

**THE 1984 OREGON
OCEAN SALMON FISHERIES**

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**OREGON DEPARTMENT OF FISH AND WILDLIFE
Ocean Salmon Management**

THE 1984 OREGON OCEAN SALMON FISHERIES

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by

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THE 1984 OREGON OCEAN SALMON FISHERIES

INTRODUCTION

The Ocean Salmon Management Program is responsible for collecting fishery and biological data from the commercial and recreational ocean salmon fisheries, and analyzing the data and recommending appropriate management regulations for these fisheries. Management regulations are designed to achieve the optimum sustained use of the salmon resources.

In FY 1984 we sampled and analyzed data on catch and fishing effort, investigated chinook age composition, and recovered marked and coded-wire tagged salmon caught in offshore fisheries. We instituted a short-term troll observer program designed to obtain data on coho salmon that were caught and released during the chinook-only season south of Cape Falcon. We also sampled eye fluid and tissue samples from chinook salmon at Charleston for use in electrophoretic genetic-stock identification (GSI) analysis. Other short-term activities were an evaluation of a troll season extension for chinook salmon off southern Oregon, and the collection of random coho scales for a Research Section scale study to identify hatchery and wild coho.

We continued the "key buyer" calling of processors to estimate daily troll coho landings north of Cape Falcon. The key buyers represented about 90% of the total area landings.

The sampling program for the ocean salmon fisheries is supervised by a program leader and 2 project leaders, one each for the troll and recreational fisheries. We sampled at 11 major ports along the coast utilizing 9 troll and 22 recreational samplers and 2 crew chiefs. The two crew chiefs acted as liaison between samplers and the project leaders in Newport and helped sample whenever necessary. They also brought the survey data and coded wire tags to

Newport each week. Two seasonal employees helped Newport staff edit, keypunch and computer process the sampled data.

Sampling program activities for 1984 were reduced by not using a central coast crew chief and not sampling commercial landings at Pacific City and Depoe Bay. These reductions were implemented because of the lack of a commercial coho fishery south of Cape Falcon. Normally, coho predominate in the landings at both Pacific City and Depoe Bay, and with no coho fishery, sampling was not justified.

Funding of the ocean sampling program came from two sources: (1) Anadromous Fisheries Act 89-304 (Project Number AFC-121-1) and (2) Bonneville Power Administration - Pacific Marine Fisheries Commission (Contract Number 84-0016).

The 1984 OCEAN TROLL SALMON FISHERY

REGULATIONS

Chinooks and Pinks

For all areas single-point barbless hooks were required (Table 1). There were no exceptions for bait hooks and plugs as in past years.

In the area north of Cape Falcon, the season opened from May 1 to May 31 or until a quota of 14,000 chinook was landed. This quota was reached and the season terminated on May 7. The season opened again on August 4 and ended at noon on August 6 when the coho quota was reached. Minimum size was 28" for chinook and 16" for pinks.

In the area from Cape Falcon to Cape Blanco, the season was open from May 1 to June 15 and from July 1 to August 31. State waters were opened on September 1 and closed by federal action on September 21. A limited fishery was open off Tillamook Bay between Pyramid Rock and Manhattan Beach in state waters from October 1-31 to harvest surplus hatchery chinooks. Minimum size was 26" for chinook and 16" for pinks.

From Cape Blanco to the OR/CA border, fishing was open from May 16 to June 6 and from July 16 to August 22. State waters were open from Cape Blanco to Humbug Mountain from October 1 to November 30. Minimum size was 26" for chinook and 16" for pinks.

Coho

The only open coho area was from Cape Falcon to the south jetty of the Columbia River. The season opened on August 4 and was terminated on August 6 at noon after the 12,400 fish quota was reached. Single-point barbless hooks were required on all gear. Minimum size was 16".

Table 1. History of Oregon Troll Regulations, 1948-84.

Year	Chinook		Coho	
	Season	Size	Season	Size
Prior to 1948	No Restrictions	No Restrictions	No Restrictions	No Restrictions
1948	No Restrictions	27"	July 1-November 15	Same
1949-1955	March 15-October 31	26"	June 15-October 31	Same
1956-1964	April 15-October 31	Same	Same	Same
1965-1975	Same	Same	Same	15"
1976	North of Tillamook Head May 1-June 14 and July 1-October 31	28" until 6-4-76 26" after 6-4-76	North of Tillamook Head July 1-October 31	16"
	South of Tillamook Head May 1-October 31	26"	South of Tillamook Head June 15-October 31	16"
1977	Same	28" N. of Tillamook Head 26" S. of Tillamook Head	Same	16"
1978	Boundary moved south to Cape Falcon - same dates and size limits as 1977.			
1979	North of Cape Falcon May 1-May 31 and July 1-July 24 and August 4-August 31	28"	North of Cape Falcon July 1-July 24 and August 4-August 31	16"
	South of Cape Falcon May 1-May 31 and July 1-October 31	26"	South of Cape Falcon July 1-September	16"
1980	North of Cape Falcon May 1-May 31 and July 15-September 8	28"	North of Cape Falcon July 15-September 8	16"
	South of Cape Falcon May 1-May 31 and June 16-June 30 (Cape Falcon to Cape Blanco only) July 15-October 31	26"	South of Cape Falcon July 15-September 8	16"
1981	North of Cape Falcon May 1-May 31 and July 15-August 24 ^a /	28"	North of Cape Falcon July 15-August 24 ^a /	16"
	South of Cape Falcon May 1-May 31 and July 1-October 31 ^b /	26"	South of Cape Falcon July 1-August 24 ^a /	16"

Table 1. (Continued)

Year	Chinook		Coho	
	Season	Size	Season	Size
1982	North of Cape Falcon May 1-May 31 July 1-7	28"	North of Cape Falcon July 1-8	16"
	Cape Falcon to Cape Blanco May 1-May 31 June 1-June 15 July 1-October 31 ^{c/}	26"	Cape Falcon to OR/CA border July 1-12	16"
	Cape Blanco to OR/CA border May 1-May 31 June 1-June 8 July 1-October 31 ^{c/}	26"		
1983	North of Cape Falcon May 1-May 31 July 1-July 31 ^{d/} August 10-September 8 ^{e/}	28"	North of Cape Falcon July 1-July 31 ^{d/}	16"
	Cape Falcon to Cape Blanco May 1-June 15 August 1-October 31	26"	Cape Falcon to Cape Kiwanda August 1-Quota 2	16"
	Cape Blanco to OR/CA border May 16-June 15 July 1-August 31 September 1-September 15 ^{f/} October 1-October 31	26" 26"	Cape Kiwanda to Heceta Head July 1-Quota 1 August 1-Quota 2	16"
			Heceta Head to OR/CA border July 1-Quota 1	16"
1984 ^{g/}	North of Cape Falcon May 1 31 or 14,000 quota August 4 - September 3 or 12,400 quota	28" 28"	August 4-September 3 or 12,400 quota	16"
	Cape Falcon to Cape Blanco May 1 - June 15	26"		
	Cape Blanco to OR/CA border May 16 - June 16 July 16 - August 22			

SPECIAL TROLL SEASONS IN STATE WATERS

1974-1975	November 1 through December 31 - Area off Elk and Chetco rivers
1976-1982	November 1 through November 30 - Area off Elk and Chetco rivers
1983	November 1 through November 30 - Elk River area only
1984	September 1 through September 21 - Cape Falcon-Cape Blanco October 1 through October 31 - Manhattan Beach-Pyramid Rock October 1 through November 30 - Elk River area

^{a/} Closed August 21 in FCZ (3-200 miles)

^{b/} From 3-200 miles, chinook fishery was limited to the area between Cape Falcon and Cape Sebastian from August 25 through September 8 using whole bait or five inch or larger plugs.

^{c/} Use whole bait and plugs not less than 5" from July 12 through September 5.

^{d/} Must land 2 chinook for each coho. Use plugs 6" or larger.

^{e/} Limited to area from Columbia River south jetty to Cape Falcon out to 10 miles.

^{f/} 12x24 mile rectangle open around mouth of Rogue River.

^{g/} Single point barbless hooks on all gear.

EFFORT AND CATCH STATISTICS

Effort and catch statistics for the 1984 Oregon troll salmon fishery are

preliminary. Poundages, dollar value, area of catch and days fished are obtained directly from commercial fish receiving tickets. Pounds landed are converted to number of fish utilizing average weight information. In early years all troll catch statistics for Oregon were reported by port of landing; however, since 1979 catch and effort estimates have also been reported by catch area (Figure 1).

Data by port of landing are reported on a port area format that corresponds to the above catch areas. The Astoria area includes the Astoria-Warrenton-Hammond complex and dory landings at Seaside and Cannon Beach. The Garibaldi-Pacific City area includes the ports of Nehalem, Garibaldi, and Pacific City; the Depoe Bay-Waldport area, the ports of Depoe Bay, Newport and Waldport; the Florence-Bandon area, the ports of Florence, Winchester Bay, Coos Bay and Bandon; and the Port Orford-Brookings area, the ports of Port Orford, Gold Beach and Brookings.

Effort

Since 1979, Oregon's troll effort has been estimated in boat days. Cumulative effort for the troll fishery totaled 7,900 boat days in 1984, or only 36% of the 22,200 boat days in 1983 (Table 2, Column 1). The Coos Bay and Brookings area accounted for 62% of the effort (Table 3). Effort in all areas in 1984 was much lower than in 1983, due mainly to the lack of a 1984 coho season south of Cape Falcon. Effort was heaviest during August corresponding to the short period of good chinook fishing south of Cape Blanco (Table 4).

The ODFW waived the one fish landing requirement to keep a salmon permit valid and allowed refunds on licenses that had been purchased but not used.

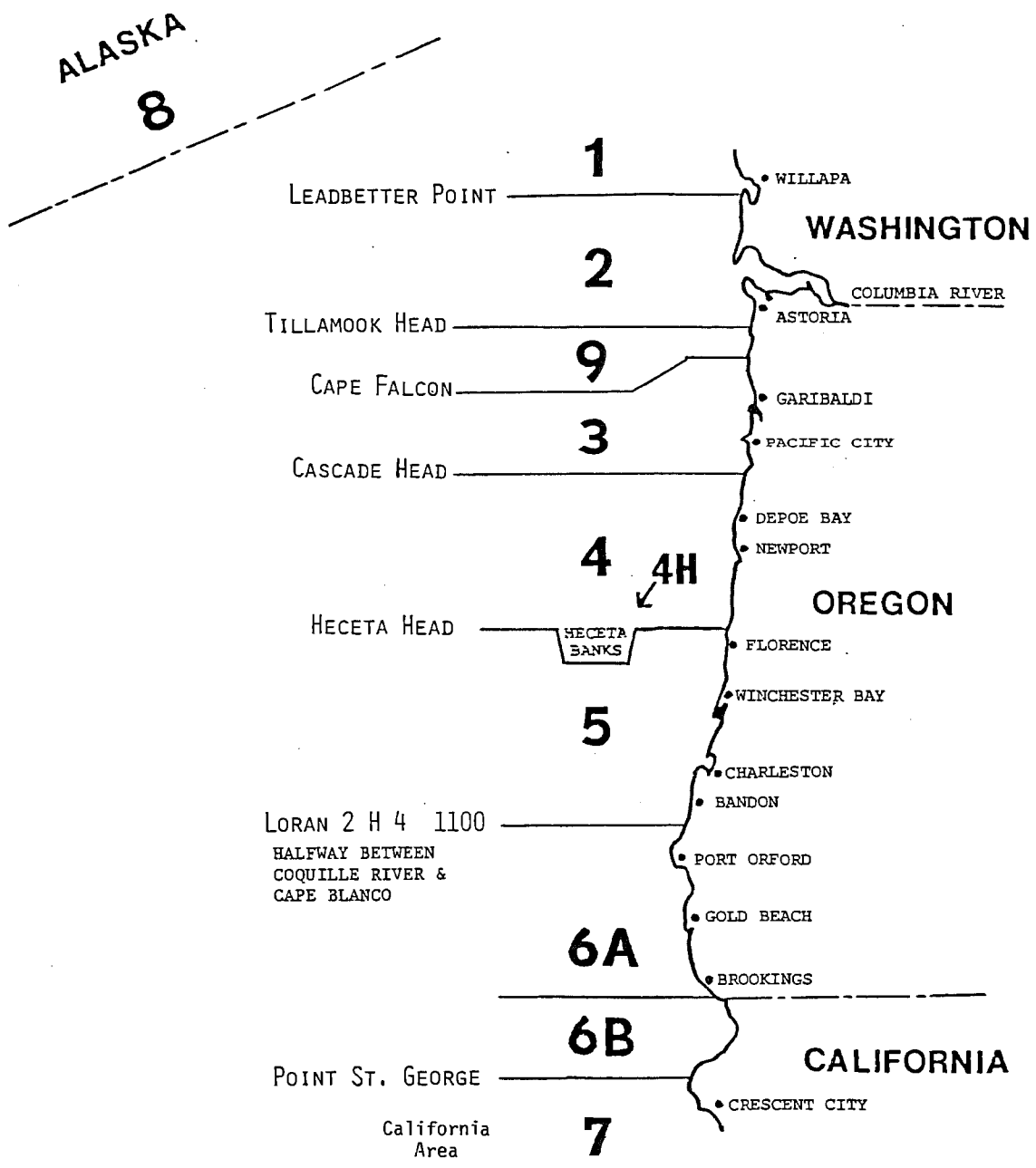


Figure 1. Ocean Salmon Management Areas

Table 2. Oregon Commercial Troll Salmon Effort and Catch in Number of Fish and Pounds Dressed, 1971-1984^{a/}

Year	Effort (boat days)	Chinook		Coho		Pinks	
		No.	lbs dr.	No.	lbs dr.	No.	lbs dr.
1971	-	102,900	1,000,800	1,490,100	8,765,100	2,000	9,000
1972	-	127,300	1,303,700	824,600	4,856,300	<100	100
1973	-	363,300	3,461,300	795,500	5,137,100	3,200	14,200
1974	-	224,100	2,290,400	1,137,200	7,230,900	<100	100
1975	-	224,700	2,583,300	657,400	4,087,500	200	900
1971-75 Average	-	208,500	2,127,900	981,000	6,015,400	1,800 ^{b/}	8,000 ^{b/}
1976	-	184,300	1,921,600	1,827,000	9,061,200	0	0
1977	-	340,000	3,464,900	446,100	2,640,800	88,000	396,100
1978	-	191,500	1,893,600	611,600	2,779,000	<100	200
1979	48,800	245,500	2,580,000	714,600	4,586,300	20,500	106,300
1980	39,900	209,400	2,171,500	383,300	2,190,200	300	1,600
1981	45,200	160,400	1,573,400	620,300	3,324,300	60,200	324,000
1982	33,900	232,600	2,351,300	522,200	2,708,400	0	0
1983	22,200	79,600	655,300	319,800	1,097,900	<100	200
1984 ^{c/}	7,900	64,300	549,900	14,000	71,000	0	0

^{a/} Includes catches made off California, Washington and Alaska and landed in Oregon.

^{b/} Odd-year average

^{c/} Preliminary

Table 3. Summary of Oregon Commercial Troll Effort and Catch by Area of Catch in Number of Fish, 1979-84.

Year	Area of Catch						Oregon Subtotal	Alaska	Wash.	Calif.	Total
	Col. R.	Tillamook	Newport	Coos Bay	Brookings						
EFFORT (Boat Days)											
1979	2,400	6,300	12,800	16,800	9,900	48,200	0	600	100	48,800	
1980	1,700	6,000	10,700	12,400	8,300	39,100	50	700	30	39,900	
1981	2,500	8,600	11,000	13,400	9,300	44,800	0	200	100	45,200	
1982	800	3,600	5,800	13,600	8,900	32,800	0	700	400	33,900	
1983	1,100	3,000	7,100	6,900	3,700	21,700	0	200	300	22,200	
1984 ^{a/}	500	500	1,900	2,300	2,600	7,800	0	100	<100	7,900	
CATCH Chinook											
1979	5,900	5,000	38,600	68,700	123,800	242,000	0	2,600	900	245,500	
1980	5,600	7,800	48,700	74,800	68,400	205,300	300	2,900	900	209,400	
1981	8,400	12,200	27,100	24,400	86,000	158,200	0	1,000	1,300	160,400	
1982	7,300	9,000	27,600	109,200	69,500	222,600	0	7,000	3,100	232,600	
1983	5,400	4,900	24,000	19,800	22,000	76,100	0	1,600	1,900	79,600	
1984 ^{a/}	1,500	1,600	18,700	15,400	24,600	61,800	0	200	300	64,300	
Coho											
1979	48,700	77,900	211,800	263,100	101,200	702,700	0	11,300	600	714,600	
1980	23,500	80,600	137,300	99,200	33,500	374,200	1,800	7,200	40	383,300	
1981	41,900	160,400	192,400	161,400	53,500	609,600	0	10,400	300	620,300	
1982	24,100	114,800	117,800	227,900	22,300	506,800	0	14,100	1,200	522,200	
1983	4,900	63,300	118,000	109,700	22,500	318,400	0	100	1,300	319,800	
1984 ^{a/}	13,900	0	0	0	0	13,900	0	200	0	14,000	

^{a/} Preliminary

Table 4. Oregon Commercial Troll Effort and Catch of Coho and Chinook in Number of Fish by Month, 1971-75 Average and 1979-84^{a/}.

		April	May	June	July	August	September	October	November ^{b/}	Total
<u>EFFORT (Boat Days)</u>										
<u>1971-75</u>										
Average		NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	Monthly	-	1,400	100 ^{c/}	21,500	21,700	1,300	2,000	800	
	Cumulative	-	1,400	1,500	23,000	44,700	46,000	48,000	48,800	48,800
1980	Monthly	-	2,100	3,700 ^{d/}	12,100	14,600	4,600	2,300	500	
	Cumulative	-	2,100	5,800	17,900	32,500	37,100	39,400	39,900	39,900
1981	Monthly	-	3,300 ^{e/}	-	21,300	16,700	1,600	1,900	500	
	Cumulative	-	3,300	3,300	24,600	41,300	42,800	44,700	45,200	45,200
1982	Monthly	-	2,300	2,100	18,800	5,600	2,800	1,500	600	
	Cumulative	-	2,300	4,500	23,300	29,000	31,800	33,300	33,900	33,900
1983	Monthly	-	1,600	1,900	12,200	4,100	1,200	1,100	100	
	Cumulative	-	1,600	3,500	12,300	19,800	21,000	22,100	22,200	22,200
1984	Monthly	-	400	400	2,100	4,300	200	300	200	
Prelim.	Cumulative	-	400	900	2,900	7,200	7,400	7,700	7,900	7,900
<u>Chinook</u>										
<u>1971-75</u>										
Average	Monthly	500	8,300	27,500	56,600	69,700	31,400	13,700	1,300	
	Cumulative	500	8,800	36,400	93,000	162,800	194,200	207,200	209,200	209,200
1978	Monthly	-	3,200	40,600	63,100	46,900	25,000	9,300	3,500	
	Cumulative	-	3,200	43,800	106,900	153,800	178,800	188,100	191,500	191,500
1979	Monthly	-	11,000	200 ^{c/}	73,600	119,500	13,200	25,200	2,600	
	Cumulative	-	11,000	11,300	84,900	204,400	217,700	242,900	245,500	245,500
1980	Monthly ^{b/}	-	28,500	29,700 ^{d/}	47,700	64,000	25,200	16,000	1,000	
	Cumulative	-	25,800	55,400	103,200	167,200	192,300	208,400	209,400	209,400
1981	Monthly	-	28,600 ^{e/}	-	34,900	65,700	16,900	13,200	1,200	
	Cumulative	-	28,600	28,600	63,500	129,200	146,100	159,200	160,400	160,400
1982	Monthly	-	23,000	14,800	125,400	46,100	15,000	6,900	1,400	
	Cumulative	-	23,000	37,800	163,200	209,300	224,300	231,200	232,600	232,600
1983	Monthly	-	9,500	16,300	34,100	11,500	2,700	4,600	900	
	Cumulative	-	9,500	25,800	59,900	71,400	74,100	78,700	79,600	79,600
1984	Monthly	-	4,600	2,400	17,800	36,900	700	1,000	900	
Prelim.	Cumulative	-	4,600	7,000	24,800	61,700	62,400	63,400	64,300	64,300

Table 4. Continued

COHO 1971-75 Average										
Monthly	-	-	227,800	414,400	305,800	29,700	3,300	-	-	-
Cumulative	-	-	227,800	642,200	948,000	977,700	981,000	-	-	981,000
1978	Monthly	-	-	279,600	227,200	92,800	10,400	1,600	-	-
	Cumulative	-	-	279,600	506,800	599,700	610,000	611,600	-	611,600
1979	Monthly	-	-	400 ^{c/}	534,000	178,700	1,600	-	-	-
	Cumulative	-	-	400	534,400	713,100	714,600	-	-	714,600
1980	Monthly	-	-	-	228,700	137,500	17,100	-	-	-
	Cumulative	-	-	-	228,700	366,200	383,300	-	-	383,300
1981	Monthly	-	-	-	350,300	270,000	-	-	-	-
	Cumulative	-	-	-	350,300	620,300	-	-	-	620,300
1982	Monthly	-	-	-	522,200	-	-	-	-	-
	Cumulative	-	-	-	522,200	-	-	-	-	522,200
1983	Monthly	-	-	-	275,300	36,100	8,400	-	-	-
	Cumulative	-	-	-	275,300	311,400	319,800	-	-	319,800
1984 Prelim.	Monthly	-	-	-	-	14,000	-	-	-	-
	Cumulative	-	-	-	-	14,000	-	-	-	14,000

^{a/} Statistics from 1971-78 are reported by calendar months; monthly totals from 1979-84 are the sum of statistical weeks with closest fit to calendar months. Includes catches made off California, Washington, and Alaska and landed in Oregon.

^{b/} Late season at mouth of Elk and Chetco Rivers only (initiated in 1974). Averages for November include only 1974-75.

^{c/} Caught off California and landed in Oregon.

^{d/} Totals for June 1980 include landings made through July 6.

^{e/} Totals for May 1981 include landings made through June 7.

These two decisions were a direct result of the lack of a coho troll season south of Cape Falcon.

Catch

Chinook. The 1984 troll chinook catch was only 81% of the 1983 catch and 30% of the 1979-82 average (Table 2, Figure 2). A total of 64,300 chinook weighing 0.55 million pounds (dressed weight) was landed in 1984 compared to 79,600 chinook in 1983 and 212,000 chinook for 1979-82.

Of the 64,300 chinook landed in 1984, 92% were caught from the Newport area south (Table 3). Catches in all areas except Brookings were lower in 1984 than in 1983.

The troll catch of chinook salmon peaked in all areas during August, 1984, when 57% of the total catch was made (Tables 4, 5 and 6). August is normally the peak month for chinook landings.

Coho. The commercial troll catch in 1984 totaled 14,000 fish weighing 71,000 pounds (dressed weight) which is 64% of the 1983 landings and 3% of the 1979-82 average (Table 2, Figure 2).

The distribution of the 1984 coho catch was limited by regulation to the area between Cape Falcon and the south jetty of the Columbia River. One landing at Astoria came from the area north of Cape Alava where Washington also has a limited coho fishery.

Pink Salmon

No pink salmon landings were reported in 1984. This is the normal pattern on an even-year fishery since even-year runs off Oregon are far weaker than odd-year runs.

Table 5. Oregon Troll Salmon Effort and Catch, in Numbers of Fish by Area of Catch and by Statistical Month, 1984.

Month	Columbia R	Tillamook	Newport	Coos Bay	Brookings	Oregon	Alaska	Wash.	Calif.	Total
						Subtotal				
<u>EFFORT (Boat Days)</u>										
May	100	<100	100	100	200	400	0	100	<100	500
June	0	<100	200	200	<100	400	0	0	<100	400
July	0	100	900	700	400	2,100	0	0	<100	2,100
August	400	300	800	1,200	1,600	4,300	0	<100	0	4,300
September	0	<100	<100	100	<100	200	0	0	0	200
October	0	<100	0	0	200	300	0	0	0	300
November	0	0	0	0	200	200	0	0	0	200
Total	500	500	1,900	2,300	2,600	7,800	0	100	<100	7,900
<u>Chinook</u>										
May	1,300	100	100	100	900	2,500	0	2,000	<100	4,600
June	0	100	1,500	900	<100	2,400	0	0	<100	2,400
July	0	200	10,500	3,600	3,300	17,600	0	0	200	17,800
August	300	1,100	6,500	10,200	18,700	36,800	0	100	<100	36,900
September	0	100	100	600	<100	700	0	-	0	700
October	0	100	0	0	900	1,000	0	-	0	1,000
November	0	0	0	0	900	900	0	-	-	900
Total	1,500	1,600	18,700	15,400	24,600	61,800	0	2,200	300	64,300
<u>Coho</u>										
June	-	-	-	-	-	-	-	-	-	0
July	-	-	-	-	-	-	0	-	-	0
August	13,900	-	-	-	-	13,900	0	200	-	14,000
September	-	-	-	-	-	-	0	-	-	0
Total	13,900	-	-	-	-	13,900	0	200	-	14,000

Table 6. Oregon Troll Salmon Catch by Species in Pounds Dressed, by Calendar Month and Port Area, 1984.

Month	Port of Landing					Total
	Astoria	Garibaldi to Pacific City	Depoe Bay to Waldport	Florence to Bandon	Port Orford to Brookings	
			<u>CHINOOK</u>			
May	24,029	1,103	4,944	1,191	7,377	38,644
June	417	81	12,971	6,819	883	21,171
July	1,095	1,403	93,693	39,498	35,168	170,857
August	1,711	11,614	51,643	85,080	132,416	282,464
September	57	1,090	1,071	4,600	82	6,900
October	0	1,744	0	16	17,578	19,338
November	0	0	0	0	10,572	10,572
Total	27,309	17,035	164,322	137,204	204,076	549,946
			<u>COHO</u>			
July	0	0	0	0	0	0
August	33,982	18,331	18,627	0	104	71,044
September	0	0	0	0	0	0
Total	33,982	18,331	18,627	0	104	71,044

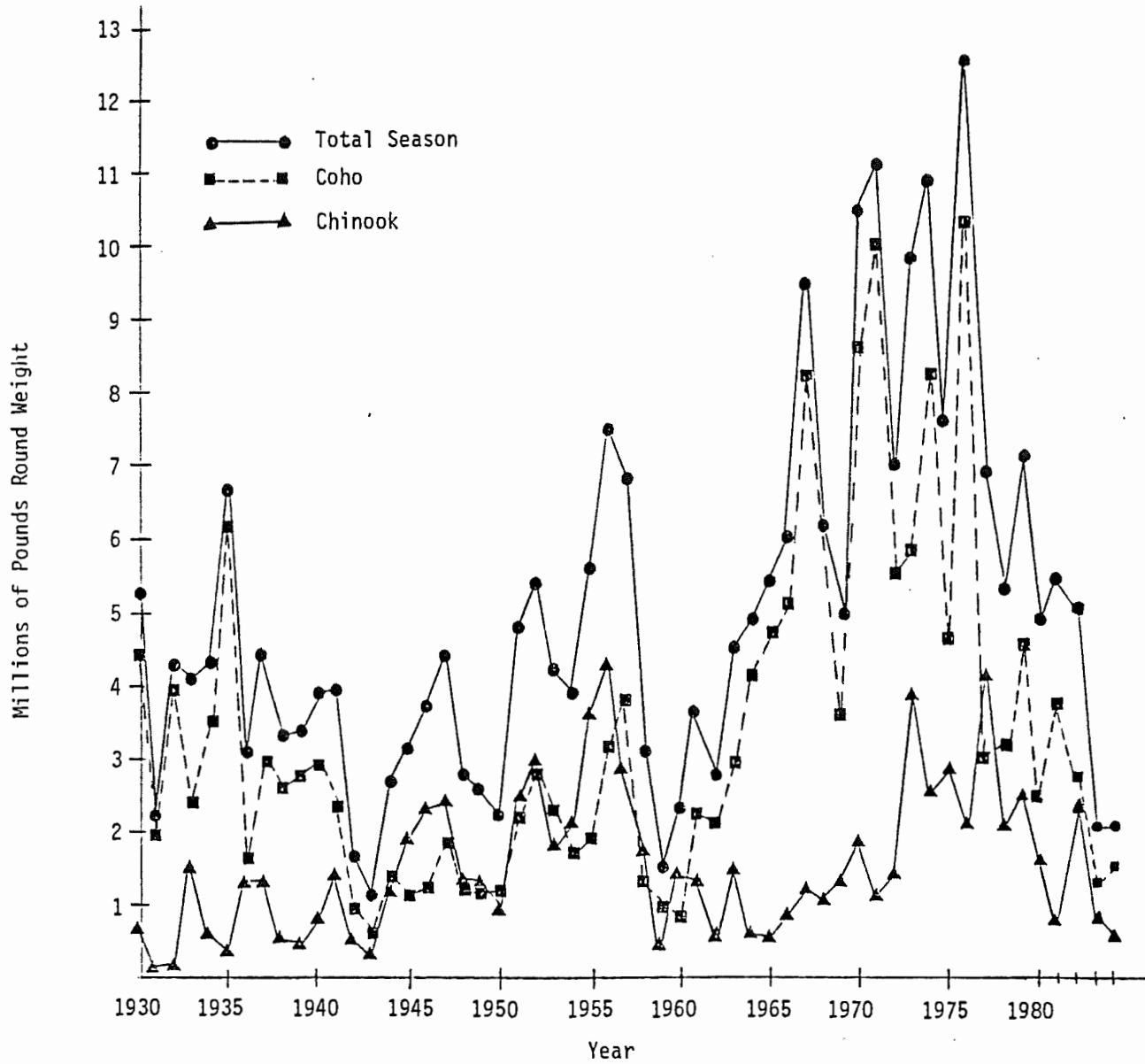


Figure 2. Oregon Ocean Troll Salmon Production 1930-1984.

DOLLAR VALUE OF THE CATCH

The chinook landings in 1984 were worth \$1,513,000 to the fishermen, the coho \$118,000. The average price per pound for chinook was \$2.75; for coho, \$1.67 (Table 7).

EXTENDED TROLL SEASON

Chinook landings during the 1984 Tillamook Bay area extended troll season were 1,700 pounds dressed weight or an estimated 95 fish. Poor weather prevented fishing during much of October.

Chinook landings during the 1984 Elk River area extended season were 28,100 pounds dressed weight or an estimated 1,756 fish.

One objective of the extended seasons has been the harvest of mature, surplus local stocks of fish. The available data indicate that both extended seasons accomplished this objective.

AVERAGE WEIGHT

Data on average dressed weights from chinook and coho by port of landing enabled us to convert landings in pounds to numbers of fish.

The seasonal average weight for chinook in 1984 was 8.5 pounds dressed weight compared to 8.2 pounds in 1983 (Table 8). In 1984, the average weights were larger than in 1983 in all areas except Astoria.

The seasonal average weight for coho in 1984 was 5.1 pounds dressed weight compared to 3.4 pounds in 1983 (Table 9). The average weight for 1984 is of less value than that of previous years when used for comparison purposes, since the fish were sampled from a fishery limited to the area north of Cape Falcon only and lasting only 2.5 days. Previous data cover a range of areas and time.

Table 7. Estimates of Ex-vessel Value^{a/} of Oregon Troll Salmon Landings and Average Price per Pound, 1971-84.

Year	Chinook		Coho		Total Value
	\$ Value	\$/lb	\$ Value	\$/lb	
1971	587,000	0.59	3,155,000	0.36	3,742,000
1972	982,000	0.75	2,475,000	0.51	3,457,000
1973	3,520,000	1.02	4,004,000	0.78	7,524,000
1974	2,412,000	1.05	5,525,000	0.76	7,937,000
1975	2,680,000	1.04	3,128,000	0.77	5,808,000
1976	3,410,000	1.77	11,458,000	1.26	14,868,000
1977	7,938,000	2.29	3,546,000	1.34	11,484,000
1978	3,584,000	1.89	3,756,000	1.35	7,340,000
1979	6,639,000	2.57	10,350,000	2.26	16,988,000
1980	5,259,000	2.42	2,926,000	1.34	8,185,000
1981	4,036,000	2.57	5,535,000	1.66	9,571,000
1982	6,094,000	2.59	3,801,000	1.40	9,895,000
1983	1,244,000	1.90	1,052,000	0.96	2,296,000
1984 ^{b/}	1,513,000	2.75	118,000	1.67	1,631,000

^{a/} Dressed weight value

^{b/} Preliminary

Table 8. Observed Average Dressed Weight and Calculated Number of Chinook Landed in Oregon by Calendar Month and Port Area, 1984.

Port of Landing	Month							Total
	May	June	July	Aug.	Sept.	Oct.	Nov.	
<u>Astoria</u>								
Numbers	2,763	50	115	163	4	0	0	3,095
Pounds	24,029	417	1,095	1,711	57	0	0	27,309
Ave. wt.	8.9	8.3	9.5	10.5	14.3	0	0	8.8
<u>Garibaldi-Pacific City</u>								
Numbers	130	5	141	1,147	77	95	0	1,595
Pounds	1,103	81	1,403	11,614	1,090	1,744	0	17,035
Ave. wt.	8.5	16.2	10.0	10.1	14.2	18.4	0	10.7
<u>Depoe Bay-Waldport</u>								
Numbers	588	1,462	10,820	6,380	89	0	0	19,339
Pounds	4,944	12,971	93,693	51,643	1,071	0	0	164,322
Ave. wt.	8.4	8.9	8.7	8.1	12.0	0	0	8.5
<u>Florence-Bandon</u>								
Numbers	145	847	4,706	10,587	569	1	0	16,855
Pounds	1,191	6,819	39,498	85,080	4,600	16	0	137,204
Ave. wt.	8.2	8.1	8.4	8.0	8.1	16.0	0	8.1
<u>Port Orford-Brookings</u>								
Numbers	858	117	4,413	16,298	11	1,070	687	23,454
Pounds	7,377	883	35,168	132,416	82	17,578	10,572	204,076
Ave. wt.	8.6	7.5	8.0	8.1	7.5	16.4	15.4	8.7
<u>Total</u>								
Numbers	4,484	2,481	20,195	34,575	750	1,166	687	64,338
Pounds	38,644	21,171	170,857	282,464	6,900	19,338	10,572	549,946
Ave. wt.	8.6	8.5	8.5	8.2	9.2	16.6	15.4	8.5

Table 9. Observed Average Dressed Weight and Calculated Number of Coho Landed in Oregon by Calendar Month and Port Area, 1984.

Port of Landing	July	August	Sept.	Total
<u>Astoria</u>				
Numbers	0	7,329	0	7,329
Pounds	0	33,982	0	33,982
Ave. wt.	0	4.6	0	4.6
<u>Garibaldi-Pacific City</u>				
Numbers	0	3,303	0	3,303
Pounds	0	18,331	0	18,331
Ave. wt.	0	5.5	0	5.5
<u>Depoe Bay-Waldport</u>				
Numbers	0	3,387	0	3,387
Pounds	0	18,627	0	18,627
Ave. wt.	0	5.5	0	5.5
<u>Florence-Bandon</u>				
Numbers	0	0	0	0
Pounds	0	0	0	0
Ave. wt.	0	0	0	0
<u>Port Orford-Brookings</u>				
Numbers	0	22	0	22
Pounds	0	104	0	104
Ave. wt.	0	4.7	0	4.7
<u>Total</u>				
Numbers	0	14,041	0	14,041
Pounds	0	71,044	0	71,044
Ave. wt.	0	5.1	0	5.1

TROLL SALMON MARK SAMPLING

In 1984, two samplers were assigned to Newport and Charleston and one each to Astoria, Garibaldi, Winchester Bay, Port Orford and Brookings. Some sampling of the troll fishery was done at Florence and Gold Beach by recreational samplers. In 1984, 60% of all chinook and 61% of all coho landings were examined for coded wire tags (Table 10, 11).

Chinook

Samplers found 1,499 adipose-clipped chinook in the 1984 troll landings and obtained 1,471 snouts. Technicians found tags in 1,305 or 89% of the snouts. The main agencies contributing the tags were:

California Department of Fish and Game	49%
Oregon Department of Fish and Wildlife	36%

Coho

Samplers found 424 adipose-clipped coho in the 1984 troll coho landings and obtained 424 random snouts. Technicians found coded-wire tags in 377 or 89%. The main agencies contributing tags were:

Washington Department of Fisheries	53%
Oregon Department of Fish and Wildlife	20%
Oregon Aqua-Foods	8%
U.S. Fish and Wildlife Service	7%

Table 10. Oregon Troll Chinook Mark Sampling by Calendar Month and Port Area, 1984.

Port of Landing	Month							Total
	May	June	July	Aug.	Sept.	Oct.	Nov.	
<u>Astoria</u>								
No. Examined	1,036	0	0	86	0	0	0	1,122
No. Landed	2,763	50	115	163	4	0	0	3,095
% Examined	37	0	0	53	0	0	0	36
No. Marks	44	0	0	3	0	0	0	47
<u>Garibaldi-Pacific City</u>								
No. Examined	17	0	32	78	15	45	0	187
No. Landed	130	5	141	1,147	77	95	0	1,595
% Examined	13	0	23	7	19	47	0	12
No. Marks	2	0	1	0	1	0	0	4
<u>Depoe Bay-Waldport</u>								
No. Examined	390	868	6,889	3,656	7	0	0	11,810
No. Landed	588	1,462	10,820	6,380	89	0	0	19,339
% Examined	66	59	64	57	8	0	0	61
No. Marks	10	28	240	107	0	0	0	385
<u>Florence-Bandon</u>								
No. Examined	74	414	2,804	8,065	198	0	0	11,555
No. Landed	145	847	4,706	10,587	569	1	0	16,855
% Examined	51	49	60	76	35	0	0	69
No. Marks	2	20	92	278	6	0	0	398
<u>Port Orford-Brookings</u>								
No. Examined	453	74	2,242	9,732	0	1,021	660	14,182
No. Landed	858	117	4,413	12,298	11	1,070	687	23,454
% Examined	51	63	51	60	0	95	96	60
No. Marks	10	2	68	387	0	124	74	665
<u>Total</u>								
No. Examined	1,970	1,856	11,967	21,617	220	1,066	660	38,856
No. Landed	4,494	2,481	20,195	34,575	750	1,166	687	64,338
% Examined	43	75	59	63	29	91	96	60
No. Marks	68	50	40	775	7	124	74	1,499

Table 11. Oregon Troll Coho Mark Sampling by Calendar Month and Port Area, 1984.

Port of Landing	Month			Total
	July	August	Sept.	
<u>Astoria</u>				
No. Examined	0	4,684	0	4,684
No. Landed	0	7,329	0	7,327
% Examined	0	64	0	64
No. Marks	0	237	0	237
<u>Garibaldi-Pacific City</u>				
No. Examined	0	2,856	0	2,856
No. Landed	0	3,303	0	3,303
% Examined	0	86	0	86
No. Marks	0	128	0	128
<u>Depoe Bay-Waldport</u>				
No. Examined	0	1,065	0	1,065
No. Landed	0	3,387	0	3,387
% Examined	0	31	0	31
No. Marks	0	59	0	59
<u>Florence-Bandon</u>				
No. Examined	0	0	0	0
No. Landed	0	0	0	0
% Examined	0	0	0	0
No. Marks	0	0	0	0
<u>Port Orford-Brookings</u>				
No. Examined	0	0	0	0
No. Landed	0	22	0	22
% Examined	0	0	0	0
No. Marks	0	0	0	0
<u>Total</u>				
No. Examined	0	8,605	0	8,605
No. Landed	0	14,041	0	14,041
% Examined	0	61	0	61
No. Marks	0	424	0	424

THE 1984 RECREATIONAL OCEAN SALMON FISHERY

The 1984 ocean recreational salmon season was unique in several respects: (1) It followed a season of unusual ocean conditions associated with the El Nino which resulted in record low salmon catches and spawning escapement, (2) for the first time, the coho stocks were not simultaneously targeted on by the commercial troll fleet and, (3) the opening day of the sport season (July 9) was the latest on record.

In 1984, our ocean recreational fishery survey estimated a catch of 16,992 chinook and 123,325 coho with 153,061 salmon angler trips and 50,530 bottomfish trips. Both total salmon catch and directed salmon effort were record lows.

REGULATIONS

Ocean salmon regulations for Oregon's recreational fishery in 1984 were the most restrictive on record with low quotas and late opening dates. The regulations were implemented by the Pacific Fishery Management Council and the Oregon Department of Fish and Wildlife in response to expected low abundance of coho and many chinook stocks along the Pacific coast.

A recreational quota of 43,000 coho was established between Cape Shoalwater, Washington and Cape Falcon, Oregon. South of Cape Falcon, including California, the recreational coho quota was set at 106,000 fish.

The salmon season opened July 9 south of Cape Falcon and July 28 northward. Unlike 1983, the coho quotas were quickly met and the all-salmon season closed on August 7 south of Cape Falcon and August 8 north of Cape Falcon. After the ocean recreational fisheries were closed, the Columbia River mouth, inside Buoy 10, was opened to salmon fishing on August 9 and a sizeable recreational fishery developed in the area. The ocean fishery reopened in state waters August 25, south of Cape Falcon and closed September 3. In addition,

state waters off Tillamook Bay were open to chinook fishing from September 15 until September 21 when federal preemption proceedings closed the fishery.

A PFMC-scheduled recreational salmon fishery continued south of Cape Blanco through October for all species except coho. There had been a November target fishery on chinook in state waters off the Elk and Chetco rivers from 1977 to 1982. The Chetco River area was closed in 1983 and again in 1984 because of expected low abundance of Chetco fish. The fishery off the Elk River was scheduled in 1984 but was not accessible to most recreational boats.

For the Columbia River ocean area in 1984, fishing was restricted to an area between the Columbia River South Jetty and Cape Falcon in Oregon and between Klipsan Beach and Cape Shoalwater in Washington. Chinook were not permitted in the catch (Figure 3).

The ocean daily bag limit in 1984 was two fish except during August 25-September 3 in state waters. During this time the bag limit from Cape Blanco to Cape Falcon was one salmon, but south of Cape Blanco the limit was two salmon, of which only one could be a coho. The ocean fishery had no weekly possession limit and the annual bag limit was 40 salmon and steelhead. North of Cape Falcon, minimum size limits were 16 inches for coho and 24 inches for chinook. South of Cape Falcon, the minimum size limit was 20 inches for both coho and chinook (Table 12).

OCEAN SALMON SAMPLING

Twenty-two seasonal aides sampled the ocean recreational fishery in 1984. All samplers made boat counts and sampled; only in Brookings did we have a specific person counting boats. Newport had 4 samplers; Astoria, Garibaldi and Coos Bay each had 3; Winchester Bay and Brookings 2 and Pacific City, Depoe Bay, Florence and Gold Beach each had one sampler.

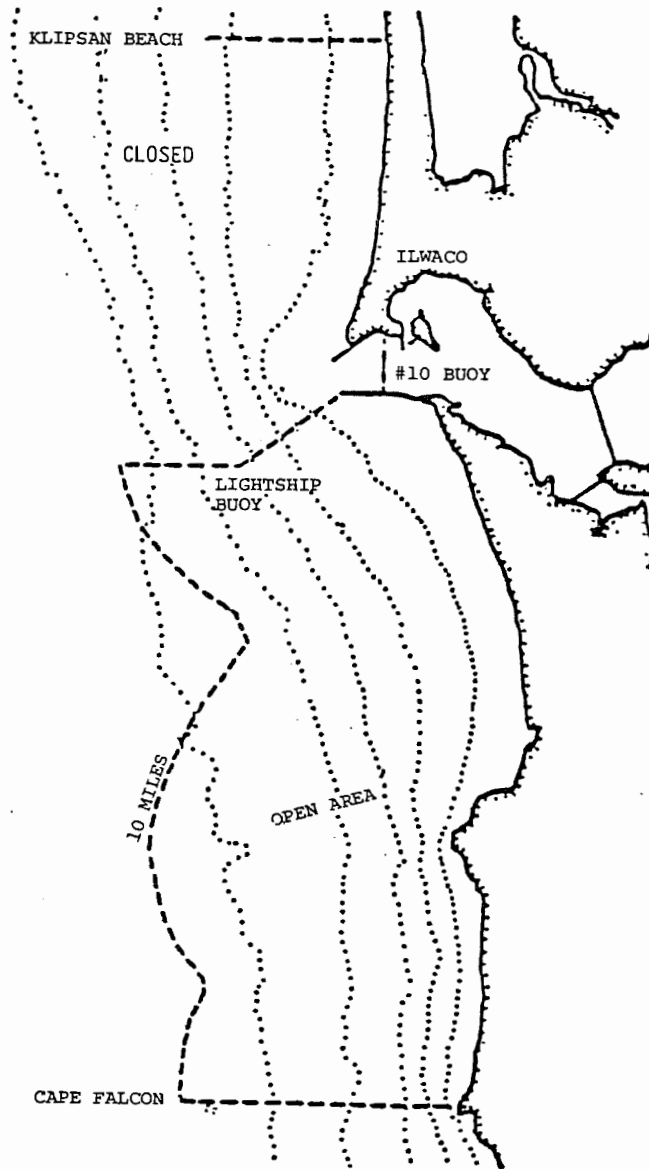


Figure 3. Area Restrictions in the Ocean Recreational Salmon Fishery off the Columbia River, 1984.

Table 12. Summary of Oregon's Recreational Ocean Salmon Regulations, 1946-84.

Year	Season	Regulations
1946	All year	3 fish/day; 9 in possession.
1947	All year	2 fish/day; 6 in possession
1948-54	All year	2 fish/day; 4 in possession; 20 fish annual limit.
1955-57	All year	2 fish/day; 4 in possession; 20 fish annual limit; 20" minimum size, both species.
1958-64	All year	2 fish/day; 4 in possession; 20 fish annual limit; 20" minimum size, both species, except 22" minimum size north of Tillamook Head (July 1-October 31).
1965-69	All year	3 fish/day; 6 in possession; 20 fish annual limit; 20" minimum size, both species.
1970-75	All year	3 fish/day; no possession limit; 40 fish annual limit; North of Tillamook Head, 20" minimum size both species. South of Tillamook Head, no size limits.
1976	April 10-Dec. 31	3 fish/day; 40 fish annual limit. North of Tillamook Head-chinook, 24" minimum size; coho, 16" minimum size. South of Tillamook Head, no size limits.
1977	April 30-Oct. 31	Same as in 1976.
	November 1-31	State waters off Elk and Chetco rivers. 3 chinook/day; no size limit.
1978	April 29-Oct. 31	3 fish/day; 40 fish annual limit. North of Cape Falcon-chinook, 24" minimum size; coho, 16" minimum size. South of Cape Falcon-chinook, 22" minimum size; coho, 16" minimum size.
	November 1-30	Off Elk and Chetco rivers-3 chinook/day; 22" minimum size.
1979	May 12-Sept. 16	2 fish/day south of Cape Falcon; 3 fish/day north of Cape Falcon, of which only 2 may be chinook or coho; 40 fish annual limit. Size limits as in 1978.
	November 1-30	(State waters off Elk and Chetco rivers) 2 chinook/day; 22" minimum size.
1980	May 10-Sept. 14 ^a /	3 fish/day lowered to 2 fish/day on July 16; 40 fish annual limit. Size limits as in 1978.
	Sept. 15-Oct. 31	(South of Cape Falcon) 2 chinook/day; 22" minimum size.
	November 1-30	(State waters off Elk and Chetco rivers) as above.

Table 12 (Continued)

Year	Season	Regulations
1981	May 15-Sept. 20 ^{b/} (South of Cape Falcon)	2 fish/day; increased to 3 fish/day on August 14 south of Cape Falcon only; 40 fish annual limit. Size limits as in 1978.
	May 23-Sept. 7 ^{b/} (North of Cape Falcon)	
	Sept. 21-Oct. 31	(South of Cape Blanco) 2 chinook per day; 22" minimum size.
	November 1-30	(State waters off Elk and Chetco rivers) as above.
1982	May 28-June 11 (Between Cape Blanco and Cape Falcon in state waters)	First 2 chinook taken per day; barbless hook only.
	May 28-Aug. 1 ^{c/} (South of Cape Blanco)	2 fish/day north of Cape Falcon; first 2 fish taken/day south of Cape Falcon, regardless of size. Size limit north of Cape Falcon same as in 1978. 40 fish annual limit.
	June 12-August. 1 ^{c/} (Entire coast)	
	Aug. 2-Oct. 31	(South of Cape Blanco) First 2 chinook taken/day.
	November 1-30	(State waters off Elk and Chetco rivers) First 2 chinook taken/day.
1983	May 28-Sept. 18 (South of Cape Blanco)	2 fish/day north of Cape Falcon; first 2 fish taken/day south of Cape Falcon regardless of size. Size limit north of Cape Falcon same as in 1978. 40 fish annual limit.
	June 18-Sept. 11 (North of Cape Falcon)	
	June 18-Sept. 18 (Entire coast south of Cape Falcon)	
	Sept. 19-Oct. 31	(South of Cape Blanco) First 2 chinook taken/day.
	November 1-30	(State waters off Elk River)- First 2 chinook taken/day.

Table 12 (Continued)

Year	Season	Regulations
1984	July 9-Aug. 7	(South of Cape Falcon) 2 fish/day; 40 fish annual limit. Minimum size 20". Single-point barbless hooks.
	July 28-Aug. 8	(Cape Falcon to Columbia River, South Jetty) 2 coho/day; 40 fish annual limit. Minimum size 16". No chinook allowed. Single-point barbless hooks.
	Aug. 9-Aug. 24	(South of Cape Blanco) 2 chinook/day; 20" minimum size. Single-point barbless hooks.
	Aug. 25-Sept. 3 (State waters only)	(Cape Falcon to Cape Blanco) 1 fish/day; 20" minimum size. Single-point barbless hooks. (Cape Blanco to OR/CA border) 2 fish/day, one of which can be coho; 20" minimum size. Single-point barbless hooks.
	Sept. 4-Oct. 31	(Cape Blanco to OR/CA border) 2 chinook/day; 20" minimum size. Single-point barbless hooks.
	Sept. 15-Sept. 21 ^d / (State waters only)	(Manhattan Beach to Pyramid Rock--off Tillamook Bay) 2 chinook/day; 20" minimum size. Single-point barbless hooks.
	November 1-30 (State waters only)	(Cape Blanco to Humbug Mountain-Elk River) 2 chinook/day; 20" minimum size. Single-point barbless hooks.

^a/ Federal waters (3-200 miles) closed to coho fishing effective Sept. 1.

^b/ Federal waters closed August 26-September 20 for all species of salmon.

^c/ Federal waters closed to coho fishing on July 21, north of Cape Falcon and July 25 south of Cape Falcon.

^d/ Pacific Ocean between 45 degrees 38 minutes N. Latitude and 45 degrees 29 minutes 45 seconds N. latitude and seaward 3 miles.

A modified random sampling design was used at each port to survey the ocean recreational fishery. Catch per unit effort data was collected at least 5 days a week, including all weekends and holidays through interviews with ocean anglers at boat ramps, moorages, and charter docks. The salmon catch was sampled for species, marks and scales. Snouts were collected from marked (adipose-clipped) fish and their coded wire tags were later recovered.

Effort was obtained by several methods: (1) boat counts by ODFW samplers, (2) Coast Guard bar crossing counts, and (3) information from charter boat offices. In Pacific City, total effort was estimated from a combination of trailer counts and angler interviews. All catch and effort data were keypunched and processed on Oregon State University's CYBER computer. The survey provided accurate weekly estimates of Oregon's ocean recreational effort and catch within 7 days after the week ended. Preliminary estimates were available within a day after the fishing week ended.

Department samplers checked 60,266 salmon in 1984 compared to 71,619 salmon in 1983 (Table 13). Sampling rates in 1984 ranged from 71% at Pacific City to 27% at Winchester Bay and Florence. Overall, 42% of the total combined salmon catch from all ports was sampled, as in 1983 (Table 14).

Figure 13. Oregon Ocean Recreational Salmon Catch Statistics from Sampling Data, 1984^a/.

	Catch										Total Salmon Catch	Salmon Angler Trips	Total Salmon Catch	Salmon per Angler Trip
	Coho					Chinook								
	Adult	Jack	Total	Adult	Jack	Total	Pinks	Marked Coho	Marked Chinook	Salmon Angler Trips				
Alsea R.	10,788	86	10,874	14	12	26	0	429	0	7,110	10,900	1.5		
Alsea R. (cont.)	15,287	-	15,287	876	2	878	3	782	27	19,172	16,168	0.8		
Alsea R. (cont.)	4,998	-	4,998	227	-	227	0	286	11	4,607	5,225	1.1		
Alsea R. (cont.)	14,556	3	14,559	780	-	780	0	795	30	13,992	15,339	1.1		
Alsea R. (cont.)	26,678	-	26,678	1,182	-	1,182	0	1,285	41	29,968	27,860	0.9		
Alsea R. (cont.)	8,118	-	8,118	1,370	-	1,370	0	396	14	8,673	9,488	1.1		
Alsea R. (cont.)	21,441	-	21,441	2,575	-	2,575	0	1,380	85	21,697	24,016	1.1		
Alsea R. (cont.)	9,879	-	9,879	909	-	909	0	619	33	9,866	10,788	1.1		
Alsea R. (cont.)	1,586	-	1,586	912	-	912	0	160	16	5,038	2,498	0.5		
Alsea R. (cont.)	9,905	-	9,905	8,133	-	8,133	0	861	316	32,935	18,038	0.4		
Totals	123,236	89	123,325	16,978	14	16,992	3	6,993	573	153,061 ^c	140,320	0.9		

^a All ports except Gold Beach were sampled the entire season.

^b Sampling ended September 3.

^c Includes 3 angler trips from Port Orford.

Table 14. Recreational Ocean Salmon Sampling Rates at Oregon Ports, 1975-84.

Port	Percent of Catch Sampled ^{a/}									
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Astoria	10	8	9	29	35	20	40	42	44	31
Garibaldi	16	36	48	33	43	39	36	55	61	35
Pacific City	34	-	-	41	-	-	82	87	82	71
Depoe Bay	20	305	26	49	47	45	50	68	60	65
Newport	9	15	15	15	31	39	40	31	34	48
Florence	-	26	-	-	-	-	30	37	44	27
Winchester Bay	10	24	21	22	35	33	26	32	33	27
Coos Bay	10	30	32	51	47	49	57	63	47	54
Gold Beach	41	-	29	23	42	50	48	62	43	47
Brookings	21	21	19	20	29	22	21	30	36	42
Combined Ports	13	20	19	27	37	34	39	44	42	42
Number of Samplers	8	8	8	11	13	14	16	16	19	20
Sampler months	27	26	27	36	47	54	62	51	60	55
^{a/} Percentage of total catch observed by samplers = $\frac{\text{number of salmon observed}}{\text{estimated catch of salmon}}$										

EFFORT AND CATCH STATISTICS

Effort

Historically, ocean fishing effort data have always included a small number of bottomfishing trips. Since 1979, salmon fishing trips have been tallied separately. The majority of ocean anglers choose salmon fishing over bottomfishing when both fisheries are available. In 1984, 153,100 trips (75%) of the total 203,600 angler trips targeted on salmon (Tables 15 and 16). This percentage is not directly comparable with past years as we started sampling in early June in three major bottomfishing ports in 1984. If only the relative effort during salmon season is considered (starting July 9), salmon trips made up 83% of the total 183,300 trips in 1984. This percentage is comparable to the 1979-83 average for salmon trips; 88% or 279,200 trips compared to the 318,400 average total trips.

July is usually the peak month for recreational ocean salmon effort, followed by August. In 1984, 74,900 salmon angler trips or 49% of the total salmon trips occurred in July, and 69,800 trips or 46% occurred in August (Tables 16 and 17). The season closed August 7 and August 8, south and north of Cape Falcon respectively. A chinook fishery continued south of Cape Blanco and an additional 17,400 salmon angler trips were made August 25-September 3 when the Fish and Wildlife Commission reopened the ocean salmon season in state waters south of Cape Falcon. Of those 17,400 trips, 15,600 were made between Cape Falcon and Cape Blanco. A further discussion of this fishery in state waters is on page 47. August was the top month for bottomfishing effort with 20,800 or 41% of the total (Table 16).

Brookings had the highest effort in 1984 with 32,900 or 22% of the total salmon trips. The salmon season was also the longest on the Oregon coast (July 9 through October 31). Newport had the second highest salmon effort

Table 15. Oregon Ocean Recreational Salmon Catch and Effort for 1966-84^{a/}

Year	Effort (Angler Trips)		Catch			Salmon/Angler
	Salmon	Total	Coho	Chinook	Pinks	
1966	-	-	227,900	37,400	-	-
1967	-	-	351,000	42,800	-	-
1968	-	-	265,800	25,100	-	-
1969	-	-	232,900	31,800	-	-
1970	-	-	257,400	42,900	-	-
1971	-	303,700	311,700	29,600	121	1.12
1972	-	331,700	248,400	44,100	58	0.88
1973	-	350,400	232,068	60,984	2,008	0.84
1974	-	335,849	314,501	36,729	34	1.05
1975	-	407,498	252,209	75,719	1,218	0.81
1971-75 Avg	-	345,829	271,776	49,426	1,115 ^{b/}	0.93
1976	-	538,414	501,306	79,316	50	1.08
1977	-	404,534	195,277	61,364	4,037	0.62
1978	-	403,740	259,769	22,844	24	0.70
1979	301,343	341,770	180,834	20,902	607	0.67
1980	331,443	362,015	325,843	19,014	24	1.04
1981	311,027	350,937	199,812	29,173	1,589	0.74
1982	226,029	275,947	175,128	38,716	14	0.95
1983	226,022	261,456	146,904	24,677	69	0.76
1984	153,061	203,591	123,325	16,992	3	0.91

^{a/} Prior to 1981, sampling data were supplemented with salmon/steelhead tag data for ports and time periods not sampled.

^{b/} Odd year average

Table 16. Oregon Ocean Recreational Effort by Port, by Month and by Trip Type, 1984.

Port/Trip Type	Month						Total
	May	June	July	August	Sept.	Oct.	
Columbia R.	-	204	2,320	5,092	-	-	7,616
Salmon	-	-	2,018	5,092	-	-	7,110
Bottomfish	-	204	302	0	-	-	506
Garibaldi	-	2,295	13,136	10,518	4,393	-	27,490
Salmon	-	-	9,108	8,879	1,185	-	19,172
Bottomfish	-	2,295	4,028	1,639	356	-	8,318
Pacific City	-	570	3,087	2,952	139	-	6,748
Salmon	-	-	2,686	1,891	30	-	4,607
Bottomfish	-	570	401	1,061	109	-	2,141
Depoe Bay	-	1,277	9,179	9,265	265	-	19,986
Salmon	-	-	7,820	5,972	200	-	13,992
Bottomfish	-	1,277	1,359	3,293	65	-	5,994
Newport	-	5,240	19,711	20,672	689	-	46,312
Salmon	-	-	16,174	13,219	575	-	29,968
Bottomfish	-	5,240	3,537	7,453	114	-	16,344
Florence	-	-	4,198	4,344	131	-	8,673
Salmon	-	-	4,198	4,344	131	-	8,673
Bottomfish	-	-	0	0	0	-	0
Winchester Bay	-	320	12,576	10,836	197	-	23,929
Salmon	-	-	12,342	9,216	139	-	21,697
Bottomfish	-	320	234	1,620	58	-	2,232
Coos Bay	-	738	5,884	6,443	201	-	13,266
Salmon	-	-	5,496	4,312	58	-	9,866
Bottomfish	-	738	388	2,131	143	-	3,400
Port Orford	-	5	14	0	0	-	19
Salmon	-	-	3	0	0	-	3
Bottomfish	-	5	11	0	0	-	16
Gold Beach	-	148	1,562	4,280	148	-	6,138
Salmon	-	-	1,424	3,510	104	-	5,038
Bottomfish	-	148	138	770	44	-	1,100
Brookings	-	3,408	16,298	16,133	4,400	3,175	43,414
Salmon	-	-	13,674	13,328	2,844	3,089	32,935
Bottomfish	-	3,408	2,624	2,805	1,556	86	10,479
Total South of Cape Falcon	-	14,001	85,645	85,443	7,711	3,175	195,975
Salmon	-	-	72,925	64,671	5,266	3,089	145,951
Bottomfish	-	14,001	12,720	20,772	2,445	86	50,024
State Total	-	14,205	87,965	90,535	7,711	3,175	203,591
Salmon	-	-	74,943	69,763	5,266	3,089	153,061
Bottomfish	-	14,205	13,022	20,772	2,445	86	50,530

Table 17. Oregon Ocean Salmon Recreational Effort and Catch (Numbers of Fish) by Month, 1974-75 Average and 1978-84.

		April ^{a/}	May	June	July	August	Sept.	October	Nov.	Season Total
EFFORT (Salmon Angler Trips)										
1974-75^{b/} Average										
	Monthly	1,800	9,800	39,300	124,700	129,800	61,300	5,100	-	
	Cumulative	1,800	11,500	50,900	175,600	305,300	366,600	371,700	-	371,700
1978	Monthly	-	12,300	78,700	144,500	115,900	37,600	13,300	1,500	
	Cumulative	-	12,300	90,900	235,500	351,500	388,900	402,200	403,700	403,700
1979	Monthly	-	8,900	42,800	104,900	131,500	7,300	4,800	1,100	
	Cumulative	-	8,900	51,700	156,600	288,100	295,400	300,200	301,300	301,300
1980	Monthly	-	5,900	78,400	140,000	84,700	19,100	2,900	400	
	Cumulative	-	5,900	84,300	224,300	309,000	328,100	331,000	331,400	331,400
1981	Monthly	-	13,800	45,700	112,200	110,300	26,400	2,300	300	
	Cumulative	-	13,800	59,500	171,700	282,000	308,400	310,700	311,000	311,000
1982	Monthly	-	700	32,100	177,100	10,200	3,000	2,600	300	
	Cumulative	-	700	32,800	209,900	220,100	223,100	225,700	226,000	226,000
1983	Monthly	-	800	31,500	108,000	55,100	25,500	5,100	-	
	Cumulative	-	835	32,300	140,300	195,400	220,900	226,000	-	226,000
1984 Prelim.	Monthly	-	-	-	74,900	69,800	5,300	3,100	-	
	Cumulative	-	-	-	74,900	144,700	150,000	153,100	-	153,100
CHINOOK										
1974-75^{b/} Average										
	Monthly	200	900	4,800	19,700	19,700	9,200	1,800	-	
	Cumulative	200	1,100	5,900	25,500	45,300	54,500	56,200	-	56,200
1978	Monthly	100	900	4,700	5,000	9,600	1,600	900	100	
	Cumulative	100	1,000	5,700	10,700	20,200	21,900	22,800	22,800	22,800
1979	Monthly	-	800	4,700	5,100	9,400	200	600	100	
	Cumulative	-	800	5,600	10,700	20,000	20,200	20,800	20,900	20,900
1980	Monthly	-	300	4,700	6,900	5,400	1,300	300	100	
	Cumulative	-	300	5,000	11,900	17,300	18,600	19,000	19,000	19,000
1981	Monthly	-	700	3,100	10,300	12,500	2,200	300	<100	
	Cumulative	-	700	3,800	14,200	26,600	28,800	29,100	29,200	29,200
1982	Monthly	-	-	24,200	151,000	-	-	-	-	
	Cumulative	-	-	24,200	175,100	-	-	-	-	38,700
1983	Monthly	-	500	24,600	75,600	26,400	14,400	-	-	
	Cumulative	-	500	30,500	106,100	132,500	146,900	-	-	24,700
1984	Monthly	-	-	-	5,800	9,600	1,200	400	-	
	Cumulative	-	-	-	5,800	15,400	16,600	17,000	-	17,000

Table 17. Oregon Ocean Salmon Recreational Effort and Catch (Numbers of Fish) by Month, 1974-75 Average and 1978-84. (Continued)

<u>COHO</u> <u>1974-75^{b/}</u> <u>Average</u>		<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Sept.</u>	<u>October</u>	<u>Nov.</u>	<u>Total</u>
	Monthly	800	5,800	36,500	102,500	103,000	33,900	900	-	
	Cumulative	800	6,600	43,100	145,600	248,600	282,500	283,400	-	283,400
1978	Monthly	200	5,100	101,500	71,400	67,800	13,200	500	-	
	Cumulative	200	5,300	106,900	178,300	246,100	259,300	259,800	-	259,800
1979	Monthly	-	5,400	35,800	73,800	64,200	1,600	-	-	
	Cumulative	-	5,400	41,200	115,000	179,200	180,800	-	-	180,800
1980	Monthly	-	6,000	114,200	156,100	45,100	4,400	-	-	
	Cumulative	-	6,000	120,200	276,300	321,400	325,800	-	-	325,800
1981	Monthly	-	9,200	26,300	70,800	80,600	12,900	-	-	
	Cumulative	-	9,200	35,500	106,300	186,900	199,800	-	-	199,800
1982	Monthly	-	<100	4,700	31,900	1,600	200	200	<100	
	Cumulative	-	<100	4,700	36,700	38,300	38,500	38,700	38,700	175,100
1983	Monthly	-	500	2,900	10,100	3,600	3,300	1,000	-	
	Cumulative	-	500	6,600	16,800	20,400	23,700	24,700	-	146,900
1984	Monthly	-	-	-	64,600	57,900	900	-	-	
	Cumulative	-	-	-	64,600	122,500	123,300	-	-	123,300

a/ April value includes any early season catches.

b/ Only 1974 and 1975 of 1971-75 period are available on a monthly basis.

NOTE: After 1978 monthly totals are sum of statistical week's estimates with closest fit to calendar month.

Table 18. Summary of Oregon Recreational Ocean Salmon Effort and Catch by Area, 1974-75 Average and 1976-84.

Year	Area ^{a/}					Total
	Columbia R.	Tillamook	Newport	Coos Bay	Brookings	
<u>EFFORT</u>						
(Salmon Angler Trips) ^{b/}						
1974-75 Avg.	75,900	40,900	91,300	104,300	59,200	371,700
1978	63,400	31,700	115,600	104,400	88,600	403,700
1979	43,300	31,000	72,400	94,700	59,900	301,300
1980	46,300	47,800	83,900	97,400	56,000	331,400
1981	44,700	38,000	77,300	83,900	67,100	311,000
1982	27,200	24,600	53,500	59,400	61,300	226,000
1983	30,900	25,300	42,600	71,600	55,700	226,000
1984	7,100	23,800	44,000	40,200	38,000	153,100
<u>CATCH</u>						
<u>Chinook</u>						
1974-75 Avg.	32,600	2,000	4,300	6,800	10,600	56,200
1976	44,600	2,300	4,600	14,600	13,200	79,300
1977	22,600	1,500	2,600	22,700	11,800	61,400
1978	7,900	800	2,100	4,800	7,300	22,800
1979	7,500	1,000	1,400	4,500	6,400	20,900
1980	5,500	1,600	1,800	5,300	4,800	19,000
1981	11,500	1,900	2,400	4,500	8,900	29,200
1982	8,200	1,400	3,500	10,100	15,500	38,700
1983	3,400	700	1,600	6,600	12,400	24,700
1984	< 100	1,100	2,000	4,900	9,000	17,000
<u>Coho</u>						
1974-75 Avg.	70,700	27,200	65,100	90,100	30,200	283,400
1976	116,700	50,000	118,100	164,800	51,800	501,300
1977	55,300	15,600	34,000	76,300	14,000	195,300
1978	60,200	8,500	61,200	82,800	47,100	259,800
1979	38,000	9,400	36,300	79,000	18,200	180,800
1980	55,600	28,900	72,400	135,900	33,000	325,800
1981	54,300	17,700	61,900	57,600	8,300	199,800
1982	35,500	23,100	44,000	55,600	16,900	175,100
1983	37,200	8,800	21,800	62,600	16,300	146,900
1984	10,900	20,300	41,200	39,400	11,500	123,300

a/ Columbia River area includes Astoria, Warrenton and Hammond; Tillamook area includes Garibaldi and Pacific City; Newport area includes Depoe Bay and Newport; Coos Bay area includes Florence, Winchester Bay and Coos Bay; Brookings area includes Gold Beach and Brookings.

b/ 1979-1984 effort consists of salmon angler trips only.

Table 19. Oregon Recreational Effort in Salmon Angler Trips by Management Area^{a/} and Month for 1979-1984.

Area	April	May	June	July	August	Sept.	Oct.	Nov.	Season ^{b/}
<u>Columbia R</u>									
1979	-	800	5,000	14,800	19,700	2,900	-	-	43,300
1980	-	1,300	7,800	13,700	19,700	3,800	-	-	46,300
1981	-	1,000	4,900	14,100	20,100	4,600	-	-	44,700
1982	-	-	4,900	22,300	-	-	-	-	27,200
1983	-	-	2,700	12,900	11,500	3,800	-	-	30,900
1984	-	-	-	2,000	5,100	-	-	-	7,100
<u>Tillamook</u>									
1979	-	900	3,200	11,800	14,500	600	-	-	31,000
1980	-	400	8,500	17,300	18,100	3,600	-	-	47,800
1981	-	1,300	2,200	11,500	16,500	6,600	-	-	38,000
1982	-	100	2,700	21,800	-	-	-	-	24,600
1983	-	-	1,200	12,600	7,800	3,700	-	-	25,300
1984	-	-	-	11,800	10,800	1,200	-	-	23,800
<u>Newport</u>									
1979	-	2,000	8,200	33,200	28,700	200	-	-	72,400
1980	-	1,800	16,700	39,000	22,600	3,800	-	-	83,900
1981	-	2,300	8,200	27,600	31,700	7,500	-	-	77,300
1982	-	200	7,300	46,000	-	-	-	-	53,500
1983	-	-	3,600	22,800	10,900	5,200	-	-	42,600
1984	-	-	-	24,000	19,200	800	-	-	44,000
<u>Coos Bay</u>									
1979	-	4,800	21,500	42,900	25,200	300	-	-	94,700
1980	-	2,200	32,100	46,200	14,300	2,600	-	-	97,400
1981	-	6,600	13,900	35,200	22,700	5,500	-	-	83,900
1982	-	100	12,000	77,300	-	-	-	-	59,400
1983	-	-	14,200	36,900	13,600	6,900	-	-	71,600
1984	-	-	-	22,000	17,900	300	-	-	40,200
<u>Brookings</u>									
1979	-	300	4,900	27,100	18,500	3,300	5,000	900	59,900
1980	-	200	13,300	23,900	10,000	5,300	2,900	400	56,000
1981	-	2,700	16,500	23,700	19,300	2,300	2,300	300	67,100
1982	-	400	5,200	39,700	10,200	3,000	2,600	300	61,400
1983	-	800	9,800	22,700	11,200	6,100	5,000	100	55,700
1984	-	-	-	15,100	16,800	2,900	3,100	-	38,000
<u>All Areas</u>									
1979	-	8,900	42,800	129,800	106,700	7,300	5,000	900	301,300
1980	-	5,900	78,400	140,000	84,700	19,100	2,900	400	331,400
1981	-	13,800	45,700	112,200	110,300	26,400	2,300	300	311,000
1982	-	700	32,100	177,100	10,200	3,000	2,600	300	226,000
1983	-	800	31,500	108,000	55,100	25,500	5,000	100	226,000
1984	-	-	-	74,900	69,800	5,300	3,100	-	153,100

a/ Columbia River area includes Astoria, Warrenton and Hammond; Tillamook area includes Garibaldi and Pacific City; Newport area includes Depoe Bay and Newport; Coos Bay area includes Florence, Winchester Bay and Coos Bay; Brookings area includes Gold Beach and Brookings.

b/ By area and calendar month. Season totals may vary from summarized months due to rounding.

with 30,000 angler trips followed by Winchester Bay with 21,700. Salmon effort dropped from 1983 levels in all ports except Pacific City and Florence where it increased, and Depoe Bay and Newport where it was similar to 1983 (Table 16). Table 18 shows past ocean recreational effort by management areas and Table 19 shows the same data by month and management area.

Salmon fisheries developed just inside the jetties of many bays after the ocean season closed. We sampled these fisheries for varying time periods as follows: (1) the "Buoy 10" fishery in the Columbia River (Buoy 10 to Astoria-Megler Bridge) through September, (2) the entire Tillamook Bay fishery through October and the jetty areas of Yaquina, Umpqua and Coos bays through September 3. The Oregon portion of the Columbia River fishery produced most of the catch and effort; 24,700 angler trips out of a total 50,000 trips; 4,200 chinook harvested out of a total catch of 6,200 and 26,300 coho out of 27,800 total coho (Table 20). These data are treated as inriver catch and are not included in the annual ocean catch statistics.

Table 20. Salmon Effort and Catch in Selected Oregon Estuaries and Time Periods, 1984.

Estuary	Sampling Period	EFFORT		CATCH		
		Salmon Angler Trips	Chinook Adults	Jacks	Coho Adults	Jacks
Columbia ^{1/} (Buoy 10)	Aug 9-Sept 30	24,735	4,229	-	26,345	-
Tillamook (Entire Bay)	Aug 9-Oct 31	21,717	1,778	81	1,096	57
Yaquina (West of Hwy 101)	Aug 8-Sept 3	652	9	0	14	16
Umpqua (West of boat basins)	Aug 9-Sept 3	1,820	109	8	238	7
Coos (Between jetties)	Aug 8-Sept 3	1,051	10	2	61	0
Total South of Falcon		25,240	1,906	91	1,409	80
Coastwide Total		49,975	6,135	91	27,754	80

^{1/} Oregon side only

Catch

The sampling survey estimated the total chinook and coho catch for Oregon's ocean fishery in 1984 (Table 13) except for minor landings at unsurveyed ports. Fish landed at these unsurveyed ports represent less than one percent of the total catch off Oregon and will not be available until late 1985.

The 1984 total ocean recreational salmon catch was 140,300 fish, a record low (Figure 4) and only 24% of the record high recreational ocean catch (580,700) in 1976 (Table 15). Figure 4 shows the trend in recreational ocean catches since 1966.

Chinook. The recreational harvest of 17,000 chinook in 1984 was the lowest on record, 34% of the 1971-75 average catch of 49,400 fish and 54% of the long-term 1966-83 average catch of 40,700 fish (Table 15).

Fishing during August accounted for 56% of the catch (9,600 fish) with July accounting for 34% (5,800 fish). The chinook fishery south of Cape Blanco continued through October 31.

Brookings area anglers were the most successful on the Oregon coast with a chinook catch of 8,100 fish (48% of the total), while Winchester Bay had 2,600 chinook (15%) and Florence, a surprising third, landed 1,400 fish (8%) (Table 21).

The Columbia River, traditionally an important chinook area, did not have a chinook season in 1984. The 26 chinook landed at Astoria were illegal fish or were caught south of Cape Falcon.

Table 21. Oregon Ocean Recreational Chinook Catch by Port by Month, 1984.

Port	Month						Total
	May	June	July	Aug.	Sept.	Oct.	
Columbia R.	-	-	-	26 ^{1/}	-	-	26 ^{1/}
Garibaldi	-	-	438	375	65	-	878
Pacific City	-	-	149	75	3	-	227
Depoe Bay	-	-	450	324	6	-	780
Newport	-	-	636	539	7	-	1,182
Florence	-	-	578	786	6	-	1,370
Winchester Bay	-	-	1,195	1,366	14	-	2,575
Coos Bay	-	-	431	473	5	-	909
Gold Beach	-	-	180	710	22	-	912
Brookings	-	-	1,760	4,888	1,037	448	8,133
Total South of Cape Falcon	-	-	5,817	9,562	1,165	448	16,992
Statewide Total	-	-	5,817	9,562	1,165	448	16,992

^{1/} Illegal or taken south of Cape Falcon

Coho. The ocean recreational coho catch of 123,000 fish was the lowest recorded during the 1966-84 period. Catch was 16% lower than the previous low 1983 catch and less than one-half of the 1971-75 average of 271,800 coho. In comparison, the long-term 1966-83 average coho catch is 260,000 fish (Table 15).

In the abbreviated 1984 season, 64,600 or 53% of the total recreational coho catch was made in July. Another 57,900 coho were taken in early August. A fishery in state waters in late August through September 3 yielded an additional 6,800 coho.

The Newport area landed the most coho, 26,700 fish or 22% of the total season's catch. Winchester Bay made up another 17% of the total coho catch. Recreational landings were down substantially, even from the mediocre 1983 season from Winchester Bay south. The low catches partly result from the late opening of the season and the small quota. All other ports except Astoria showed a gain in coho landings over 1983 although the total catch was a record low (Table 22). The short 12 day season north of Cape Falcon resulted in a catch of only 10,900 coho in Astoria compared to a 1979-83 average harvest of 44,100 coho. A historical perspective on salmon catch by month and management area is shown in Tables 18 and 23.

Table 22. Oregon Ocean Recreational Coho Catch by Port by Month, 1984^{a/}

Port	Month					Total
	May	June	July	August	September	
Columbia R.	-	-	3,571 ^{b/}	7,303	-	10,874
Garibaldi	-	-	6,383	8,448	456	15,287
Pacific City	-	-	2,833	2,104	11	4,998
Depoe Bay	-	-	8,224	6,253	82	14,559
Newport	-	-	16,520	10,103	55	26,678
Florence	-	-	3,430	4,632	56	8,118
Winchester Bay	-	-	10,953	10,420	68	21,441
Coos Bay	-	-	5,223	4,633	23	9,879
Gold Beach	-	-	485	1,057	44	1,586
Brookings	-	-	6,898	2,900	107	9,905
Total South of Cape Falcon	-	-	60,999	50,550	902	112,451
Statewide Total-		-	64,570	57,853	902	123,325

^{a/} Monthly totals are the sum of statistical weeks estimates with closest fit to calendar month.

^{b/} Includes 28 coho caught south of Cape Falcon.

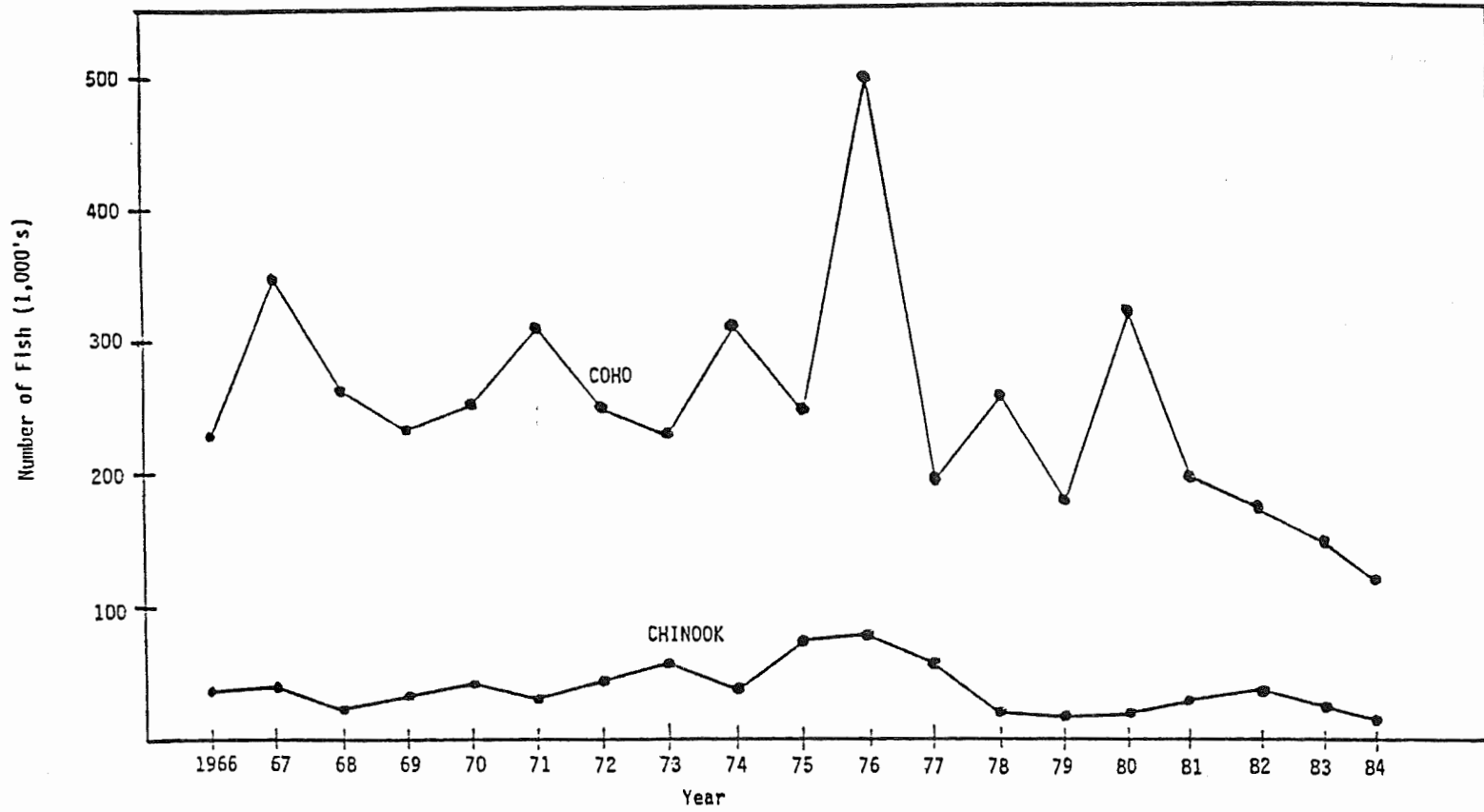


Figure 4. Trends in Oregon Recreational Ocean Salmon Catches, 1966-84.

Table 23. Oregon Ocean Recreational Chinook and Coho Catch (Number of Fish) by Catch Area and Month, 1979-84, with 1974-75 Average.

Area ^a	Chinook								
	April	May	June	July	August	Sept.	Oct.	Nov.	Season ^{b/}
<u>Columbia R</u>									
1974-75 ave.	100	600	2,700	12,800	10,100	5,600	100	-	32,000
1979	-	600	1,600	2,100	3,100	100	-	-	7,500
1980	-	100	1,200	1,400	2,500	400	-	-	5,500
1981	-	<50	400	3,200	6,700	1,200	-	-	11,500
1982	-	-	2,200	6,000	-	-	-	-	8,200
1983	-	-	1,000	1,600	500	200	-	-	3,400
1984	-	-	-	-	-	-	-	-	-
<u>Tillamook</u>									
1974-75 ave.	<50	<50	100	200	1,100	300	200	-	1,900
1979	-	<50	<50	600	300	<50	-	-	1,000
1980	-	<50	200	300	800	200	-	-	1,600 ^{c/}
1981	-	<50	<50	600	900	400	-	-	1,900
1982	-	-	100	1,300	-	-	-	-	1,400
1983	-	-	<100	400	200	100	-	-	700
1984	-	-	-	600	500	<100	-	-	1,100
<u>Newport</u>									
1974-75 ave.	<50	<50	600	1,800	1,400	300	100	-	4,200
1979	-	200	300	500	400	<50	-	-	1,400
1980	-	100	600	600	400	200	-	-	1,800
1981	-	<50	100	1,100	1,000	200	-	-	2,400
1982	-	-	600	2,900	-	-	-	-	3,500
1983	-	-	400	800	300	200	-	-	1,600
1984	-	-	-	1,100	900	<100	-	-	2,000
<u>Coos Bay</u>									
1974-75 ave.	<50	200	700	1,600	2,900	1,000	200	-	6,700
1979	-	200	2,400	1,500	500	<50	-	-	4,500
1980	-	<50	1,400	2,700	700	200	-	-	5,300
1981	-	100	400	2,300	1,300	300	-	-	4,500
1982	-	<50	1,000	9,100	-	-	-	-	10,100
1983	-	-	1,300	2,400	1,100	1,700	-	-	6,600
1984	-	-	-	2,200	2,600	<	-	-	4,900
<u>Brookings</u>									
1974-75 ave.	<50	<50	300	3,400	4,200	1,200	1,000	-	10,200
1979	-	<50	300	2,100	3,400	<50	600	100	6,400
1980	-	<50	1,300	1,700	1,000	400	300	100	4,800
1981	-	500	2,200	3,200	2,600	100	300	<50	8,900
1982	-	<50	800	12,700	1,500	200	200	<50	15,500
1983	-	500	3,400	4,900	1,500	1,000	1,000	<50	12,400
1984	-	-	-	1,900	5,600	1,100	400	-	9,000
<u>All Areas</u>									
1974-75 ave.	200	900	4,500	19,700	19,700	8,500	1,600	-	55,000
1979	-	1,000	4,600	6,700	7,700	200	600	100	20,900
1980	-	300	4,700	6,900	5,400	1,300	300	100	19,000
1981	-	700	3,100	10,300	12,500	2,200	300	<50	29,200
1982	-	<50	4,700	31,900	1,500	200	200	<50	38,700
1983	-	500	6,100	10,100	3,600	3,300	1,000	-	24,700
1984	-	-	-	5,800	9,600	1,200	400	-	17,000

Table 23. Continued.

Area	Coho								
	April	May	June	July	August	Sept.	Oct.	Nov.	Season ^{b/}
<u>Columbia R</u>									
1974-75 ave.	200	800	3,900	17,600	35,000	11,700	100	-	69,300
1979	-	400	6,500	13,300	16,300	1,500	-	-	38,000
1980	-	1,800	17,300	19,800	15,600	1,200	-	-	55,600
1981	-	1,700	8,300	18,100	20,200	6,000	-	-	54,300
1982	-	-	5,300	30,200	-	-	-	-	35,500
1983	-	-	3,600	18,900	9,700	5,100	-	-	37,200
1984	-	-	-	3,600	7,300	-	-	-	10,900
<u>Tillamook</u>									
1974-75 ave.	<50	100	1,500	5,000	15,300	4,500	200	-	26,700
1979	-	100	1,100	2,600	5,600	<50	-	-	9,400
1980	-	100	7,100	10,800	10,300	600	-	-	28,900
1981	-	300	1,000	5,600	9,600	2,000	-	-	18,500
1982	-	-	1,300	21,800	-	-	-	-	23,100
1983	-	-	200	6,100	1,600	900	-	-	8,800
1984	-	-	-	9,300	10,600	500	-	-	20,300
<u>Newport</u>									
1974-75 ave.	100	100	8,100	24,800	26,400	4,500	100	-	64,000
1979	-	200	3,700	18,700	13,600	<50	-	-	36,300
1980	-	200	18,500	41,500	10,800	1,400	-	-	72,400
1981	-	400	6,300	20,700	30,500	7,000	-	-	61,900
1982	-	-	3,600	40,500	-	-	-	-	44,000
1983	-	-	600	13,500	4,300	3,500	-	-	21,800
1984	-	-	-	24,700	16,400	100	-	-	41,200
<u>Coos Bay</u>									
1974-75 ave.	300	3,400	17,900	39,100	21,000	6,700	200	-	88,700
1979	-	4,900	22,700	16,700	14,600	<50	-	-	79,000
1980	-	3,800	53,600	70,600	7,100	800	-	-	135,900
1981	-	6,300	8,100	25,100	16,500	1,700	-	-	57,600
1982	-	-	12,200	43,400	-	-	-	-	55,600
1983	-	-	20,700	28,300	9,200	4,500	-	-	62,700
1984	-	-	-	19,600	19,700	100	-	-	39,400
<u>Brookings</u>									
1974-75 ave.	100	900	4,100	16,000	5,300	3,100	100	-	29,600
1979	-	<50	1,600	14,500	2,100	-	-	-	18,200
1980	-	100	17,700	13,400	1,400	500	-	-	33,000
1981	-	500	2,600	1,400	3,800	<100	-	-	8,300
1982	-	<50	1,700	15,200	-	-	-	-	16,900
1983	-	500	4,900	8,900	1,600	500	-	-	16,300
1984	-	-	-	7,400	4,000	200	-	-	11,500
<u>All Areas</u>									
1974-75 ave.	700	5,300	35,500	102,500	103,000	30,400	800	-	278,300
1979	-	5,700	35,600	85,800	52,200	1,600	-	-	180,800
1980	-	6,000	114,200	156,100	45,100	4,400	-	-	325,800
1981	-	9,200	26,300	70,800	80,600	13,700	-	-	200,600
1982	-	<50	24,100	151,000	-	-	-	-	175,100
1983	-	500	30,000	75,600	26,400	14,400	-	-	146,900
1984	-	-	-	64,600	57,900	900	-	-	123,300

^{a/} Columbia River area includes Astoria, Warrenton and Hammond; Tillamook area includes Garibaldi and Pacific City; Newport area includes Depoe Bay and Newport; Coos Bay area includes Florence, Winchester Bay and Coos Bay; Brookings area includes Gold Beach and Brookings.

^{b/} Individual monthly catches may not equal season total due to rounding.

^{c/} Includes Nehalem Bay.

^{d/} Includes Salmon and Siletz Rivers and Waldport.

SPECIAL RECREATIONAL SEASONS

Oregon's ocean recreational salmon anglers had three fishing opportunities in addition to the seasons set by the Pacific Fishery Management Council: (1) a late August salmon fishery in state waters from Cape Falcon to the California border, and (2) a mid September chinook fishery off Tillamook Bay. A November chinook fishery in state waters off the Elk River was also set but the area is inaccessible to most recreational anglers.

Late August-Labor Day season

A special, ocean recreational salmon season with a one-salmon bag limit was established by the Fish and Wildlife Commission for state waters from August 25 through September 3 from Cape Falcon to the California border. South of Cape Blanco, the regulation for the ongoing chinook fishery was modified to permit one coho to be kept as part of the two-salmon bag limit. Minimum size limit was 20 inches and gear was limited to barbless hooks.

This second season with a reduced bag limit received a mixed reaction by users. The charter industry opposed the one-fish limit; charter businesses in Coos Bay and Winchester Bay scheduled no salmon trips. At other ports, charter trips were available but interest was down substantially from the same time in previous years. Private boat anglers expressed opinions that ranged from not wanting the special season to wanting no restrictions whatsoever. These attitudes influenced catch and effort during the extended season.

Other factors limited our ability to evaluate the effects of the season. The second season reopened after the scheduled season had been closed for 17 days and lasted only 10 days. Creel data from such a limited period can be affected by weather or other factors. The ocean was rough for as many as 6 of the 10 days in some ports, which reduced the effort and catch/angler in many instances.

South of Cape Blanco there was an ongoing chinook fishery with a two-fish bag limit. To evaluate the reaction to a one-salmon bag limit, we isolated the data from Cape Falcon to Cape Blanco and compared 1984 to the 1979-81 average effort and catch for similar time periods. The 1979-81 period was used because the fishery was closed in August of 1982, and 1983 data were not used since the El Nino ocean conditions abnormally reduced the salmon angling effort.

Between August 25 and September 3 there were an estimated 17,441 salmon angler trips and a catch of 1,284 chinook and 5,515 coho in state waters south of Cape Falcon. In the limited area between Cape Blanco and Cape Falcon, anglers made an estimated 15,572 salmon trips, 27% fewer than the 1979-81 average of 21,257 trips for the same time period. Overall salmon landings decreased 37% over the 1979-81 average. Catch rate in 1984 was 0.37 salmon/angler compared to a 0.43 average in 1979-81 (Table 24).

Table 24. Recreational Salmon Effort and Catch, Cape Falcon-Cape Blanco, August 25 through September 3, 1984 and Similar Time Periods, 1979-83.

Year	Effort	Catch	
	Salmon Angler Trips	Chinook	Coho
1979	22,678	182	7,779
1980	20,125	504	7,310
1981	20,970	1,105	10,490
1979-81 avg.	21,257	597	8,526
1982	---	---	---
1983	12,424	878	8,493
1984	15,572	463	5,271

Effort by charter boats declined much more sharply in 1984 than did effort by private boats. The 1,246 charter angler trips represented a 73% decline from a 1979-81 average of 4,621 trips in late August. Charter trips made up 22% of the total effort for 1979-81 but only 8% of the total effort in 1984. Private angler trips were down only 14%, 14,236 trips compared to the 1979-81 average of 16,236 (Table 25).

Table 25. Charter and Private Boat Salmon Angler Effort, Cape Falcon-Cape Blanco, August 25 through September 3, 1984 and Similar Time Periods, 1979-83.

Year	Angler Trips		
	Charter	Private	Total
1979	5,670	17,008	22,678
1980	4,629	15,496	20,125
1981	3,565	17,405	20,970
1982	--	--	--
1983	1,491	10,933	12,424
1984	1,246	14,326	15,572

With regard to the one-fish bag limit, we found that:

1. The 10-day fishing period was too short to fully evaluate the effects of lowering the bag limit.
2. Ocean angling effort dropped 27% in 1984, compared to the 1979-81 average.
3. Charter effort was reduced 73% and private angler effort was down 14% from the 1979-81 average.
4. Total catch of chinook and coho in 1984 declined 37% from the 1979-81 average.

5. Salmon/angler was similar in 1984 (0.37) to the 1979-81 average (0.43). Charter anglers made up only 8% of the 1984 effort compared to the 1979-81 average of 22%.

September Fishery off Tillamook Bay

The Fish and Wildlife Commission set an open season for all salmon except coho in state waters off Tillamook Bay between Manhattan Beach (45° 38" N. Lat.) and Pyramid Rock to the south (45° 29' 45" N. Lat.). The season was originally set for September 15 through October 31 but was amended to end September 21 after a federal court preemption order was filed against Oregon. The bag limit remained at 2 fish, 20 inches or greater in length, with only single-point barbless hooks permitted.

The fishery in state waters was affected by rough ocean conditions, confusion over the regulations, and increasing success in an on-going bay fishery. We estimated 439 ocean salmon angler trips and landings of 8 coho (illegal) and 41 chinook. Eighty-two percent of the effort and catch came on the first weekend of the season, September 15 and 16.

CHARTER/PRIVATE BOAT FISHERIES

There were 218 charter boat licenses issued in 1984 but only about 148 vessels were active. No estimate is available of the number of individual private boats that fished. Since 1973, catch and effort statistics have been compiled by boat type at all ports sampled.

Charters

Effort. The 1984 charter boat effort was estimated at only 24,300 salmon angler trips, a record low, and only 58% of the previous low 41,900 trips in 1983 (Table 26). Charter anglers made up 16% of the total ocean salmon trips in 1984, compared to 19% in 1983 and well below the 1973-83 average of 26% (83,100 angler trips) (Figure 5).

Charter boat fleets operate out of most major Oregon ports but vary greatly in size and number of vessels. The Astoria-Warrenton-Hammond area had the largest fleet in 1984 (47 boats) but only 2,700 salmon angler trips in the ocean. Newport, with 33 active charter boats, showed the most salmon effort with 5,800 angler trips, closely followed by Depoe Bay (19 boats) with 5,300 trips. Compared to 1982 and 1983, salmon charter effort was down substantially in Astoria, Winchester Bay, Coos Bay, and Gold Beach, about level in Brookings, Newport and Depoe Bay, and up substantially in Garibaldi in 1984 (Table 25).

Not all charter anglers go salmon fishing during the salmon season. Although salmon is the primary pursuit of the Astoria and Winchester Bay charters, bottomfishing dominates the Garibaldi charter fleet and is also important to the Depoe Bay, Newport, and Coos Bay charters (Table 27). Coastwide in 1984, 14,200 trips (37%) of the total 38,500 charter trips targeted on bottomfish during the salmon season. In 1983, 16,900 (29%) of the total charter anglers went bottomfishing. The 1979-81 average for bottomfishing trips is 14,700 or 17% of the total charter trips during the salmon season. These figures indicate that charters were concentrating more on bottomfish than in past years. In 1982 and 1984, August was closed to salmon fishing which boosted the bottomfishing share. In 1983 the unusual water conditions associated with El Nino reduced salmon fishing effort in many ports and again boosted the bottomfishing effort.

Catch. Charter anglers landed 27,300 coho and 2,200 chinook in 1984, including 147 coho and 17 chinook which were caught incidentally by bottomfish anglers. The total catch of 29,500 coho and chinook by charter anglers in 1984 was well below the 1983 catch of 44,400 fish and the 1973-83 average of 91,700 fish. The charter fleet landed 21% of the total recreational salmon catch in 1984, down from 26% in 1983 and the 1973-83 average of 35% (Fig. 5).

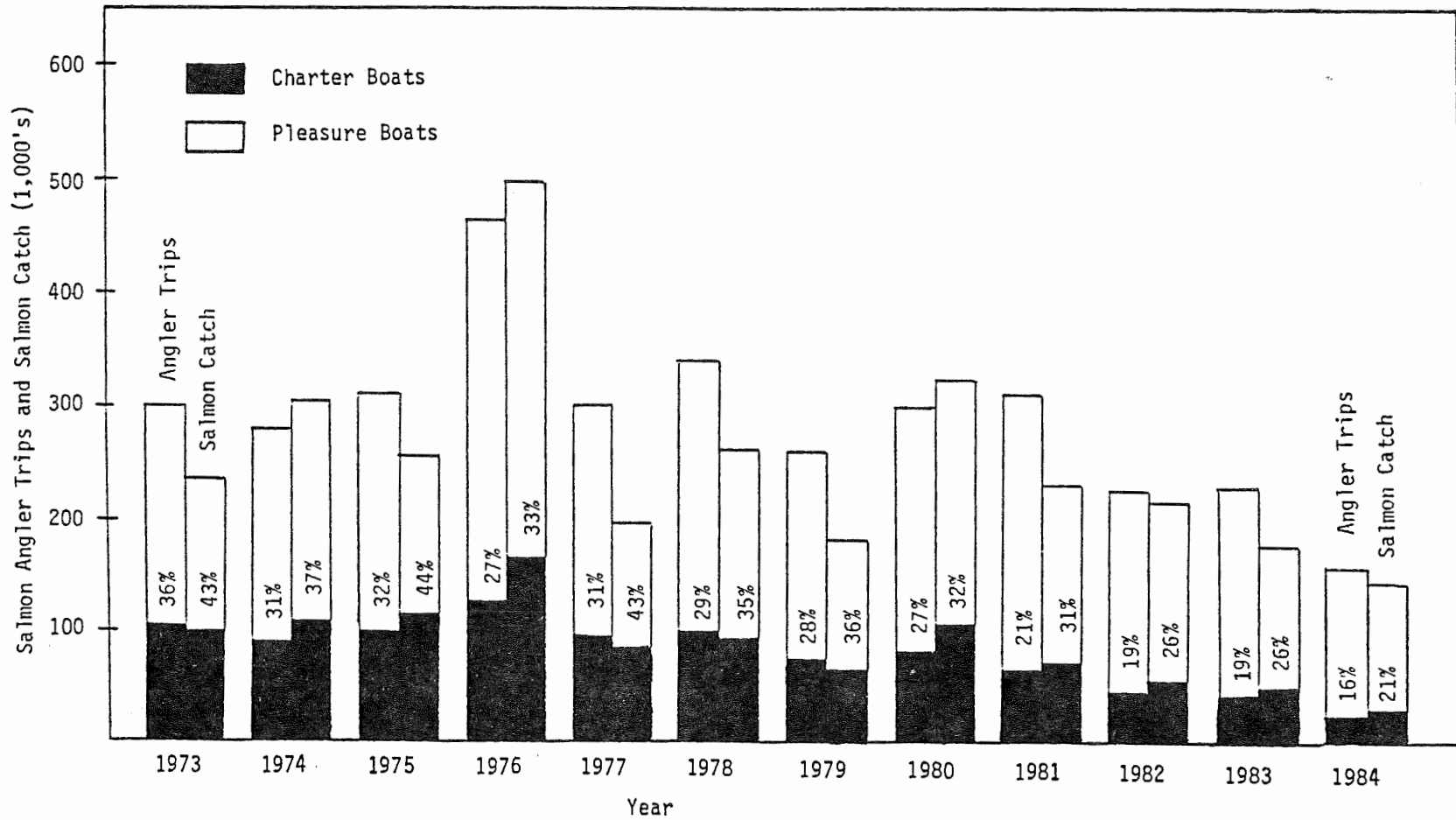


Figure 5. Oregon Ocean Recreational Salmon Fishery Statistics by Boat-Type, 1973-1984.

Table 26. Oregon Ocean Recreational Salmon Effort and Catch by Boat-Type, 1984^{a/}.

Port	Salmon Charter Boats				Salmon Private Boats			
	Boat Trips	Angler Trips	Catch		Boat Trips	Angler Trips	Catch	
			Chinook	Coho			Chinook	Coho
Columbia R.	308	2,704	5	4,409	1,288	4,406	21	6,465
Garibaldi	315	2,356	147	2,855	6,066	16,816	731	12,432
Pacific City	33	142	2	219	1,463	4,465	225	4,779
Depoe Bay	719	5,335	305	5,572	3,056	8,657	475	8,987
Newport	725	5,793	436	6,904	8,198	24,175	746	19,774
Florence	0	0	0	0	3,133	8,673	1,370	8,118
Winchester Bay	626	4,253	508	4,651	6,374	17,444	2,067	16,790
Coos Bay	194	1,647	152	1,934	2,950	8,219	757	7,945
Port Orford	1	3	0	0	0	0	0	0
Gold Beach	197	966	251	256	1,750	4,072	661	1,330
Brookings	164	1,132	424	468	13,643	31,803	7,709	9,437
Total	3,282	24,331	2,230	27,268	47,921	128,730	14,762	96,057
Combined totals for all Oregon craft	122,936	153,061	16,992	123,325				

^{a/} All ports were sampled the entire ocean salmon season except Gold Beach where sampling ended Sept. 5.

The Newport charter fleet landed 7,300 salmon or 25% of the total catch in 1984. Success remained high through most of the season but dropped drastically the last week in August; the final average was 1.3 salmon/angler. Depoe Bay and Winchester Bay charters took 5,900 and 5,200 salmon respectively and averaged 1.1 and 1.2 salmon/angler. These three ports made up 62% of the charter catch (Table 25). The state-wide average charter angler success was 1.2 fish/angler, compared with the 1973-83 average of 1.1.

Private Anglers

Effort. The 1984 salmon effort by private boats was estimated at 128,700 angler trips or 84% of the total salmon effort. This total is a record low and is 43% less than the 1973-83 average of 224,749 trips (Table 25 and Figure 6). Brookings as usual had most effort with 31,800 private salmon trips or 25% of the coast total. Brookings' relatively long salmon season, safe bar, and large population of retired people all contribute to make this the leading small boat port on the Oregon coast. Newport, often a contender with Brookings for the most effort, had 24,200 angler trips or 19% of the total. Winchester Bay had 17,400 angler trips and a 14% share of the total private boat effort.

As with charters, some private boats only fish for bottomfish, even during the salmon season. Effort data by trip type (salmon or bottomfish) was collected through interviews and applied proportionately to the total effort counts. These data showed that 16,000 angler trips or 11% of the private trips targeted on bottomfish, compared to 18,600 angler trips or 9% in 1983. Brookings had the most private boat anglers, closely followed by Newport (Table 26). Almost all anglers target on salmon in the Columbia River, Florence and Winchester Bay areas.

Table 27. Oregon Ocean Recreational Effort and Catch by Boat and Trip Type^{1/} 1984^{2/}.

Port	Charter						Private					
	Boat Trips		Angler Trips		Catch ^{4/}		Boat Trips		Angler Trips		Catch ^{4/}	
	Sal	Bot	Sal	Bot	Sal	Bot ^{3/}	Sal	Bot ^{3/}	Sal	Bot ^{3/}	Sal	Bot
Columbia R.	308	4	2,704	23	4,414	427	1,288	3	4,406	3	6,486	965
Garibaldi	315	330	2,356	3,085	3,002	31,331	6,066	692	16,816	2,089	13,163	13,522
Pacific City	33	13	142	54	221	182	1,463	392	4,465	1,213	5,004	8,494
Depoe Bay	719	445	5,335	3,485	5,877	24,894	3,056	188	8,657	534	9,462	3,612
Newport	725	604	5,793	5,050	7,340	43,380	8,198	1,300	24,175	4,071	20,520	20,347
Florence	0	0	0	0	0	0	3,133	0	8,673	0	9,488	367
Winchester Bay	626	150	4,253	852	5,159	8,494	6,374	323	17,444	862	18,857	3,258
Coos Bay	194	141	1,647	1,215	2,086	12,010	2,950	427	8,219	1,222	8,702	8,528
Port Orford	1	4	3	11	0	42	0	0	0	0	0	0
Gold Beach	197	32	966	174	507	2,405	1,750	272	4,072	758	1,991	10,073
Brookings	164	39	1,132	253	892	2,074	13,643	2,003	31,803	5,296	17,146	37,030
Total	3,282	1,762	24,331	14,202	29,498	125,239	47,921	5,600	128,730	16,048	110,819	106,196

^{1/} Trip-types are separated by boat trips that target for salmon (SAL) and for bottomfish (BOT). Combination salmon and bottomfish trips are included in salmon trip estimates.

^{2/} All ports were sampled the entire ocean salmon season except for Gold Beach where sampling ended September 3.

^{3/} Bottomfish include rockfish, lingcod, flatfish and miscellaneous species.

^{4/} Total salmon and bottomfish caught by both trip types.

Catch

Anglers from private boats landed 96,100 coho and 14,800 chinook in 1984. This includes 39 coho and 12 chinook caught incidentally by anglers targeting on bottomfish. The total salmon catch of 110,800 fish in 1984 is well below the 127,200 fish caught in 1983 and 44% below the 1973-83 average of 168,600 fish (Figure 5). Private boat anglers caught 79% of the total recreational salmon catch in 1984, similar to 1983 but above the 1973-83 average of 65%.

Newport anglers caught the most salmon, 20,500 fish, followed by Winchester Bay with 18,900 and Garibaldi with 13,200. The average angler success on private boats was 0.9 salmon per angler, compared to 0.7 fish in 1983 and the 1973-83 average of 0.75 (Table 25).

Evaluation of Minimum Size Limits

Chinook

In 1984 there was no ocean fishery for chinook in Oregon north of Cape Falcon. The number of shakers (undersized salmon or prohibited species) was estimated from interview data collected during the ocean sampling survey. We estimated that 1,400 chinook were released in the Columbia River area during the brief coho season. Shaker rates were high in the Columbia River area even when the chinook season was open. The 1979-83 average shaker rate for chinook was 58% (Table 28).

South of Cape Falcon the minimum size limit was 20 inches for all salmon. Past shaker data has varied substantially. There has always been some sorting of fish, irrespective of minimum size limits. Shaker rates in this report are conservative since we have no numerical estimates of the unreported sorting.

Table 28. Chinook Salmon Released by Oregon Ocean Recreational Anglers in the Columbia River Area, 1979-1984.

Year	Number of Fish Retained	Number of Fish Released	Total Number of Fish Caught	Percentage of Catch Released
1979	7,072	8,719	15,791	55
1980	5,503	7,891	13,394	59
1981	11,516	21,664	33,180	65
1982	8,235	6,949	15,184	46
1983	3,440	3,671	7,111	52
1979-83 Average	7,153	9,779	16,932	58
1984	26 ^{1/}	1,410	1,436	98

^{1/} Illegal or taken south of Cape Falcon.

In 1982 and 1983, the anglers were required to keep the first two salmon caught. For those years, samplers measured random samples of chinook and all coho that were less than 17 inches in length, which provided an indirect measure of what percentage of fish would have been shakers under past size regulations. The 1984 minimum size limit of 20 inches resulted in shaker data that were not directly comparable with the immediate past when the chinook limit was 22 inches south of Cape Falcon. In addition, the late season opener may also have influenced the shaker rates. The 1984 chinook shaker rate for south of Cape Falcon was 17% compared to a 1979-81 average of 22% (Table 29).

Table 29. Chinook Salmon Released by Ocean Recreational Fishery by Port in 1984.

Port	Number Retained	Number Released	Total Catch	Percentage of Catch Released	
				1984	1979-81 av.
Columbia R.	26 ^{1/}	1,410	1,436	98.0	61.3
Garibaldi	878	136	1,014	13.4	0.6
Pacific City	227	79	306	25.8	1.7 ^{2/}
Depoe Bay	780	69	849	8.1	7.3
Newport	1,182	110	1,292	8.5	3.3
Florence	1,370	20	1,390	1.4	16.9 ^{2/}
Winchester Bay	2,575	269	2,844	9.5	33.6
Coos Bay	909	282	1,191	23.7	6.9
Gold Beach	912	59	971	6.1	7.6
Brookings	8,133	2,342	10,475	22.4	22.0
Total South of Cape Falcon	16,992	3,366	20,332	16.6	1.8
Coastwide Total	16,992	4,776	21,768	21.9	42.9

^{1/} Illegal or taken south of Cape Falcon

^{2/} 1981 data only

Coho. The minimum size limit for coho in the Columbia River area was 16 inches. The shaker rate was 6% in 1984, compared to the 1979-83 average of 8% (Table 30). The size limit south of Cape Falcon was 20 inches. With a 16-inch size limit, the shaker rate averaged 2% for 1979-81. The 1984 shaker rate was 8%, a reflection of the larger minimum size, no directed troll fishery on coho, and the early August closure of the season. The August shaker rate was especially high in Brookings; 3,200 of the 4,100 coho total shakers were released in August during the chinook fishery (Table 31).

Table 30. Coho Salmon Released by Oregon Ocean Recreational Fishermen in the Columbia River Area, 1979-1984.

Year	Number Retained	Number Released	Total Catch	Percentage of catch released
1979	37,894	4,905	42,799	12
1980	55,647	1,905	57,552	3
1981	54,294	1,643	55,937	3
1982	35,476	2,082	37,558	6
1983	37,245	8,318	45,563	18
1979-83 Average	44,111	3,771	47,882	8
1984	10,874	654	11,528	6

Table 31. Coho Salmon Released by Ocean Recreational Fishery by Port in 1984.

Port	Number Retained	Number Released	Total Catch	Percentage of Catch Released	
				1984	79-81 avg.
Columbia R.	10,874	654	11,528	5.6	5.4
Garibaldi	15,287	838	16,125	5.2	0.1
Pacific City	4,998	353	5,351	6.6	0.3
Depoe Bay	14,559	629	15,188	4.1	1.9
Newport	26,678	662	27,340	2.4	0.6
Florence	8,118	419	8,537	4.9	0.9
Winchester Bay	21,441	1,296	22,737	5.7	3.3
Coos Bay	9,879	1,551	11,430	13.6	1.6
Gold Beach	1,586	199	1,785	11.1	0.8
Brookings	9,905	4,146	14,051	29.5	0.3
Total south of Cape Falcon	112,451	10,094	122,545	8.2	1.7
Coastwide total	123,325	10,748	134,073	8.0	2.5

Table 33. Coho Mark Sampling Data in the Ocean Recreational Fishery,
by Port and Month, 1984.

Port	July	August	September	Total
<u>Columbia R.</u>				
No. Sampled	1,343	2,035	--	3,378
Total Catch	3,571	7,303	--	10,874
% Sampled	38%	28%	--	31%
No. Ad Marks	54	77	--	131
<u>Garibaldi</u>				
No. Sampled	2,580	2,705	212	5,497
Total Catch	6,383	8,448	449	15,280
% Sampled	40%	32%	47%	35%
No. Ad Marks	114	155	7	276
<u>Pacific City</u>				
No. Sampled	2,218	1,334	9	3,561
Total Catch	2,883	2,104	11	4,998
% Sampled	77%	63%	82%	71%
No. Ad Marks	115	81	1	197
<u>Depoe Bay</u>				
No. Sampled	5,176	4,178	58	9,412
Total Catch	8,224	6,253	82	14,559
% Sampled	63%	67%	71%	65%
No. Ad Marks	288	224	3	515
<u>Newport</u>				
No. Sampled	7,844	5,048	31	12,923
Total Catch	16,520	10,103	55	26,678
% Sampled	47%	50%	56%	48%
No. Ad Marks	363	254	1	618
<u>Florence</u>				
No. Sampled	889	1,397	31	2,317
Total Catch	3,430	4,632	56	8,118
% Sampled	26%	30%	55%	28%
No. Ad Marks	40	77	2	119
<u>Winchester Bay</u>				
No. Sampled	3,236	2,649	29	5,914
Total Catch	10,953	10,420	68	21,441
% Sampled	30%	25%	43%	27%
No. Ad Marks	223	157	4	384
<u>Coos Bay</u>				
No. Sampled	3,107	2,224	16	5,347
Total Catch	5,223	4,633	23	9,879
% Sampled	59%	48%	69%	54%
No. Ad Marks	177	150	7	328
<u>Gold Beach</u>				
No. Sampled	168	517	33	718
Total Catch	485	1,057	44	1,586
% Sampled	35%	49%	75%	45%
No. Ad Marks	23	39	4	66
<u>Brookings</u>				
No. Sampled	2,683	1,195	43	3,921
Total Catch	6,898	2,900	107	9,905
% Sampled	39%	41%	40%	39%
No. Ad Marks	229	102	6	337
<u>Total</u>				
No. Sampled	29,244	23,282	462	52,988
Total Catch	64,570	57,853	895	123,318
% Sampled	45%	40%	52%	43%
No. Ad Marks	1,626	1,316	29	2,971

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