

**THE 1983 OREGON
OCEAN SALMON FISHERIES**

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

THE 1983 OREGON OCEAN SALMON FISHERIES

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by

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THE 1983 OREGON OCEAN SALMON FISHERIES

INTRODUCTION

The Ocean Salmon Management Program is responsible for obtaining fishery and biological data from the commercial and sport ocean salmon fisheries, 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.

Activities pursued during FY 1983 included the sampling and analyses of data on catch and fishing effort, chinook age composition, mark recoveries and coded wire tags. We also did a short-term study on fecundity to determine if hatcheries and natural stocks could expect fewer eggs per female salmon because of the small size of the fish this year. Because of the small size of the fish we also investigated the length-weight relationship this year and compared it to data collected in earlier years. Both of these latter studies were hampered by the lack of available fish. Other short-term work was done on the 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 separate hatchery and wild coho.

We started a "key buyer" calling program this year to keep a daily estimate of the troll coho landings. The "key buyers" represented about 80% of the total state 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 12 troll and 22 recreational samplers. The sampling program for 1983 was upgraded by adding a third crew chief, stationed on the central coast. The north and the

south coast crew chiefs brought the survey data and coded wire tag snouts to Newport each week. All three crew chiefs acted as liaison between samplers and the project leaders in Newport and also helped sample whenever necessary. Three seasonal employees also helped permanent staff to edit, keypunch and computer process the sampled data.

Funding of the ocean sampling program came from three sources: (1) Anadromous Fisheries Act 89-304 (Project Number AFC-93-3), (2) Anadromous Fisheries Act 89-304 (Project Number AFC-121-1) and (3) Bonneville Power Administration - Pacific Marine Fisheries Commission (Contract Number 83-0011).

The 1983 season was influenced greatly by a phenomenon called El Nino. This phenomenon resulted in the influx of warm water off the coast and caused many problems in the salmon fishery. Fishermen did not find salmon in the normal and customary areas because the fish moved into areas which contained cooler water. Periods of good upwelling were absent during the summer, resulting in poor feeding conditions and very small fish. El Nino also had an adverse effect upon the survival of the fish as indicated by poor hatchery returns.

THE 1983 OCEAN TROLL SALMON FISHERY

Regulations

Chinook and Pinks

For all areas during May, barbless hooks were required and during June, only five inch or larger plugs or whole bait were allowed (Table 1). In the area north of Cape Falcon, with the exception of the conservation zone directly off the mouth of the Columbia River, fishing was open from May 1 to May 31. The fishery was then open from July 1 to July 31 using 6" or larger

Table 1. History of Oregon Troll Regulations, 1948-83.

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.

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	26"	Cape Kiwanda to Heceta Head July 1-Quota 1 August 1-Quota 2	16"
	September 1-September 15 ^{f/} October 1-October 31	26"	Heceta Head to OR/CA border July 1-Quota 1	16"

SPECIAL SOUTH COAST TROLL SEASONS OFF CHETCO AND ELK RIVERS

1974-1975	November 1 through December 31
1976-1982	November 1 through November 30
1983	November 1 through November 30 Elk River area only

^{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.

plugs. The quota of 95,000 chinook for May and July was not reached. The third open period extended from August 10 to September 8 from the south jetty of the Columbia River out to 10 miles. The 19,000 fish quota for this period was also not reached. Minimum size in this area was 28" for chinook and 16" for pinks.

Between Cape Falcon and Cape Kiwanda, fishing was open from May 1 to June 15, and from August 1 to October 31. Minimum size was 26" for chinook and 16" for pinks.

Between Cape Kiwanda and Cape Blanco, fishing was open from May 1 to June 15 and from July 1 to October 31. 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 15 and from July 1 to August 31. During May, fishermen were limited to six lines. A small area, 12 miles north and 12 miles south of the Rogue River, out to 12 miles was open from September 1 to September 15. The entire area from Cape Blanco to the border was then open to fishing from October 1 to October 31. Minimum size was 26" for chinook and 16" for pinks.

Coho

North of Cape Falcon, a limited coho fishery was allowed from July 1 to July 31 in which only 33% of the total catch could be coho. The quota of 20,000 fish during July was not reached. The fishery was then open from August 10 to September 8 in the area from the south jetty of the Columbia River out to 10 miles. A quota of 144,000 fish was allotted but was also not reached. Minimum size was 16".

From Cape Falcon to Cape Kiwanda the fishery was open from August 1 to quota 2 or September 4, whichever came first. Quota 2 was originally 254,000 fish for the area between Cape Falcon and Heceta Head, but was later raised to

333,000 fish by adding fish not taken in quota 1 and increased contributions of fish from private hatcheries. The 333,000 quota was not reached.

The area from Cape Kiwanda to Heceta Head was open to both quota 1 and 2 allocations. The quota 1 season started July 1 and was closed on July 24 in anticipation of reaching the 297,000 fish limit. Twenty-two thousand fish not caught under quota 1 were then added to quota 2. The quota 2 season opened on August 1 and remained open until September 14. The quota 2 allocation was not reached. Minimum size was 16".

The area from Heceta Head to the OR/CA border was a quota 1 area and was open on July 1. This season was closed on July 24 in anticipation of reaching the 297,000 fish quota. Minimum size was 16".

The two-quota coho season was established this year in an attempt to keep fishing effort concentrated on Columbia River stocks which are showing better escapements than some of the coastal stocks and could stand more fishing effort.

The Department of Fish and Wildlife extended the troll season for chinook through November 30 off the Elk River within state waters. The extended fishery was restricted to the area from Cape Blanco south to Humbug Mountain offshore to three miles.

Catch and Effort Statistics

Catch and effort statistics for the 1983 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).

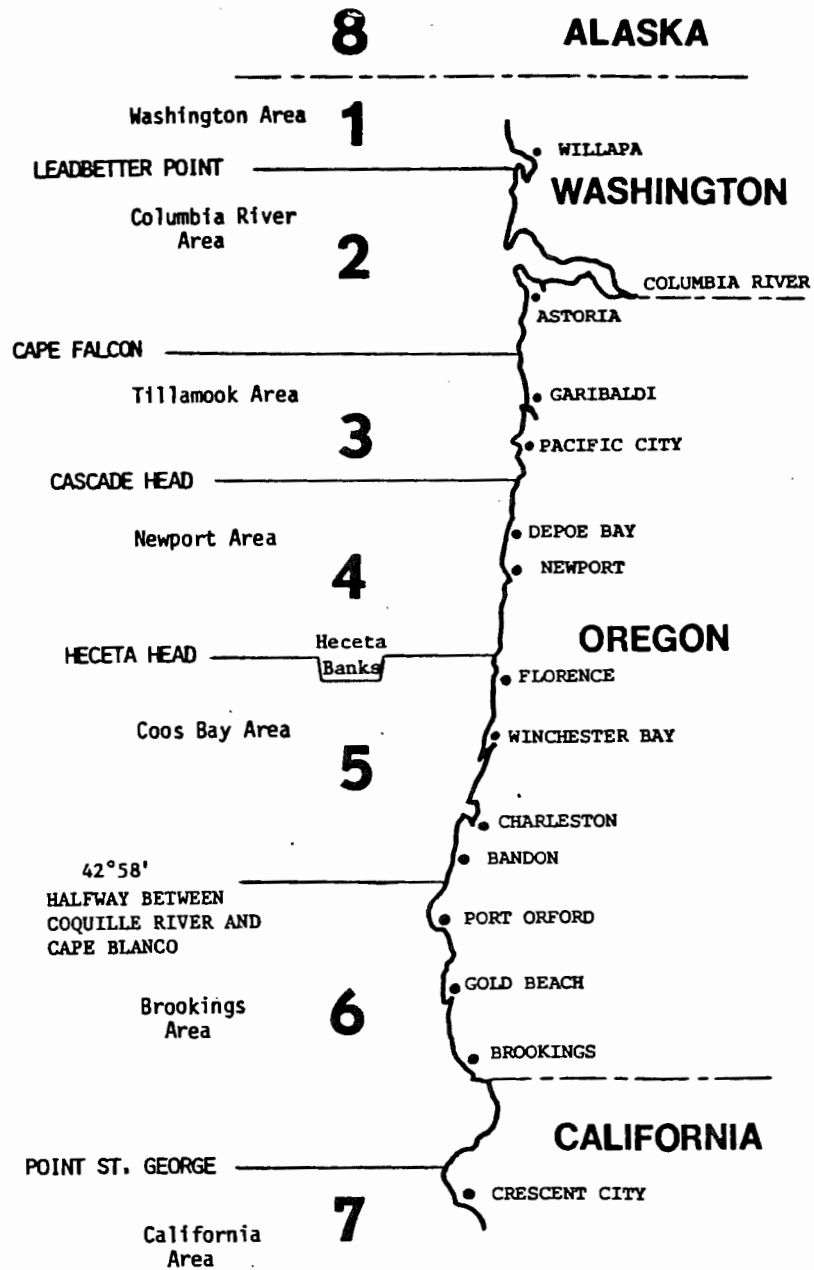


Figure 1. Oregon Ocean Salmon Management Areas

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 22,100 boat days in 1983, or only 65% of the 33,900 boat days in 1982 (Table 2, Col. 1). The Newport and Coos Bay areas accounted for 63% of the effort (Table 3). The Columbia River area was the only area showing an increase in effort compared to previous years. Effort in the Brookings area was 59% lower than in 1982, perhaps attributable to the two-week delay of the May chinook season south of Cape Blanco.

Effort during July was quite high and corresponded to the short period of good coho fishing (Table 4). The total effort for 1983 was lower than previous years because many boats stopped fishing after the coho quota 1 season was closed.

Chinook Catch

The 1983 troll chinook catch was only 34% of the 1982 catch and 38% of the 1971-75 average (Table 2, Figure 2). A total of 79,600 chinook weighing 0.7 million pounds (dressed weight) was landed in 1983 compared to 232,600 chinook in 1982 and 208,500 chinook for 1971-75.

Table 2. Oregon Commercial Troll Salmon Effort and Catch in Number and Pounds Dressed, 1971-1983^{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 ^{c/}	22,100	79,600	654,800	319,800	1,098,000	<100	200

^{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, 1979-83.

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 ^{a/}	800	3,600	5,800	13,600	8,900	32,800	0	700	400	33,900
1983 ^{a/}	1,100	3,000	7,100	6,900	3,700	21,700	0	100	300	22,100
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 ^{a/}	7,300	9,000	27,600	109,200	69,500	222,600	0	7,000	3,100	232,600
1983 ^{a/}	5,400	4,900	24,000	19,800	22,000	76,100	0	1,600	1,900	79,600
Coho										
1979	48,700	77,900	211,800	263,000	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 ^{a/}	24,100	114,800	117,800	227,900	22,300	506,800	0	14,100	1,200	522,200
1983 ^{a/}	4,900	63,300	118,000	109,700	22,500	318,400	0	100	1,300	319,800

^{a/} Preliminary

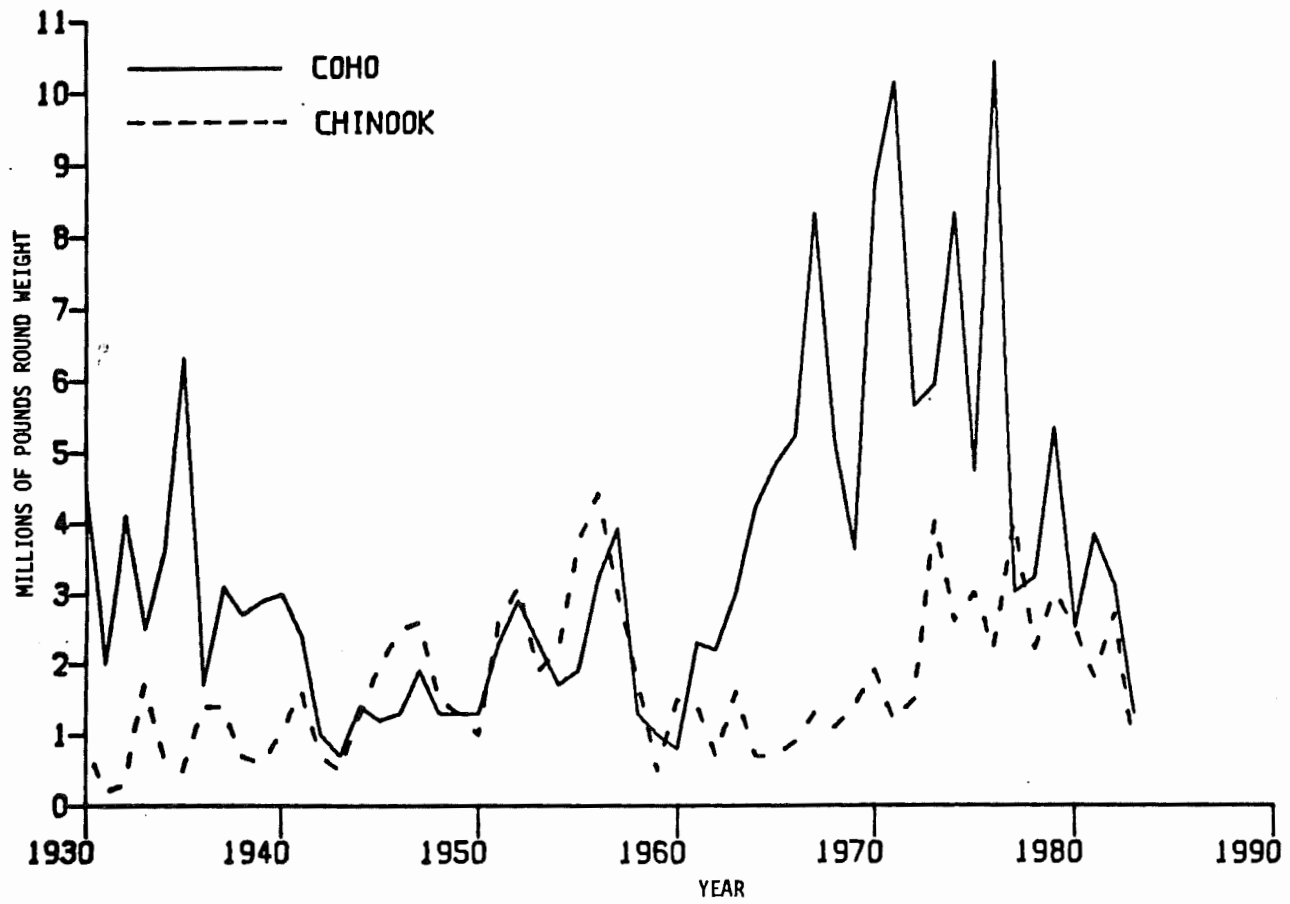


Figure 2. Oregon Ocean Troll Salmon Production, 1930-1983.

Table 4. Oregon Commercial Troll Effort and Catch of Coho and Chinook in Number of Fish by Month, 1971-75 Average and 1978-83^a/.

		April	May	June	July	August	September	October	November ^b /	Season Total
EFFORT (Boat Days)										
1971-75										
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 ^c /	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 ^d /	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 ^e /	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 Prelim.	Monthly	-	1,500	1,900	12,200	4,100	1,200	1,100	100	
	Cumulative	-	1,500	3,400	15,600	19,700	20,900	22,000	22,100	22,100
CHINOOK										
1971-75										
Average		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 ^c /	84,900	204,400	217,700	242,900	245,500	245,500
1980	Monthly ^b /	-	25,800	29,700 ^d /	47,700	64,000	25,200	16,000	1,000	
	Cumulative	-	25,800	55,400 ^d /	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 ^e /	28,600	63,500	129,200	146,100	159,200	160,400	160,400

Table 4. Continued.

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	
Prelim.	Cumulative	-	9,500	25,800	59,900	71,400	74,100	78,700	79,600	79,600
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 ^{c/}	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	-	-	
Prelim.	Cumulative	-	-	-	275,300	311,400	319,800	-	-	319,800

^{a/} Statistics from 1971-78 are reported by calendar months; monthly totals from 1979-82 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.

Of the 79,600 chinook landed in 1983, 87% were caught from the Newport area south (Table 3). Catches in all other areas were also lower in 1983 than in 1982.

The troll catch of chinook salmon peaked in July 1983 when 43% of the total catch was made (Tables 4, 5 and 6). August is normally the peak month for chinook landings.

Coho Catch

The commercial troll coho catch in 1983 totaled 319,700 fish weighing 1.1 million pounds (dressed weight) which is 61% of the 1982 landings and 32% of the 1971-75 average (Table 2, Figure 2).

The distribution of the 1983 coho catch was similar to 1982 (Table 3): 91% of the catch was again made in the Tillamook, Newport and Coos Bay areas. However, the distribution between the three areas differed from 1982, in that the Newport area had 37% of the state total in 1983 but only 23% in 1982.

Pink Catch

Unlike most odd-years, the 1983 troll pink landings were almost non-existent: only 68 fish were reported. The warm water associated with El Nino may have led to a more northerly migration pattern of pink salmon in 1983 and kept them north of Oregon.

The Dollar Value of the Catch

The chinook landings in 1983 were worth \$1,243,000 to the fishermen, the coho \$1,052,000. The average price per pound for chinook was \$1.90, for coho \$0.94 (Table 7).

Extended Troll Season Landings

Chinook landings during the 1983 extended troll season were 8,800 pounds dressed weight or an estimated 708 fish.

Table 5. Oregon Troll Salmon Effort and Catch, in Numbers of Fish by Area of Catch and by Statistical Month, 1983.

Month	Columbia R	Tillamook	Newport	Coos Bay	Brookings	Oregon				Total
						Subtotal	Alaska	Wash.	Calif.	
<u>EFFORT (Boat Days)</u>										
May	456	79	250	479	171	1,435	0	124	3	1,562
June	137	56	273	659	713	1,838	0	10	27	1,875
July	54	1,076	3,957	5,453	1,641	12,181	0	5	22	12,208
August	253	1,268	1,867	137	302	3,827	0	10	248	4,085
September	156	310	482	122	81	1,151	0	-	10	1,161
October	-	186	259	59	634	1,138	0	-	-	1,138
November	-	-	-	-	115	115	0	-	-	115
Total	1,056	2,975	7,088	6,909	3,657	21,685	0	149	310	22,144
<u>Chinook</u>										
May	3,210	490	1,762	1,607	1,212	8,281	0	1,241	10	9,532
June	1,590	692	1,569	3,985	8,134	15,970	0	83	219	16,272
July	234	1,583	10,758	12,757	8,648	33,980	0	1	140	34,121
August	206	1,238	6,217	909	1,186	9,756	0	229	1,539	11,524
September	113	504	1,335	364	296	2,612	0	-	30	2,642
October	-	388	2,393	209	1,749	4,739	0	-	-	4,739
November	-	-	-	-	752	752	0	-	-	752
Total	5,353	4,895	24,034	19,831	21,977	76,090	0	1,554	1,938	79,582
<u>Coho</u>										
June	-	-	-	-	-	-	-	-	31	31
July	150	43,349	99,534	109,705	22,450	275,188	0	3	108	275,299
August	2,236	18,290	14,281	-	-	34,807	0	136	1,129	36,072
September	2,539	1,654	4,163	-	-	8,356	0	-	-	8,356
Total	4,925	63,293	117,978	109,705	22,450	318,351	0	139	1,268	319,758

Table 6. Oregon Troll Salmon Catch, by Species, in Pounds Dressed, by Calendar Month and Port Area, 1983.

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	52,880	1,623	17,299	13,199	12,024	97,025
June	8,689	421	23,551	34,124	52,152	118,937
July	1,017	15,229	88,047	100,662	64,568	269,523
August	1,264	4,613	46,638	20,627	21,068	94,210
September	1,379	3,597	6,737	3,537	1,511	16,761
October	235	7,764	13,554	4,246	23,122	48,921
November	0	0	598	0	8,849	9,447
Total	65,464	33,247	196,424	176,395	183,294	654,824
			<u>COHO</u>			
July	153	150,077	327,016	372,863	82,127	932,236
August	10,452	59,896	64,735	3,102	4,655	142,840
September	8,146	4,020	10,552	166	0	22,884
Total	18,751	213,993	402,303	376,131	86,782	1,097,960

Table 7. Estimates of Ex-vessel Value^{a/} of Oregon Troll Salmon Landings and Average Price per Pound, 1971-83.

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 ^{b/}	1,243,000	1.90	1,052,000	0.96	2,295,000

^{a/} Dressed weight value

^{b/} Preliminary

An anticipated benefit of the extended season has always been the high incidence of mature Elk and Sixes river chinook observed in the catch. The available data indicate that the extended season is taking primarily mature local stocks of fish.

Average Weight Data

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

The seasonal average weight for chinook in 1983 was 8.2 pounds dressed weight compared to 10.1 pounds in 1982 (Table 8). In 1983, the average weights were smaller in all areas.

The seasonal average weight for coho in 1983 was 3.4 pounds dressed weight compared to 5.2 pounds in 1982 (Table 9). The low average weight in 1983 is the lowest average weight for coho recorded since data were first collected in 1952. The poor growth and small size can be attributable directly to the warm-water conditions along the coast associated with El Nino which adversely affected the food supply for salmon.

Troll Salmon Mark Sampling

In 1983, two samplers were assigned to Astoria, Newport and Charleston and one each to Garibaldi, Pacific City, Depoe Bay, Winchester Bay, Port Orford and Brookings. Some minimal sampling of the troll fishery was done at Florence and Gold Beach by recreational samplers. In 1983, 41% of all chinook and 42% of all coho landings were examined for coded wire tags (Table 10, 11).

Samplers found 1,613 adipose-clipped chinook in the 1983 troll landings and obtained 1,588 snouts. Technicians found tags in 1,382 or 87% of the snouts. The main agencies contributing the tags were:

California Department of Fish and Game	54%
Oregon Department of Fish and Wildlife	32%

Table 8. Observed Average Dressed Weight and Calculated Number of Chinook by Calendar Month and Port/Area, 1983.

Port of Landing	Month							Total
	May	June	July	Aug.	Sept.	Oct.	Nov.	
<u>Astoria</u>								
Numbers	5,423	886	98	128	127	18	0	6,680
Pounds	52,880	8,689	1,017	1,264	1,379	235	0	65,464
Ave. wt.	9.8	9.8	10.4	9.9	10.9	10.9	0	9.8
<u>Garibaldi-Pacific City</u>								
Numbers	186	38	1,841	537	219	495	0	3,316
Pounds	1,623	421	15,229	4,613	3,597	7,764	0	33,247
Ave. wt.	8.7	11.1	8.3	8.6	16.4	15.7	0	10.0
<u>Depoe Bay-Waldport</u>								
Numbers	2,065	2,885	10,654	5,945	902	1,986	96	24,533
Pounds	17,299	23,551	88,047	46,638	6,737	13,554	598	146,424
Ave. wt.	8.4	8.2	8.3	7.8	7.5	6.8	6.2	8.0
<u>Florence-Bandon</u>								
Numbers	1,738	4,083	12,735	2,646	471	579	0	22,252
Pounds	13,199	34,124	100,662	20,627	3,475	4,246	0	176,333
Ave. wt.	7.6	8.4	7.9	7.8	7.4	7.3	0	7.9
<u>Port Orford-Brookings</u>								
Numbers	1,605	6,892	8,809	2,840	190	1,757	708	22,801
Pounds	12,024	52,152	64,568	21,068	1,573	23,122	8,849	185,356
Ave. wt.	7.5	7.6	7.3	7.4	8.3	13.2	12.5	8.1
<u>Total</u>								
Numbers	11,017	14,784	34,137	12,096	1,909	4,835	804	79,582
Pounds	97,025	118,937	269,523	94,210	16,761	48,921	9,447	654,824
Ave. wt.	8.8	8.0	7.9	7.8	8.8	10.1	11.8	8.2

Table 9. Observed Average Dressed Weight and Calculated Number of Coho by Calendar Month and Port Area, 1983.

Port of Landing	July	August	Sept.	Total
<u>Astoria</u>				
Numbers	40	2,716	2,371	5,127
Pounds	153	10,452	8,146	18,751
Ave. wt.	3.8	3.8	3.4	3.7
<u>Garibaldi-Pacific City</u>				
Numbers	47,686	17,277	1,139	66,102
Pounds	150,077	59,896	4,020	213,993
Ave. wt.	3.1	3.5	3.5	3.2
<u>Depoe Bay-Waldport</u>				
Numbers	96,165	16,039	2,873	115,077
Pounds	327,016	64,735	10,552	402,303
Ave. wt.	3.4	4.0	3.7	3.5
<u>Florence-Bandon</u>				
Numbers	108,914	703	39	109,656
Pounds	372,863	3,102	166	376,131
Ave. wt.	3.4	4.4	4.3	3.4
<u>Port Orford-Brookings</u>				
Numbers	22,625	1,171	0	23,796
Pounds	82,127	4,655	0	86,782
Ave. wt.	3.6	4.0	0	3.6
<u>Total</u>				
Numbers	275,430	37,906	6,422	319,758
Pounds	932,176	142,840	22,884	1,097,960
Ave. wt.	3.4	3.8	3.6	3.4

Table 10. Oregon Troll Chinook Mark Sampling by Calendar Month and Port Area, 1983.

Port of Landing	Month							Total
	May	June	July	Aug.	Sept.	Oct.	Nov.	
<u>Astoria</u>								
No. Examined	1,667	547	17	29	57	0	0	2,317
No. Landed	5,423	886	98	128	127	18	0	6,680
% Examined	31	62	17	23	45	0	0	35
No. Marks	56	9	1	1	2	0	0	69
<u>Garibaldi-Pacific City</u>								
No. Examined	68	9	830	223	12	0	0	1,142
No. Landed	186	38	1,841	537	219	495	0	3,316
% Examined	37	24	45	42	5	0	0	34
No. Marks	1	1	52	5	1	0	0	60
<u>Depoe Bay-Waldport</u>								
No. Examined	851	1,421	4,672	2,571	550	616	0	10,681
No. Landed	2,065	2,885	10,654	5,945	902	1,986	96	24,533
% Examined	41	49	44	43	61	31	0	44
No. Marks	19	80	226	144	24	34	0	527
<u>Florence-Bandon</u>								
No. Examined	317	1,973	5,392	1,171	146	324	0	9,323
No. Landed	1,738	4,083	12,735	2,646	471	579	0	22,252
% Examined	18	48	42	44	31	56	0	42
No. Marks	12	71	219	66	7	8	0	383
<u>Port Orford-Brookings</u>								
No. Examined	382	1,603	4,391	828	80	1,196	616	9,096
No. Landed	1,605	6,892	8,809	2,840	190	1,757	708	22,801
% Examined	24	23	45	29	42	68	87	40
No. Marks	27	100	253	33	4	97	60	574
<u>Total</u>								
No. Examined	3,285	5,553	15,302	4,822	845	2,136	616	32,559
No. Landed	11,017	14,784	34,137	12,096	1,909	4,835	804	79,582
% Examined	30	32	45	40	44	44	77	41
No. Marks	115	261	751	249	38	139	60	1,613

Table 11. Oregon Troll Coho Mark Sampling by Calendar Month and Port Area, 1983.

Port of Landing	Month			Total
	July	August	Sept.	
<u>Astoria</u>				
No. Examined	5	673	1,324	2,002
No. Landed	40	2,716	2,371	5,127
% Examined	13	25	56	39
No. Marks	0	36	59	95
<u>Garibaldi-Pacific City</u>				
No. Examined	16,295	7,957	428	24,680
No. Landed	47,686	17,277	1,139	66,102
% Examined	34	46	38	37
No. Marks	753	413	30	1,196
<u>Depoe Bay-Waldport</u>				
No. Examined	36,534	6,563	1,401	44,498
No. Landed	96,165	16,039	2,873	115,073
% Examined	38	41	49	39
No. Marks	1,825	339	74	2,238
<u>Florence-Bandon</u>				
No. Examined	50,400	72	0	50,472
No. Landed	108,914	703	39	109,656
% Examined	46	10	0	46
No. Marks	2,572	5	0	2,577
<u>Port Orford-Brookings</u>				
No. Examined	12,707	195	0	12,902
No. Landed	22,625	1,171	0	23,796
% Examined	56	17	0	54
No. Marks	771	14	0	785
<u>Total</u>				
No. Examined	115,941	15,460	3,153	134,554
No. Landed	275,430	37,906	6,422	319,758
% Examined	42	41	49	42
No. Marks	5,921	807	163	6,891

Samplers found 6,891 adipose-clipped coho in the 1983 troll coho landings and obtained 6,799 random snouts. Technicians found coded-wire tags in 6,178 or 91%. The main agencies contributing tags were:

Oregon Department of Fish and Wildlife	53%
Washington Department of Fisheries	17%
Oregon Aqua Foods	16%
U.S. Fish and Wildlife Service	9%

THE 1983 RECREATIONAL OCEAN SALMON FISHERY

The recreational salmon fishery lasted through the scheduled season in 1983 but the effects of the unusually warm ocean waters associated with the "El Nino" weather phenomenon resulted in record low catches. A total of 24,700 chinook and 146,900 coho were caught while 226,000 salmon and 35,400 bottomfish trips were recorded.

Regulations

Ocean salmon regulations for Oregon's recreational fishery in 1983 were somewhat more liberal than in 1982 except in the Columbia River area (Table 12). The regulations were implemented by the Pacific Fishery Management Council and the Department of Fish and Wildlife and reflect concern for poor returns of coho and chinook salmon stocks along the Pacific Coast.

A pre-season quota of 189,000 coho was established between Leadbetter Point in Washington and Cape Falcon in Oregon. For the first time, a recreational quota was set on chinook salmon in the Columbia River area; 29,000 chinook were allotted between Cape Falcon, Oregon and Klipsan Beach, Washington. South of Cape Falcon, including California, the coho quota was set at 196,000 fish. This quota was increased to 211,000 coho in early August in response to a higher than predicted private hatchery contribution in the ocean catch.

The salmon season opened on May 29 south of Cape Blanco and June 18 along the rest of the Oregon coast. Unlike 1982, the coho quotas in 1983 were not reached and the all-salmon season continued through September 11 to the north of Cape Falcon and September 18 to the south.

A recreational salmon fishery continued south of Cape Blanco through October for all species except coho. There had been a November target fishery

Table 12. Summary of Oregon's Recreational Ocean Salmon Regulations, 1946-83.

Season	Year	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.

- 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 First two chinook taken per day; barbless hook only.
(Between Cape Blanco and Cape Falcon in state waters)
- May 28-Aug. 1^{c/}
(South of Cape Blanco) Bag limit 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) Bag limit 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.

^{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.

on hatchery chinook in state waters off the Elk and Chetco rivers, every year since 1977. The Chetco River was kept closed because of expected poor returns of Chetco fish. The fishery off the Elk River was scheduled but is not accessible to most recreational boats.

For the Columbia River area in 1983, fishing was restricted to specific areas during the season. From June 18 through July 29, two areas were open for fishing; between North Head and Klipsan Beach in Washington and between the South Jetty and Cape Falcon in Oregon. From July 30 through August 15, there were no area restrictions. Finally, from August 16 through September 11, ocean salmon fishing was only permitted in a broad zone between the South Jetty and Cape Falcon (Figure 3).

The daily bag limit for the 1983 season was 2 fish. 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, there was no minimum size limit and people were required to keep the first 2 salmon caught, regardless of size.

Ocean Salmon Sampling

Twenty-one seasonal aides sampled the ocean recreational fishery; two more than in 1982. The increase was necessary because the Coast Guard stopped making regular boat counts in some ports. All samplers made boat counts and sampled; only in Newport and Coos Bay did we have a specific person counting boats. Astoria, Newport and Winchester Bay each had 3 samplers; Garibaldi, Coos Bay and Brookings each had 2 and Pacific City, Depoe Bay, Florence and Gold Beach each had one sampler.

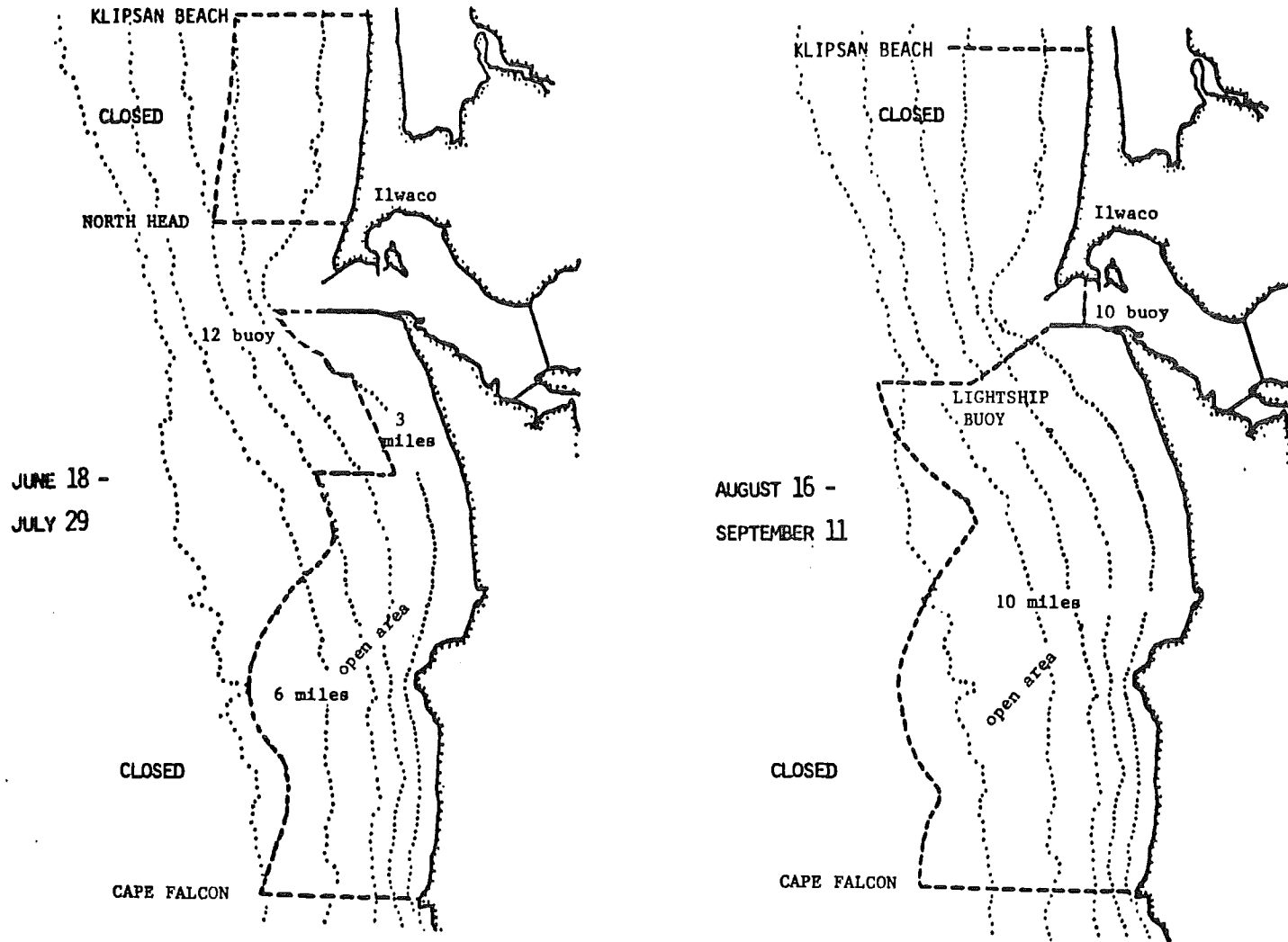


Figure 3. Recreational area restrictions off of the Columbia River, 1983.

A 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, scales, and lengths. Snouts were collected from marked (adipose-clipped) fish to later recover their coded wire tags. Bottom-fish catches were also sampled and recorded by species.

Effort was estimated by three methods: boat counts by ODFW samplers, Coast Guard bar crossing counts and 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 the Oregon State University CYBER computer. The survey presently provides accurate weekly estimates of Oregon's total ocean recreational effort and catch within 5 days of sampling. A preliminary estimate is possible within a day of the time the data arrive in Newport.

Department samplers interviewed 117,561 ocean anglers and inspected 71,619 salmon in 1983 compared to 122,200 anglers and 95,000 salmon in 1982. The data were used to estimate the effort and catch by port and week for the recreational fishery (Table 13). Sampling rates in 1983 ranged from 82% at Pacific City to 33% at Winchester Bay. Overall, 42% of the total combined salmon catch from all ports was observed (Table 14). The 42% rate is 2% less than in 1982 but still high compared to most creel censuses.

Table 13. Oregon Ocean Recreational Salmon Catch Statistics from Sampling Data, 1983^{a/}.

Port	Catch						Pinks	Marked Coho	Marked Chinook	Salmon Angler Trips	Total Salmon Catch	Salmon per Angler Trip
	Adult	Coho		Adult	Chinook							
		Jack	Total		Jack	Total						
Columbia R.	36,529	716	37,245	3,419	21	3,440	0	1,659	120	30,851	40,685	1.3
Garibaldi	7,730	181	7,911	558	39	597	2	312	33	23,259	8,510	0.4
Pac. City	882	15	897	60	35	95	1	47	11	2,048	993	0.5
Depoe Bay	6,685	365	7,050	295	87	382	0	412	30	13,163	7,432	0.6
Newport	14,418	380	14,798	1,084	142	1,226	32	769	79	29,396	16,056	0.5
Florence	2,866	170	3,036	490	87	577	0	131	17	7,830	3,613	0.5
Winchester	34,327	1,479	35,806	1,970	2,147	4,117	15	2,260	184	40,927	39,938	1.0
Coos Bay	23,372	440	23,812	1,447	442	1,889	13	1,266	94	22,871	25,714	1.1
Gold Beach	1,511	47	1,558	1,762	306	2,068	2	104	87	8,859	3,628	0.4
Brookings	14,666	125	14,791	8,886	1,400	10,286	4	1,125	546	46,818	25,077	0.5
Total	142,986	3,918	146,904	19,971	4,706	24,677	69	8,085	1,201	226,022	171,581	0.8

^{a/} All ports except Gold Beach were sampled the entire season. Gold Beach was sampled through Sept. 18.

Table 14. Recreational Ocean Salmon Sampling Rates at Oregon Ports, 1975-1983.

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

^{a/} Percentage of total catch observed by samplers = Number of salmon observed/estimated catch of salmon.

Effort

Past ocean fishing effort data have always included a small number of bottomfishing trips. Since 1979, salmon fishing trips and bottomfishing trips have been tallied separately. There is some bottomfishing effort year-round but the figures in this report refer only to bottomfish data collected during the salmon season.

In 1983, 226,000 trips or 86% of the total 261,500 ocean angler trips targeted on salmon for all or part of their trip (Tables 15 and 16). This compares to 226,000 trips (82%) in the short 1982 season and an 88% average from 1979-82.

July is usually the peak month for recreational ocean salmon effort, followed by August. In 1983, 108,000 salmon angler trips or 48% of the total salmon trips occurred in July, and 55,100 trips or 24% occurred in August. In contrast, August was the top month for bottomfishing trips with 15,700 or 44%

Table 15. Oregon Ocean Recreational Salmon Catch and Effort for 1966-83^{a/}

Year	Effort (Angler Trips)		Catch			Fish/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	.88
1973	-	350,400	232,068	60,984	2,008	.84
1974	-	335,849	314,501	36,729	34	1.05
1975	-	407,498	252,209	75,719	1,218	.81
1971-75 Avg.	-	345,829	271,776	49,426	1,115 ^{b/}	.93
1976	-	538,414	501,306	79,316	50	1.08
1977	-	404,534	195,277	61,364	4,037	.62
1978	-	403,740	259,769	22,844	24	.70
1979	301,343	341,770	180,834	20,902	607	.67
1980	331,443	362,015	325,843	19,014	24	1.04
1981	311,027	350,937	199,812	29,173	1,589	.74
1982	226,029	275,947	175,128	38,716	14	.95
1983	226,022	261,456	146,904	24,677	69	.76

^{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, 1983.

Port/Trip Type	Month						Total
	May	June	July	August	Sept.	Oct.	
Columbia R.	-	2,678	12,900	11,646	3,759	-	30,983
Salmon	-	2,678	12,878	11,536	3,759	-	30,851
Bottomfish	-	0	22	110	0	-	132
Garibaldi	-	1,337	13,044	9,784	4,393	-	28,558
Salmon	-	1,044	11,365	7,346	3,504	-	23,259
Bottomfish	-	293	1,679	2,438	889	-	5,299
Pacific City	-	219	1,964	1,518	511	-	4,212
Salmon	-	144	1,284	464	156	-	2,048
Bottomfish	-	75	680	1,054	355	-	2,164
Depoe Bay	-	1,372	8,268	5,562	2,266	-	17,468
Salmon	-	981	6,998	3,706	1,478	-	13,163
Bottomfish	-	391	1,270	1,856	788	-	4,305
Newport	-	3,217	19,511	12,966	5,970	-	41,664
Salmon	-	2,613	15,846	7,228	3,709	-	29,396
Bottomfish	-	604	3,665	5,738	2,261	-	12,268
Florence	-	797	4,158	1,529	1,384	-	7,868
Salmon	-	797	4,158	1,491	1,384	-	7,830
Bottomfish	-	0	0	38	0	-	38
Winchester Bay	-	-	-	-	-	-	42,258
Salmon	-	7,321	20,747	8,539	4,320	-	40,927
Bottomfish	-	0	371	703	257	-	1,331
Coos Bay	-	6,142	12,806	4,387	1,629	-	24,964
Salmon	-	6,105	12,016	3,604	1,146	-	22,871
Bottomfish	-	37	790	783	483	-	2,093
Gold Beach	61	390	3,692	4,643	1,159	-	9,945
Salmon	3	309	3,288	4,247	1,012	-	8,859
Bottomfish	58	81	404	396	147	-	1,086
Brookings	1,107	9,910	21,456	9,572	5,830	5,661	53,536
Salmon	832	9,492	19,382	6,951	5,039	5,122	46,818
Bottomfish	275	418	2,074	2,621	791	539	6,718
Total South of Cape Falcon	1,168	30,705	106,017	59,203	27,719	5,661	230,473
Salmon	835	28,806	95,084	43,576	21,748	5,122	195,171
Bottomfish	333	1,899	10,933	15,627	5,971	539	35,302
Statewide Total	1,168	33,383	118,917	70,849	31,478	5,661	261,456
Salmon	835	31,484	107,962	55,112	25,507	5,122	226,022
Bottomfish	333	1,899	10,955	15,737	5,971	539	35,434

of the total. The poor salmon fishing in August may partly account for the increase in bottomfishing in August (Tables 16 and 17).

Brookings was the busiest port in 1983 with 46,800 or 21% of the total salmon trips. The salmon season was also the longest on the southern Oregon coast, lasting from May 29 through October 31. Winchester Bay had the second highest salmon effort with 40,900 angler trips. Even though the salmon season lasted the scheduled 93 days, Pacific City, Depoe Bay, Newport, Florence and Brookings all had fewer salmon angler trips in 1983 than in the abbreviated 1982 season. Table 18 shows past ocean recreational effort by management areas and Table 19 shows the same data by month and management area.

Bottomfishing effort was also down in 1983 from 1982 and 1981 in all ports except Florence. Anglers made only an estimated 35,400 bottomfishing trips in 1983, compared to 49,900 trips in 1982 and 39,700 trips in 1981.

Catch Statistics

The sampling survey estimates the total chinook and coho catch for Oregon's ocean fishery in 1983 (Table 13) except for minor landings at other unsurveyed ports. These are not included since they represent less than one percent of the total catch off Oregon and will not be available until late 1984.

The 1983 total ocean recreational salmon catch was 171,650 fish, a record low (Figure 4) and only 30% of the highest total recreational ocean salmon catch (580,700 fish) in 1976 (Table 15). Figure 4 shows the trends in recreational ocean salmon catches since 1966.

Table 17. Oregon Ocean Salmon Recreational Effort and Catch (Numbers of Fish) by Month, 1974-75 Average and 1978-83.

		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 Prelim.	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
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	-	-	-	-	175,100
1983 Prelim.	Monthly	-	500	24,600	75,600	26,400	14,400	-	-	
	Cumulative	-	500	30,500	106,100	132,500	146,900	-	-	146,900
COHO										
1974-75^{b/}										
Average	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	38,700
1983 Prelim.	Monthly	-	500	2,900	10,100	3,600	3,300	1,000	-	
	Cumulative	-	500	6,600	16,800	20,400	23,700	24,700	-	24,700

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 weeks' estimates with closest fit to calendar month.

Table 18. Summary of Oregon Recreational Ocean Salmon Effort and Catch (data) by Area, 1974-75 Average and 1976-83.

Year	Area ^{d/}					Total
	Columbia R.	Tillamook	Newport	Coos Bay	Brookings	
EFFORT						
(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
CATCH						
Chinook						
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
Coho						
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

^{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/} 1979-1983 effort consists of salmon angler trips only.

Table 19. Oregon Recreational Effort in Salmon Angler Trips by Management Area^{a/} and Month for 1979-1983.

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
<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
<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
<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
<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
<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

^{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.

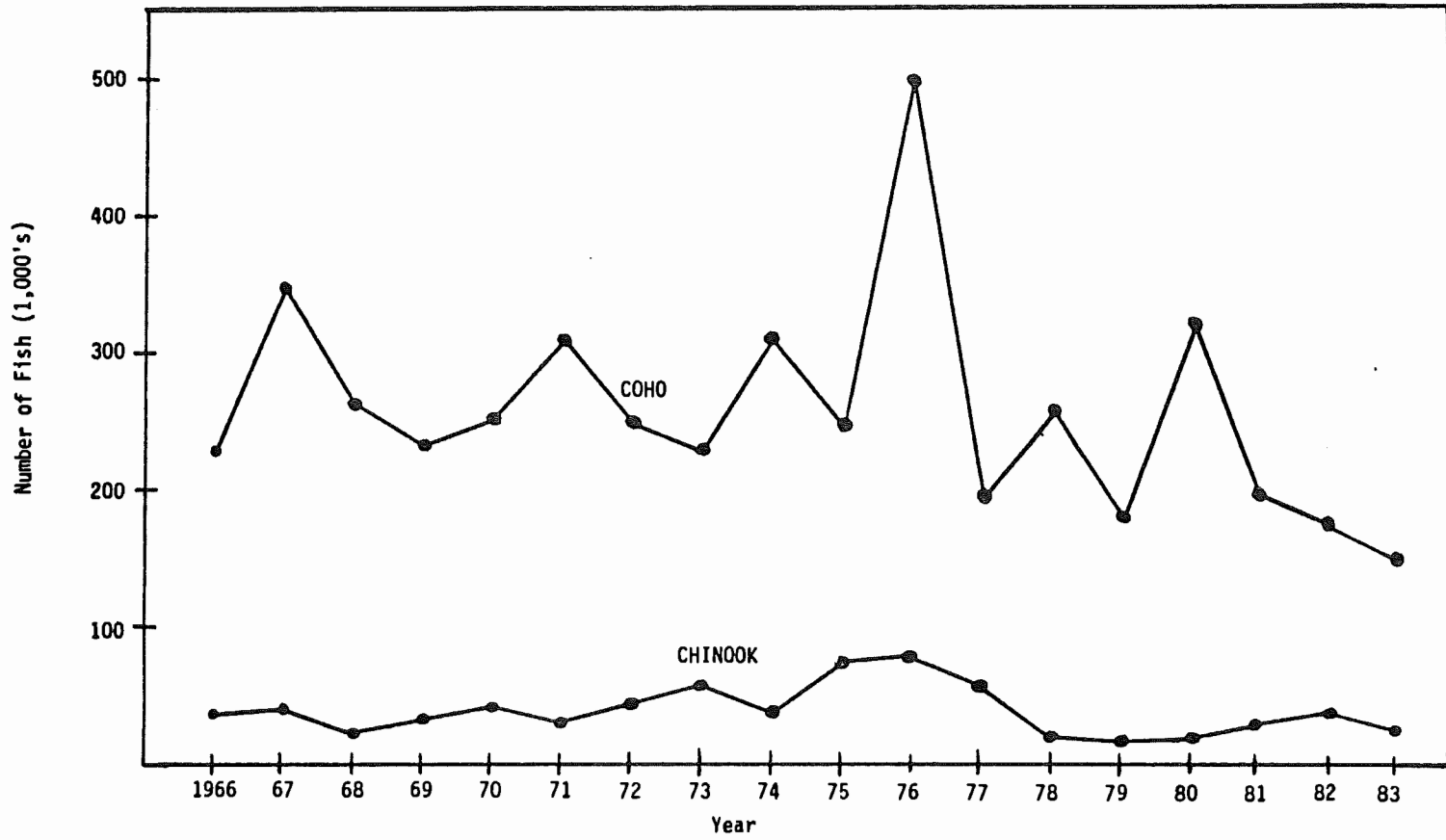


Figure 4. Trends in Oregon Recreational Ocean Salmon Catches, 1966-83.

Chinook Catch

The recreational harvest of 24,700 chinook in 1983 was the fourth lowest on record and only 50% of the 1971-75 average catch of 49,400 fish and only 64% of the long-term 1966-82 average catch of 41,500 fish (Table 15).

July accounted for 41% of the catch (10,100 fish) followed by 15% for August (3,600 fish) and 15% for September (3,300 fish). This pattern of highest catches in July follows historical trends. The high catch in October (1,000 chinook landed) is the most since 1977.

Brookings area ocean anglers caught the most chinook, 10,300 fish (42% of the total), Winchester Bay had 4,100 chinook (17%) and Astoria, which traditionally lands the most chinook, landed 3,400 fish (14%; Table 20). The low catches at Astoria reflected the more restrictive regulations in force north of Cape Falcon (size limits and area closures). The 3,400 chinook landed in Astoria in 1983 is only 10% of the average 1974-75 landings of 32,600 fish and 22% of the 1976-82 average of 15,400 chinook (Table 18).

Table 20. Oregon Ocean Recreational Chinook Catch by Port, by Month, 1983^{a/}.

Port	Month						Total
	May	June	July	Aug.	Sept.	Oct.	
Columbia R.	-	735	1,944	533	228	-	3,440
Garibaldi	-	2	347	164	84	-	597
Pacific City	-	4	56	30	5	-	95
Depoe Bay	-	35	225	76	46	-	382
Newport	-	321	559	228	118	-	1,226
Florence	-	143	210	97	127	-	577
Winchester Bay	-	491	1,403	803	1,420	-	4,117
Coos Bay	-	682	769	244	194	-	1,889
Gold Beach	-	61	689	936	382	0	2,068
Brookings	504	3,355	4,238	521	652	1,016	10,286
Total South of Cape Falcon	504	5,393	8,197	3,099	3,028	1,016	21,237
Statewide Total	504	6,128	10,141	3,632	3,256	1,016	24,677

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

Coho Catch

The ocean recreational coho catch of 146,900 fish was the lowest recorded during the period 1966-83. It was 16% lower than the previous low 1982 catch and less than half of the 1971-75 average of 271,800 coho. In comparison, the long-term 1966-82 average coho catch is 266,900 fish (Table 15).

July accounted for 51% of the total recreational coho catch with 75,600 fish. The season opener was delayed until June 18, but 30,000 coho were taken that month. Statewide, 80% of the catch had been made by August 7 (Table 17).

The Columbia River area yielded the most coho; 37,200 fish or 25% of the total. Winchester and Coos Bays together made up another 41% of the total coho catch. In ports from Garibaldi to Florence, the coho catch was down sharply even from the mediocre 1982 season. Winchester Bay, Coos Bay and Gold Beach all had larger landings of coho this year than in 1982 while Brookings' catch was just 1,000 fish less than in 1982 (Table 21). A historical perspective on salmon catch by month and management area is shown in Table 22.

Table 21. Oregon Ocean Recreational Coho Catch by Port, by Month, 1983^{a/}

Port	Month					Total
	May	June	July	August	September	
Columbia R.	-	3,569	18,878	9,742	5,056	37,245
Garibaldi	-	196	5,439	1,451	825	7,911
Pacific City	-	22	655	140	80	897
Depoe Bay	-	230	3,997	1,763	1,060	7,050
Newport	-	382	9,492	2,510	2,414	14,798
Florence	-	176	1,453	561	846	3,036
Winchester Bay	-	10,144	16,753	5,781	3,128	35,806
Coos Bay	-	10,357	10,102	2,868	485	23,812
Gold Beach	0	196	755	498	109	1,558
Brookings	453	4,750	8,019	1,086	383	14,791
Total South of Cape Falcon	453	26,453	56,765	16,658	9,330	109,659
Statewide Total	453	30,022	75,643	26,400	14,386	146,904

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

Table 22. Oregon Ocean Recreational Chinook and Coho Catch (Number of Fish) by Catch Area and Month, 1979-83, with 1974-75 Average.

Area	Chinook								
	April	May	June	July	August	Sept.	Oct.	Nov.	Season ^{b/}
Columbia R									
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
Tillamook									
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
Newport									
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
Coos Bay									
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
Brookings									
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
All Areas									
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

Table 22. Continued.

Area	Coho								
	April	May	June	July	August	Sept.	Oct.	Nov.	Season ^{d/}
Columbia R									
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
Tillamook									
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
Newport									
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
Coos Bay									
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
Brookings									
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
All Areas									
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

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.

Columbia River Area Special Fishery Zones

Since immature feeding salmon are found around the Columbia River mouth year-round, the special fishery zones were an attempt to allow some fishing while protecting these salmon schools and depressed runs such as upriver "bright" chinook.

The June 18-July 29 southern fishing zone was originally intended to extend due south from the tip of the South Jetty. However, the Pacific Fishery Management Council adopted a definition that, in effect, included a wedge-shaped piece that extended 3 miles past the tip of the jetty (Figure 3). Therefore, the restrictions were not as severe as intended and many salmon were caught in this area.

Except for an initial interest in the northern area, most of the effort and catch came from Oregon waters off the southern area. Seventy percent of the angler trips, 70% of the coho and 55% of the chinook were recorded from south of the South Jetty, June 18-July 29 (Table 23 and Figure 5). The ratio of coho shakers/landed fish was 0.1 both north and south. There were more chinook shakers/landed fish in the southern area (1.1) as compared to the North Head to Klipsan Beach zone (0.7).

Table 23. Oregon Recreational Salmon Effort, Catch and Fish Released, by Time Period, Columbia River Area, 1983.

	June 18-July 29				July 30-August 15			
	North	South	West	Total	North	South	West	Total
Angler Trips	3,550	9,559	0	13,109	532	5,591	2,485	8,608
Chinook Catch	1,129	1,444	0	2,573	24	257	54	335
Coho Catch	5,342	13,356	0	18,698	724	5,896	3,620	10,240
Chinook Released	845	1,639	0	2,484	30	318	157	505
Coho Released	547	1,438	0	1,985	154	1,274	747	2,175

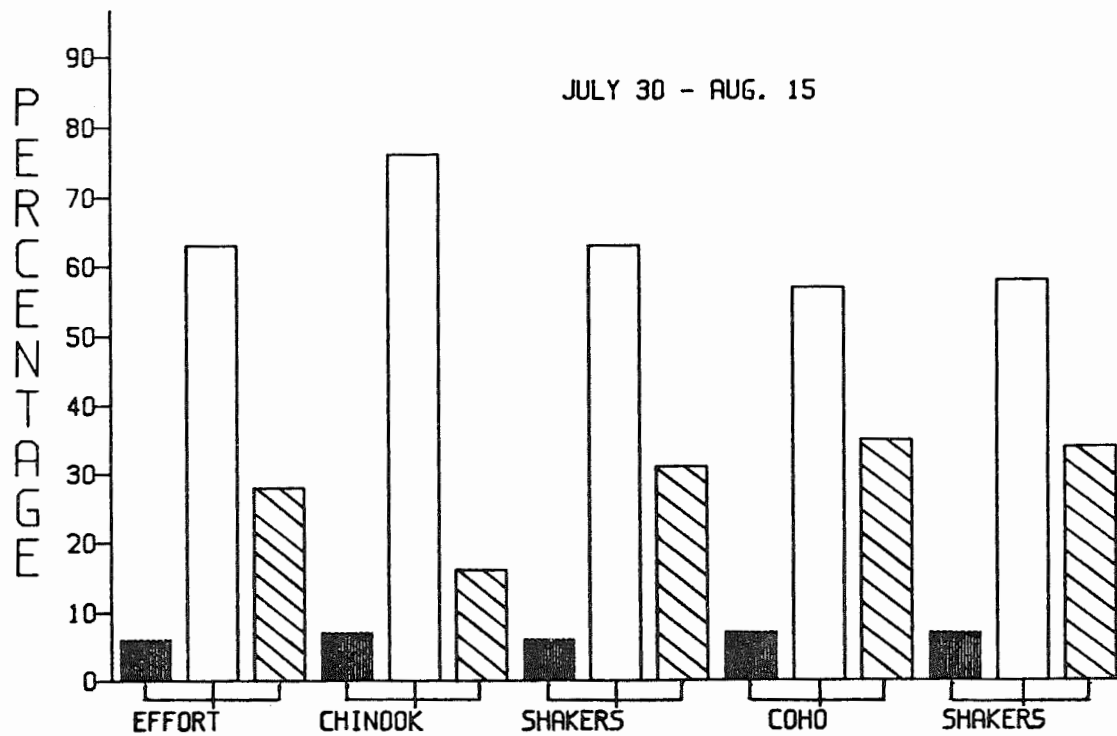
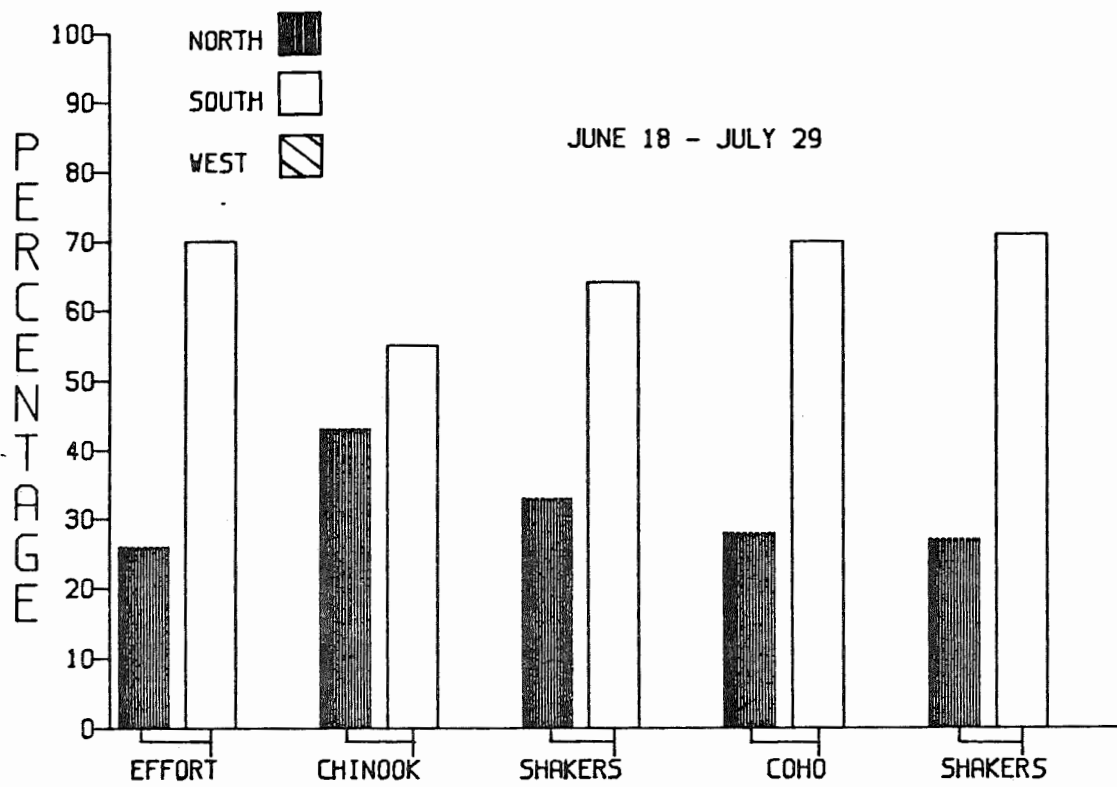


FIGURE 5. OREGON EFFORT AND CATCH COLUMBIA RIVER AREA, JUN 18 - AUG 15 1983

No area restrictions were in effect from July 30 through August 15. Our samplers still recorded area fished, assigning as "west" anything caught straight off the mouth of the Columbia River. Effort in the northern area dropped off drastically to 6% of the total; the southern zone was still the most popular area with 65% of the effort. Our creel indicated that 29% of the anglers chose fishing due west from the river mouth. Fifty-eight percent of the coho and 77% of the chinook were taken from the southern area. The total catch north of North Head amounted to less than 10% while 35% of the coho and 16% of the chinook came off the river mouth (Table 23 and Figure 5).

The ratio of coho shakers/fish kept was 0.2 in all areas, compared to 0.1 in the earlier time period before July 30. The chinook shaker data showed similar values for the northern and southern areas, 1.3 and 1.2 respectively, but 2.9 chinook were released for every chinook kept in the western zone. During the June-July period, 2,626 chinook were landed compared to only 338 fish for the period July 30-Aug. 15 (Table 23).

Salmon fishing in the Columbia River east of Buoy 10 opened on August 16. We sampled the catch in the river west of the Astoria-Megler Bridge through September, and estimated effort to be 3,149 angler trips and catch to be 210 chinook and 877 coho. These river data are not included in the ocean statistics.

Charter/Private Boat Fisheries

There were 254 charter boat licenses issued in 1983 but only about 152 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 1983 salmon charter boat fishing effort was estimated at only 41,900 salmon angler trips, a record low. Charter anglers made up 18.5% of the total ocean salmon recreational angler trips in 1983, similar to 1982 but well below the 1973-82 average of 28% (87,200 angler trips; Figure 6). 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 1983 and also the most salmon angler trips at 12,900. Winchester Bay was next with 8,300 trips. Although the charters in the Astoria area and the coast from Winchester Bay south showed a modest increase in salmon angler trips over 1982, the ports between Garibaldi and Newport fell below that effort (Table 24).

Not all charter anglers go salmon fishing. 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 charter fleets (Table 25). In 1983, 16,900 trips or 29% of the total 58,800 charter trips targeted on bottomfish. In 1982, 19,300 or 31% of the total charter anglers went bottomfishing. The 1979-81 average for bottomfishing trips is 14,700 or 17% of the total charter trips. In 1982, August was closed to salmon fishing, which boosted the bottomfishing share. In 1983, the unusual water conditions associated with El Nino reduced salmon fishing in many ports, and again boosted the bottomfishing effort.

Catch

Charter anglers landed 39,700 coho and 4,700 chinook in 1983, including 300 coho and 100 chinook which were caught incidentally by bottomfish charter anglers. The total catch of 44,400 coho and chinook by charter anglers in 1983

Table 24. Oregon Ocean Recreational Salmon Effort and Catch by Boat-Type, 1983^{a/}.

Port	Salmon Charter Boats				Salmon Private Boats			
	Boat Trips	Angler Trips	Catch		Boat Trips	Angler Trips	Catch	
			Coho	Chinook			Coho	Chinook
Columbia R.	1,738	12,901	17,661	1,694	5,225	17,950	19,584	1,746
Garibaldi	260	1,743	1,203	54	7,971	21,516	6,708	543
Pacific City	24	90	35	3	633	1,958	862	92
Depoe Bay	905	5,699	3,150	138	2,763	7,464	3,900	244
Newport	859	5,836	3,561	308	8,386	23,560	11,237	918
Florence	33	98	33	13	2,961	7,732	3,003	564
Winchester Bay	1,305	8,273	8,124	905	11,759	32,654	27,682	3,212
Coos Bay	469	3,687	4,958	357	6,505	19,184	18,854	1,532
Gold Beach	393	2,174	366	511	2,761	6,685	1,192	1,557
Brookings	255	1,415	610	697	19,296	45,403	14,181	9,589
Total	6,241	41,916	39,701	4,680	65,492	184,106	107,203	19,997
Combined totals for all Oregon craft	71,733	226,022	146,904	24,677				

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

was below the 1982 catch of 56,800 fish and the 1973-82 average of 96,400 fish. The charter fleet landed 26% of the total recreational salmon catch in 1983, same as in 1982. The 1973-82 average of the charter's share is 87,200 fish or 28% of the total catch (Figure 6).

The Columbia River charter fleet landed 19,400 salmon or 44% of the total catch in 1983. Success remained high through most of the season; the final average was 1.5 salmon/angler. Winchester Bay charters took 9,000 salmon and the Coos Bay fleet landed 5,300 salmon. The success rate in these ports was variable and the final average was 1.1 fish/angler. The 3 ports made up 77% of the charter catch, leaving only 16,000 fish to be apportioned between ports of Newport, Depoe Bay, Garibaldi and others (Table 25). The statewide average charter angler success was 1.06 fish/angler, compared with the 1973-82 average of 1.1.

Private Anglers

Effort

The 1983 private salmon boat effort was estimated at 184,100 angler trips or 81.5% of the total salmon effort. This is only slightly above the record low 1982 effort and 27% less than the 1973-82 average of 221,600 trips (Table 24 and Figure 6). Brookings as usual had the most effort with 45,400 private salmon trips or 25% of the coast total. Brookings' long salmon season, safe bar and large population of retired people all contribute to make this the leading "kicker boat" port on the Oregon coast. Winchester Bay had 32,700 angler trips or 18% of the sport salmon effort while Newport, often a contender with Brookings for the most effort, had 23,600 angler trips or 13% of the total. The salmon effort in 1982 was down because of a short season; this year's lack of salmon, especially in August, also reduced the effort.

Table 25. Oregon Ocean Recreational Effort and Catch Statistics by Boat and Trip Type^{1/} 1983^{2/}.

Port	Charter						Private					
	Boat Trips		Angler Trips		Catch		Boat Trips		Angler Trips		Catch	
	Sal	Bot	Sal	Bot	Sal	Bot ^{3/}	Sal	Bot ^{3/}	Sal	Bot ^{3/}	Sal	Bot
Columbia R.	1,738	9	12,901	63	19,355	2,463	5,225	19	17,950	69	21,330	6,495
Garibaldi	260	425	1,743	4,089	1,257	47,341	7,971	369	21,516	1,210	7,251	16,253
Pacific City	24	14	90	57	38	548	633	647	1,958	2,107	954	15,236
Depoe Bay	905	517	5,699	3,750	3,288	45,023	2,763	168	7,464	555	4,144	11,472
Newport	859	789	5,836	6,137	3,869	74,713	8,386	1,951	23,560	6,131	12,155	56,737
Florence	33	2	98	6	46	10	2,961	12	7,732	32	3,567	791
Winchester Bay	1,305	173	8,273	1,166	9,029	15,478	11,759	49	32,654	165	30,894	3,630
Coos Bay	469	134	3,687	1,089	5,315	9,401	6,505	311	19,184	1,004	20,386	12,434
Gold Beach	393	29	2,174	167	877	3,567	2,761	314	6,685	919	2,749	18,069
Brookings	255	58	1,415	335	1,307	3,443	19,296	2,299	45,403	6,383	23,770	61,225
Total	6,241	2,150	41,916	16,859	44,381	201,987	68,260	6,139	184,106	18,575	127,257	202,342
Totals:	Boat trips: 82,790		Angler trips: 261,456		Salmon: 171,638		Bottomfish: 404,329					

^{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 18.

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

As with charters, some private boats only fish for bottomfish. Effort data by trip type (salmon or bottomfish) was collected through interviews and applied proportionately to the total effort counts. These data show that 18,600 angler trips or 9% of the private trips targeted on bottomfishing, less than in 1982 when 14% or 30,600 angler trips were for bottomfish. Brookings had the most private bottomfish anglers, closely followed by Newport (Table 25). Almost all private anglers target on salmon in the Columbia River, Florence and Winchester Bay areas.

Catch

Anglers from private boats landed 107,203 coho and 19,997 chinook in 1983. This includes 272 coho and 65 chinook caught incidentally by anglers targeting on bottomfish. The total salmon catch of 127,200 fish in 1983 is well below the 157,200 fish caught in 1982 even though the season was substantially longer in 1983. The catch was 26% below the 1973-82 average of 172,700 fish (Figure 6). Private boat anglers caught 74% of the total recreational salmon catch in 1983, similar to 1982 but above the 1973-82 average of 64%.

Winchester Bay anglers caught the most salmon, 30,900 fish, followed by Brookings with 23,800 and Astoria with 21,300. The average angler success on private boats was 0.7 salmon per angler, compared to 0.9 fish in 1982 and the average of 0.8 from 1973-82 (Table 25).

Evaluation of Minimum Size Limits

Chinook

In 1983, minimum size limits were in effect only north of Cape Falcon. The minimum size for chinook was 24 inches. The number of shakers (undersized salmon) was estimated from interview data collected during the ocean sampling

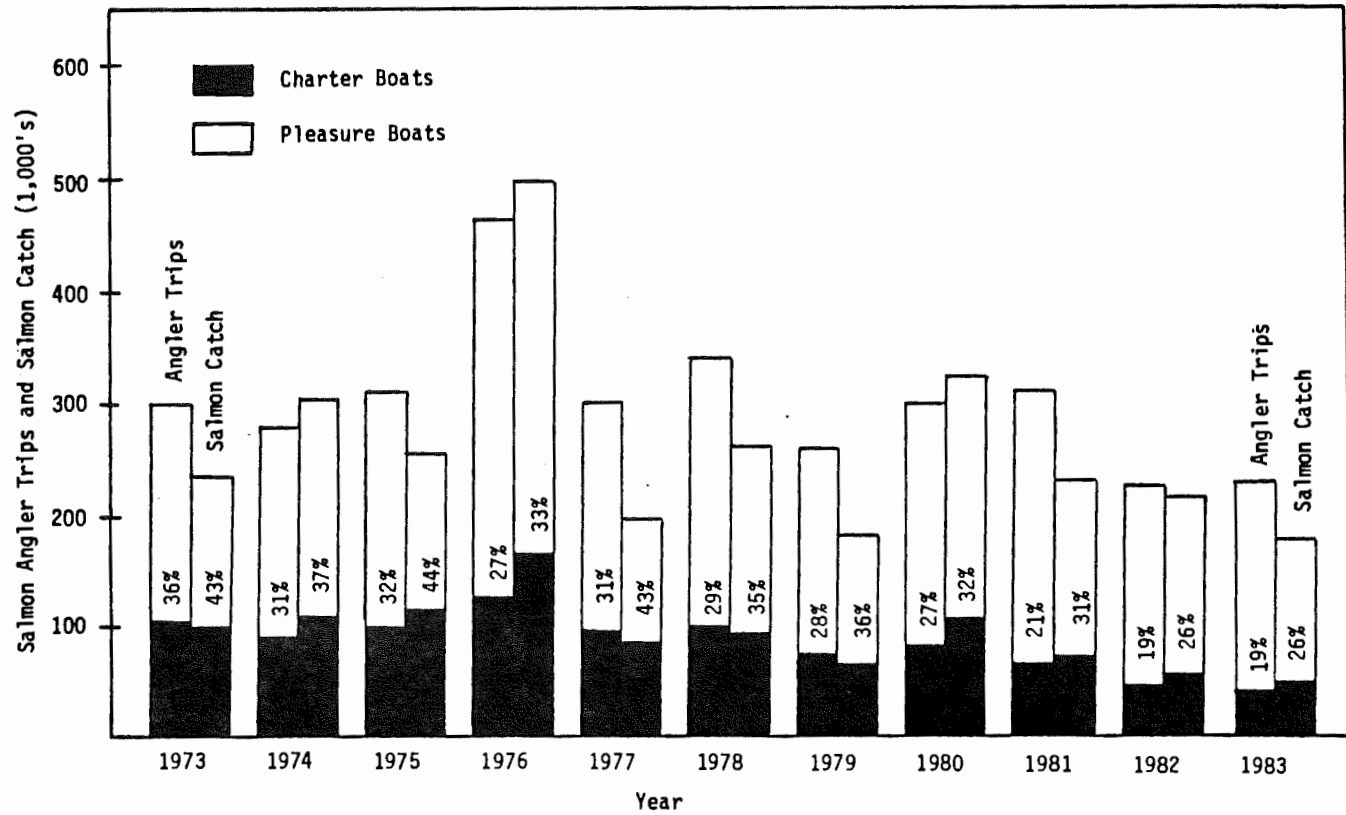


Figure 6. Oregon Ocean Recreational Salmon Fishery Statistics by Boat-Type, 1973-1983.

survey. We estimated that 3,700 chinook or 52% of the total chinook catch in the Columbia River area was released. In comparison, the 1982 shaker rate in the Columbia River area was 46%, and the 1979-82 average was 58% (Table 26).

Table 26. Chinook Salmon Released by Oregon Ocean Recreational Anglers in the Columbia River Area, 1979-1983.

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
1979-82 Average	8,081	11,306	19,387	58
1983	3,440	3,671	7,111	52

South of Cape Falcon, anglers were required to keep the first two salmon caught. In order to get 1983 data that was at least similar to past years, samplers were asked to randomly measure samples of the chinook catch and all coho salmon that were less than 17 inches in length. This would give us information on what percentage of fish would have been released under past minimum size regulations (16" for coho and 22% for chinook).

Past shaker data has varied substantially from year to year in any one port. There has always been some sorting of fish, irrespective of minimum size limits. As in the past, some anglers volunteered that they would not keep "small fish". Shaker rates in this report are conservative since we could not quantify the unreported sorting. As was documented in the troll salmon section, both chinook and coho were smaller in 1983 than in past years. Table 27 is a summary of the chinook length data by port and fishery.

Table 27. Analysis of Chinook Lengths from the Oregon Ocean Recreational Fishery South of Cape Falcon, June 18-September 18, 1983.

	Average Size (mm)			Minimum Size (mm)		Percentage <560 mm			Percentage of Fish Tagged
	Charter	Rec.	Comb.	Charter	Rec.	Charter	Rec.	Comb.	Comb.
Garibaldi N=160	(646)	768	755	(247)	310	(31.0)	8.0	10.0	3.1
Pacific City N=69	-	636	636	-	305	-	30.4	30.4	11.6
Depoe Bay	Not Enough Data								
Newport N=277	713	688	698	355	330	12.7	18.6	16.2	4.3
Florence N=192	-	678	678	-	310	-	19.3	19.3	3.1
Winchester Bay N=1,544	529	579	567	250	260	64.7	48.7	52.3	3.4
Coos Bay N=739	575	627	616	295	228	48.0	29.5	33.3	3.4
Gold Beach ^{1/} N=788	689	704	699	316	327	19.7	14.7	16.2	4.4
Brookings ^{2/} N=799	544	632	619	305	297	55.3	30.2	34.0	6.3
Statewide N=4,568	600	635	627	247	228	43.4	32.1	34.9	4.3

N = Number of fish measured

^{1/} Data from May 29 through Sept 18 in Gold Beach

^{2/} Date from May 29 through Oct 31 in Brookings

() = Less than 30 samples

In some ports, not enough data was collected from the charter fishery. As in 1982, the charter fleet landed a higher percentage of chinook that were less than 22 inches in length than did the private boats.

The smallest charter caught chinook that we measured was 247 mm (9.7") while the pleasure boat minimum was 228 mm (9"). In 1982, the charter minimum was 315 mm (12.4") and the pleasure boat minimum was 304 mm (12"). The average length of a charter caught chinook was 600 mm (23.6") compared to 705 mm (27.8") last year. The same statistic for the pleasure boat catch was 635 mm (25") in 1983 compared to 740 mm (29.1") last year (Table 27).

A comparison of the 1983 lengths with the 1979-81 average shaker (fish released) rates confirmed the preponderance of small fish this year. South of Cape Falcon, 35% or 7,013 chinook of 21,237 fish landed were less than 22 inches in length. In 1982, only 19% or 5,700 chinook were less than 22 inches in length and from 1979-81, the average rate of shakers was only 22% or 3,958 chinook of the 18,146 fish caught (Table 28).

Coho

The minimum size limit for coho in the Columbia River area was 16 inches. The shaker rate was 18% in 1983, compared to the 1979-82 average of 5% (Table 29). The coho shaker rates for the rest of the coast have always been low, averaging 1.7% in 1979-81. The samplers were asked to measure all small coho so that we could get a conservative estimate of how many coho would have been "shakers" if a 16 inch size regulation had been in effect. The estimate would be conservative because some small fish were sorted at sea and, realistically, some small coho that were sampled may not have been measured. We sampled 44,983 coho south of Cape Falcon and 854 fish were less than 16 inches in length. In contrast, we sampled 64,016 coho in 1982 and only 205 fish were recorded as less than 16 inches in length.

Table 28. Chinook Salmon Released (Col. R) or Landed, Less than 22"* in Length from the Ocean Recreational Fishery off Oregon in 1983, by Port with 1979-81 Averages in Parenthesis.

Port	Number of Fish Retained		Number of Fish Released or <22* inches in Length		Total Number of Fish Caught		Percentage of Catch Released or <22**	
	1983	79-81 Avg.	1983	79-81 Avg.	1983	79-81 Avg.	1983	79-81 Avg.
Columbia R.	3,440	(8,081) ^{1/}	3,671	(11,306) ^{2/}	7,111	(19,387)	52.0	(61.3)
Garibaldi	597	(1,095)	60	(7)	657	(1,102)	10.0	(0.6)
Pacific City	95	(117) ^{1/}	29	(2) ^{1/}	124	(119) ^{1/}	30.4	(1.7) ^{1/}
Depoe Bay	382	(509)	- ^{3/}	(40)	382	(549)	- ^{3/}	(7.3)
Newport	1,226	(1,353)	199	(46)	1,425	(1,398)	16.2	(3.3)
Florence	577	(764) ^{1/}	111	(155)	688	(919) ^{1/}	19.3	(16.9) ^{1/}
Winchester Bay	4,117	(2,939)	2,153	(1,484)	6,270	(4,423)	52.3	(33.6)
Coos Bay	1,889	(1,122)	629	(655)	2,518	(1,776)	33.3	(36.9)
Gold Beach	2,068	(817)	335	(67)	2,403	(884)	16.2	(7.6)
Brookings	10,286	(5,472)	3,497	(1,502)	13,783	(6,975)	34.0	(22.0)
S. of Falcon								
Total	21,237	(14,188)	7,013	(3,958)	28,250	(18,146)	34.9	(21.8)
Statewide Total	24,677	(22,218)	10,684	(15,264)	35,361	(38,933)	30.2	(42.9)

* Columbia River area size limit is 24 inches.

^{1/} 1981 Data only

^{2/} 1979-82 Average

^{3/} Not enough data

Table 29. Coho Salmon Released by Oregon Ocean Recreational Fishermen in the Columbia River Area, 1979-1983.

Year	Number of Fish Retained	Number of Fish Released	Total Number of Fish Caught	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
1979-82 Average	45,828	2,634	48,462	5
1983	37,245	8,318	45,563	18

Recreational Ocean Salmon Mark Sampling

Samplers at ten ports observed 41% of the chinook and 42% of the coho landed during the 1983 sampling survey.

Chinook

The samplers examined 10,217 chinook and found 488 or 5% had an adipose fin clipped (Table 30). The samplers collected 473 heads from these fish in order to recover coded-wire tags. An additional 36 chinook heads were taken from marked fish that were not sampled in the survey.

Department staff found tags in 417 of the 473 chinook heads for a 88% tag recovery ratio.

The major agencies contributing chinook tags were:

California Department of Fish and Game	59%
Oregon Department of Fish and Wildlife	25%
Various private hatcheries	7%
Washington Department of Fisheries	4%
U.S. Fish and Wildlife Service	3%
National Marine Fisheries Service	1%

Table 30. Chinook Mark Sampling Data in the Ocean Recreational Fishery, by Port and Month, 1983.

Port	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
<u>Columbia R.</u>								
No. Sampled	-	455	686	234	95	-	-	1,470
Total Catch	-	1,034	1,645	533	228	-	-	3,440
% Sampled	-	44	42	43	41	-	-	42
No. Ad Marks	-	23	22	5	4	-	-	54
<u>Garibaldi</u>								
No. Sampled	-	1	229	89	48	-	-	367
Total Catch	-	2	347	164	84	-	-	597
% Sampled	-	50	65	54	57	-	-	61
No. Ad Marks	-	0	16	5	1	-	-	23
<u>Pacific City</u>								
No. Sampled	-	3	46	19	5	-	-	73
Total Catch	-	4	56	30	5	-	-	95
% Sampled	-	75	82	63	100	-	-	76
No. Ad Marks	-	0	7	2	0	-	-	9
<u>Depoe Bay</u>								
No. Sampled	-	21	109	43	27	-	-	200
Total Catch	-	35	225	76	46	-	-	382
% Sampled	-	60	48	56	58	-	-	52
No. Ad Marks	-	2	8	2	2	-	-	14
<u>Newport</u>								
No. Sampled	-	124	172	88	36	-	-	420
Total Catch	-	321	559	228	118	-	-	1,226
% Sampled	-	38	30	38	30	-	-	34
No. Ad Marks	-	3	10	6	3	-	-	22
<u>Florence</u>								
No. Sampled	-	56	70	53	52	-	-	231
Total Catch	-	143	210	97	127	-	-	577
% Sampled	-	39	33	54	40	-	-	40
No. Ad Marks	-	1	4	2	1	-	-	8
<u>Winchester Bay</u>								
No. Sampled	-	120	417	389	724	-	-	1,650
Total Catch	-	491	1,403	803	1,420	-	-	4,117
% Sampled	-	24	29	48	50	-	-	40
No. Ad Marks	-	1	27	14	31	-	-	73
<u>Coos Bay</u>								
No. Sampled	-	265	397	158	130	-	-	950
Total Catch	-	682	769	244	194	-	-	1,889
% Sampled	-	38	51	64	67	-	-	50
No. Ad Marks	-	11	25	5	3	-	-	44
<u>Gold Beach</u>								
No. Sampled	0	50	295	339	162	-	-	846
Total Catch	0	61	689	936	382	-	-	2,068
% Sampled	0	81	42	36	42	-	-	40
No. Ad Marks	0	3	10	14	7	-	-	34
<u>Brookings</u>								
No. Sampled	177	1,272	1,566	239	301	455	-	4,101
Total Catch	504	3,355	4,238	521	652	1,016	-	10,286
% Sampled	35	37	36	45	46	45	-	39
No. Ad Marks	8	74	85	9	16	0	-	192
<u>Total</u>								
No. Sampled	177	2,367	3,987	1,651	1,580	455	-	10,217
Total Catch	504	6,128	10,141	3,632	3,256	1,016	-	24,677
% Sampled	35	39	39	45	48	45	-	41
No. Ad Marks	8	118	215	64	68	0	-	473

Table 31. Coho Mark Sampling Data in the Ocean Recreational Fishery, by Port and Month, 1983.

Port	May	June	July	Aug.	Sept.	Total
<u>Columbia R.</u>						
No. Sampled	-	1,622	8,557	4,231	2,009	16,419
Total Catch	-	3,569	18,878	9,742	5,056	37,245
% Sampled	-	45	45	43	39	44
No. Ad Marks	-	60	333	213	126	732
<u>Garibaldi</u>						
No. Sampled	-	149	3,568	678	439	4,834
Total Catch	-	196	5,439	1,451	825	7,911
% Sampled	-	76	65	46	53	61
No. Ad Marks	-	10	118	41	18	187
<u>Pacific City</u>						
No. Sampled	-	22	546	102	76	746
Total Catch	-	22	655	140	80	897
% Sampled	-	100	83	72	95	83
No. Ad Marks	-	3	27	5	5	40
<u>Depoe Bay</u>						
No. Sampled	-	161	2,558	955	627	4,301
Total Catch	-	230	3,997	1,763	1,060	7,050
% Sampled	-	70	63	54	59	61
No. Ad Marks	-	14	140	51	40	245
<u>Newport</u>						
No. Sampled	-	165	3,192	970	749	5,076
Total Catch	-	382	9,492	12,510	2,414	114,798
% Sampled	-	43	33	38	31	34
No. Ad Marks	-	16	157	49	44	266
<u>Florence</u>						
No. Sampled	-	73	619	263	390	1,345
Total Catch	-	176	1,453	561	846	3,036
% Sampled	-	41	42	46	46	44
No. Ad Marks	-	4	24	14	14	56
<u>Winchester Bay</u>						
No. Sampled	-	2,301	4,898	2,810	1,666	11,675
Total Catch	-	10,144	16,753	5,781	3,128	35,806
% Sampled	-	22	29	48	53	32
No. Ad Marks	-	147	311	162	101	721
<u>Coos Bay</u>						
No. Sampled	-	4,032	4,940	1,869	319	11,160
Total Catch	-	10,357	10,102	2,868	485	23,812
% Sampled	-	38	48	65	65	46
No. Ad Marks	-	223	254	77	10	564
<u>Gold Beach</u>						
No. Sampled	0	169	317	192	44	722
Total Catch	0	196	755	498	109	1,558
% Sampled	0	86	41	38	40	46
No. Ad Marks	0	9	26	16	3	54
<u>Brookings</u>						
No. Sampled	151	1,577	2,739	487	170	5,124
Total Catch	453	4,750	8,119	1,086	383	14,791
% Sampled	33	33	33	44	44	34
No. Ad Marks	15	137	182	34	15	383
<u>Total</u>						
No. Sampled	151	10,271	31,934	12,557	6,489	61,402
Total Catch	453	30,022	75,643	26,400	14,386	146,904
% Sampled	33	34	42	48	45	42
No. Ad Marks	15	623	1,572	662	376	3,248

Coho

The samplers examined 61,402 coho and found that 3,248 or 5% had their adipose fin clipped (Table 31). They collected 3,198 heads from these marked fish for coded wire tag recovery. An additional 162 coho heads were collected from marked fish that were not sampled in the survey.

Technicians found 3,040 tags in the 3,198 coho heads. This is a 95% tag recovery ratio. The major agencies contributing coho tags were:

Oregon Department of Fish and Wildlife	54%
Washington Department of Fisheries	20%
Oregon Aqua-Foods	12%
U.S. Fish and Wildlife Service	8%
California Department of Fish and Game	3%
Anadromous, Inc.	1%

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