

I. SUMMARY OF 1984 OCEAN SALMON MANAGEMENT

Fishing Seasons

Troll Seasons

A summary of the actual 1984 troll fishing seasons for both the fishery conservation zone (FCZ) and state territorial waters is provided in Table I-1. The actual seasons in the FCZ were identical to those recommended in April by the Council. However, within state territorial waters there were three seasons which were open in contravention to federal regulations: (1) an all-salmon-except-coho season from Cape Falcon to Cape Blanco, Oregon, from September 1 through September 30; (2) an all-salmon season from the Oregon-California border to Point Delgada, California, from August 16 through August 22; and (3) an all-salmon season from Point Delgada to Point Arena, California, from August 16 through September 30. The fishery between Cape Blanco and Cape Falcon was closed at midnight September 21 by federal preemption of Oregon's fishery management authority in that area.

Responding to near record low predictions for Oregon Production Index (OPI) coho stocks, no all-species troll season was allowed in the FCZ between Cape Falcon, Oregon and Point Arena, California. The all-salmon season north of Cape Falcon was limited by a 24,800 coho quota that was taken in less than three full days of fishing. The May all-salmon-except-coho fishery north of Cape Falcon was limited by a quota of 14,000 chinook which stopped the fishery after seven days. All other troll fisheries were managed on the basis of fixed closing dates rather than quotas.

A summary of troll fishing seasons since 1977 off of each of the three Pacific coast states is provided in Appendix C, Tables C-1, C-3, and C-5.

Recreational Seasons

A summary of the actual recreational fishing seasons for both the FCZ and state territorial waters is provided in Table I-2. With one exception, the actual seasons in the FCZ were identical to those recommended in April by the Council. That exception was an emergency regulation implemented by the Secretary of Commerce at the Council's request which changed the all-salmon recreational season scheduled to open July 28 in two subareas between Cape Falcon and Cape Shoalwater to all-salmon-except-chinook fisheries. Changes in state regulations to conform to this emergency regulation preceded federal action.

Within state territorial waters, two recreational seasons were opened off Oregon in contravention to federal regulations. The first was an all-salmon season between Cape Falcon and the Oregon-California border from August 25 through September 3. The second was an all-salmon-except-coho sport fishery between Manhattan Beach and Pyramid Rock (near Tillamook Bay) which was scheduled to be open from September 15 through October 31. However, this season was preempted by federal regulation on September 21.

Quotas were used to regulate all recreational seasons north of Cape Falcon in 1984. Between Cape Falcon and the U.S.-Mexico border there was a coho quota, but no chinook quota. While coho caught south of the Oregon-California border

Table I-1. Summary of actual ocean troll salmon fishing seasons for 1984.

Area	Season		Total Days	Preseason quota		Special Restrictions a/b/
	Salmon Species	Dates		Chinook	Coho	
<u>U.S.-Canada border to Cape Falcon, OR</u>	All-except-coho	May 1-May 7	7	14,000	-	Conservation Zone 1 (Columbia R. mouth) closed.
U.S.-Canada border to Cape Alava, WA S. Jetty, Columbia River to Cape Falcon	All	Aug. 4-Aug. 6 ^{c/}	3	d/	12,400	Open inside 10 miles.
	All	Aug. 4-Aug. 6 ^{c/}	3	d/	12,400	
<u>Cape Falcon to Cape Blanco, OR</u>	All-except-coho	May 1-June 15	108	none	e/	Open inside 3 miles in contravention to federal regulations.
		July 1-Aug. 31 Sept. 1-Sept. 21	21	none	e/	
Manhattan Beach to Pyramid Rock	All-except-coho	Sept. 15-Sept. 21	7	none		Open inside 3 miles in contravention to federal regulations.
<u>Cape Blanco to Pt. Delgada, CA</u>	All-except-coho	Oct. 1-Oct. 31	31	none		Open inside 3 miles.
		May 16-June 6 July 16-Aug. 22	60	none	e/	
Cape Blanco to Humbug Mountain	Chinook-only	Oct. 1-Nov. 30	61	None		Open inside 3 miles.
OR-CA border to Pt. Delgada	All	Aug. 16-Aug. 22	7	none	none	Open inside 3 miles in contravention to federal regulations; 12-mile square closed at mouth of Klamath River.
		May 1-Sept. 30 Aug. 16-Sept. 30	153	none	e/	
<u>Pt. Delgada to Pt. Arena, CA</u>	All-except-coho	May 1-Sept. 30 Aug. 16-Sept. 30	46	none	none	Open inside 3 miles in contravention to federal regulations.
<u>Pt. Arena to U.S.-Mexico border</u>	All-except-coho	May 1-May 31	31	none	e/	
		June 1-Sept. 30	122	none	none	

a/ Barbless hooks required in all areas in 1984.

b/ North of Cape Falcon, Oregon the minimum size limits were 28 inches for chinook and 16 inches for coho. Between Cape Falcon and the Oregon-California border the minimum size limits were 26 inches for chinook and 16 inches for coho. South of the Oregon-California border the limits were 26 inches for chinook and 22 inches for coho.

c/ Fishing ceased when state waters closed at noon on August 6. The FCZ waters remained open until midnight August 8 while quota estimates were confirmed.

d/ The combined quota for these two areas was 2,700 chinook.

e/ Estimated hooking mortality of 19,000 coho during the all-salmon-except-coho seasons from Cape Falcon to the U.S.-Mexico border.

Table I-2. Summary of actual ocean recreational salmon fishing seasons for 1984.

Area	Salmon Species		Season Dates		Total Days	Bag Limit	Preseason quota		Special Restrictions a/b/
	Salmon Species	Salmon Species	Dates	Dates			Chinook	Coho	
<u>U.S.-Canada border to Queets River, WA</u>							900	6,500	
U.S.-Canada border to Cape Alava, WA	All-except-coho		June 25-July 27		33	1		-	Open in state waters adjacent to Port of Neah Bay (Area 4B).
U.S.-Canada border to Queets River	All		July 28-Aug. 15		19	1			Open inside 3 miles.
<u>Queets River to Klipsan Beach, WA</u>	All-except-coho		May 26-May 28		3	2	5,900	700 ^{c/}	Open inside 6 miles.
<u>Cape Shoalwater, WA to Cape Falcon, OR</u>							3,500	43,000	
Cape Shoalwater to Klipsan Beach	All-except-chinook		July 28-Aug. 8		12	2			
South Jetty, Columbia R. to Cape Falcon	All-except-chinook		July 28-Aug. 8		12	2			Open inside 10 miles.
<u>Cape Falcon to U.S.-Mexico border</u>							None	106,000	
Cape Falcon to OR-CA border	All		July 9-Aug. 7		30	2			Open inside 3 miles in contravention to federal regulations.
	All		Aug. 25-Sept. 3		10	1 ^{d/}			Open inside 3 miles in contravention to federal regulations.
Manhattan Beach to Pyramid Rock	All-except-coho		Sept. 15-Sept. 21		7	2			Open inside 3 miles in contravention to federal regulations.
Cape Blanco to OR-CA border	All-except-coho		Aug. 8-Oct. 31		85	2			Open inside 3 miles.
Cape Blanco to Humberg Mountain	Chinook		Oct. 1-Nov. 30		61	2			12-mile square closed at mouth of Klamath River, Aug. 1-Aug. 31.
OR-CA border to Cape Vizcaino, CA	All		Feb. 18-June 15		259	2			
	All		July 1-Nov. 18		259	2			
Cape Vizcaino to U.S.-Mexico border	All		Feb. 18-Nov. 18		274	2			

a/ Barbless hooks required in all areas in 1984.

b/ Minimum size limits north of Cape Falcon, Oregon were 24 inches for chinook and 16 inches for coho. South of Cape Falcon, the minimum size limit was 20 inches for both coho and chinook. Inside Washington Management Area 4B, the minimum chinook length limit was 34 inches between June 25 and July 16 and 24 inches thereafter.

c/ Estimated hook-and-release mortality.

d/ Bag limit of 2 fish south of Cape Blanco, only one of which could be a coho.

counted against the coho quota which closed fisheries north of California, California fisheries remained opened after the quota was reached.

A summary of recreational fishing seasons since 1977 off each of the three Pacific coast states is available in Appendix C, Tables C-2, C-4, and C-6.

Treaty Indian Seasons

In response to concerns over the status of Bonneville Pool chinook and Grays Harbor coho, treaty fisheries were managed under quotas for both species. An all-species-except-coho season operated from May 1 through June 30. An all-species season began on July 1 and ended in mid-August upon attainment of the coho quota. Treaty troll seasons were reduced substantially from prior years.

A summary of the actual 1984 treaty Indian fishing seasons for both the FCZ and state territorial waters is provided in Table I-3. An historical summary of seasons since 1977 is provided in Appendix C, Table C-7.

Fishing Effort and Harvest

California Fisheries

Troll - Overall, troll fishing effort (days fished) was down slightly from 43,100 days fished in 1983 to 42,500 in 1984. Compared to 1983, north coast effort decreased 32 percent while effort on the south coast increased by 23 percent, due primarily to an almost doubling of fishing effort out of San Francisco.

The statewide troll landings of 290,700 chinook were 6 percent above the 274,400 catch in 1983. The north coast catch decreased by 61 percent while the south coast catch increased by 30 percent. This catch pattern reflected the large increase in effort out of San Francisco from 70,800 days fished in 1983 to 162,500 in 1984.

The coho landings declined 24 percent from 56,900 in 1983 to 43,500. The north coast landings declined from 56,200 to 16,200. The south coast landings, however, increased from 3,700 to 27,200 coho (Figure I-1). The lower north coast catch was due in part to the coho closure north of Point Arena.

Recreational - Recreational effort totaled 123,600 days fished, 11 percent higher than the 111,600 days in 1983. Effort for the north coast declined by 9 percent, while effort for the south coast increased by 27 percent.

Chinook landings increased 44 percent from the 62,100 in 1983 to 89,300. The catch pattern paralleled the effort pattern with catches off the north coast declining by 13 percent, while catches off the south coast increased by 54 percent.

Coho landings decreased 69 percent from 26,900 in 1983 to 18,400. Catches for both the north and south coasts declined. The north coast catch declined 32 percent from 26,300 coho in 1983 to 18,000, while the south coast catch dropped from 600 to 400 fish.

Table I-3. Summary of actual ocean treaty Indian troll seasons for 1984.

Tribe and Area ^{a/}	Seasons			Size Limit (inches)	
	Salmon Species	Dates	Total Days	Chinook	Coho
Quinault, Hoh, and Quileute, Ocean	All-except-coho	May 1-June 30	61	26 ^{b/}	-
	All	July 1-Aug. 16	47	26 ^{b/}	16
Makah, Area 4B Ocean Ocean	All	Jan. 1-Dec. 31	365	24	20 ^{c/}
	All-except-coho	May 1-June 30	61	24	16
	All	July 1-Aug. 18	49	24	16
Klallam, Area 4B	All	Jan. 1-April 14	104	22	16
	All	June 17-Sept. 3	79	24	16
	All	Sept. 4-Dec. 31	118	22	16

a/ Area 4B is a Washington State management zone inside territorial waters within the Strait of Juan de Fuca.

b/ A daily limit of two chinook between 24 inches and 26 inches could be retained for ceremonial and subsistence purposes.

c/ 16 inch size limit May 1-September 15.

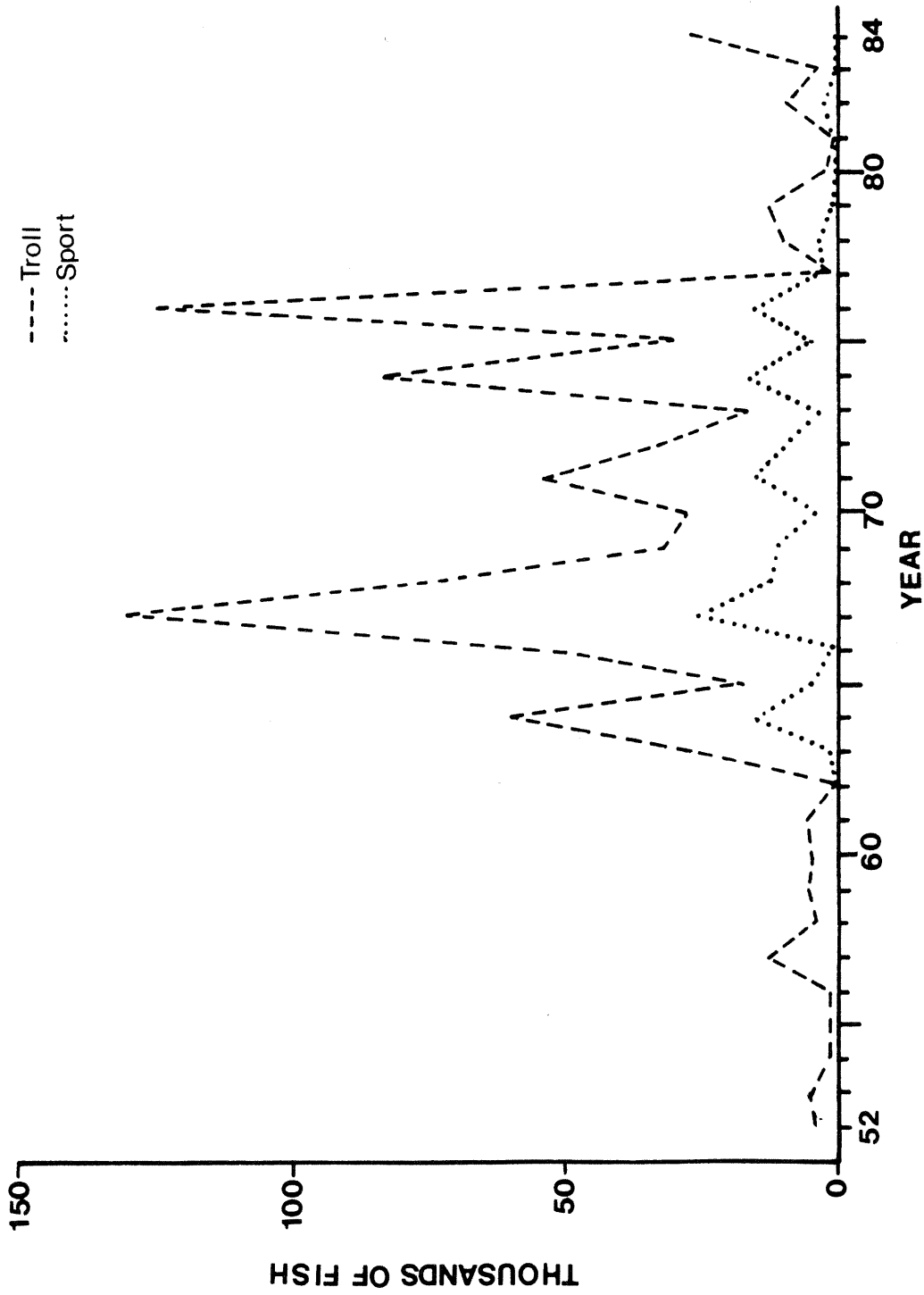


FIGURE I-1. Ocean coho salmon landings south of Point Arena by fishery, 1952-1984.

Oregon Fisheries

Troll - Troll effort declined 65 percent from 22,100 days fished in 1983 to 7,700. Reductions occurred at all ports. The closed coho season south of Cape Falcon, combined with a decision by Oregon Department of Fish and Wildlife to refund license fees and not require the landing of any fish in 1984 to validate the troll salmon permit, were primarily responsible for the reduced effort. There was a shift in effort to the southern areas in 1984 with the Coos Bay and Brookings area accounting for 61 percent of the total effort compared to only 48 percent in 1983. This shift was due principally to the occurrence of directed chinook-only fisheries in the southern area. Effort in the May fishery was down about 67 percent from 1983.

The chinook troll landings totaled 63,600 compared with 79,600 in 1983, a 20 percent decline. Approximately 95 percent of the chinook were caught south of Tillamook. Only Brookings showed an increased catch over 1983.

Coho troll landings were not permitted south of Cape Falcon. State landings of 14,000 were 4 percent of the 319,800 coho caught in 1983.

Recreational - Recreational fishing effort amounted to 203,600 angler trips, down 22 percent from 261,500 in 1983. Salmon trips also dropped substantially from 226,000 in 1983 to 153,100, a 32 percent decline. Salmon effort peaked in July at levels considerably below those of recent years. Effort in the Tillamook and Newport areas was comparable to 1983 while effort in the other areas was down substantially. Charterboat effort declined 42 percent from the 41,900 salmon angler trips in 1983 to 24,300. Pleasure boat effort was down 30 percent from 184,100 in 1983 to 128,700.

The chinook catch of 17,000 fish was down 31 percent from the 24,700 catch in 1983. Both the Tillamook and Newport areas had slight increases in their catches, while catches in the other areas declined. The elimination of the May and June fishery obviously contributed to this overall decline.

The coho catch was down 16 percent from 146,900 in 1983 to 123,300 in 1984. The Tillamook and Newport areas showed increases with the 1984 catch approximately double 1983, while catches in other areas declined substantially.

Washington Fisheries

Troll - Non-treaty troll effort for Washington totaled 1,100 days fished. This was down 89 percent from the 10,100 days fished in 1983 and down 98 percent from the 1973-1975 average of 52,200. This reduction reflects the low catch quotas in effect in 1984.

Chinook landings of 9,600 fish declined 81 percent from the 49,300 fish landed in 1983.

Coho landings were 23,400 compared to 23,100 in 1983 and the 1971-1975 average of 849,600.

Recreational - Total Washington recreational fishery effort for the 1984 season was 36,300 angler trips. This compares to 209,500 trips in 1983 and an average 482,900 trips for the 1971-1975 period.

Chinook landings in 1984 were just 7,000 fish. This compares to 48,300 in 1983 and an average 210,400 for the period 1971-1975. Most of the chinook catch was taken in the May chinook season and landed in the Port of Westport. Additional unanticipated shaker chinook mortalities were estimated for the coho-only season in the Columbia River area and the Neah Bay "trophy" chinook fishery.

Coho landings in 1984 were 39,700 fish. This compares to 209,300 in 1983 and an average of 567,400 for the 1971-1975 period. Nearly all of the 1984 coho catch was taken in the Columbia River area.

Treaty Indian Troll - Total deliveries for the treaty troll fishery amounted to 2,100, approximately 58 percent of the number of deliveries in 1983. Effort in the Cape Flattery area was substantially lower than in 1983, due primarily to two factors: (1) smaller vessels did not participate as extensively as in previous years; and (2) combination vessels concentrated on a larger than anticipated run of Fraser River sockeye.

The winter chinook fishery in the Strait of Juan de Fuca accounted for 55 percent of total deliveries by treaty troll fisheries. Winter season deliveries were 23 percent lower than 1983, while deliveries during the remainder of the season were reduced 56 percent from 1983 levels.

Treaty troll fisheries harvested a total of 19,500 chinook, with 3,200 chinook taken in ocean waters. Approximately 84 percent of the total treaty troll catch of chinook was taken inside the Strait of Juan de Fuca. Most of this catch was taken during the winter season.

The coho harvest by treaty troll fisheries was 43,800, with 96 percent harvested in ocean fishing areas.

Coastwide Summary

A coastwide summary of ocean fishing effort and harvest is provided in Tables I-4 through I-8 for chinook, coho, and pink salmon. The combined harvest by the 1984 commercial troll ocean salmon fisheries of California, Oregon, and Washington amounted to 384,000 chinook and 126,000 coho. The recreational fleet harvested 113,300 chinook and 181,400 coho.

The commercial chinook harvest was 89 percent of the 1983 catch and 37 percent of the 1971-1975 average. The coastwide recreational chinook harvest was 84 percent of the 1983 catch and 26 percent of the 1971-1975 average.

The commercial coho harvest was 28 percent of the 1983 catch and only 6 percent of the 1971-1975 average. The coastwide recreational coho harvest was 48 percent of the 1983 catch and 21 percent of the 1971-1975 average.

A complete listing of historical effort and harvest data for each state is provided in tabular form in Appendix A.

Table I-4. Ocean salmon troll effort and catch off California, Oregon and Washington, 1976-1984 and 1971-1975 average.

Year	Effort		Catch					
	No. of Deliveries	Days Fished	Numbers			Pounds ^{a/}		
			Chinook	Coho	Pink	Chinook	Coho	Pink
California								
1971-1975 Average	45,200	NA	562,700	361,600	7,800 ^{b/}	5,742,800	2,211,300	37,000 ^{b/}
1976	60,000	NA	539,900	621,800	c/	4,943,900	2,843,900	c/
1977	61,500	NA	600,200	45,200	1,800	5,637,000	283,200	9,300
1978	66,900	NA	637,700	315,800	c/	5,492,400	1,295,100	c/
1979	56,300	104,400	726,100	183,900	700	7,548,000	1,198,000	3,800
1980	51,100	82,400	573,000	49,800	100	5,715,000	301,600	400
1981 ^{d/}	47,700	69,000	549,300	78,000	7,000	5,471,000	466,000	27,000
1982 ^{d/}	57,000	92,600	764,000	89,800	c/	7,365,800	541,600	c/
1983 ^{d/}	28,700	43,100	274,400	56,900	c/	2,047,000	255,000	c/
1984 ^{a/}	24,500	42,500	290,700	43,500	0	2,588,000	345,000	0
Oregon^{e/}								
1971-1975 Average	45,600	NA	208,500	981,000	1,800 ^{b/}	2,127,900	6,015,400	8,000 ^{b/}
1976	75,800	NA	184,300	1,827,000	0	1,921,600	9,061,200	0
1977	85,100	NA	340,000	446,100	88,000	3,464,900	2,640,800	396,100
1978	45,700	NA	191,500	611,600	<100	1,893,600	2,779,000	200
1979	43,600	48,800	245,500	714,600	20,500	2,580,000	4,586,300	106,300
1980	29,900	39,900	209,400	383,300	300	2,171,500	2,190,200	1,600
1981 ^{d/}	35,100	45,200	160,400	620,300	60,200	1,573,400	3,324,300	324,000
1982 ^{d/}	26,500	33,900	232,800	521,900	<100	2,351,300	2,708,400	<100
1983 ^{d/}	17,400	22,100	79,600	319,800	<100	654,800	1,098,000	200
1984 ^{d/}	5,400	7,800	63,600	14,000	0	539,300	71,000	0
Washington^{f/}								
1971-1975 Average	NA	53,900 ^{f/}	279,900	870,800	51,100 ^{b/}	3,211,200	4,804,100	240,600
1976	NA	60,700	361,400	1,384,800	1,500	3,802,400	6,231,500	5,800
1977	NA	57,300	267,500	716,200	288,300	2,834,300	3,713,500	1,384,200
1978	NA	43,500	166,200	609,800	3,500	2,073,500	2,802,200	13,400
1979	NA	42,600	148,100	665,600	560,700	1,686,600	3,657,500	2,534,400
1980	NA	27,400	135,300	391,900	1,700	1,666,400	1,972,100	7,500
1981	NA	28,400	118,200	401,700	237,300	1,237,800	1,751,500	928,500
1982 ^{d/}	NA	19,900	161,700	382,200	300	1,650,200	1,935,200	900
1983 ^{d/}	NA	14,000	76,400	68,300	106,400	686,900	193,100	374,100
1984 ^{d/}	NA	3,200	28,700	68,400	0	192,200	212,800	0

a/ Dressed weight.

b/ Odd-year average.

c/ Under 50.

d/ Preliminary.

e/ Includes catches made off California, Washington and Alaska and landed in Oregon.

f/ Includes treaty-Indian catches and catches made off Oregon, California, and Alaska and landed in Washington. Includes treaty Indian landings which represent a minimum estimate of days fished.

g/ 1973-1975 average; 1971 and 1972 effort data are deliveries and are not comparable.

Table I-5. Ocean salmon recreational effort and catch off California, Oregon and Washington, 1976-1984 and 1971-1975 average.

Year	Effort (Angler Trips)		Catch (Numbers of Fish)				Salmon/ Angler Trip
	Salmon Trips	Total Trips	Chinook	Coho	Pinks	Total	
<u>California</u>							
1971-1975 Average	242,200		169,600	48,300		217,900	0.90
1976	182,200		81,000	57,900		138,900	0.76
1977	182,200		108,000	14,300		122,300	0.67
1978	156,100		75,600	44,400		120,000	0.77
1979	163,600		112,200	16,500		128,700	0.79
1980	148,400		85,400	22,100		107,500	0.72
1981 ^{a/}	128,000		83,700	9,700		93,400	0.73
1982 ^{a/}	170,400		149,200	24,600		173,800	1.02
1983 ^{a/}	111,600		62,100	26,900		89,000	0.80
1984 ^{a/}	123,600		89,300	18,400		107,700	0.87
<u>Oregon^{b/}</u>							
1971-1975 Average	NA	345,800	49,400	271,800	1,100 ^{c/}	321,800	0.93
1976	NA	538,400	79,300	501,300		580,600	1.08
1977	NA	404,500	61,400	195,300	4,000	260,700	0.64
1978	NA	403,700	22,800	259,800		282,600	0.70
1979	301,300	341,800	20,900	180,800	600	202,300	0.67
1980	331,400	362,000	19,000	325,800		344,900	1.04
1981	311,000	346,700	29,200	199,800	1,600	230,600	0.74
1982	226,000	249,700	38,700	175,100		213,800	0.95
1983	226,000	261,500	24,700	146,900	<100	171,700	0.76
1984 ^{a/}	153,100	203,600	17,000	123,300	<50	140,300	0.92
<u>Washington</u>							
1971-1975 Average	482,900		210,400	567,400	10,100 ^{c/}	787,900	1.60
1976	538,100		170,700	942,800		1,113,500	2.07
1977	530,000		175,000	490,200	29,300	694,500	1.31
1978	482,800		96,400	469,800		566,200	1.17
1979	310,700		76,900	290,300	17,600	384,800	1.24
1980	280,100		53,600	361,500		415,100	1.48
1981	234,700		84,400	237,600	10,200	332,200	1.42
1982 ^{a/d/}	218,100		106,700	206,000		312,700	1.43
1983 ^{a/}	209,500		48,300	209,300	4,500	262,000	1.25
1984 ^{a/}	36,300		7,000	39,700		46,700	1.29

a/ Preliminary.

b/ Oregon fish/angler computed based on total angler trips prior to 1979 and on salmon trips beginning in 1979.

c/ Odd-year pink average for 1971-1975.

d/ Includes Washington-based effort and catch from Oregon state waters (July 26-August 1) and Strait of Juan de Fuca after WDF and NMFS ocean closures.

Table I-6. Commercial troll and ocean sport chinook catches (thousands of fish), 1971-1984 and 1971-1975 average.

Year	California			Oregon ^{b/}			Washington ^{c/}			PFMC Area			Southeast		Grand Total
	Troll	Sport	State Total	Troll	Sport	State Total	Troll	Sport	State Total	Troll Sport		Troll	Alaska Troll		
										Troll	Sport			Troll	
1971	434	188	622	103	30	133	252	160	412	789	378	1,167	1,270	334	2,771
1972	492	200	692	127	44	171	203	212	415	822	456	1,278	1,223	242	2,742
1973	817	198	1,015	363	61	424	317	204	521	1,497	463	1,960	1,091	308	3,359
1974	492	157	649	224	37	261	353	215	568	1,069	409	1,478	1,178	322	2,978
1975	579	104	683	225	76	301	274	262	536	1,078	442	1,520	1,103	287	2,910
1971-1975 Average	563	170	733	209	49	258	280	210	490	1,052	429	1,481	1,173	299	2,953
1976	540	81	621	184	79	263	361	171	532	1,085	331	1,416	1,249	231	2,896
1977	563	127	690	340	61	401	268	175	443	1,171	363	1,534	1,111	272	2,918
1978	519	84	603	192	23	215	166	96	262	877	203	1,080	1,033	376	2,489
1979 ^{a/}	659	123	782	245	21	266	148	77	225	1,052	221	1,273	997	338	2,608
1980 ^{a/}	575	86	661	209	19	228	133	54	187	917	159	1,076	1,002	300	2,378
1981 ^{a/}	549	84	633	160	29	189	117	84	201	826	197	1,023	868	248	2,147
1982 ^{a/}	750	149	899	232	39	271	160	107	267	1,142	295	1,437	994	242	2,762
1983 ^{a/}	274	62	336	79	25	104	77	48	125	430	135	565	772	271	1,608
1984 ^{a/}	291	89	380	64	17	81	29	7	36	384	113	497	802	240	1,539

a/ Preliminary from 1979 for California; from 1979 for Washington, and from 1981 for Oregon.

b/ Includes catches from California, Washington, and Alaska landed in Oregon.

c/ Includes catches from California, Oregon, and Alaska landed in Washington.

Table I-7. Commercial troll and ocean sport coho catches (thousands of fish), 1971-1984 and 1971-1975 average.

Year	California			Oregon ^{b/}			Washington ^{c/}			PFMC Area			Southeast Alaska		Grand Total
	Troll	Sport	State Total	Troll	Sport	State Total	Troll	Sport	State Total	Troll	Sport	Total	Troll	Total	
1971	442	67	509	1,490	312	1,802	1,264	747	2,011	3,196	1,126	4,322	3,457	391	8,170
1972	158	45	203	825	248	1,073	575	542	1,117	1,558	835	2,393	2,369	792	5,554
1973	348	32	380	796	232	1,028	702	472	1,174	1,846	736	2,582	2,483	540	5,605
1974	656	77	733	1,137	314	1,451	1,038	595	1,633	2,831	986	3,817	2,700	845	7,362
1975	204	21	225	657	252	909	774	481	1,255	1,635	754	2,389	1,404	214	4,007
1971-1975 Average	362	48	410	981	272	1,253	871	567	1,438	2,214	887	3,101	2,482	557	6,140
1976	622	58	680	1,827	501	2,328	1,385	943	2,328	3,834	1,502	5,336	2,876	525	8,737
1977	35	27	62	446	195	641	716	490	1,206	1,197	712	1,909	2,248	507	4,664
1978	238	44	282	612	260	872	610	470	1,080	1,460	774	2,234	2,570	1,101	5,905
1979 ^{a/}	164	16	180	715	181	896	666	290	956	1,545	487	2,032	2,906	919	5,857
1980 ^{a/}	50	21	71	383	326	709	386	362	748	820	709	1,529	2,695	707	4,931
1981 ^{a/}	78	10	88	620	200	820	401	238	639	1,099	448	1,547	2,112	862	4,521
1982 ^{a/}	90	25	115	522	175	697	380	206	586	992	406	1,398	2,509	1,322	5,229
1983 ^{a/}	57	27	84	320	147	467	66	209	275	443	383	826	3,457	1,280	5,563
1984 ^{a/}	43	19	62	14	123	137	69	40	109	126	182	308	3,220	1,200	4,728

a/ Preliminary from 1979 for California; from 1979 for Washington, and from 1981 for Oregon.

b/ Includes catches from Alaska, Washington, and California landed in Oregon.

c/ Includes catches from Alaska, Oregon, and California landed in Washington.

Table I-8. Commercial troll and ocean sport pink salmon catches (thousands of fish), 1971-1984 and 1971-1975 average.

Year	California		Oregon		Washington		PFMC Area		Canada Troll	S.E. Alaska Troll	Grand Total	
	Troll	Sport	Troll	Sport	Troll	Sport	Troll	Sport				
1971	1	2	NA	NA	21	9	30	24	NA	1,284	105	NA
1972	T	T	T	T	4	T	4	T	T	1,033	167	1,200
1973	19	3	2	5	55	8	63	77	10	1,232	135	1,454
1974	T	T	T	T	1	T	1	1	T	609	265	874
1975	3	T	1	1	77	14	91	80	15	1,288	77	1,460
1971-1975 Average ^{a/}	8	2	NA	NA	51	10	61	61	NA	1,089	150	NA
1976	T	0	0	T	2	0	2	2	0	781	194	977
1977	1	88	4	92	288	29	318	377	33	2,677	281	3,368
1978	NA	T	0	T	4	0	4	NA	0	428	618	NA
1979 ^{b/}	T	21	1	21	561	18	578	582	19	4,036	629	5,264
1980 ^{b/}	T	T	0	T	1	0	1	1	0	1,295	268	1,564
1981 ^{b/}	7	60	2	62	234	10	244	301	12	4,150	579	5,035
1982 ^{b/}	T	T	0	T	T	0	T	1	0	NA	534	NA
1983 ^{b/}	T	T	T	T	105	4	109	105	4	NA	NA	NA
1984	0	T	T	T								

a/ Odd year average for California, Oregon, Washington, and PFMC.

b/ Preliminary.

T Less than 500 fish.

Quotas

Non-treaty - Ocean quotas for both chinook and coho salmon constrained the troll and recreational fisheries north of Cape Falcon. South of Cape Falcon the recreational fishery coho quota was 106,000, while no troll retention of coho was permitted as far south as Point Arena. Table I-9 lists the various quotas as well as the actual harvest associated with each.

The 5,900 May recreational quota north of Cape Falcon was the only chinook quota that was exceeded, with an actual catch of 6,700. Overall, for a total chinook quota of 35,300, the actual harvest was 25,100 fish.

All coho quotas were exceeded. The overall coho quota totaled 218,800, while the actual harvest was 264,000, or 307,500 including the California troll catch. This uncertainty on accounting for the California troll coho catch is discussed further in Chapter VI.

Treaty Indian - In 1984, treaty troll fisheries operated under quotas in response to concerns over low run-size expectations. A quota of 8,300 chinook for the period May 1 through September 30 was implemented to limit the harvest of Bonneville Pool hatchery (BPH) tule stock; quotas of 38,500 coho or 490 Grays Harbor wild coho were established to constrain impacts on Grays Harbor stocks.

Table I-9. PFMC 1984 coho and chinook quotas and actual harvest in numbers of fish by management area.

Management Area	Chinook		Coho	
	Quota	Harvest	Quota	Harvest
<u>NON-TREATY</u>				
TROLL				
<u>North of Cape Falcon</u>				
May Season	14,000	11,400	0	0
August Season				
North of Cape Alava	1,500 ^{a/}	1,400	12,400	16,900
South of Columbia River	1,200 ^{a/}	600	12,400	20,600
Subtotal	16,700	13,400	24,800	37,500
<u>South of Cape Falcon</u>	-	-	0	(43,500) ^{b/}
RECREATIONAL				
<u>North of Cape Falcon</u>				
May-June Season				
Klipsan Beach-Queets River	5,900	6,700	0	0
July-September Season				
North of Cape Alava (July 1-July 17, inside 3 miles)	700	100 ^{c/}	0	<50
North of Queets River (Inside 3 miles)	200	100	6,500	6,500 ^{d/}
Cape Falcon-Cape Shoalwater	3,500	100 ^{e/}	43,000 ^{f/}	44,000 ^{g/}
Subtotal	10,300	7,000	49,500	50,600
<u>South of Cape Falcon</u>	-	-	106,000 ^{h/}	131,200
NON-TREATY TOTALS	27,000	20,400	180,300	219,300
<u>TREATY INDIAN</u>				
TROLL				
Washington	8,300	4,700	38,500	43,400
<u>GRAND TOTAL</u>	35,300	25,100	218,800	263,700 (307,200) ^{b/}

a/ These quotas were adjusted upward for May chinook-only quota shortfall.

b/ Numbers in parentheses include harvest by California troll fishery. No coho troll quota for this area was provided under 1984 ocean regulations in the 19,000 hooking mortality.

c/ In addition, there was an estimated 200 sub-legal chinook hooking mortality.

d/ Includes illegal landings during chinook-only fishery and after August 15 closure. In addition, an estimated 200 coho were killed during July chinook-only-fishery and 700 coho were killed during the all-species season.

e/ Illegal landings during coho-only fishery; in addition there was an estimated 1,500 chinook shaker mortality (1,500 not included).

f/ Original quota of 43,700 reduced by 700 for estimated hooking mortality during May chinook-only fishery. Postseason estimate of this mortality was 800.

g/ In addition there was an estimated 800 coho hooking mortality during May chinook-only fishery.

h/ The original quota established for the recreational fishery was adjusted downward by 19,000 fish to compensate for preseason estimates of hooking mortality loss during the all-salmon-except-coho troll fishery and from a California troll catch. A postseason assessment of hooking mortality loss provided a conservative estimate of 24,000 coho. An additional 8,000 coho were deducted to account for wild fish expected to be taken in the Columbia River and Washington coastal areas.