

CHAPTER IV

SOCIOECONOMIC ASSESSMENT OF THE 2013 OCEAN SALMON FISHERIES

SUMMARY: Total 2014 exvessel value of the Council-managed non-Indian troll commercial salmon fishery was \$29.8 million. This was the second highest since an inflation-adjusted total of \$35.3 million was harvested in 2004 (Last year's total was \$34.6 million). The exvessel value of the coastwide commercial fishery in 2014 was more than double the 2009-2013 inflation-adjusted average of \$14.9 million (which includes one zero year for California in 2009), but still 48 percent below the 1979 through 1990 inflation-adjusted average of \$57.8 million. The coastwide average exvessel price for Chinook in 2014 was \$5.62 per pound, 10 percent below last year's inflation-adjusted average of \$6.24. At \$1.88 per pound, average West Coast coho prices in 2014 were 15 percent below last year's inflation-adjusted average of \$2.22.

The preliminary number of vessel-based ocean salmon recreational angler trips taken on the West Coast in 2014 was 354,500, an increase of 15 percent from last year, but 41 percent below the 1979 through 1990 average of 599,700 angler-trips.

Total West Coast income impacts associated with recreational and commercial ocean salmon fisheries for all three states combined in 2014 were estimated at \$112.1 million, slightly below last year's inflation-adjusted total of \$112.3 million, and the second highest level achieved in the past five years.¹

ALLOCATION OF THE SALMON RESOURCE

Salmon management by the Council involves numerous allocation issues including:

- Determining the amount of salmon available for ocean harvest after considering expected abundances, harvests by inside fisheries, and spawning escapement goals.
- Allocating harvest among broad management areas and among port areas within the management areas.
- Allocating harvest between Indian and non-Indian harvesters.
- Allocating the non-Indian portion between commercial and recreational harvesters.

The amount of salmon available for harvest in Council management areas depends, in part, on harvest in Canada and Alaska. Allocation of harvest between the West Coast, Canada, and Alaska is determined within the constraints of the PST.

In general, the recreational fishery has tended to have a 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 relatively higher rate in that area. The geographic

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

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 2014 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 2014 were \$5.62 and \$1.88 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 \$6.93 and \$6.90 per pound, respectively. Oregon Chinook prices were highest in April and November, averaging \$8.54 and \$7.02 per pound, respectively. In Washington, average Chinook prices were highest in May at \$6.42 per pound and generally lower through the remainder of the season (there were no Washington landings in April). California and Washington average Chinook exvessel prices were at their lowest in July, while average Oregon Chinook prices were lowest in August. Over the whole season, exvessel Chinook prices in Washington, Oregon and California averaged \$5.50, \$5.71 and \$5.54 per pound, respectively; while coho prices in Washington and Oregon averaged \$1.83 and \$2.00 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 2014 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 focus on the non-Indian commercial fishery in Council management areas and associated state territorial ocean area waters.

Total 2014 coastwide exvessel value of the Council-managed non-Indian, commercial, troll salmon fishery was \$29.8 million, 14 percent below last year (\$34.6 million), and more than double the 2009-2013 inflation-adjusted average of \$14.9 million. Coastwide exvessel value in 2014 was more than 22 times its all-time low level of \$1.3 million recorded in 2008 (including pinks, adjusted for inflation). Although more than 99 percent of total coastwide exvessel value in 2014 was from Chinook landings, coho landings achieved their highest share of exvessel revenue since 2009. Coastwide coho exvessel value in 2014 was \$227,500; more than triple the inflation-adjusted level for the prior year (\$73,700), and 42 percent above the recent five-year average (2009-2013) of \$160,000, (Figure IV-4).

In 2014 California achieved \$12.3 million in commercial troll exvessel landings value of Chinook, just over half the prior year's level of \$24.0 million, and 11 percent below the level of two years ago (\$13.9 million) (adjusted for inflation). 2014 landings revenues were 59 percent below the 1979-1990 inflation-adjusted average of \$30.4 million (which include coho landings during that period).

The 2014 exvessel value of the Oregon commercial troll Chinook and coho harvest of \$14.8 million was the highest level since \$15.6 million in 1989, nearly double last year's total of \$7.7 million, and more than four times the 2009-2013 average of \$3.6 million (inflation-adjusted). Oregon's 2014 commercial troll harvest value was 19 percent below the 1979-1990 average of \$18.3 million, but 61 percent above the long-term, 1979-2013 inflation-adjusted average of \$9.1 million.

The 2014 exvessel value of Washington's non-Indian troll Chinook and coho harvest of \$2.7 million was 6 percent below last year's inflation-adjusted value of \$2.9 million, but 16 percent above the 2009-2013 five-year average value of \$2.3 million. However the 2014 value is still 67 percent below the 1979-1990 inflation-adjusted average of \$8.2 million.

The 2014 average West Coast ocean harvest Chinook price of \$5.62 per pound is 10 percent below last year's inflation-adjusted value of \$6.24 per pound, which was the highest value in inflation-adjusted terms since 2008, and third highest since 1979. Adjusted for inflation, the coastwide average Chinook price over the last nine years (2006-2014) was \$6.06 per pound (which includes the highest recorded inflation-adjusted average price of \$7.60 in 2008). 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). At \$1.88 per pound, 2014 average West Coast coho prices were 15 percent lower than last year (and the previous five-year (2009-2013) average), 10 percent below two years ago, and 37 percent below the 1979-1990 average of \$2.96 (inflation-adjusted).

In terms of numbers of fish, the 2014 coastwide, non-Indian commercial troll Chinook harvest of 413,100 fish was 8 percent below last year (Figure IV-1). The number of Chinook harvested commercially in 2014 was the second highest level recorded during 2006-2014, but still 34 percent below the number landed in 2005 (627,200), and 36 percent below the 1976-2013 long-term average of 642,900 fish. The 2014 coastwide average weight per Chinook (12.7 pounds) was 4 percent above last year's average (12.3 pounds), 12 percent above the average in 2012 (11.4 pounds), and 2 percent above the previous five-year (2009-2013) average of 12.5 pounds per fish (Appendix D Tables D-1, D-2, and D-3).

The non-Indian commercial fishery caught 26,400 coho coastwide in 2014, more than four times the prior year (6,500), more than double the recent five-year average (2009-2013) of 11,800, and the highest number since 42,000 coho were caught in 2009. The coastwide average weight per coho (5.9 pounds) was 13 percent higher than last year and the highest average weight recorded since 7 pounds in 2010.

West Coast port areas with the highest commercial Chinook landings (by weight) in 2014 were Fort Bragg (20 percent), Coos Bay (19 percent), San Francisco (18 percent), and Newport (18 percent). In 2013 the leading ports were San Francisco (32 percent), Fort Bragg (26 percent) and Coos Bay (14 percent). In 2014, the ports north of Cape Falcon accounted for about 12 percent of aggregate coastwide Chinook harvest by weight. By comparison, ports north of Cape Falcon accounted for 9 percent of Chinook landings in 2013, 14 percent in 2012, 21 percent in 2011, 51 percent in 2010, 95 percent in 2009 and 84 percent in 2008, owing largely to restrictions during that time on fisheries south of Cape Falcon. Between 2000 and 2007, ports north of Cape Falcon accounted for an average of about 9 percent of coastwide Chinook landings by weight.

Compared with last year, commercial Chinook harvest by weight in 2014 was nearly double in Oregon, up just less than 3 percent in Washington, but down 41 percent in California. Compared with last year, the 2014 commercial Coho harvest by weight was nearly triple in Washington and up 33-fold in Oregon. 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 1,145 vessels participated in the West Coast commercial salmon fishery in 2014. This is 4 percent more than participated in 2013 (1,098), 12 percent greater than the number participating in 2012 (1,021), and 36 percent more vessels than participated in 2011 (842). The number of vessels making landings in 2014 was the highest since 1,222 vessels in 2005. Note that these coastwide vessel counts are less than totals derived by summing values in the three state-level tables (Tables D-4, D-5, and D-6) because a given vessel may be counted as landing 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 2014, 655 commercial vessels made salmon landings in California, compared with 671 vessels in 2013, 616 vessels in 2012, 464 vessels in 2011 and 215 vessels in 2010. No vessels landed salmon in California in 2008 or 2009. In 2007, 601 vessels made landings in California (Table D-4). In Oregon, the active fleet increased by 94 vessels in 2014, to 493 vessels compared with 399 vessels in 2013 and 369 vessels in 2012. The number of active vessels in Oregon in 2014 was highest since 565 vessels participated in 2005 (Table D-5). The number of active vessels in Washington increased by eight from 108 vessels last year to 116 vessels in 2014 (Table D-6). This was the largest number of participating vessels in Washington since 116 vessels participated in 2010. Coastwide the number of state limited entry salmon permits issued in 2014 decreased by 18 from the previous year to 2,267. Landings were made on 56 percent of all permits in 2014, up from 52 percent in 2013, 47 percent in 2012 and 37 percent in 2011. Note: Years 2008 and 2009 are the two lowest vessel participation years on record (1982-2014). 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 2014, coastwide average inflation-adjusted exvessel value of salmon landings per vessel decreased 20 percent compared to 2013, to about \$23,600 per vessel. Compared to last year, average exvessel revenue per vessel in 2014 was down 47 percent in California and 13 percent in Washington, but up 55 percent in Oregon. Note that some caution needs to be exercised in interpreting average exvessel revenue per vessel. The averages may be influenced as much by a disproportionate change in the number of small or large harvesters participating from one year to the next as by any real change in the average revenues of vessels that participated in all years.

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 2014 the treaty Indian ocean troll fishery harvested 65,200 Chinook (752,800 pounds) and 55,900 coho (361,900 pounds), compared with 52,400 Chinook (419,600 pounds) and 47,700 coho (265,700 pounds) in 2013, and 56,400 Chinook (601,900 pounds) and 37,500 coho (215,500 pounds) in 2012. The preliminary exvessel value of Chinook and coho landed in the treaty Indian ocean troll fishery was \$3.6 million in 2014, compared with inflation-adjusted values of \$2.5 million in 2013 and \$2.5 million in 2012 (Numbers of fish are from Table A-15; Weights and revenue values are based on January 25, 2015 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 vary considerably with species (Chinook, coho or chum), race (e.g., spring versus fall Chinook), and stock (e.g., tules versus brights). Spring Chinook generally bring the highest prices, and tule fall Chinook and chum the lowest prices.

Total exvessel value of combined treaty Indian and non-Indian commercial salmon harvested in the Columbia River in 2014 was \$14.9 million. This was 25 percent above the inflation-adjusted 2013 level of \$12.0 million, and more than double the 2012 level of \$6.6 million (adjusted for inflation). Of these amounts, the total inflation-adjusted exvessel value of non-Indian commercial salmon harvested in the Columbia River was \$6.3 million in 2014, \$5.5 million in 2013, and \$3.4 million in 2012 (Table IV-9).

Total 2014 exvessel value of treaty Indian salmon harvested in the Columbia River and sold on fish tickets was \$8.7 million. This is 34 percent higher than the inflation-adjusted level of \$6.5 million in 2013, and nearly triple the inflation-adjusted level of \$3.2 million in 2012. Note that these values include only sales made to licensed fish buyers. Treaty Indian fishers' direct sales to the public are accounted for in harvest monitoring reports (Table B-20), but estimates of the pounds and value of such sales are not included in Table IV-9.

Puget Sound and Washington Coastal Inside Fisheries

Information on 2014 Puget Sound and Washington coastal inside fisheries is preliminary. In previous years, substantial revisions to these numbers have occurred after publication of this review. Based on PacFIN data (as of January 25, 2015), 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 2014 was \$7.9 million. This was 34 percent below last year's inflation-adjusted (and revised) value of \$12.0 million, but 29 percent above the \$6.2 million harvest value in 2012. Of the total non-Indian commercial landings in 2014, \$1.4 million were Chinook and coho, compared with \$1.5 million in 2013 and \$1.7 million in 2012. The 1981 through 2013 inflation-adjusted average annual exvessel value from these fisheries was \$16.4 million, of which approximately \$4.0 million on average were Chinook and coho. It is interesting to note that all values higher than those respective averages were recorded prior to 1992.

The preliminary 2014 exvessel value reported to PacFIN (as of January 25, 2015) for all salmon species taken in the commercial treaty Indian fisheries in Puget Sound and Washington coastal inside fisheries (excluding the Columbia River) was \$14.2 million, of which \$5.1 million were Chinook and coho. The (revised) value for the 2013 commercial treaty Indian harvest in Puget Sound and Washington coastal inside fisheries is \$17.0 million for all salmon species, of which \$8.0 million were Chinook and coho (inflation-adjusted). The exvessel value of the 2012 commercial treaty Indian harvest in Puget Sound and Washington coastal inside fisheries was \$13.0 million for all salmon species, of which \$8.1 million were Chinook and coho (inflation-adjusted). From 1981 through 2013 the inflation-adjusted average annual exvessel value of commercial treaty Indian fisheries in Puget Sound and Washington coastal inside areas is \$21.0 million, of which on average \$8.0 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 2007-2014. Average commercial catch of fall Chinook over those years was about 22,500 fish, most of which were taken in the estuary. Although no commercial sales also occurred in spring Chinook gillnet fisheries in 2014, harvests in 1989, 1996, 2000-2004, and 2007-2013 resulted in an 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 2014 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 (\$685,000 adjusted to 2014 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 2014 approximately 11,800 commercial fall Chinook were harvested, the lowest total since the fishery was closed in 2006, and 78 percent below the 2013 harvest of 52,100 fish. The

2012 fall Chinook harvest of 82,900 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. No spring Chinook commercial harvest occurred in 2014. By comparison 971 spring Chinook were harvested in 2013, 856 in 2012, and 33 in 2011 (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 2014 was 354,500, an increase of 15 percent over 2013, and 22 percent above the 2012 level, but 41 percent below the 1979-1990 annual average of 599,700. Compared with 2013, preliminary estimates of the number of trips taken in 2014 in California decreased by 16 percent, but increased by 41 percent in Oregon, and by 46 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 2014 (27 percent) was slightly higher than in 2013, but 5 percent lower than in 2012 (29 percent). Underlying this coastwide trend were an increase of 12 percent over last year in the proportion of charter trips in California, an increase of 39 percent in the proportion of charter trips in Oregon, (i.e., increase from 9 percent of trips in 2013 to 12 percent in 2014), and a decrease of 4 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 2014 (120,300) continued a downward trend over the prior two years. The 2014 total was 18 percent below 2013 (147,300), and 16 percent lower than in 2012 (148,000). The number of salmon trips in 2014 was 37 percent lower than the prior year in Crescent City, 29 percent lower in Eureka, 21 percent lower in San Francisco, and 10 percent lower in Monterey. Only in Fort Bragg was the number of salmon trips slightly higher (1 percent) than in the prior year. A total of 74,700 Chinook were caught in California on the total of 120,300 trips, for an average success rate of 0.62 fish per trip. The charter industry's share of California recreational salmon trips in 2014 was 40 percent, 12 percent above last year's share, and the highest proportion recorded since 40 percent in 2005 (Table IV-10, Table IV-11 and Figure IV-5).

Oregon

Ocean recreational salmon trips in Oregon in 2014 were up 41 percent to 121,500 trips compared with an estimated 86,300 angler trips in 2013 (Tables IV-10 and IV-12). Total trips in 2014 were the highest since 145,700 recorded in 2004, and 79 percent above the most recent five-year average (2009-2013) of 68,000. Compared with last year, effort was much higher in Astoria (double), Tillamook (up 78 percent) and Newport (up 143 percent); approximately even in Coos Bay; while in Brookings the number of trips fell 15

percent. The charter industry's share of Oregon recreational salmon trips in 2014 was about 12 percent, which is 39 percent higher than last year, and about 9 percent above the recent five-year (2009-2013) average share of 11 percent (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 2013, retention rates ranged between 0.44 and 1.08 salmon per angler-day. The 2014 Oregon salmon retention rate of 0.97 was near the upper end of this range and was 86 percent above last year's value of 0.52. The 2014 value was the highest since a retention rate of 1.08 was recorded in 2009, and it continues a rising trend exhibited since the recent low of 0.44 in 2010. In 2014, coho contributed 84 percent of the total Oregon recreational ocean salmon catch, more than double last year's share of 32 percent and the highest coho share since 98 percent was recorded in 2009.

Washington

In 2014, 112,700 ocean angler trips were taken on vessels on the Washington coast, an increase of 46 percent from the 77,000 trips taken in 2013, and 40 percent above the recent five-year (2009-2013) average of 80,600. About 31 percent of Washington angler trips in 2014 were taken on charter vessels, down 4 percent from 2013, and 3 percent below the recent five-year average share of 32 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 1.41 in 2014, the highest rate since 1.52 recorded in 2009, 35 percent above the recent five-year (2009-2013) average success rate of 1.04, and up 46 percent from 0.97 in 2013. 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 2014, the recreational salmon fishery between Cape Falcon and the U.S./Canada border was open seven days per week in all areas during the main June-September season. In 2014 there were 45,500 bottomfish trips north of Cape Falcon, slightly more than in 2013, and continuing an overall upward trend exhibited since the 2009 low point of 37,200 (Table IV-14). Compared with 2013, while trips from Neah Bay were 11 percent above last year's level, the Columbia River, Westport and La Push areas all showed decreases in total bottomfish effort.

Buoy 10 and Area 4B Add-On Fisheries

In 2014 salmon anglers fishing from private and charter boats from Oregon and Washington made a total of 103,500 trips in the Buoy 10 fishery. This effort level is approximately 62 percent above the 64,000 and 63,700 trips recorded in 2013 and 2012, respectively. Angler success/retention rates fishing from boats in the Buoy 10 fishery increased to 0.79 salmon per day in 2014 from 0.47 in 2013, 0.41 in 2012 and 0.38 in 2011 (Table IV-15).

In 2000, about 3,400 trips were made in the late-season Area 4B add-on fishery. Since then there have been no late season Area 4B add-on fisheries, with the exception of 2008, when there were an estimated 782 private trips and no charter trips. There was no Area 4B add-on fishery in 2014 (Table IV-15).

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-trips), and were estimated using the IO-PAC fisheries economic impact model. This is a change from prior years' pre-season documents where income impacts were estimated using the Fisheries Economic Assessment Model (FEAM). The change in methodology means that recent year income impacts estimated using IO-PAC are no longer comparable with historical values for years prior to 2010 that were estimated using FEAM. Consequently any comparisons of income impacts in this document are confined to describing trends appearing over 2010-2014, during which period the IO-PAC-based models and multipliers are applied. Appendix E contains a more detailed explanation of the change in income modeling methodology, including comparisons of IO-PAC with FEAM-based estimates for recent years.

Estimated state and local community income impacts of commercial and recreational ocean salmon fisheries and selected state-managed fisheries are shown in Tables IV-16 through IV-20. Income impacts are most relevant to those dependent on the income stream from the fishery, including individuals, businesses, and local and state governments. These impacts represent estimates of total personal income associated with harvesting, processing and first level distribution activities in the commercial salmon fisheries and trip-related expenditures made by recreational salmon anglers, expressed at the local community (county) and state levels.² Impacts include personal income earned by those directly participating in the fishery (e.g. vessel owners, crew members, processing workers, and recreational charter operators), income indirectly associated with the fishery that is earned by those providing supplies to harvesting, processing and recreational operations (e.g. fuel, gear, bait, and ice suppliers), and income earned by those who benefit when direct and indirect income is re-spent in the community (e.g. income of grocery store owners, car mechanics, and health professionals). This last category is sometimes called induced income.

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

² Because *income impact* refers to income "associated with" a given level of economic activity, the term *impact* in this context should not be confused with the term *impact* as frequently employed in policy analyses such as those required by the National Environmental Policy Act. Such policy analyses refer to impact as the effect (the difference) which results from taking an action (as compared to not taking the action). Income impacts are one of a number of different but related measures of total economic activity (e.g. income impacts, gross receipts, total jobs, etc.).

Income impacts are presented at the local and state levels (and could also be provided at the national level). As one moves from evaluation of income impacts at the level of a local economy to consideration of larger state and national economies, any indicated changes in income impacts increasingly represent a measure of disruption due to redistribution of activities within the economy and probably decreasingly represent a net loss at the level of the economy being considered.

Income impacts are estimated based on several data components, including: reported commercial landings and exvessel prices by port or area, an inventory of local harvesters and processors, estimates of expenditures by harvester and processors, data on 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. Commercial ocean harvests that are landed outside of coastal areas (e.g., ocean troll caught salmon landed in Puget Sound ports) are not included in these estimates of coastal community impacts, but 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 non-fishing and fishing-dependent sectors. As such they represent likely upper bounds on the local community and state-level income impacts generated by West Coast salmon fisheries. All income impact estimates reported in this Review are in terms of inflation-adjusted 2014 dollars.

West Coast Ocean Fishery Commercial and Recreational Income Impacts

Total state level income impacts associated with recreational and non-Indian commercial ocean salmon fisheries for all three states combined in 2014 were \$112.1 million, slightly below last year's inflation-adjusted level of \$112.3 million, and 31 percent above the inflation-adjusted 2012 level. The 2014 level was the second highest estimated over the 2010-2014 period (Tables IV-16, IV-17 and IV-18). West Coast income impacts associated with the 2014 non-Indian commercial ocean fishery were \$50.3 million, 11 percent below the estimate for 2013 (\$56.7 million), and the second highest estimated over the 2010-2014 period.³ Income impacts generated by the three states' combined 2014 ocean recreational fisheries were estimated at \$61.8 million, 11 percent above last year's level of \$55.6 million, and the highest level estimated over the 2010-2014 period. Note that these coastwide values may mask effects in individual communities. Tables IV-16, IV-17 and IV-18 provide greater detail on the income impacts estimated for individual port areas in the three West Coast states.

Selected Inside Fisheries

Columbia River Commercial Fisheries

Historically the non-Indian and treaty Indian Columbia River commercial fisheries have generated a substantial amount of income for Oregon and Washington communities on the Columbia River. In 2014, income impacts associated with the Columbia River commercial catch (combined non-Indian and treaty Indian) were estimated at \$21.5 million, 25 percent above the prior year's level of \$17.1 million, more than double the 2012 total estimate of \$9.5 million, and the highest value estimated for the 2010-2014 estimation period (Table IV-19).

Buoy 10 and Area 4B Add-On

Estimated local community income impacts associated with the 2014 Buoy 10 recreational salmon fishery were \$6.1 million, 60 percent higher than the estimate of \$3.8 million for the 2013 fishery, 58 percent above

³ Income impact estimates for the commercial fishery do not include postseason settlement payments fishers may have received from buyers. In certain years postseason settlements have been particularly significant in the California fishery.

the estimate for the 2012 fishery, more than double the estimated value of \$2.9 million for 2011, and the highest value observed over the 2010-2014 estimation period. There was no late-season Area 4B add-on fishery in 2014. The most recent Area 4B add-on fishery, which occurred in 2008, was the first since 2000. Inflation-adjusted local community income impacts associated with the 2008 area 4B add-on fishery were an estimated to be \$32,000 (Table IV-20).

TABLE IV-1. Average monthly exvessel troll salmon price in dollars per dressed pound for California, Oregon, and Washington in 2014.

Species/Grade	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season
CALIFORNIA											
Chinook ^{a/}	-	-	6.93	5.80	4.64	5.27	5.88	6.90	-	-	5.54
Coho	-	-	-	-	-	-	-	-	-	-	-
OREGON											
Chinook											
Large (>11 Pounds)	-	8.57	6.65	5.92	4.77	4.61	5.01	6.17	6.91	-	5.70
Medium (7-11 Pounds)	-	8.57	6.54	5.57	4.48	4.04	5.08	6.00	6.76	-	5.43
Small (<7 Pounds)	-	8.00	6.54	5.67	4.92	4.18	4.98	6.20	6.83	-	5.35
Ungraded Chinook	-	8.55	6.60	6.04	5.00	4.55	5.11	6.53	7.29	-	5.94
Weighted Average	-	8.54	6.61	5.86	4.78	4.48	5.06	6.32	7.02	-	5.71
Mixed Coho	-	-	-	-	1.62	1.94	2.10	-	-	-	2.00
WASHINGTON^{b/}											
Chinook											
Large (>11 Pounds)	-	-	6.47	5.73	4.34	4.65	4.49	-	-	-	5.26
Medium (8-11 Pounds)	-	-	6.24	5.56	3.99	4.20	4.23	-	-	-	4.98
Small (<8 Pounds)	-	-	5.02	4.82	3.54	3.38	4.81	-	-	-	4.58
Ungraded Chinook	-	-	-	-	-	-	-	-	-	-	-
Weighted Average	-	-	6.42	5.76	4.28	4.57	4.50	-	-	-	5.50
Mixed Coho	-	-	-	-	1.57	1.80	1.95	-	-	-	1.83

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, 2014) 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	42,999	2.53	6.27	2,303	5,706	2.19	5.43	19,659	48,705
1980	12,741	28,928	2.27	5.15	408	926	1.36	3.09	13,149	29,854
1981-1985	10,945	21,029	2.42	4.59	554	1,076	1.94	4.03	11,499	22,106
1986-1990	21,151	34,399	2.56	4.13	490	784	1.36	2.66	21,641	35,183
1991-1995	7,335	10,132	2.28	3.18	143	207	1.25	2.35	7,478	10,339
1996	5,984	7,808	1.44	1.88	-	-	-	-	5,984	7,808
1997	7,288	9,345	1.38	1.77	-	-	-	-	7,288	9,345
1998	3,060	3,880	1.66	2.10	-	-	-	-	3,060	3,880
1999	7,429	9,283	1.93	2.41	-	-	-	-	7,429	9,283
2000	10,304	12,602	2.01	2.46	-	-	-	-	10,304	12,602
2001	4,773	6,179	1.98	2.56	-	-	-	-	4,773	6,179
2002	7,776	9,913	1.55	1.98	-	-	-	-	7,776	9,913
2003	12,181	15,226	1.91	2.39	-	-	-	-	12,181	15,226
2004	17,895	21,770	2.87	3.49	-	-	-	-	17,895	21,770
2005	12,913	15,219	2.97	3.50	-	-	-	-	12,913	15,219
2006	5,350	6,118	5.13	5.87	-	-	-	-	5,350	6,118
2007	7,902	8,802	5.18	5.77	-	-	-	-	7,902	8,802
2008	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-
2010	1,246	1,334	5.47	5.86	-	-	-	-	1,246	1,334
2011	5,133	5,386	5.18	5.44	-	-	-	-	5,133	5,386
2012	13,521	13,939	5.34	5.51	-	-	-	-	13,521	13,939
2013	23,632	24,005	6.23	6.33	-	-	-	-	23,632	24,005
2014 ^{c/}	12,350	12,350	5.54	5.54	-	-	-	-	12,350	12,350

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, 2014) 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	7,450	0.89	3.31	3,658	13,711	0.64	2.36	5,694	21,161
1976-1980	5,290	14,023	2.17	5.73	6,389	17,455	1.51	3.99	11,679	31,478
1981-1985	3,582	6,846	2.46	4.67	2,248	4,483	1.45	2.76	5,830	11,329
1986-1990	9,381	15,232	2.47	3.98	3,203	5,213	1.54	2.49	12,584	20,445
1991-1995	1,971	2,728	2.24	3.12	326	471	0.64	0.91	2,297	3,200
1996	3,007	3,924	1.56	2.04	-	-	-	-	3,007	3,924
1997	2,469	3,166	1.60	2.05	-	-	-	-	2,469	3,166
1998	2,297	2,913	1.64	2.08	-	-	-	-	2,297	2,913
1999	1,400	1,749	1.94	2.42	1	1	1.03	1.29	1,401	1,751
2000	2,988	3,654	2.02	2.47	75	92	1.06	1.30	3,063	3,746
2001	4,680	6,058	1.61	2.08	41	53	0.79	1.02	4,721	6,111
2002	5,383	6,863	1.54	1.96	8	10	0.75	0.96	5,391	6,873
2003	7,186	8,982	1.97	2.46	36	45	0.85	1.06	7,222	9,028
2004	9,832	11,961	3.45	4.20	86	105	1.24	1.51	9,919	12,067
2005	8,466	9,978	3.17	3.74	37	44	1.87	2.20	8,503	10,022
2006	2,663	3,045	5.48	6.27	38	44	2.90	3.32	2,701	3,088
2007	2,630	2,929	5.66	6.30	193	215	1.90	2.12	2,822	3,143
2008	484	528	7.31	7.99	10	11	2.82	3.08	494	540
2009	77	84	5.06	5.49	267	290	2.04	2.21	345	374
2010	2,775	2,973	5.49	5.88	16	17	2.23	2.39	2,791	2,989
2011	2,396	2,515	5.96	6.25	5	5	2.01	2.11	2,401	2,520
2012	4,263	4,395	5.75	5.93	8	9	2.20	2.27	4,271	4,404
2013	7,604	7,724	5.88	5.97	7	7	2.56	2.60	7,611	7,731
2014 ^{b/}	14,692	14,692	5.71	5.71	67	67	2.00	2.00	14,760	14,760

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, 2014) 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	10,059	0.89	3.32	3,060	11,369	0.66	2.47	5,775	21,428
1976-1980	5,313	14,383	2.39	6.27	6,086	16,436	1.67	4.40	11,399	30,819
1981-1985	1,954	3,844	2.46	4.67	1,272	2,512	1.32	2.51	3,225	6,356
1986-1990 ^{c/}	1,310	2,122	2.61	4.23	360	574	1.62	2.62	1,670	2,696
1991-1995 ^{d/}	550	780	2.17	3.03	120	170	0.86	1.21	670	950
1996	d/	d/	d/	d/	59	76	0.86	1.12	d/	d/
1997	125	160	1.55	1.99	-	-	-	-	125	160
1998	123	156	1.51	1.91	-	-	-	-	123	156
1999	377	471	1.90	2.37	19	24	0.88	1.10	396	495
2000	224	274	1.71	2.09	34	42	1.09	1.33	258	316
2001	349	452	1.44	1.86	34	44	0.69	0.89	383	496
2002	756	964	1.11	1.42	2	2	1.58	2.01	758	966
2003	951	1,189	1.15	1.44	40	50	0.74	0.92	991	1,239
2004	1,079	1,313	2.14	2.60	106	129	1.16	1.41	1,185	1,442
2005	1,273	1,501	2.70	3.18	16	19	1.65	1.94	1,290	1,520
2006	1,029	1,176	4.64	5.31	16	19	1.69	1.93	1,045	1,195
2007	905	1,007	4.90	5.46	48	54	1.46	1.63	953	1,061
2008	673	736	6.73	7.35	36	39	2.49	2.72	709	774
2009	893	968	5.76	6.24	276	299	2.02	2.19	1,169	1,267
2010	3,083	3,302	5.61	6.01	32	34	2.14	2.29	3,115	3,337
2011	1,652	1,734	5.12	5.37	35	37	2.10	2.20	1,687	1,771
2012	2,323	2,395	5.34	5.51	35	36	1.99	2.05	2,358	2,431
2013	2,771	2,814	6.16	6.26	67	68	2.15	2.18	2,838	2,882
2014	2,549	2,549	5.50	5.50	160	160	1.83	1.83	2,709	2,709

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, 2014) 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	463	0.75	1.97	1,200	3,137	0.54	1.44	1,367	3,600
1981-1985	129	250	0.74	1.41	287	564	0.41	0.79	416	814
1986-1990	41	68	0.77	1.24	57	89	0.66	1.07	98	158
1991-1995	1	2	0.88	1.22	38	54	0.64	0.89	39	56
1997	b/	b/	0.56	0.72	b/	b/	0.20	0.26	b/	b/
1999	b/	b/	0.67	0.84	b/	b/	0.38	0.47	b/	b/
2001	1	1	0.58	0.75	b/	b/	0.22	0.28	1	1
2003	b/	b/	0.85	1.06	b/	b/	0.30	0.37	b/	b/
2005	b/	b/	1.25	1.47	b/	b/	0.52	0.61	b/	b/
2007	b/	b/	1.11	1.24	b/	b/	0.33	0.37	b/	b/
2009	b/	b/	0.51	0.55	b/	b/	0.33	0.36	b/	b/
2011	b/	b/	1.31	1.37	1	1	0.83	0.87	1	1
2013	b/	b/	1.35	1.37	b/	b/	0.61	0.62	b/	b/

a/ Odd year averages.

b/ Less than \$500.

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

Year or Avg.	Crescent City	Eureka	Fort Bragg	San Francisco	Monterey	State Total
CHINOOK (thousands of dressed pounds)						
1976-1980	393	1,403	1,449	1,733	889	5,867
1981-1985	350	428	1,128	1,806	742	4,454
1986-1990	155	405	2,299	3,648	1,592	8,097
1991-1995	2	25	183	1,893	1,326	3,429
1996-2000	2	35	146	2,155	1,699	4,037
2001	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	24	200	1,427	1,776	367	3,793
2014 ^{c/}	27	110	1,035	958	99	2,228
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	-	-	-	-	-	-
2014	-	-	-	-	-	-

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	34	76	232	783	166	1,291
2014 ^{c/}	172	149	931	1,024	298	2,575
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	2	-	-	-	-	2
2014 ^{c/}	33	18	9	7	1	67

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
2014	77	93	182	112	463	e/	463
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
2014	7	22	47	12	87	-	87

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, 2014 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	
	Spring	Fall					Spring	Fall					
		Brights ^{d/}	Tules	Brights ^{d/}	Tules								
Oregon													
Average Price Per Landed Pound ^{e/} (dollars)													
1987-2003	4.18	1.43	0.39	1.24	0.54		4.35	1.35	0.35	0.95	-		
2004	4.53	1.67	0.27	1.09	0.30		2.25	1.37	0.12	0.72	-		
2005	4.02	1.91	0.31	1.26	0.37		-	1.23	0.20	1.10	-		
2006	5.35	2.45	0.32	1.50	0.30		3.43	1.75	0.30	1.43	-		
2007	6.00	3.15	0.06	1.80	0.84		4.18	2.91	0.03	1.19	-		
2008	6.75	2.73	0.62	1.43	0.71		5.07	2.80	0.49	1.27	0.98		
2009	4.88	2.23	0.59	1.31	0.56		3.70	1.52	0.39	1.00	-		
2010	5.28	2.27	0.64	1.49	0.72		4.51	2.16	0.67	2.02	-		
2011	5.33	2.39	0.61	1.73	0.81		3.75	2.48	0.75	1.61	-		
2012	6.00	2.28	0.56	1.66	0.51		5.69	2.64	0.76	1.91	-		
2013	6.55	2.55	0.58	1.87	0.51		5.27	2.09	0.65	1.36	-		
2014 ^{g/}	5.38	1.83	0.57	1.17	0.54		5.03	1.72	0.57	0.91	-		
Exvessel Value (thousands of dollars)													
1987-2003	507	1,703	100	1,098	2	3,410	6	697	18	6	-	727	4,137
2004	1,249	682	60	827	f/	2,817	180	654	36	21	-	892	3,709
2005	370	521	40	995	f/	1,927	-	245	13	1	-	259	2,187
2006	702	729	21	717	f/	2,169	f/	361	3	17	-	381	2,550
2007	851	393	1	343	f/	1,589	71	403	1	16	-	490	2,079
2008	780	1,127	70	732	f/	2,709	352	1,024	64	55	f/	1,495	4,204
2009	474	974	98	1,110	f/	2,656	154	611	39	26	-	830	3,486
2010	2,021	965	165	834	1	3,986	633	490	94	35	-	1,252	5,238
2011	1,225	1,518	143	759	f/	3,645	192	627	32	32	-	883	4,528
2012	1,089	928	113	153	f/	2,283	76	360	5	12	-	453	2,737
2013	940	2,156	108	499	f/	3,703	91	1,053	23	6	-	1,173	4,876
2014 ^{g/}	628	1,621	141	1,660	f/	4,050	279	887	14	34	-	1,215	5,264
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	144	846	186	267	f/	1,442	17	503	35	5	-	560	2,002
2014 ^{g/}	117	886	247	1,419	f/	2,669	55	516	24	38	-	634	3,302

TABLE IV-9. Landings, exvessel values and average prices (inflation adjusted, 2014 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	Fall				Spring	Fall				
		Brights ^{d/}	Tules	Brights ^{d/}	Tules						
Washington^{g/h/i/}											
Average Price Per Landed Pound ^{e/} (dollars)											
1987-2003	2.59	-	2.18	-	-	-	2.29	-	-	-	
2004	4.22	1.64	1.21	0.94	-	1.99	0.60	0.35	-	-	
2005	4.20	2.21	1.52	-	-	2.69	1.60	0.64	0.57	-	
2006	7.47	2.84	1.40	1.08	-	4.96	1.51	0.89	1.00	-	
2007	7.33	2.79	1.38	1.06	-	4.86	1.49	0.87	0.98	-	
2008	5.74	1.93	1.23	0.64	-	3.26	1.01	0.62	-	-	
2009	5.36	2.09	1.40	0.64	-	4.04	1.22	0.94	-	-	
2010	4.71	2.00	1.58	0.61	-	3.68	1.91	1.50	3.28	-	
2011	6.46	2.10	1.68	0.44	-	4.90	1.78	1.30	-	-	
2012	6.23	2.17	1.86	-	-	4.64	1.92	1.19	-	-	
2013	5.36	1.62	1.13	0.46	-	4.71	1.45	0.98	1.08	-	
2014											
Exvessel Value (thousands of dollars)											
1987-2003	240	659	456	1	1,342	60	1,073	15	-	1,145	2,487
2004	331	531	423	f/	1,284	201	529	12	-	741	2,026
2005	260	385	231	f/	877	133	844	12	-	989	1,865
2006	366	480	315	-	1,161	484	1,448	29	f/	1,961	3,122
2007	141	256	279	f/	676	f/	1,381	58	f/	1,440	2,116
2008	343	555	302	f/	1,201	1,060	1,742	161	f/	2,962	4,163
2009	340	583	321	f/	1,245	669	887	27	-	1,583	2,828
2010	581	548	347	2	1,477	2,123	1,858	24	-	4,004	5,481
2011	370	783	250	1	1,403	1,749	3,049	244	1	5,042	6,446
2012	340	750	64	f/	1,154	950	1,757	37	-	2,744	3,898
2013	198	1,373	221	-	1,792	888	4,317	111	-	5,315	7,107
2014	247	1,369	594	f/	2,210	1,980	5,126	362	2	7,469	9,679
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
2014	46	846	524	f/	1,416	421	3,540	369	2	4,332	5,748

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	55.0	92.3	49.2	66.9	b/	0.3
2014 ^{c/}	48.1	72.1	33.7	41.1	-	0.5
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	7.4	78.9	1.8	28.6	3.5	11.1
2014 ^{c/}	14.5	107.0	1.3	17.2	19.0	80.6

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	24.7	52.3	9.2	19.6	17.9	27.9
2014 ^{c/}	34.6	78.1	12.1	27.7	46.0	73.3

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	a/	4.1	5.5	40.4	4.9	55.0
2014 ^{b/}	0.1	3.2	5.4	33.9	5.5	48.1
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	7.0	18.6	11.7	29.2	25.7	92.3
2014 ^{b/}	4.3	13.0	12.1	20.8	22.0	72.1
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	7.0	22.8	17.3	69.5	30.7	147.3
2014 ^{b/}	4.4	16.2	17.5	54.6	27.5	120.3

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. (Page 1 of 2)

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	1.7	0.6	4.2	0.3	0.6	7.4
2014 ^{b/}	2.6	1.0	10.2	0.3	0.4	14.5
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	4.4	13.5	11.1	29.5	19.5	78.1
2014 ^{b/}	9.7	24.2	27.0	29.5	16.7	107.0

TABLE IV-12. Estimates of Oregon recreational ocean salmon angler trips (thousands) by port area and boat type. (Page 2 of 2)

Year or Avg.	Astoria	Tillamook	Newport	Coos Bay	Brookings	State Total
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	6.1	14.1	15.3	29.8	20.1	85.5
2014 ^{b/}	12.3	25.2	37.2	29.8	17.1	121.5

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. (Page 1 of 2)

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	0.9	0.7	15.9	7.1	24.7
2014 ^{d/}	1.1	1.1	22.7	9.7	34.6
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	14.4	3.6	20.0	14.4	52.3
2014 ^{d/}	15.4	3.9	31.2	27.6	78.1

TABLE IV-13. Estimates of Washington recreational ocean salmon angler trips (thousands) by port area and boat type.
(Page 2 of 2)

Year or Avg.	Neah Bay ^{a/}	La Push	Westport	Ilwaco ^{b/}	State Total
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	15.4	4.3	35.9	21.5	77.0
2014 ^{d/}	16.5	5.1	53.9	37.2	112.7

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

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

c/ 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	10.2	82.3	92.5	4.8	97.2	15.9	20.0	35.9	0.7	3.6	4.3	0.9	14.4	15.4
2014 ^{b/}	12.8	140.3	153.1	10.9	164.0	22.5	31.2	53.8	1.1	3.9	5.1	1.1	15.4	16.5

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	3.3	2.2	5.6	0.4	6.0	14.5	2.9	17.3	0.4	5.2	5.6	0.7	15.9	16.6
2014 ^{b/}	3.0	1.5	4.5	0.8	5.3	13.8	2.7	16.5	0.4	5.0	5.4	0.8	17.6	18.4

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	1.5	14.8	16.3	-	16.3	-	-	-	-	-	-	-	-	-
2014 ^{b/}	0.1	1.5	1.7	-	1.7	-	-	-	-	-	-	-	-	-

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^{a/b/} 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	459	40,648	1,754	81	15,448	41	50	4,638	148	0	0
2014 ^{c/}	237	70,402	3,696	13	19,033	41	385	39,873	2,295	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	93	22,813	-	6	7,018	-	27	2,757	-	0	0
2014 ^{c/}	179	32,675	333	-	7,701	-	179	14,673	339	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	552	63,461	1,754	87	22,466	41	77	7,395	148	0	0
2014 ^{c/}	416	103,077	4,029	13	26,734	41	564	54,546	2,634	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	-	-	-	-	-	-	-	-	-	0	0
2006 ^{e/}	-	-	-	-	-	-	-	-	-	0	0
2007	-	-	-	-	-	-	-	-	-	0	0
2008	-	782	-	-	11	-	-	137	-	0	0
2009 ^{f/}	-	-	-	-	-	-	-	-	-	0	0

a/ From 2000, catch downstream of boundary line from Tongue Pt., OR to Rocky Pt., WA. Prior to 2000, only catch downstream of Astoria-Megler Br.

b/ Prior to 1987, data on charter and private anglers were combined. Total Buoy 10 catch and effort data prior to 1987 are provided in Table B-21.

c/ Preliminary.

d/ There was no Area 4B add-on fishery prior to 1989.

e/ There was no Area 4B add-on fishery opening because the Area 4 ocean quota was not attained.

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

TABLE IV-16. Estimates of California coastal community and state personal income impacts in thousands of real (inflation adjusted, 2014) 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	6,497	16,503	16,182	21,227	9,111	69,520	89,376
1981-1985	3,290	3,970	9,291	17,538	5,976	40,065	49,882
1986-1990	1,237	3,063	16,295	31,641	11,833	64,070	78,632
1991-1995	10	145	1,024	11,908	6,784	19,871	23,946
1996-2000	11	173	723	12,466	7,558	20,931	22,146
2001	15	318	1,052	11,052	2,338	14,776	15,337
2002	278	533	3,797	15,795	4,254	24,658	26,194
2003	225	39	15,433	16,080	2,536	34,314	38,163
2004	1,978	437	7,568	23,776	5,351	39,110	39,933
2005	148	445	5,517	13,737	7,210	27,057	27,734
2006	-	-	2,515	6,503	1,003	10,021	10,332
2007	338	839	3,467	8,276	1,687	14,607	14,868
2008	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-
2010 ^{d/}	-	36	1,811	143	164	2,154	2,237
2011	69	445	5,035	2,263	995	8,807	9,096
2012	40	698	4,782	10,826	5,853	22,198	22,759
2013	227	1,936	13,109	19,525	4,082	38,879	39,763
2014 ^{d/}	221	871	8,505	9,551	1,055	20,203	20,690
RECREATIONAL							
1976-1980	1,260	1,461	851	12,790	857	17,220	19,316
1981-1985	1,381	1,423	682	11,327	904	15,717	17,691
1986-1990	2,339	2,438	1,189	13,843	3,720	23,529	27,420
1991-1995	848	913	1,379	11,709	5,608	20,458	24,020
1996-2000	393	723	1,409	11,739	5,157	19,421	22,594
2001	365	792	2,138	7,821	3,134	14,250	15,181
2002	163	881	2,261	9,819	4,838	17,962	19,077
2003	92	663	1,708	7,116	2,329	11,909	12,615
2004	139	1,112	2,214	11,513	4,519	19,498	20,625
2005	105	704	1,791	8,708	3,292	14,600	15,437
2006	62	695	1,476	5,916	1,982	10,131	10,753
2007	88	907	1,191	4,193	1,452	7,831	8,378
2008	-	-	27	-	-	27	31
2009	47	234	-	-	-	281	328
2010	9	196	429	1,742	1,161	3,536	3,771
2011	32	725	990	3,427	1,810	6,984	7,485
2012	342	1,301	987	6,179	3,000	11,809	12,599
2013	300	1,318	1,206	7,427	1,830	12,080	12,802
2014 ^{d/}	198	960	1,203	6,052	1,741	10,154	10,777

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, 2014) 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	4,171	5,369	12,594	19,381	8,057	49,572	67,211
1981-1985	1,351	1,738	4,076	7,189	3,121	17,475	23,749
1986-1990	624	3,637	8,094	15,602	2,957	30,913	41,749
1991-1995	87	678	2,778	1,349	138	5,030	6,781
1996-2000	144	284	2,940	1,697	409	5,475	6,672
2001	392	800	5,992	3,148	646	10,979	13,364
2002	1,122	950	5,131	4,536	820	12,560	15,211
2003	1,099	996	6,643	6,040	712	15,489	18,741
2004	927	741	6,562	7,140	1,529	16,898	18,262
2005	768	1,279	5,466	5,414	1,282	14,208	15,353
2006	1,004	625	1,642	442	385	4,099	4,398
2007	296	420	684	1,994	794	4,189	4,496
2008	423	206	-	-	73	702	740
2009	173	162	142	20	43	539	576
2010	962	279	1,396	948	374	3,959	4,258
2011	239	101	555	1,903	513	3,311	3,557
2012	693	487	2,082	1,825	709	5,796	6,240
2013	291	595	1,912	6,069	1,271	10,138	10,908
2014 ^{d/}	1,528	1,175	6,835	7,510	2,449	19,496	21,036
RECREATIONAL							
1979	3,496	1,116	5,317	5,383	2,591	17,904	23,083
1980	4,221	1,855	5,870	5,642	2,518	20,106	25,895
1981-1985	2,061	1,662	3,969	4,048	2,817	14,557	18,897
1986-1990	1,411	1,765	5,493	4,001	2,932	15,602	20,312
1991-1995	958	772	1,747	1,560	1,101	6,137	7,958
1996-2000	371	425	419	462	889	2,566	3,383
2001	1,441	776	1,831	1,535	1,071	6,654	8,156
2002	840	1,101	1,444	1,683	789	5,857	7,209
2003	1,226	1,273	2,888	2,103	619	8,109	9,975
2004	1,101	1,384	2,667	1,987	765	7,905	9,735
2005	799	571	906	1,235	510	4,022	4,929
2006	574	673	712	883	434	3,275	4,025
2007	805	913	1,381	1,105	445	4,650	5,715
2008	231	360	299	300	193	1,383	1,702
2009	811	985	1,992	594	245	4,627	5,697
2010	621	553	868	344	234	2,620	3,213
2011	485	542	840	419	245	2,531	3,112
2012	395	512	961	695	745	3,308	4,084
2013	444	602	1,031	1,199	829	4,105	5,064
2014 ^{d/}	795	1,069	2,503	1,191	693	6,250	7,711

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, 2014) 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	6,023	8,224	16,304	5,838	36,390	8,105	58,053
1981-1985	1,184	479	4,467	1,069	7,199	1,729	11,316
1986-1990	655	172	2,052	446	3,326	1,001	5,449
1991-1995 ^{g/}	482	106	686	49	1,325	193	1,950
1996-2000	162	3	196	19	380	100	522
2001	321	0	668	45	1,034	0	1,119
2002	663	86	1,164	194	2,107	0	2,323
2003	1,206	203	995	146	2,550	46	2,956
2004	888	280	1,104	108	2,380	28	2,751
2005	728	435	1,120	138	2,421	1	2,735
2006	542	439	421	283	1,684	36	1,994
2007	239	243	993	123	1,599	21	1,778
2008	156	206	590	157	1,109	13	1,250
2009	317	327	1,141	79	1,864	36	2,125
2010	342	537	4,061	88	5,029	-	5,253
2011	780	308	1,457	87	2,632	-	2,919
2012	1,163	671	1,485	206	3,525	-	3,991
2013	716	666	2,843	69	4,293	0	4,680
2014	578	679	1,655	1,035	3,947	1	4,468
RECREATIONAL							
1976-1980	2,219	1,101	22,072	10,804	36,197	-	48,932
1981-1985	1,342	137	8,685	4,463	14,627	-	19,795
1986-1990	1,030	118	4,928	2,657	8,733	-	11,828
1991-1995	547	107	3,042	1,543	5,238	-	7,084
1996-2000	290	79	1,424	697	2,490	-	3,356
2001	811	165	6,026	3,818	10,820	-	12,641
2002	689	176	5,551	3,039	9,456	-	11,048
2003	1,002	281	6,252	4,050	11,585	-	13,553
2004	1,175	249	5,100	3,343	9,867	-	11,569
2005	806	252	4,655	2,707	8,419	-	9,859
2006	528	221	3,437	2,105	6,291	-	7,364
2007	538	172	3,527	2,750	6,988	-	8,170
2008	234	103	2,320	980	3,636	-	4,249
2009	629	276	4,426	3,029	8,359	-	9,777
2010	453	226	4,431	2,120	7,231	-	8,450
2011	448	245	3,545	1,943	6,181	-	7,231
2012	568	235	4,027	1,869	6,698	-	7,841
2013	659	250	3,927	1,947	6,783	-	7,947
2014	729	344	5,688	2,937	9,698	-	11,345

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, 2014) 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			Chum			Chinook			Chum				
	Spring	Fall		Spring	Fall		Spring	Fall		Spring	TOTAL			
	Brights ^{d/}	Tules	Coho		Brights ^{d/}	Tules	Coho		Brights ^{d/}	Tules	Coho	Chum	TOTAL	
Oregon														
1987-2003	984	2,563	260	1,913	3	5,723	13	1,080	77	11	e/	1,181	6,903	
2004	2,290	1,518	323	1,842	1	5,974	382	1,559	375	58	-	2,374	8,348	
2005	688	1,103	192	2,016	e/	3,999	-	582	89	1	-	671	4,671	
2006	1,246	1,432	94	1,353	e/	4,125	1	776	15	32	-	824	4,949	
2007	1,486	787	e/	598	e/	2,871	129	756	e/	33	-	918	3,789	
2008	1,342	2,139	201	1,385	e/	5,066	626	1,934	210	110	-	2,880	7,946	
2009	845	1,932	291	2,168	e/	5,236	287	1,351	149	58	-	1,845	7,081	
2010	3,563	1,902	462	1,541	2	7,471	1,138	977	258	58	-	2,431	9,901	
2011	2,152	2,940	407	1,320	e/	6,819	355	1,205	83	56	-	1,699	8,518	
2012	1,884	1,809	336	269	e/	4,299	132	681	13	20	-	846	5,145	
2013	1,610	4,089	310	837	e/	6,846	159	2,088	62	12	-	2,322	9,167	
2014 ^{f/}	1,095	3,313	406	3,287	e/	8,102	491	1,845	40	77	-	2,453	10,554	
Washington^{f/g/h/}														
1987-2003	434	1,104		871	2	2,410	134	2,228		36	-	2,398	4,808	
2004	601	1,207		944	e/	2,751	446	1,773		64	-	2,283	5,034	
2005	479	855		466	e/	1,800	289	2,918		52	-	3,260	5,060	
2006	672	968		592	-	2,232	968	3,204		83	e/	4,255	6,487	
2007	239	486		487	e/	1,212	1	2,780		138	e/	2,919	4,131	
2008	586	1,050		580	1	2,216	1,893	3,890		380	e/	6,162	8,378	
2009	595	1,200		646	1	2,442	1,271	2,326		77	-	3,673	6,115	
2010	1,022	1,101		656	4	2,784	3,883	4,412		54	-	8,349	11,132	
2011	660	1,582		448	2	2,692	3,236	6,241		447	e/	9,924	12,616	
2012	583	1,485		111	1	2,180	1,682	3,628		71	-	5,381	7,561	
2013	340	2,693		371	-	3,404	1,579	8,733		218	-	10,531	13,935	
2014 ^{f/}	432	2,900		1,189	e/	4,521	3,512	11,229		809	4	15,550	20,070	
Columbia River														
1987-2003	1,418	3,927		2,783	5	8,133	147	3,385		46	e/	3,579	11,712	
2004	2,890	3,048		2,786	1	8,726	828	3,707		122	-	4,657	13,383	
2005	1,167	2,150		2,482	e/	5,799	-	3,588		53	-	3,931	9,730	
2006	1,918	2,494		1,945	-	6,357	969	3,995		115	-	5,079	11,435	
2007	1,725	1,273		1,085	e/	4,083	130	3,536		171	-	3,837	7,920	
2008	1,928	3,389		1,964	1	7,282	2,519	6,033		490	-	9,042	16,324	
2009	1,440	3,423		2,813	1	7,678	1,557	3,826		135	-	5,518	13,196	
2010	4,585	3,465		2,198	7	10,254	5,022	5,646		112	-	10,780	21,034	
2011	2,812	4,929		1,769	2	9,512	3,591	7,529		503	-	11,623	21,134	
2012	2,467	3,631		380	1	6,479	1,814	4,322		90	-	6,227	12,705	
2013	1,950	7,091		1,208	-	10,250	1,739	10,883		230	-	12,852	23,102	
2014 ^{f/}	1,527	6,619		4,476	e/	12,622	4,003	13,114		885	-	18,002	30,625	

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, 2014) 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	2,607	4,546	7,153
1991-1995	79	1,483	2,523	4,006
1996-2000	45	950	1,300	2,250
2001	126	2,655	2,803	5,459
2002	84	1,786	1,679	3,465
2003	89	2,116	1,465	3,581
2004	69	1,419	1,344	2,763
2005	55	1,418	782	2,200
2006	41	1,060	606	1,666
2007	36	878	658	1,536
2008	32	812	606	1,419
2009	73	1,718	1,189	2,907
2010	52	1,282	779	2,061
2011	49	1,317	688	2,006
2012	65	1,762	912	2,674
2013	66	1,814	833	2,646
2014 ^{b/}	108	3,083	1,214	4,296
AREA 4B ADD-ON^{c/}				
1989-1990	12	-	644	644
1991-1995	6	-	375	375
1996-2000	3	-	135	135
2001	-	-	-	-
2002	-	-	-	-
2003	-	-	-	-
2004	-	-	-	-
2005	-	-	-	-
2006	-	-	-	-
2007	-	-	-	-
2008	1	-	32	32
2009	-	-	-	-
2010	-	-	-	-
2011	-	-	-	-
2012	-	-	-	-
2013	-	-	-	-
2014 ^{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.

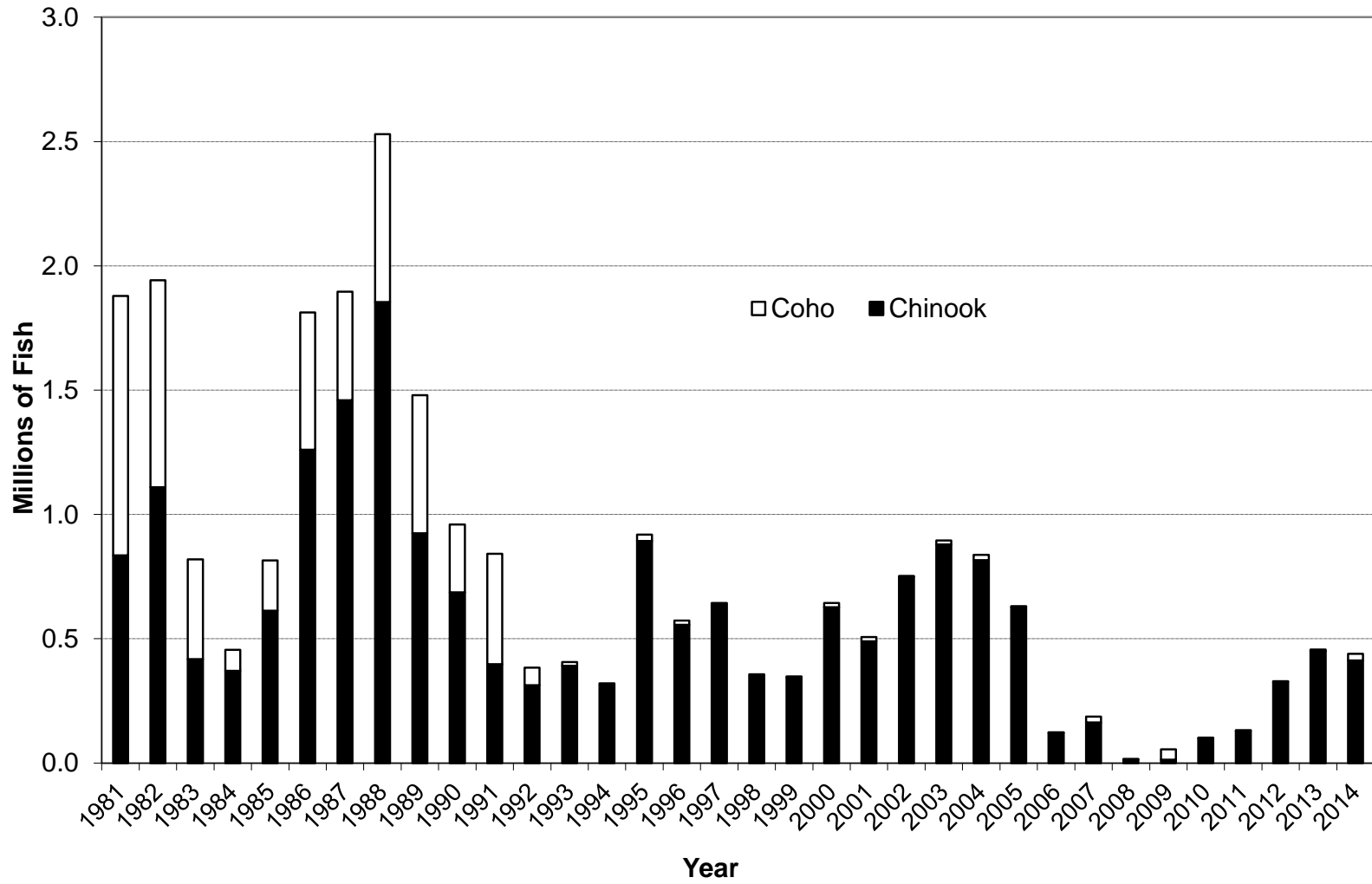


Figure IV-1. West Coast ocean non-Indian commercial Chinook and coho harvest.

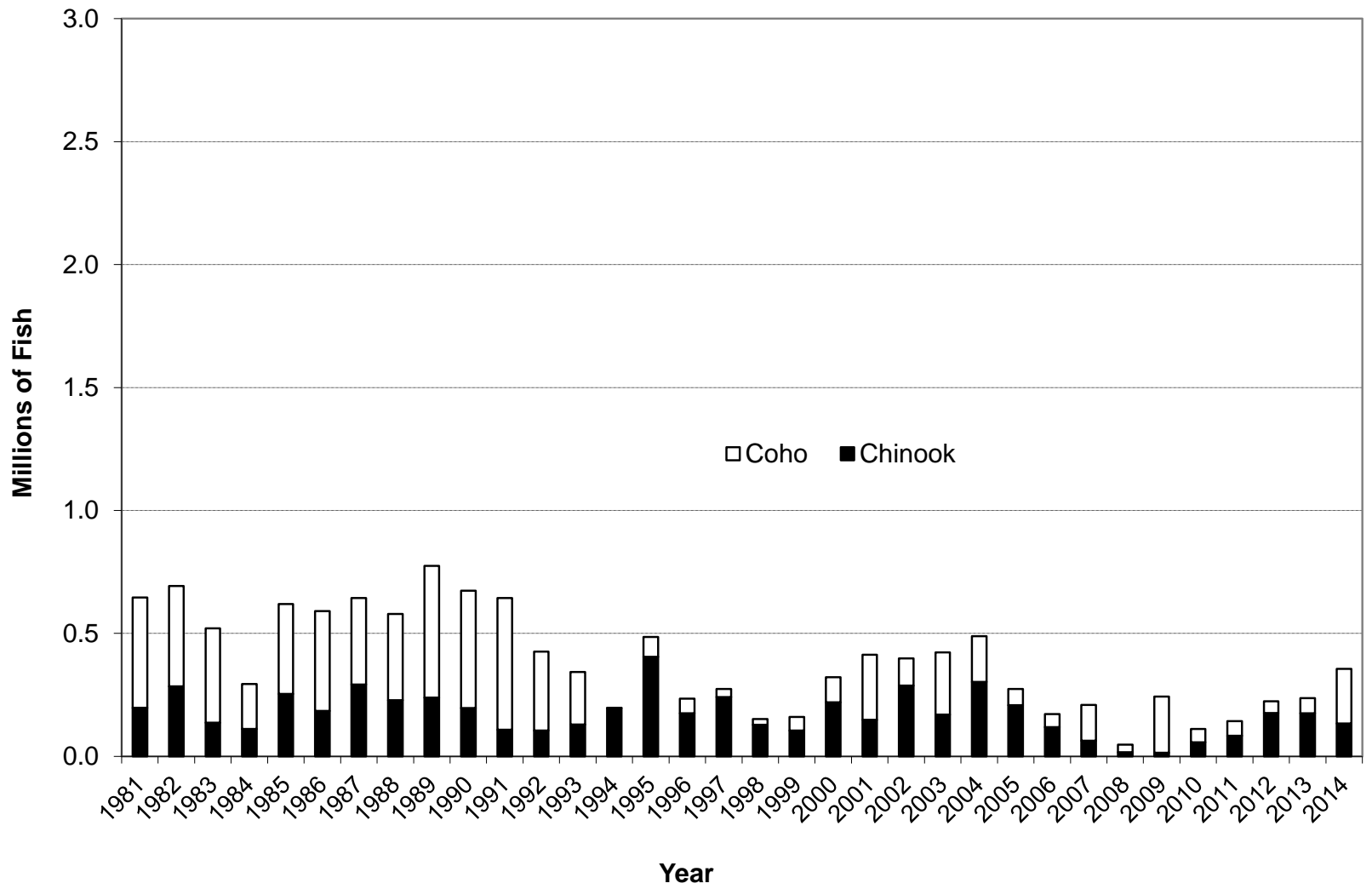


Figure IV-2. West Coast ocean recreational Chinook and coho harvest.

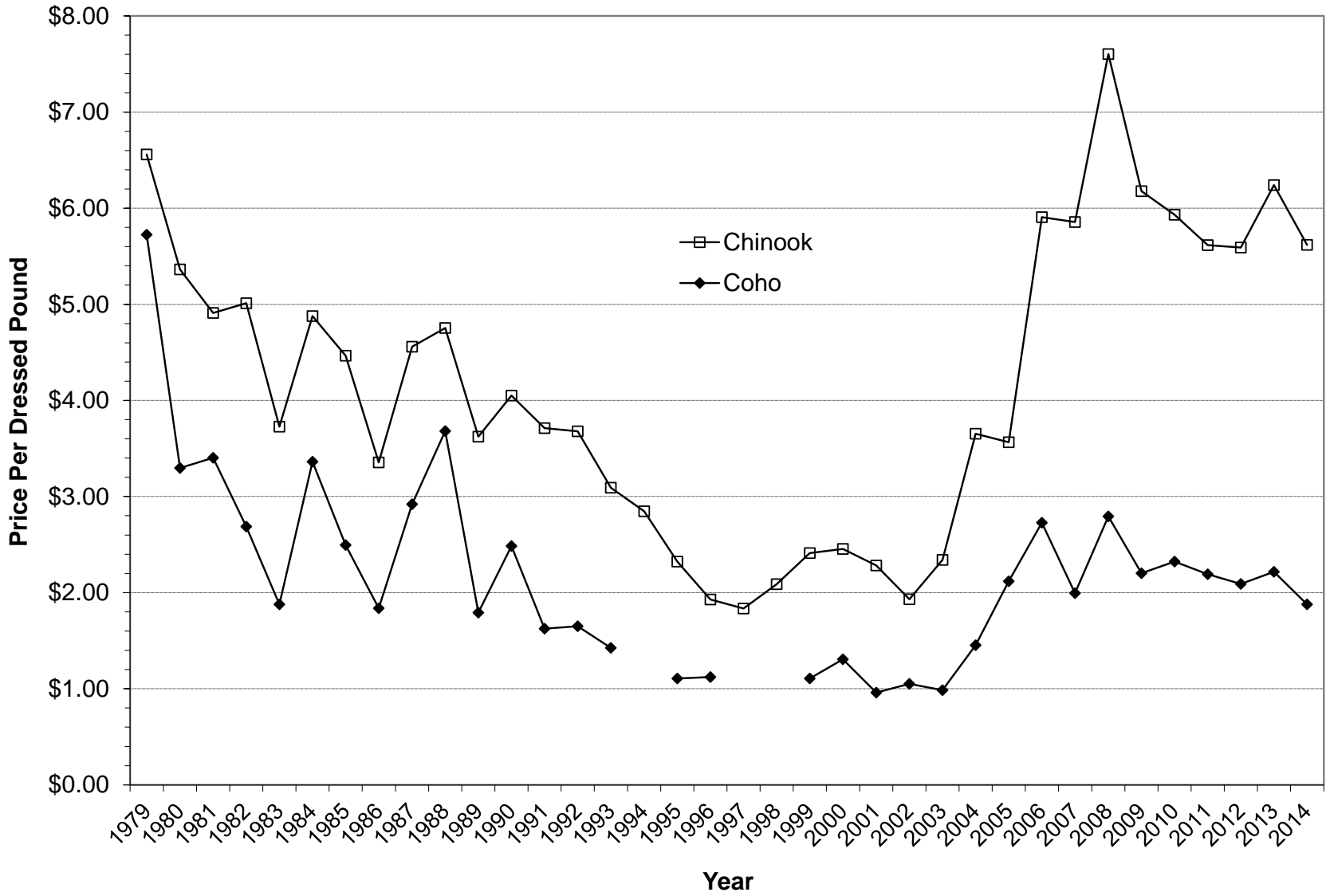


Figure IV-3. West Coast non-Indian ocean commercial salmon average annual exvessel prices (inflation adjusted, 2014 dollars).

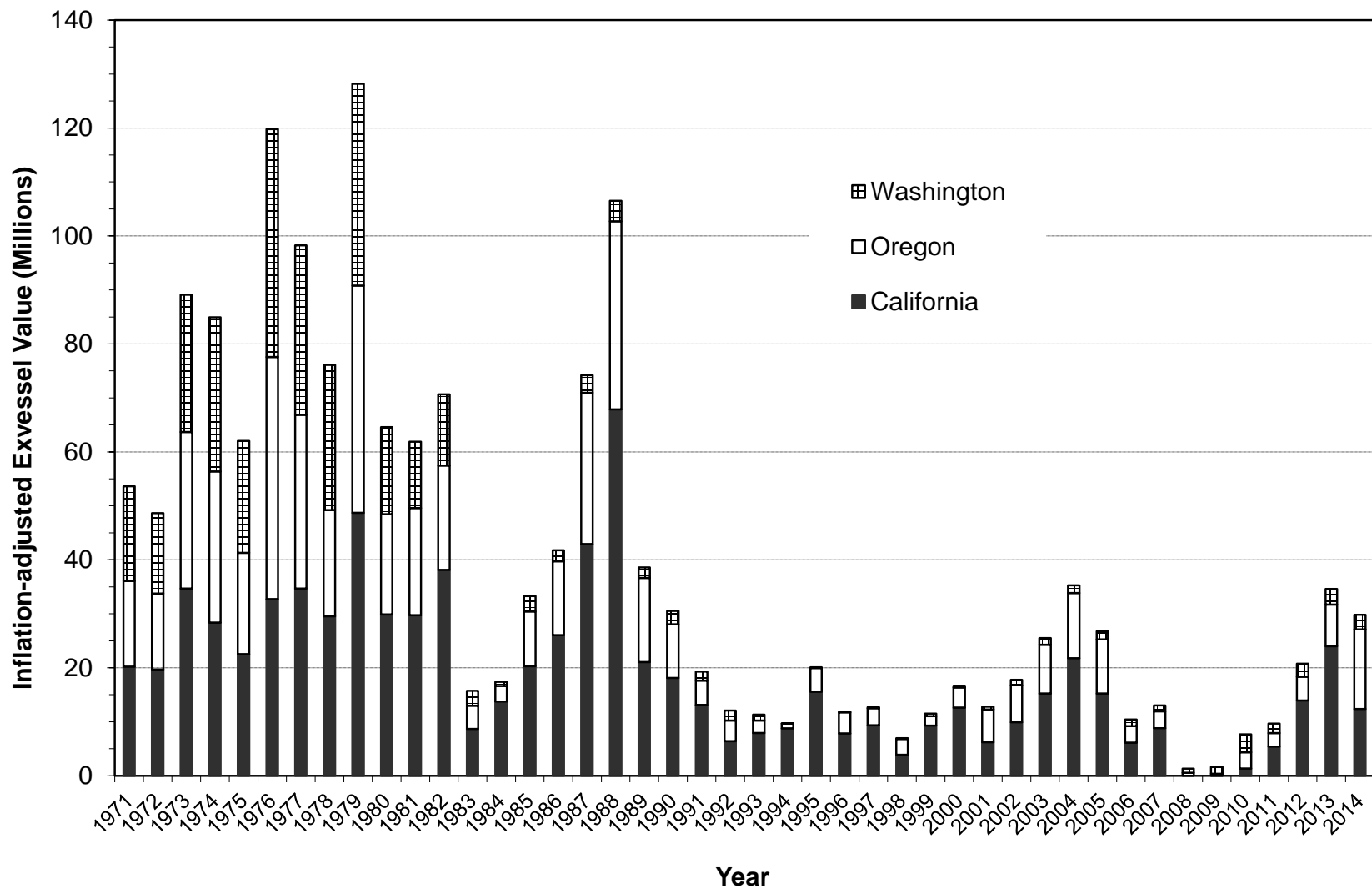


Figure IV-4. Exvessel value of West Coast non-Indian ocean commercial Chinook and coho landings by state of landing (inflation adjusted, 2014 dollars).

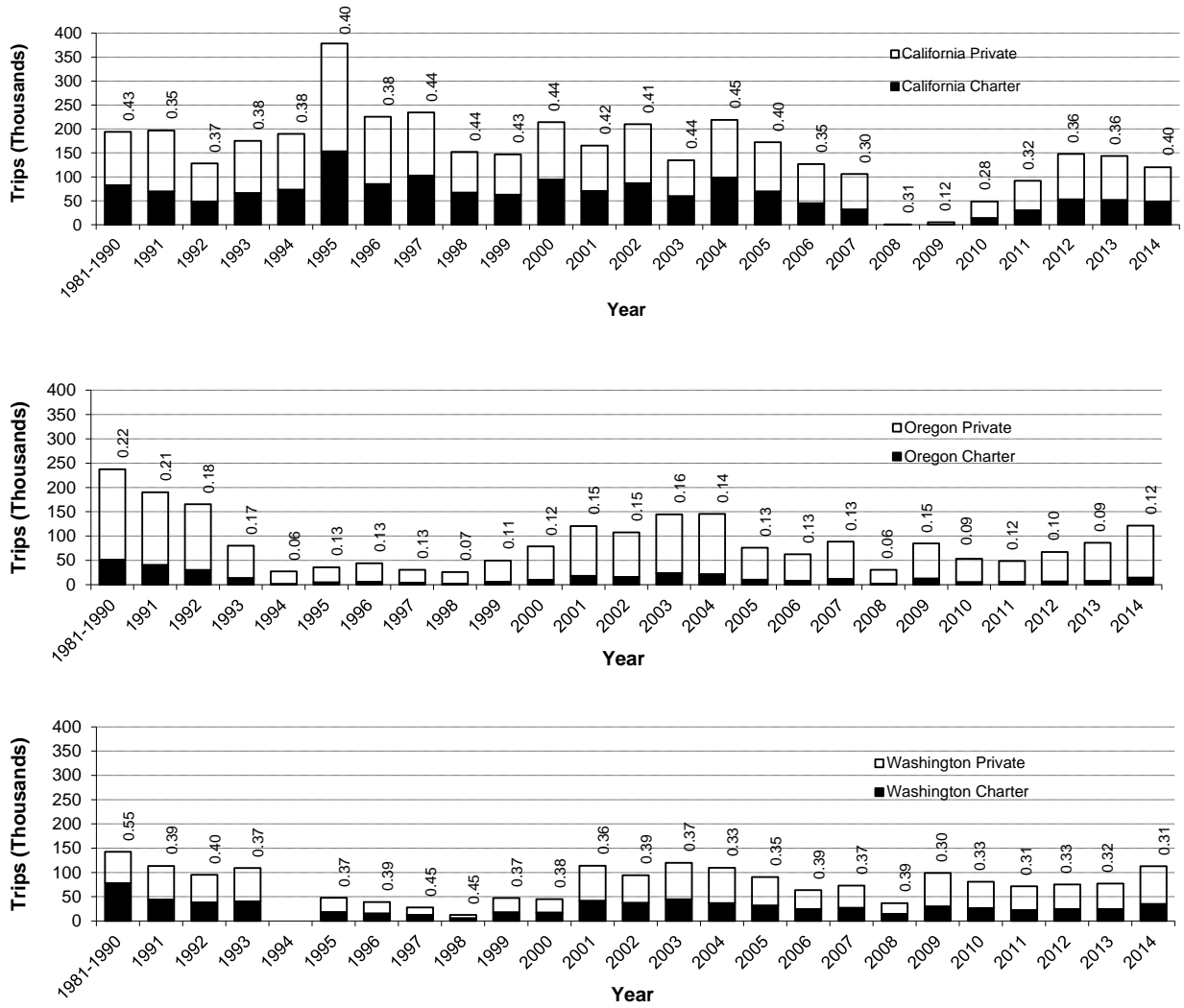


Figure IV-5. Total recreational ocean salmon trips for California, Oregon, and Washington, with proportion of charter trips shown above each bar.