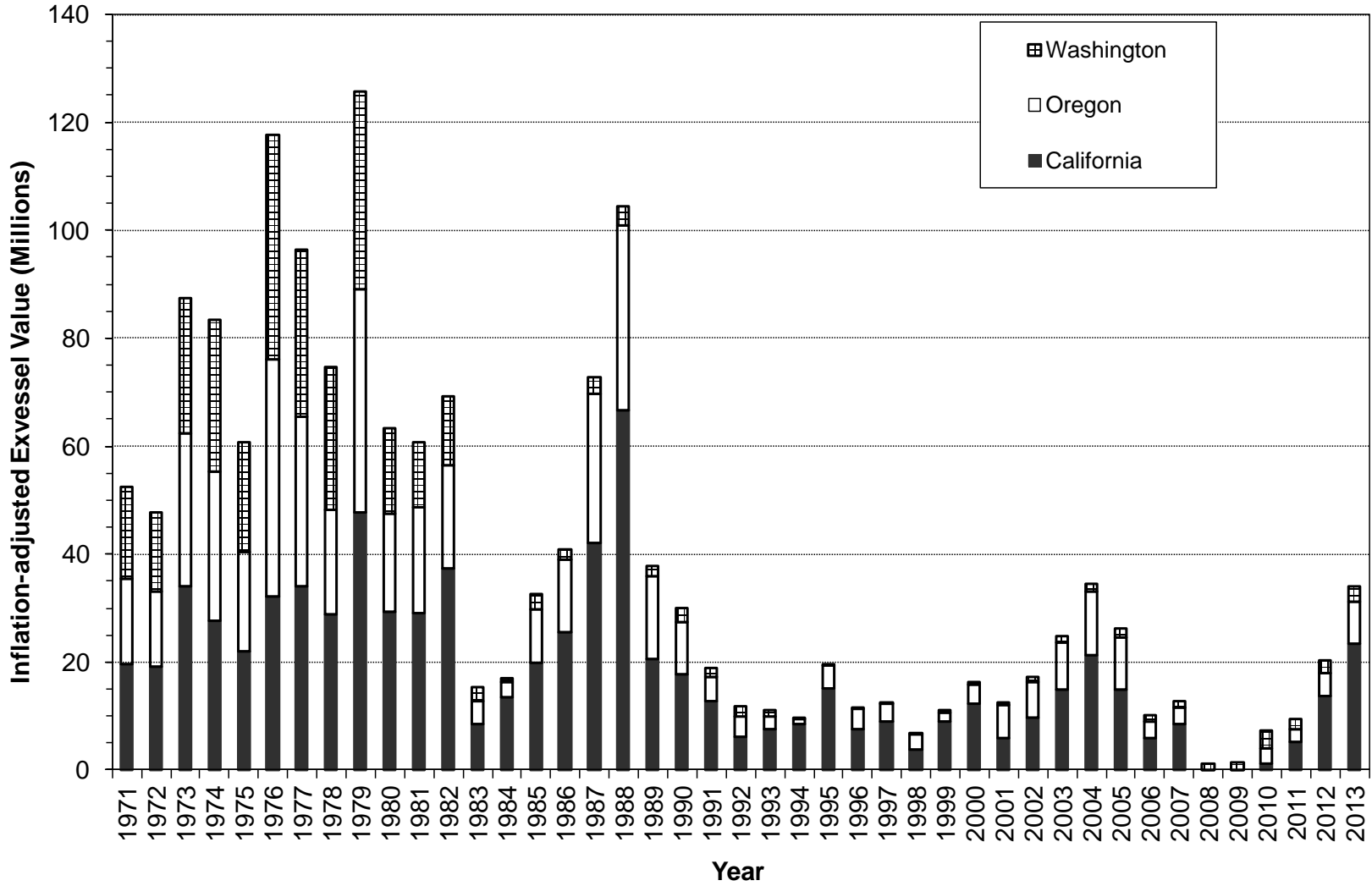


Figure IV-4. Exvessel value of West Coast non-Indian ocean commercial Chinook and coho landings by state of landing (inflation adjusted, 2013 dollars).

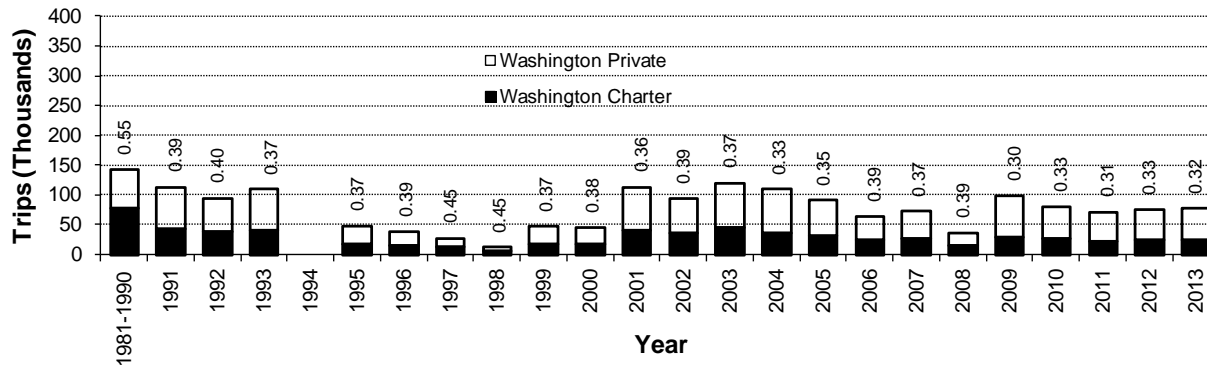
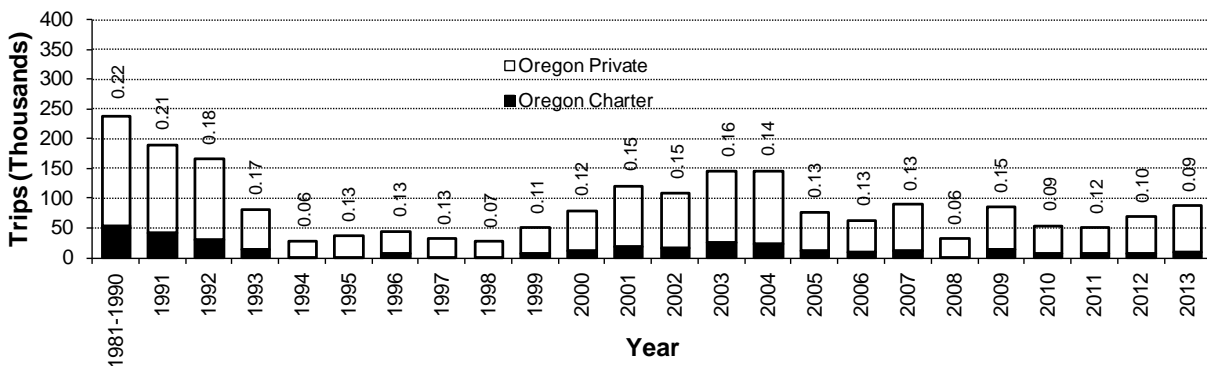
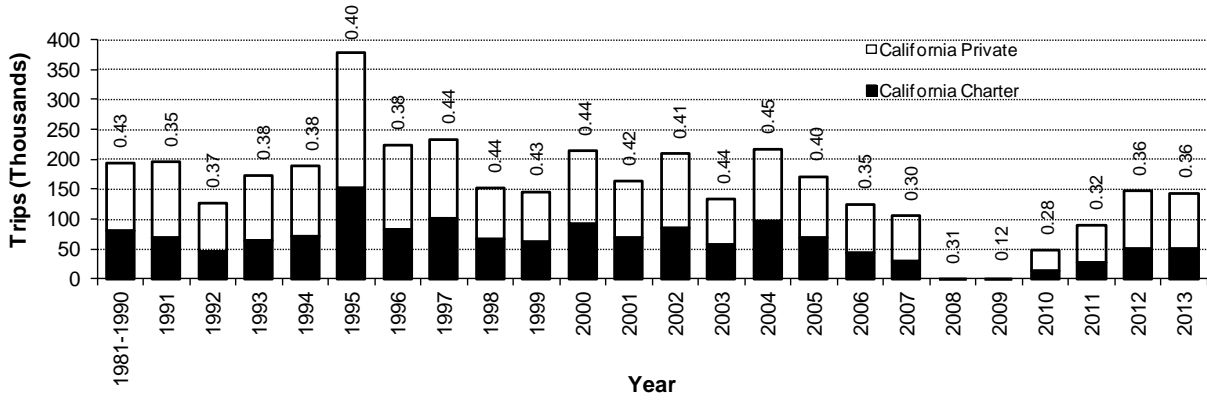


Figure IV-5. Total recreational ocean salmon trips for California, Oregon, and Washington, with proportion of charter trips shown above each bar.

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