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MANAGEMENT OF THE OCEAN SALMON FISHERY

Annual Report  
October 1, 1978 to September 30, 1979

by  
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# MANAGEMENT OF THE OCEAN SALMON FISHERY

## INTRODUCTION

The Ocean Salmon Management Program is responsible for obtaining fishery and biological data, analyzing these data and recommending appropriate management options for the ocean fisheries. Proposed management options are designed to achieve the optimum use of the salmon resource on a sustained basis. The ocean salmon recreational fishery is now part of the Ocean Salmon Management Program commencing with the 1978 season.

Activities pursued during FY 1979 included the sampling and analysis of catch statistics, chinook age composition, mark recovery data, and coded wire tag data. Short term work continued on the chinook maturity study, 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.

## THE 1978 TROLL SALMON FISHERY

### Regulations

The major change in regulations made by the Pacific Fisheries Management Council was to shift the management boundary separating Columbia River chinook stocks from Tillamook Head down to Cape Falcon.

The 1978 chinook troll season opened on May 1 and continued through October 31 with two exceptions. The first exception was the June 15-30 closure north of Cape Falcon. The second exception was the one month extension (November) off the Elk and Chetco Rivers. The 1978 coho season opened on June 15th south of Cape Falcon and July 1st north of Cape Falcon. The coho season closed on October 31.

The Department of Fish and Wildlife extended the troll season through November 1978 in two areas off the southern Oregon coast. The purpose of the extension was to reduce the numbers of surplus hatchery chinook anticipated at the Elk and Chetco River stations. The extended fishery was restricted to the following areas:

Elk River Area: Cape Blanco south to Humbug Mountain and offshore to three miles.

Chetco River Area: Goat Island south to the California-Oregon border and offshore to three miles.

### Catch Statistics

Final 1978 Oregon troll landings are summarized in Tables 1 and 2 for chinook and coho respectively. The number of individual Oregon salmon landings made during 1978 was tabulated as a measure of fishing effort (Table 3). Landings from May 1 to June 14 were exclusively chinook.

Table 1. Oregon Troll Chinook Catch Statistics for 1978 by Management Area and Month

Category and Month	Astoria	Garibaldi Pac. City	Depoe Bay Newport	Florence to Bandon	Port Orford to Brookings	Total
<u>No. of lbs dr</u>						
May	10,983	306	3,434	9,391	6,209	30,823
June	59,031	26,328	91,769	128,322	90,787	396,237
July	58,114	40,573	191,912	244,851	86,554	622,004
August	11,161	19,210	154,314	145,010	101,914	431,609
September	1,508	2,493	105,219	45,932	82,991	238,143
October	24,901	2,836	21,760	2,996	58,641	111,134
November	0	0	1,535	2,072	60,063	63,670
Total	165,698	91,746	569,943	579,074	487,159	1,893,620
<u>No. of Fish</u>						
May	1,104	24	259	1,093	736	3,216
June	5,932	2,318	8,267	13,652	10,428	40,597
July	5,036	3,839	16,294	28,093	9,825	63,087
August	1,041	1,549	15,165	18,656	10,459	46,870
September	117	207	11,464	4,854	8,381	25,023
October	1,966	201	2,567	328	4,215	9,277
November	0	0	106	138	3,207	3,451
Total	15,196	8,138	54,122	66,825	47,251	191,532

Table 2. Oregon Troll Coho Catch Statistics for 1978 by Management Area and Month

Category and Month	Astoria	Garibaldi Pac. City	Depoe Bay Newport	Florence to Bandon	Port Orford to Brookings	Total
<u>No. of lbs dr</u>						
June	73,451	161,787	303,518	561,990	120,073	1,220,819
July	102,340	172,511	328,160	343,359	83,468	1,029,838
August	40,035	61,270	219,672	100,143	48,245	469,365
September	10,240	5,008	13,213	10,213	11,455	50,619
October	5,621	365	699	572	1,059	8,316
November	0	0	0	0	8	8
Total	231,687	401,431	865,262	1,016,277	264,308	2,778,965
<u>No. of Fish</u>						
June	17,840	40,676	73,328	120,323	27,451	279,618
July	26,842	39,609	68,623	73,975	18,182	227,231
August	8,149	11,954	41,801	20,719	10,177	92,810
September	2,235	1,078	2,644	2,263	2,158	10,378
October	1,092	72	132	119	184	1,599
November	0	0	0	0	2	2
Total	56,158	93,399	186,528	217,399	58,154	611,638

Table 3. Number of Individual Salmon Landings in Oregon for 1978 by Management Area and Month.

Month	Astoria	Garibaldi Pac. City	Depoe Bay Newport	Florence to Bandon	Port Orford to Brookings	Total
May	73	15	75	303	92	558
June	213	1,994	2,466	4,409	1,546	10,628
July	893	2,929	5,122	5,771	2,134	16,849
August	547	1,650	3,907	3,571	1,957	11,632
September	201	196	903	775	1,160	3,235
October	58	99	263	110	1,256	1,786
November	0	0	1	12	992	1,005
Total	1,985	6,883	12,737	14,951	9,137	45,693

Statistical data are reported on a revised management area format this year. The Astoria area includes only the Astoria, Warrenton, Hammond complex. Garibaldi-Pacific City area includes Nehalem, Garibaldi and Pacific City. Depoe Bay-Newport area includes Depoe Bay and Newport. Florence-Bandon area includes Florence, Winchester Bay, Coos Bay and Bandon. Port Orford-Brookings includes Port Orford, Gold Beach and Brookings.

Troll chinook landings were 1,894,000 pounds dressed weight in 1978, about 55% of the 3,465,000 pounds landed in 1977 (Figure 1). The 1978 landings were 77% of the 1971-75 average of 2,447,000 pounds dressed. An estimated 191,532 chinook were landed during the 1978 season.

The 1978 troll coho landings were 2,779,000 pounds dressed weight, about 5% higher than the 2,641,000 pounds landed in 1977. The 1978 landings were about 40% of the 1971-75 average of 6,918,000 pounds dressed. An estimated 611,638 coho were landed during the 1978 season.

#### The Dollar Value of the Catch

The chinook landings in 1978 were worth \$3,584,246 to the fisherman. The coho value was \$3,755,703. The average price per pound for chinook was \$1.89 and for coho, \$1.35. Total landed value was \$7,339,949.

#### Extended Troll Landings

Chinook landings during the extended season were 63,670 pounds dressed weight or an estimated 3,451 fish. Only two coho were landed during this period.

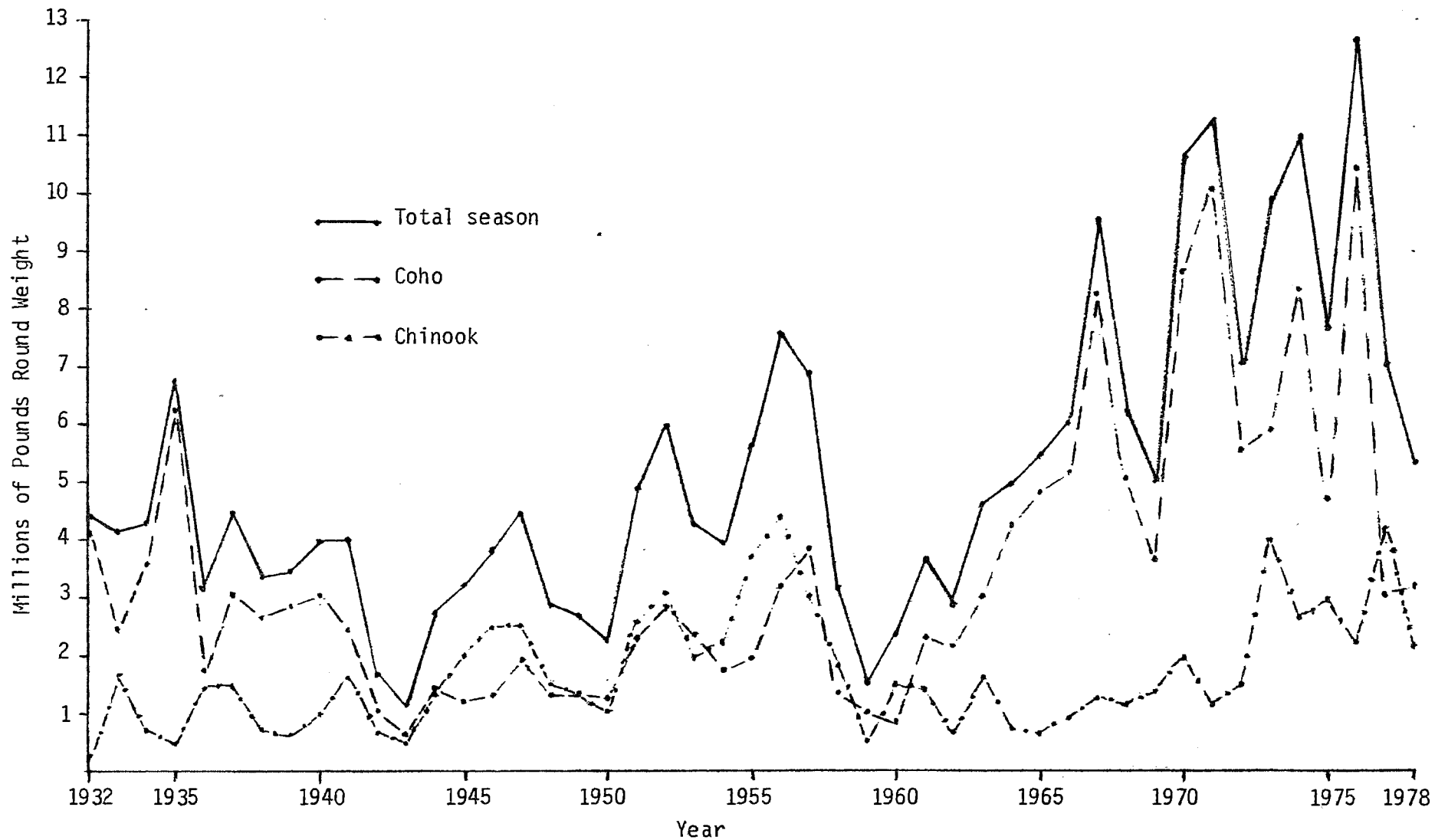


Figure 1. Oregon Ocean Troll Salmon Production 1932-1978.



An anticipated benefit of the extended season has always been the high incidence of mature Elk and Chetco chinook observed in the catch. This is still a valid point but our sampling design does not show this as well as it did in the past. The large number of single fin marks used at Elk River hatchery are no longer included in the coastwide sampling program. The only indication we have now must come from the coded wire tag program. The available data from all sources indicate that the extended season is still taking primarily mature local stocks.

### 1978 Troll Chinook Age Composition

Chinook landings were sampled at several ports to obtain age composition information. Scales were obtained from 1,536 chinook. Plastic impressions were prepared from these scales and ages were determined. This information has not been worked into the new programming procedures and is not available in usable form at this time.

### Troll Salmon Mark Sampling

Two samplers each were assigned to Astoria, Newport and Charleston. Garibaldi, Depoe Bay, Winchester Bay, Port Orford and Brookings were assigned one sampler each. This sampling effort resulted in 19% of all chinook and 19% of all coho being examined for coded wire tags. We sampled only for coded wire tags in 1978 as the use of other assignable marks is being phased out. Detailed sampling information is presented in Tables 4 and 5 for chinook and coho.

Samplers observed 805 adipose-clipped chinook in the troll landings and obtained 624 snouts. Technicians found coded wire tags in 439 or 70% of the total. The main contributing agencies were Oregon Department of Fish and Wildlife with 69% and the U.S. Fish and Wildlife Service (USFWS) with 17% of the total.

Samplers found 3,614 adipose-clipped coho in the troll landings and obtained 2,859 snouts. Technicians found coded wire tags in 2,349 or 82%. The main contributing agencies were Oregon Department of Fish and Wildlife with 82% and the Washington Department of Fisheries with 8% of the total.

### Average Weight Data

Average weight data were collected from chinook and coho salmon for conversion of landings to numbers of fish. The 1978 chinook average weights are presented in Table 6. The seasonal average weight for chinook was 9.9 pounds dressed weight compared to 10.2 pounds in 1977. Generally, the 1978 average weights were higher on the north and south coast but lower along the central coast area as compared to the 1977 landings. Chinook average weights seldom reflect growth with time because age and stock composition in a given area continually fluctuate.

The seasonal average weight of coho salmon was 4.5 pounds dressed weight compared to 5.9 pounds in 1977 (Table 7). This average weight is the lowest we have seen since we started collecting average weight information in 1947.

Table 4. Oregon Troll Chinook Mark Sampling by Management Area, 1978

Area	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
<b>Astoria</b>								
No. Examined	179	282	917	51	13	0	0	1,442
No. Landed	1,104	5,932	5,036	1,041	117	1,966	0	15,196
% Examined	16	5	18	5	11	0	0	9
No. Marks	7	6	29	4	0	0	0	46
<b>Garibaldi-Pacific City</b>								
No. Examined	0	650	1,100	511	27	0	0	2,288
No. Landed	24	2,518	3,839	1,549	207	201	0	8,138
% Examined	0	28	29	33	13	0	0	28
No. Marks	0	5	18	6	1	0	0	30
<b>Depoe Bay-Newport</b>								
No. Examined	165	1,576	2,411	1,645	1,677	0	0	8,474
No. Landed	259	8,267	16,294	15,165	11,464	2,567	106	54,122
% Examined	64	19	15	11	15	0	0	16
No. Marks	4	54	69	46	48	0	0	221
<b>Florence-Bandon</b>								
No. Examined	300	2,197	4,833	3,356	140	47	0	10,873
No. Landed	1,022	12,652	28,093	18,656	4,854	339	138	66,825
% Examined	27	16	17	18	3	14	0	16
No. Marks	5	44	113	55	1	0	0	218
<b>Port Orford-Brookings</b>								
No. Examined	0	2,914	2,909	3,389	1,328	1,002	1,436	12,978
No. Landed	736	10,428	9,825	10,459	8,111	4,215	3,207	47,251
% Examined	0	28	30	32	16	24	45	27
No. Marks	0	53	52	27	7	69	82	290
<b>Total</b>								
No. Examined	644	7,619	12,170	8,952	3,185	1,049	1,436	36,055
No. Landed	3,216	40,507	63,087	46,870	25,023	9,288	3,451	191,532
% Examined	20	19	19	19	13	11	42	19
No. Marks	33	152	271	133	57	69	82	805

Table 5. Oregon Troll Coho Mark Sampling by Management Area, 1978.

Area	June	July	Aug.	Sept.	Oct.	Nov.	Total
<u>Astoria</u>							
No. Examined	3,020	4,427	598	264	0	0	8,309
No. Landed	17,840	26,842	8,149	2,235	1,092	0	56,158
% Examined	17	16	7	12	0	0	15
No. Marks	90	101	18	2	0	0	211
<u>Garibaldi-Pacific City</u>							
No. Examined	8,499	7,154	2,918	172	0	0	18,743
No. Landed	40,676	39,609	11,964	1,078	72	0	93,399
% Examined	21	18	24	16	0	0	20
No. Marks	164	107	65	3	0	0	339
<u>Depoe Bay-Newport</u>							
No. Examined	17,354	11,476	7,583	460	0	0	36,873
No. Landed	73,328	68,623	41,801	2,644	132	0	186,528
% Examined	24	17	18	17	0	0	20
No. Marks	440	384	251	16	0	0	1,091
<u>Florence-Bandon</u>							
No. Examined	16,742	12,732	4,985	439	1	0	34,899
No. Landed	120,323	73,975	20,719	2,263	119	0	217,399
% Examined	14	17	24	19	1	0	16
No. Marks	890	516	170	12	0	0	1,588
<u>Port Orford-Brookings</u>							
No. Examined	9,848	5,155	3,495	417	67	2	18,984
No. Landed	27,451	18,182	10,177	2,158	184	2	58,154
% Examined	36	28	34	19	36	100	33
No. Marks	224	101	54	6	0	0	385
<u>Total</u>							
No. Examined	55,463	40,944	19,579	1,752	68	2	117,808
No. Landed	279,618	227,231	92,810	10,378	1,599	2	611,638
% Examined	20	18	21	17	4	100	19
No. Marks	1,808	1,209	558	39	0	0	3,614

Table 6. Observed Average Dressed Weight and Calculated Numbers of Chinook by Month and Management Area, 1978.

	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
<u>Astoria</u>								
Number	1,104	5,932	5,035	1,041	117	1,966	0	15,196
Pounds	10,983	59,031	58,114	11,161	1,508	24,901	0	165,698
Ave. Wt.	9.9	10.0	11.5	10.7	12.9	12.7	0	10.9
<u>Garibaldi-Pac. City</u>								
Number	24	2,318	3,839	1,549	207	201	0	8,138
Pounds	306	26,328	40,573	19,210	2,493	2,836	0	91,746
Ave. Wt.	12.8	11.4	10.6	12.4	12.0	14.1	0	11.3
<u>Depoe Bay-Newport</u>								
Number	259	8,267	16,294	15,165	11,464	2,567	106	54,122
Pounds	3,434	91,769	191,912	154,314	105,219	21,760	1,535	569,943
Ave. Wt.	13.3	11.1	11.8	10.2	9.2	8.5	14.5	10.5
<u>Florence-Bandon</u>								
Number	1,093	13,652	28,093	18,656	4,854	328	138	66,825
Pounds	9,891	128,322	244,851	145,010	45,932	2,996	2,072	579,074
Ave. Wt.	9.0	9.4	8.7	7.8	9.5	9.1	15.0	8.7
<u>Port Orford-Brookings</u>								
Number	736	10,428	9,825	10,459	8,381	4,215	3,207	47,251
Pounds	6,209	90,787	86,554	101,914	82,991	58,641	60,063	487,159
Ave. Wt.	8.4	8.7	8.8	9.7	9.9	13.9	18.7	10.3
<u>Total</u>								
Numbers	3,216	40,597	63,087	46,870	25,023	9,277	3,451	191,532
Pounds	30,823	396,237	622,004	431,609	238,143	111,134	63,670	1,893,620
Ave. Wt.	9.6	9.7	9.9	9.2	9.5	12.0	18.4	9.9

Table 7. Observed Average Dressed Weight and Calculated Numbers of Coho by Month and Management Area, 1978.

	June	July	Aug.	Sept.	Oct.	Nov.	Total
<u>Astoria</u>							
Numbers	17,840	26,842	8,149	2,235	1,092		56,158
Pounds	73,451	102,340	40,035	10,240	5,621	0	231,687
Ave. Wt.	4.1	3.8	4.9	4.6	5.1	0	4.1
<u>Garibaldi-Pac. City</u>							
Numbers	40,676	39,609	11,964	1,078	72	0	93,399
Pounds	161,787	172,511	61,270	5,498	365	0	401,431
Ave. Wt.	4.0	4.4	5.1	5.1	5.1	0	4.3
<u>Depoe Bay-Newport</u>							
Numbers	73,328	68,623	41,801	2,644	132	0	186,528
Pounds	303,518	328,160	219,672	13,213	699	0	865,262
Ave. Wt.	4.1	4.8	5.3	5.0	5.3	0	4.6
<u>Florence-Bandon</u>							
Numbers	120,323	73,975	20,719	2,263	119	0	217,399
Pounds	561,990	343,359	100,143	10,213	572	0	1,016,277
Ave. Wt.	4.7	4.6	4.8	4.5	4.8	0	4.7
<u>Port Orford-Brookings</u>							
Numbers	27,451	18,182	10,177	2,158	184	2	58,154
Pounds	120,073	83,468	48,245	11,455	1,059	8	264,308
Ave. Wt.	4.4	4.6	4.7	5.3	5.8	4.0	4.5
<u>Total</u>							
Numbers	279,618	227,231	92,810	10,378	1,599	2	611,638
Pounds	1,220,819	1,029,838	469,365	50,619	8,316	8	2,778,965
Ave. Wt.	4.4	4.5	5.1	4.9	5.2	4.0	4.5

Coho average weights usually show a monthly increase from June through the end of the season. In 1978, this only was evident on the extreme south coast and Garibaldi. Much monthly fluctuation in average weights was evident along the rest of the coast.

## THE 1978 OCEAN RECREATIONAL FISHERY

### Regulations

Two major changes in ocean recreational salmon regulations for 1978 were made by the Pacific Fisheries Management Council. The management boundary for Columbia River stocks was shifted south from Tillamook Head to Cape Falcon.

Oregon's 1978 recreational ocean salmon season opened on April 29 and continued through October 31. The ocean salmon season was extended one month (November) off the Elk and Chetco Rivers.

Minimum size limits for salmon caught south of Cape Falcon were increased while the minimum size limits for salmon caught north of Cape Falcon did not change (24" for chinook and 16" for coho [Table 8]). South of Falcon, the minimum size limit for chinook was changed from none to 22", and for coho from none to 16".

The daily bag limit for ocean salmon was 3 fish. There was no possession limit; and the annual bag limit for adult salmon and steelhead remained at 40 fish.

### Ocean Sampling Program

The 1978 recreational ocean salmon fishery sampling program was conducted at eight ports representing a large percentage and wide distribution of Oregon's ocean salmon catch and effort. These ports include: Astoria, Garibaldi, Depoe Bay, Newport, Winchester Bay, Coos Bay, Gold Beach and Brookings. A total of 11 samplers were employed in 1978 with Astoria, Newport, and Winchester Bay assigned two samplers each. ODFW Marine Region personnel at major ports assisted in the sampling survey.

A random sampling design was used at each port to survey the ocean recreational fishery. A 5-day per week sampling schedule including all weekends and holidays was followed to collect catch per unit effort data. Anglers were interviewed to obtain catch and effort data upon completion of their ocean angling trips. Samplers conducted the survey at several locations including boat ramps, moorages, and charter docks in each port. Pressure counts utilizing boat counts from Coast Guard or direct observations; or trailer counts at boat ramps were used to estimate total angling effort. All catch and effort data was keypunched and processed on the OSU CYBER computer by program personnel in Newport.

The salmon catch was sampled for species, marks, scales, and lengths. Samplers collected data and snouts for coded wire tag recovery from adipose-clipped fish observed. Bottomfish catches were also sampled and recorded by species.

Table 8. Oregon Ocean Recreational Salmon Regulations 1946-78.

Years	Season	Regulations
1946	All Year	3 Fish Daily Limit; 9 in possession; No Annual Limit; No Size Limits.
1947	All Year	2 Fish Daily Limit; 6 in possession; No Annual Limit; No Size Limits.
1948-54	All Year	2 Fish Daily Limit; 4 in possession; 20 Fish Annual Limit; No Size Limits.
1955-57	All Year	2 Fish Daily Limit; 4 in possession; 20 Salmon Annual Limit; 20" Minimum Size Limit - both species.
1958-64	All Year	2 Fish Daily Limit; 4 in possession; 20 Salmon Annual Limit; 20" Minimum Size Limit - both species except; 22" Minimum Size Limit - North of Tillamook Head (July 1-October 31).
1965-69	All Year	3 Fish Daily Limit; 6 in possession; 20 Salmon Annual Limit; 20" Minimum Size Limit; both species all year.
1970-75	All Year	3 Fish Daily Limit; No possession Limit; 40 Fish Annual Limit. North of Tillamook Head - 20" Minimum Size Limit; both species.  South of Tillamook Head - No Size Limit, both species.
1976	April 10- Dec. 31	3 Fish Daily Limit; No possession Limit; 40 Fish Annual Limit.  North of Tillamook Head - 24" Minimum Size for Chinook; 16" Minimum Size for Coho.  South of Tillamook Head - No Size Limit for both species.
1977	April 30- Oct. 31 <sup>1/</sup>	Same as 1976.
1978	April 29- Oct. 31 <sup>1/</sup>	3 Fish Daily Limit; No possession Limit; 40 Fish Annual Limit. North of Falcon - Chinook, 24" Minimum; Coho, 16" Minimum.  South of Falcon - Chinook, 22" Minimum; Coho, 16" Minimum.

<sup>1/</sup> The Ocean Salmon season off the Elk and Chetco Rivers was extended through November in 1977 and 1978.

Overall, 89,324 anglers were interviewed and 67,414 salmon were examined in 1978. This sampling effort resulted in a 26% sampling rate for the total catch and effort statistics. Port sampling rates ranged from 50% at Coos Bay to 16% at Newport. Total estimates from the survey were 259,799 salmon and 339,636 angler trips (Table 9). These figures account for 92% and 84% of Oregon's total ocean sport salmon catch and effort estimates, respectively. Catch data for ports and time periods not sampled were derived from returned salmon-steelhead tags and daily angler licenses.

### Effort

Recreational ocean salmon effort in 1978 was equal to the 1977 effort, but 17% above the 1971-75 average (Table 10). Total effort for 1978 was 403,740 angler trips. This effort compares to 404,534 trips in 1977 and the 1971-75 average of 345,829. The peak for ocean recreational effort occurred in July with 144,534 angler trips or 36% of the cumulative effort (Table 11). Astoria, Newport, Winchester Bay, and Brookings accounted for 284,076 angler trips or 70% of the ocean sport effort. Newport and Brookings were the busiest ports with 82,640 and 76,705 angler trips, respectively.

### Catch Statistics

Final ocean recreational salmon catch statistics were estimated from angler creel census data and salmon-steelhead tag return data. Ocean sport salmon catch for Oregon, 1966-78, is shown in Figure 2. Chinook and coho landings by port and month for 1978 are summarized in Tables 12 and 13, respectively.

The ocean recreational chinook catch was 22,844 fish in 1978. This was well below the 1977 catch and the 1971-75 average (Table 10). The 1978 catch was 63% below the 1977 catch of 61,364 chinook and 54% below the 1971-75 average of 49,426 fish.

All ports except Gold Beach had below average chinook recreational catch with Astoria, Winchester Bay, and Brookings landings very poor compared to past years. These four ports accounted for 79% of Oregon's ocean recreational chinook catch. Table 14 summarizes recreational chinook landings by management area.

Ocean recreational salmon landings by month show the 1978 chinook catch was poor throughout the entire season (Table 15). In July, chinook landings were 73% below 1977 and 75% below the 1974-75 average. The August catch in 1978 was 63% and 52% below the 1977 and 1974-75 average, respectively. For September, only 1,611 chinook were landed in 1978. This compares to 6,331 fish in 1977 and the 1974-75 average of 9,193 chinook.

The ocean recreational coho catch was 259,769 fish in 1978. This was above the poor 1977 catch, but below the 1971-75 average (Table 10). The 1978 catch was 33% above the 1977 catch of 195,277 coho, and 4% below the 1971-75 average of 271,776 fish. A total of 192,044 fish or 74% of the 1978 cumulative coho catch for Oregon's sport fishery was landed at Astoria, Newport, Winchester Bay, and Brookings. Table 15 summarizes recreational coho landings by management area.



Table 9. Oregon Ocean Recreational Salmon Catch Statistics from Sampling Data, 1978.

Port	Coho		Total	Chinook			Pinks	Marked Coho	Marked Chinook	Angler Trips	Total Salmon	Salmon per Angler trips
	Adult	Jack		Adult	Jack	Total						
Astoria	51,836	762	52,598	6,848	5	6,853	5	1,416	410	52,933	59,456	1.1
Garibaldi	5,311	73	5,384	303	6	309	0	86	2	18,400	5,693	0.3
Depoe Bay	17,825	359	18,184	428	7	435	0	197	17	29,193	18,619	0.6
Newport	41,994	654	42,648	1,519	58	1,577	18	1,055	26	79,216	44,243	0.6
Winchester	47,807	1,977	49,784	2,468	488	2,956	0	1,770	20	58,436	52,740	0.9
Coos Bay	24,311	779	25,090	845	318	1,163	1	779	22	28,619	26,254	0.9
Gold Beach	7,648	0	7,648	2,316	200	2,516	0	28	0	11,047	10,164	0.9
Brookings	38,980	8	38,988	3,609	33	3,642	0	839	30	61,792	42,630	0.7
Total	235,712	4,612	240,324	18,336	1,115	19,451	24	6,170	527	339,636	259,799	0.8

Note: Sampling periods for all ports ended September 15. The first day of sampling for each port is as follows:  
 Astoria - June 12; Garibaldi - June 16; Newport and Depoe Bay - May 1; Winchester and Coos Bay - May 16;  
 Gold Beach and Brookings - June 1.

Table 10. Oregon Ocean Recreational Salmon Catch and Effort for 1966-78.

Year	Number of Angler Trips	Catch			Fish/Angler
		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 Ave.	345,829	271,776	49,426	1,115*	.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

\* Odd years only average

Table 11. Oregon Ocean Recreational Effort (Angler Trips) by Port by Month, 1978.

Port	Month							Total
	Apr-May	June	July	August	Sept.	Oct.	Nov.	
Astoria	867	13,099	18,162	20,450	10,107	390	-	63,075
Nehalem Bay	284	738	1,735	1,089	584	52	-	4,482
Garibaldi	975	2,802	6,482	8,828	1,659	333	-	21,079
Netarts Bay	0	166	225	135	0	0	-	526
Pacific City	78	903	2,083	1,884	612	93	-	5,653
Salmon R.	0	25	15	20	26	0	-	86
Siletz R.	0	23	53	38	46	0	-	160
Depoe Bay	930	5,884	11,781	9,760	3,036	1,222	-	32,613
Newport	3,100	11,448	35,013	26,709	4,858	1,422	-	82,640
Waldport	22	11	6	4	14	0	-	57
Florence	50	1,241	6,268	3,913	967	141	-	12,580
Winchester Bay	2,369	15,111	23,445	15,427	4,634	670	-	61,656
Coos Bay	1,539	8,106	10,128	7,239	2,478	358	-	29,848
Randon	0	10	113	143	82	0	-	357
Port Orford	0	32	13	137	100	0	0	282
Gold Beach	256	2,503	3,512	4,278	1,029	29	-	11,607
Brookings	1,791	16,507	25,396	15,659	7,340	8,584	1,528	76,705
Wash. Ports	23	51	104	142	10	0	-	330
Pacific Ocean	4	-	-	-	-	-	-	4
Total	12,278	78,669	144,534	115,855	37,582	13,294	1,528	403,740

Note: 339,636 Angler trips were estimated from angler creel census data collected at 8 ports.

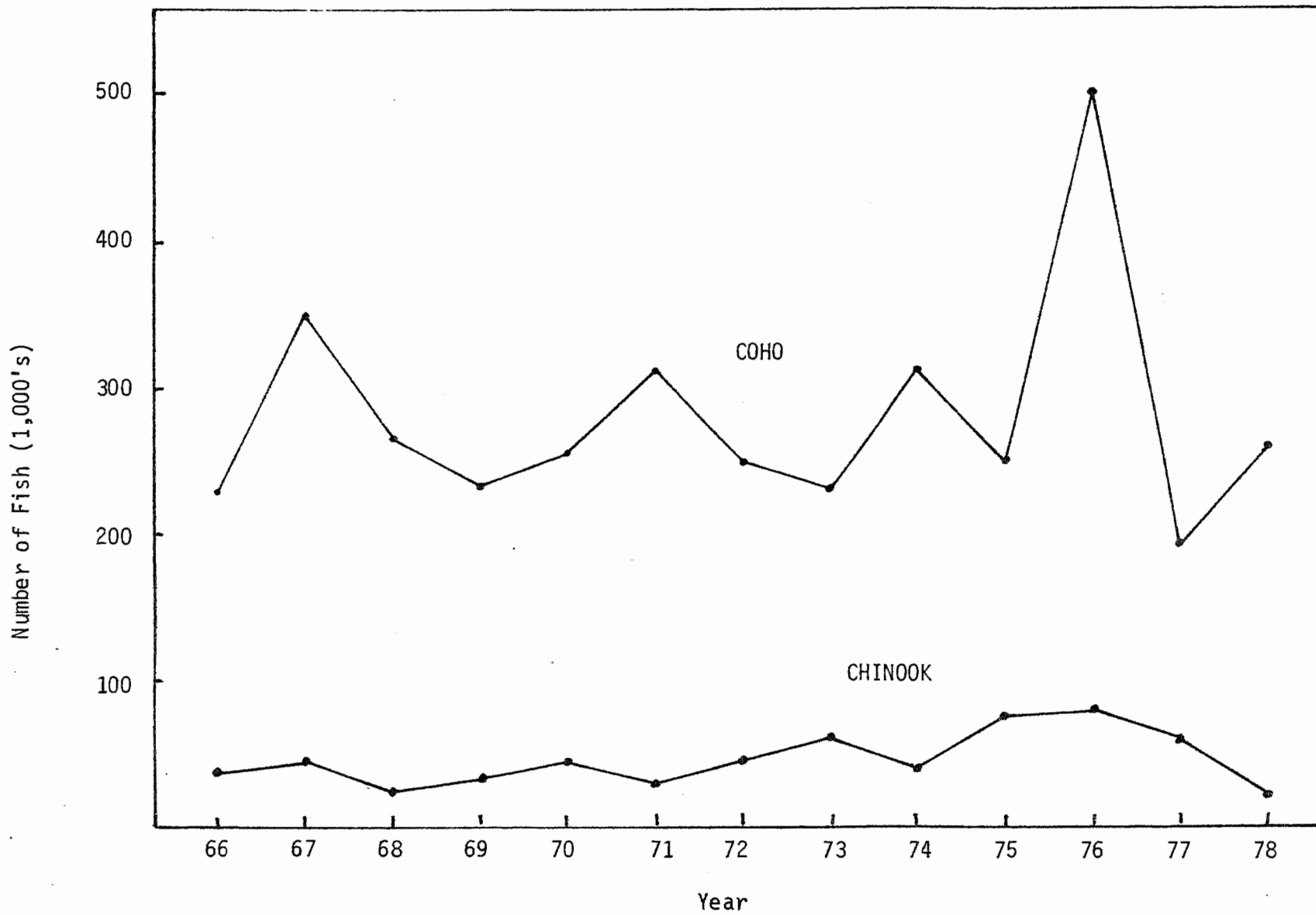


Figure 2. Oregon Ocean Recreational Salmon Catch 1966-78.

Table 12. Oregon Ocean Recreational Chinook Catch by Port by Month, 1978.

	Apr-May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Astoria	209	1,635	1,334	4,153	524	35	-	7,890
Nehalem Bay	46	8	26	26	56	3	-	165
Garibaldi	123	25	108	188	8	0	-	452
Netarts Bay	0	0	9	4	0	0	-	13
Pacific City	0	13	90	75	9	16	-	203
Salmon R.	0	5	0	3	3	0	-	11
Siletz R.	0	0	0	0	0	0	-	0
Depoe Bay	18	74	159	190	3	13	-	457
Newport	51	131	753	639	2	9	-	1,585
Waldport	3	3	3	3	3	0	-	15
Florence	0	19	171	312	19	19	-	540
Winchester Bay	402	641	596	1,146	184	41	-	3,010
Coos Bay	66	203	281	487	135	4	-	1,176
Bandon	0	0	3	10	12	0	-	25
Port Orford	0	3	0	35	37	0	0	75
Gold Beach	38	296	436	1,503	328	18	-	2,619
Brookings	38	1,646	986	770	287	753	79	4,559
Wash. Port	5	6	8	29	1	0	-	49
Total	999	4,708	4,963	9,573	1,611	911	79	22,844

Note: 19,451 chinook were estimated from angler creel census data collected at 8 ports. Estimates for ports and months not sampled are compiled from salmon-steelhead tag return data.

Table 13. Oregon Ocean Recreational Coho Catch by Port by Month, 1978.

	Apr-May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Astoria	901	20,175	15,193	17,172	6,197	196	-	59,834
Nehalem	0	130	236	487	44	6	-	903
Garibaldi	35	499	871	3,972	274	57	-	5,708
Netarts	0	31	25	60	0	0	-	116
Pacific City	19	239	766	675	84	0	-	1,783
Salmon R.	0	18	9	9	4	0	-	40
Siletz	0	21	30	22	12	0	-	85
Depoe Bay	304	5,157	6,468	5,453	785	42	-	18,209
Newport	785	8,713	14,680	18,193	438	55	-	42,864
Waldport	3	6	0	0	3	0	-	12
Florence	0	671	3,465	2,785	360	12	-	7,293
Winchester Bay	1,866	22,617	11,944	10,244	3,346	106	-	50,103
Coos Bay	1,196	11,740	6,840	4,413	980	2	-	25,171
Bandon	0	28	77	87	25	0	-	217
Port Orford	0	47	10	56	15	0	0	128
Gold Beach	47	3,838	2,290	1,291	270	3	-	7,739
Brookings	127	27,513	8,432	2,791	365	15	0	39,243
Wash. Port	25	80	87	120	6	0	-	318
Pac. Ocean (Misc)	3	-	-	-	-	-	-	3
Total	5,311	101,523	71,423	67,810	13,208	494	0	259,769

Note: 240,324 coho were estimated from angler creel census data collected at 8 ports. Estimates for ports and months not sampled are compiled from salmon-steelhead tag return data.

Table 14. Oregon Ocean Recreational Chinook Landings by Management Area, 1974 to 1978.

Management Area (Ports Included)	1974 (Mean)	1975	Chinook Catch		
			1976	1977	1978
2 (Astoria)	17,268 (32,607)	47,947	44,578	22,630	7,939
3 (Garibaldi and Pacific City)	2,238 (1,978)	1,718	2,323	1,541	833
4 (Depoe Bay and Newport)	3,579 (4,317)	5,054	4,570	2,626	2,068
5 (Florence, Win. Bay, Coos Bay, and Bandon)	3,128 (6,761)	10,393	14,613	22,727	4,751
6 (Port Orford, Gold Beach, and Brookings)	10,516 (10,561)	10,607	13,232	11,840	7,253
<b>Total</b>	<b>36,729 (56,244)</b>	<b>75,719</b>	<b>79,316</b>	<b>61,364</b>	<b>22,844</b>

Table 15. Oregon Ocean Recreational Salmon Catch in Numbers of Fish by Species by Month, 1974-75 Average, and 1976-78.

		<u>April<sup>a</sup></u>	May	June	July	August	Sept.	October	Nov.	Season
<u>C H I N O O K</u>										
1974-75 <sup>b</sup> / Average	Monthly	165	899	4,789	19,678	19,732	9,193	1,768	0	56,224
	Cumulative	165	1,064	5,853	25,551	45,263	54,456	56,224	56,224	
1976	Monthly	59	1,930	12,540	19,616	35,317	8,826	904	124	79,316
	Cumulative	59	1,989	14,529	34,145	69,462	78,288	79,192	79,316	
1977	Monthly	90	1,370	8,994	17,199	25,610	6,331	1,670	100	61,364
	Cumulative	90	1,460	10,454	27,653	53,263	59,594	61,264	61,364	
1978	Monthly	130	869	4,708	4,963	9,573	1,611	911	79	22,844
	Cumulative	130	999	5,707	10,670	20,243	21,854	22,765	22,844	
<u>C O H O</u>										
1974-75 <sup>b</sup> / Average	Monthly	779	5,772	36,510	102,519	103,028	33,866	881	0	283,355
	Cumulative	779	6,551	43,061	145,580	248,608	282,474	283,355		
1976	Monthly	576	18,663	75,711	170,092	192,096	39,564	4,050	554	501,306
	Cumulative	576	19,239	94,950	265,042	457,138	496,702	500,752	501,306	
1977	Monthly	460	15,709	26,672	84,102	58,706	9,169	459	0	195,277
	Cumulative	460	16,169	42,841	126,943	185,649	194,818	195,277	195,277	
1978	Monthly	181	5,130	101,523	71,423	67,810	13,208	494	0	259,769
	Cumulative	181	5,311	106,834	178,257	246,067	259,275	259,769	259,769	

<sup>a</sup>/ April includes any early season catches.

<sup>b</sup>/ Only 1974 and 1975 of the 1971-75 base period is available on a monthly basis by species.



Table 16. Oregon Ocean Recreational Coho Landings by Management Area 1974 to 1978.

Management Area (Ports Included)	1974 (Mean)	1975	Coho Catch	1977	1978
			1976		
2 (Astoria)	98,587 (70,724)	42,861	116,677	55,297	60,155
3 (Garibaldi and Pacific City)	29,928 (27,232)	24,536	50,022	15,594	8,510
4 (Depoe Bay and Newport)	68,089 (65,145)	62,202	118,071	34,043	61,210
5 (Florence, Win. Bay, Coos Bay, and Bandon)	77,247 (90,077)	102,906	164,764	76,305	82,784
6 (Port Clifton, Gold Beach, and Brookings)	40,650 (30,177)	19,704	51,772	14,038	47,110
Total	314,501 (283,355)	252,209	501,306	195,277	259,769

The statewide seasonal distribution of coho landings for the 1978 recreational fishery peaked earlier than in previous years. Over 41% of the total coho harvest in 1978 occurred prior to July 1, compared to 22% in the 1977 and the 1974-75 average when only 15 percent of the catch took place before July (Table 15).

#### Extended Recreational Season

A recreational ocean salmon season was included with the 1978 extended troll season in November off the Elk and Chetco Rivers. The season extensions have been granted to allow the harvest of surplus hatchery fall chinook to the two rivers. In the 1978 extended season, the recreational ocean fishery was limited to the port of Brookings where an estimated 79 chinook were harvested. Ocean recreational effort at Brookings during November was an estimated 1,528 angler trips and 624 boat trips.

#### Charter/Private Boat Fisheries

In 1978, approximately 200 charterboats and an unknown number of private boats participated in Oregon's ocean recreational salmon fishery. Catch and effort statistics were compiled by boat type at ports included in sampling surveys for 1973-1978. These survey estimates represent annually up to 90 percent of the total ocean salmon effort and catch.

The 1978 charterboat fishery effort was an estimated 15,024 boat trips and 100,035 angler trips (Table 17). This effort was 30% of the 339,636 total ocean recreational angler trips for 1978, compared to 32% for 1977, and the 1973-77 average of 31% of the ocean recreational effort (Figure 3). The number of charterboat angler trips in 1978 was 6% above the 94,204 angler trips estimated in 1977, and 2% below the 1973-77 average of 102,082 trips. Charterboat fleets operated out of most Oregon ports. Astoria, with nearly 100 charterboats, had the highest effort with 3,746 charterboat trips and 23,149 angler trips. Brookings, however, with just 2 charterboats had only 1,875 angler trips on 267 charterboat trips for 1978.

Charterboat anglers landed 85,379 coho and 6,629 chinook in 1978. Charterboat fishery salmon catch for 1978 was 9% above the 1977 catch of 84,113 salmon, and 25% below the 1973-77 average catch of 115,120 fish. Charterboats landed 35% of the total recreational salmon catch in the 1978 survey. This compares to 43% of the total catch in 1977, and the 1973-77 average of 39% of the catch. Charterboats landed 33,044 salmon at Astoria compared to 1,579 salmon landed at Brookings. The average angling success on charter boats in 1978 was 0.9 salmon per angler trip. The 1973-77 average for Oregon's charterboat ocean fishery was 1.1 salmon per angler trip.

The 1978 private boat fishery effort was an estimated 85,705 boat trips and 239,601 angler trips (Table 17). This effort accounted for 70% of the ocean recreational salmon angler trips, compared to 68% in 1977, and the 1973-77 average of 69% of the ocean sport fishery (Figure 3). The number of private boat angler trips in 1978 was 16% above the 206,969 trips estimated in 1977,

Table 17. Oregon Ocean Recreational Salmon Statistics by Boat-Type, 1978.

Port	Charter Boats				Private Boats			
	Boat Trips	Angler Trips	Catch		Boat Trips	Angler Trips	Catch	
			Coho	Chinook			Coho	Chinook
Astoria	3,746	23,149	29,320	3,724	9,286	29,784	23,278	3,129
Garibaldi	741	6,001	2,125	96	4,429	12,399	3,259	213
Depoe Bay	2,797	20,734	12,299	314	2,993	8,459	5,885	121
Newport	2,680	18,426	9,996	387	20,187	60,790	32,652	1,190
Winchester	2,462	14,892	15,847	868	16,060	43,544	33,937	2,088
Coos Bay	1,736	11,967	12,598	565	6,078	16,652	12,492	598
Gold Beach	595	2,991	1,718	572	3,343	8,056	5,930	1,944
Brookings	267	1,875	1,476	103	23,374	59,917	37,512	3,539
Totals	15,024	100,035	85,379	6,629	85,750	239,601	154,945	12,822
Totals for all Oregon Craft	100,774	339,636	240,324	19,451				

Note: Figures are from sampling survey at each port.

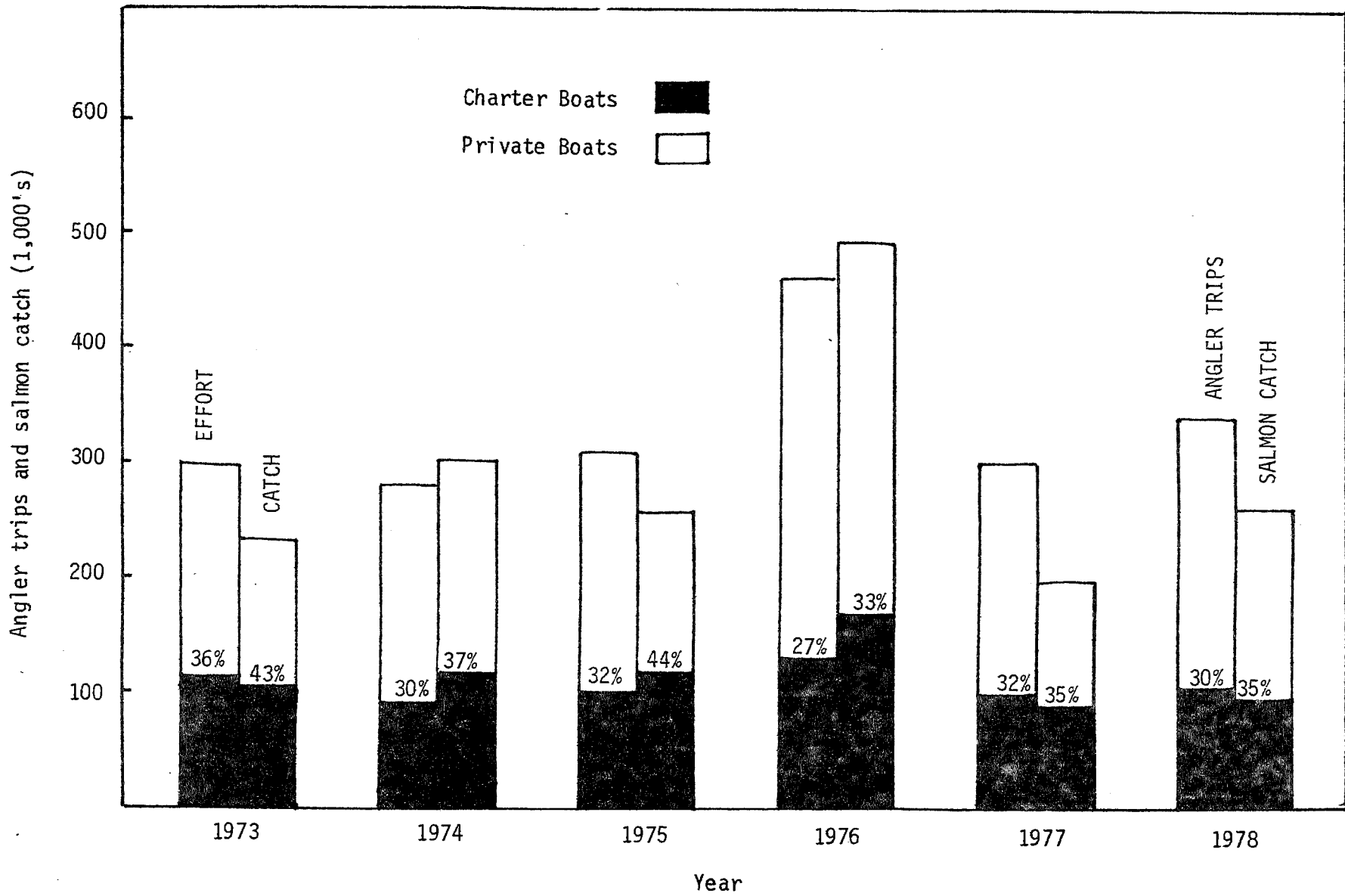


Figure 3. Oregon Sport Salmon Fishery Statistics by Boat-Type 1973-1978.

and 5% above the 1973-77 average of 228,360 trips. Brookings and Newport were the busiest ports with 23,374 and 20,187 private boat trips, respectively. Depoe Bay and Gold Beach had the lowest private boat fishery effort with 2,993 and 3,343 boat trips, respectively.

Private boat anglers landed 154,945 coho and 12,822 chinook in 1978. The private boat fishery salmon catch in 1978 was 49% above the 1977 catch of 112,433 salmon, but 8% below the 1973-77 average catch of 181,953 fish. Private boats ranging in size from small skiffs to large yachts caught 65% of the total recreational salmon landings estimated in the 1978 survey. This compares to 57% of the total catch in 1977, and the 1973-77 average of 61% of the catch. Private boats landed 41,051 salmon at Brookings compared to 3,472 salmon landed at Garibaldi. The average angling success on private boats in 1978 was 0.7 salmon per angler trip. The 1973-77 average for Oregon's private boat ocean fishery was 0.8 salmon per angler trip.

#### Recreational Ocean Salmon Mark Sampling

Samplers at eight ports observed 25% of the chinook and 26% of the coho landed during the sampling survey. This survey resulted in mark sampling rates for the whole coast of 21% for chinook and 24% for coho landed in the Oregon recreational ocean fishery.

The samplers examined 4,897 chinook and found 128 or 2.6% had an adipose fin clip (Table 18). They collected 124 heads from these marked fish for coded-wire tag recovery. An additional 8 chinook heads were collected from marked fish that were not sampled in the survey.

Technicians found tags in 120 of the 132 chinook heads. This is an 88% tag recovery ratio. The major contributing agencies of the chinook tags were Washington Department of Fisheries (57%), U.S. Fish & Wildlife Service (24%), Oregon Department of Fish & Wildlife (12%), and California Department of Fish and Game (2%).

Samplers examined 62,517 coho and found 1,524 or 2.4% had adipose fin clip (Table 19). They collected 1,473 heads from these marked fish for coded-wire tag recovery. One additional coho head was collected from a marked fish that was not sampled in the survey.

Technicians found 1,215 tags in the 1,474 coho heads. This is an 82% tag recovery ratio. The major contributing agencies and hatcheries of coho tags were Oregon Department of Fish & Wildlife (76%), Washington Department of Fisheries (11%), U.S. Fish & Wildlife Service (6%), Oregon Aqua-Foods (4%), and Anadromous Fish Inc. (1%).

Table 18. Oregon Ocean Recreational Chinook Mark Sampling, 1978.

	May	June	July	August	September	Total
<u>Astoria</u>						
No. Sampled		130	364	1,204	23	1,721
No. Landed		1,179	1,220	4,365	89	6,853
% Sampled		11	30	28	26	25
No. Ad Marks		8	17	73	1	99
<u>Garibaldi</u>						
No. Sampled		7	39	47	0	93
No. Landed		15	106	188	0	309
% Sampled		47	37	25	0	30
No. Ad Marks		0	0	1	0	1
<u>Depoe Bay</u>						
No. Sampled	3	31	81	94	1	210
No. Landed	12	71	159	191	2	435
% Landed	25	44	51	49	50	48
No. Ad Marks	0	1	1	1	0	3
<u>Newport</u>						
No. Sampled	2	27	129	86	1	245
No. Landed	12	171	753	639	2	1,577
% Sampled	17	16	17	13	50	16
No. Ad Marks	0	0	3	1	0	4
<u>Winchester Bay</u>						
No. Sampled	39	149	132	257	8	585
No. Landed	204	802	632	1,255	63	2,956
% Sampled	19	19	21	20	13	20
No. Ad Marks	0	1	1	1	0	3
<u>Coos Bay</u>						
No. Sampled	9	66	177	371	25	648
No. Landed	30	238	281	546	68	1,163
% Sampled	30	28	63	68	37	56
No. Ad Marks	0	2	5	4	1	12
<u>Gold Beach</u>						
No. Sampled		68	118	423	23	632
No. Landed		296	436	1,700	84	2,516
% Sampled		23	27	25	27	25
No. Ad Marks		0	0	0	0	0
<u>Brookings</u>						
No. Sampled		289	201	257	16	763
No. Landed		1,646	986	970	40	3,642
% Sampled		18	20	26	40	21
No. Ad Marks		5	1	0	0	6
<u>Total</u>						
No. Sampled	53	767	1,241	2,739	97	4,897 <sup>1/</sup>
No. Landed	258	4,418	4,573	9,854	348	19,451
% Sampled	21	17	27	28	28	25
No. Ad Marks	0	17	28	81	2	128 <sup>1/</sup>

<sup>1/</sup> 8 Snouts were also taken from Ad-clipped fish not sampled in survey.

Table 19. Oregon Ocean Recreational Coho Mark Sampling, 1978.

	May	June	July	August	September	Total
<u>Astoria</u>						
No. Sampled		3,013	3,691	5,392	470	12,566
No. Landed		18,628	12,176	19,770	2,024	52,598
% Sampled		16	30	27	23	24
No. Ad Marks		44	84	188	16	332
<u>Garibaldi</u>						
No. Sampled		221	289	1,265	17	1,792
No. Landed		475	663	4,173	73	5,384
% Sampled		47	44	30	23	33
No. Ad Marks		3	10	23	0	36
<u>Depoe Bay</u>						
No. Sampled	42	2,300	3,142	3,380	77	8,941
No. Landed	90	5,388	6,468	6,069	169	18,184
% Sampled	47	43	49	56	46	49
No. Ad Marks	0	30	35	31	1	97
<u>Newport</u>						
No. Sampled	48	1,799	1,985	2,757	30	6,619
No. Landed	125	9,212	14,680	18,482	149	42,648
% Sampled	38	20	14	15	20	16
No. Ad Marks	2	40	56	71	1	170
<u>Winchester Bay</u>						
No. Sampled	507	5,104	2,328	2,508	234	10,681
No. Landed	879	23,599	11,944	11,952	1,410	49,784
% Sampled	58	22	19	21	17	21
No. Ad Marks	19	189	71	69	9	357
<u>Coos Bay</u>						
No. Sampled	354	4,762	3,935	3,152	237	12,440
No. Landed	975	11,950	6,840	4,777	548	25,090
% Sampled	36	40	58	66	43	50
No. Ad Marks	8	160	109	78	4	359
<u>Gold Beach</u>						
No. Sampled		1,054	552	283	15	1,904
No. Landed		3,838	2,290	1,447	73	7,648
% Sampled		27	24	20	21	25
No. Ad Marks		15	4	0	0	19
<u>Brookings</u>						
No. Sampled		5,136	1,665	769	4	7,574
No. Landed		27,513	8,432	3,032	11	38,988
% Sampled		19	20	25	36	19
No. Ad Marks		127	24	3	0	154
<u>Total</u>						
No. Sampled	951	23,389	17,587	19,506	1,084	62,517
No. Landed	2,069	100,603	63,493	69,702	4,457	240,324
% Sampled	46	23	28	28	24	26
No. Ad Marks	29	608	393	463	31	1,524