

THE 1994 OREGON OCEAN SALMON FISHERIES

Annual Report
1994

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INTRODUCTION

The Ocean Salmon Management Program (OSMP) monitors ocean commercial and recreational salmon fisheries, coordinates Oregon coastal salmon spawning surveys, and conducts ocean and coastal rivers investigations for the Oregon Department of Fish and Wildlife (ODFW). The program uses data from these and other sources to develop management recommendations for the best use of Oregon's salmon resources, and to evaluate proposed ocean salmon fishery regulations. Major forums in which OSMP staff participate include the Pacific Fishery Management Council (PFMC) and its salmon technical teams (STT and SSC), the Pacific Salmon Commission (PSC) and their technical committees, and the Klamath Fishery Management Council (KFMC).

The OSMP fulfills Oregon's technical and management responsibilities to these management entities as directed under the U.S./Canada Salmon Interception Treaty (1986), the Magnuson Fishery Conservation and Management Act (MFCMA) PL 94-265 (1976), and the Anadromous Fisheries Act 89-304.

This report summarizes the activities of OSMP's Ocean Salmon Sampling Project for the 1994 ocean season. In 1994, we collected and analyzed data on Oregon's catch and fishing effort, recovered coded wire tags (CWTs), and gathered average weight data from commercial salmon landings. We also collected chinook salmon scales for aging. During 1994, we conducted an extensive creel of the Tillamook estuary and nearshore ocean fall chinook fisheries, and collected tissue samples from chinook for genetic stock analysis of a troll fishery near Gold Beach.

The OSMP sampling project is permanently staffed by a project leader and an assistant project leader at Newport, and one sampling coordinator at Tillamook. The sampling coordinator serves as liaison between field samplers, fishery participants, and program staff at Newport; delivers data and coded wire tags to Newport; and also samples when necessary.

The Oregon Coast has 12 substantial ocean ports and access points to the ocean fishery, and an additional 10 locations that anglers or commercial fishermen use to access the ocean occasionally. In 1994, we sampled at 10 of the primary Oregon coastal ports, utilizing 18 seasonal samplers: four were commercial troll samplers, nine were recreational samplers, and five were "combination" commercial-recreational samplers. Several of these samplers were picked up on loan from other projects or were hired for very short periods (Appendix Table 1). One additional employee helped edit and computer process the sampled data under the direction of OSMP's Data Management Project.

1994 OCEAN TROLL SALMON FISHERY

BACKGROUND

The commercial salmon troll fishery was developing off the Oregon Coast by the year 1912 (Mullen, 1981). By 1919, there were between one and two thousand boats trolling off the mouth of the Columbia River. The State of Oregon began recording troll landings separately from gillnet fisheries in 1925.

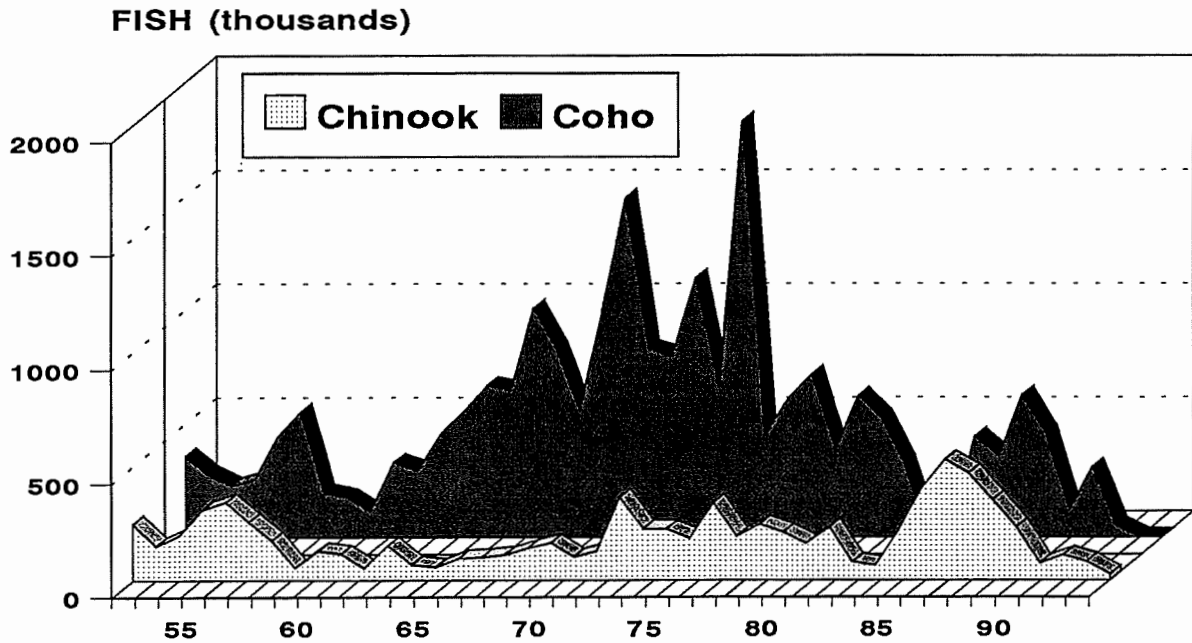
Landings of ocean troll caught coho salmon remained relatively stable from 1925 to 1941, with landings between 2,000,000 and 4,000,000 pounds (dressed weight: head-on, viscera removed) for most years (Figure 1). From 1942 to 1950 catches remained near 1,000,000 pounds annually, but by 1957 landings had climbed back up to 3,400,000 pounds. The El Niño of 1958-59 resulted in landings dropping back below 1,000,000 pounds or 200,000 fish. During the 1960s and early 1970s, improved hatchery production and rearing techniques, a growing troll fleet, and good ocean survival rates of smolts to adults resulted in record landings that peaked in 1976 with 1,800,000 coho landed. From the mid 1970s and continuing into the 1990s, Oregon's ocean coho fishery has been characterized by continuing poor ocean environmental conditions and poor overall survival, increasing management restrictions, and reduced ocean harvest opportunities.

Although chinook harvest by the Oregon troll fishery has also seen dramatic fluctuations, the long term trend has been one of increasing landings. The troll chinook fishery had record harvests in 1987 and 1988. The late 1980s and early 1990s have seen a decline in harvest due to decreases in many stocks, concern for critical natural stocks under both state and federal management and the federal Endangered Species Act (ESA), together with increasing allocation conflicts between river and ocean user groups.

Historically, coho salmon predominated in the landings, but for the last decade chinook landings have equaled coho, and in many years made up the majority of the catch. This is primarily due to lower coho survival rates and much higher chinook survival rates and catch in the late 1980's (Figure 1, Table 1). Chinook will continue to predominate in the landings until coho abundances increase enough to allow fisheries to resume.

Entry into the troll fishery was unrestricted until 1980 when a permit moratorium was adopted. Although 4,311 vessels already had Oregon troll permits, a goal of 2,400 vessels licensed to troll for salmon in Oregon was established. During the 1993 Oregon legislative session, the troll permit goal was lowered to 1,800 vessels. By the end of 1994, the number of renewed troll permits had declined to 1,569. Of the permitted vessels, only 371 recorded landings of salmon in 1994.

TROLL SALMON LANDINGS, 1952-94 Numbers of Salmon Landed



TROLL SALMON LANDINGS, 1925-94 Pounds Dressed (head on, viscera removed)

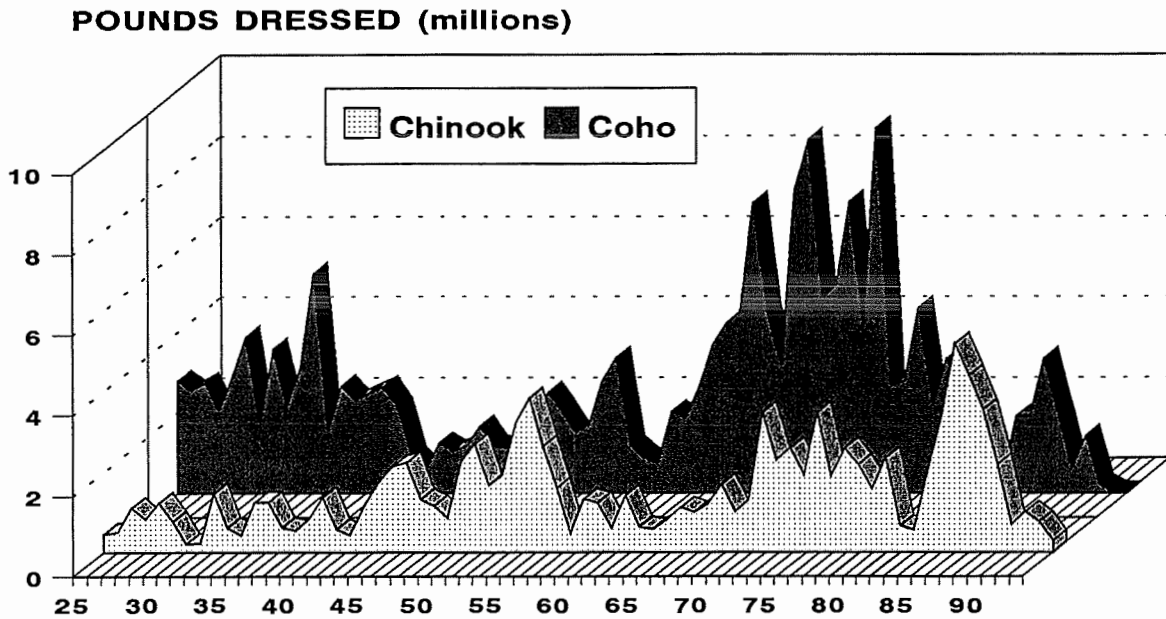


Figure 1. Historical Oregon troll salmon landings in numbers of fish (1952-94), and in pounds dressed (1925-94).

Table 1. Oregon commercial troll salmon effort (deliveries and boat days) and landings (number of fish and pounds dressed), 1952-94. Includes effort and catches made off California, Washington, and Alaska and landed in Oregon.

Year	Effort		Chinook		Coho		Pink	
	Del.	Bt. Days	No.	Lbs. Dr.	No.	Lbs. Dr.	No. ^a	Lbs. Dr. ^b
1952	-	-	247,747	2,686,323	356,487	2,491,705	1	3
1953	-	-	150,922	1,675,517	274,957	2,041,681	653	3,527
1954	-	-	197,396	1,924,210	227,197	1,508,204	0	0
1955	-	-	309,876	3,219,518	255,951	1,693,561	1,145	6,187
1956	-	-	343,045	3,825,914	443,214	2,781,851	0	0
1957	-	-	256,917	2,630,601	551,074	3,355,135	16,119	87,090
1958	-	-	174,876	1,595,335	196,612	1,165,957	0	0
1959	-	-	53,884	463,217	175,362	873,483	1,036	5,597
1960	-	-	127,834	1,328,362	112,472	731,819	10	54
1961	-	-	116,136	1,227,542	328,817	2,007,231	33	180
1962	-	-	52,559	597,664	293,234	1,870,442	0	0
1963	-	-	152,771	1,407,486	457,710	2,609,320	3,805	20,557
1964	-	-	67,505	628,387	558,109	3,683,144	12	67
1965	-	-	57,724	572,600	666,665	4,202,189	35,194	190,156
1966	-	-	95,569	799,680	646,145	4,488,517	0	0
1967	-	-	99,745	1,115,939	1,003,994	7,201,349	172,546	932,269
1968	-	-	110,150	993,410	825,352	4,398,335	659	3,560
1969	-	-	140,285	1,201,470	557,337	3,171,539	48,050	259,613
1970	-	-	164,688	1,685,028	989,743	7,536,094	162	873
1971	43,934	-	102,926	1,000,710	1,490,122	8,765,148	1,676	9,054
1972	38,354	-	127,287	1,303,729	824,602	4,856,335	21	115
1973	33,378	-	363,267	3,461,321	795,477	5,137,061	2,634	14,229
1974	51,058	-	224,110	2,290,403	1,137,193	7,230,870	13	70
1975	44,627	-	224,708	2,583,326	657,387	4,087,541	167	905
1976	71,868	-	184,345	1,921,577	1,826,968	9,061,161	1,026	5,546
1977	85,086	-	340,014	3,464,945	446,122	2,640,800	73,319	396,144
1978	45,693	-	191,532	1,893,620	611,638	2,778,964	45	244
1979	43,604	48,799	245,487	2,579,967	714,639	4,586,296	20,499	106,336
1980	29,633	39,933	209,369	2,171,509	383,288	2,190,209	316	1,570
1981	35,098	45,334	160,666	1,572,489	622,490	3,324,309	60,173	323,982
1982	26,478	33,715	232,125	2,351,252	518,421	2,708,375	0	0
1983	17,388	22,066	79,541	654,992	319,630	1,097,881	79	231
1984	5,595	7,927	64,302	549,448	13,793	69,806	0	0
1985	15,663	21,003	217,019	2,029,488	84,222	483,827	44,313	258,597
1986	25,696	32,528	402,656	3,370,301	440,398	1,904,649	4	11
1987	30,977	39,493	529,255	5,182,350	353,981	1,915,935	17,648	87,343
1988	40,860	51,076	469,988	4,386,951	623,234	3,335,987	4	11
1989	33,393	42,286	353,481	3,531,858	455,726	1,995,515	3,833	17,629
1990	20,220	26,231	232,442	2,180,867	122,295	633,804	0	0
1991	10,965	14,898	74,753	694,847	306,946	1,410,999	1,786	7,561
1992	6,212	9,224	110,489	1,012,622	49,762	206,622	3	16
1993	6,018	9,532	81,523	760,574	1,669	9,075	12	29
1994	2,425	3,770	25,275	286,680	0	0	0	0

^a Numbers of pink salmon from 1952-78 are estimated by dividing the pounds landed by the 1979-94 average weight of pink salmon landed in Oregon from 1979-94 (5.403 lbs/per pink salmon).

^b Pounds dressed for pink salmon for the period of 1952-78 is back calculated from round weights landed by dividing total pounds by the standard conversion factor of 1.15. Poundages from this period may also include landings of pinks from other commercial fisheries.

No ocean troll coho fishing was allowed in 1994. Salmon fishing was closed completely north of Cape Falcon due to concerns for regional wild coho stocks and for chinook stocks listed under the Endangered Species Act. July and August were closed in the area from Cape Falcon to Humbug Mountain to reduce incidental hooking mortality impacts on coho salmon, and the area from Cape Falcon to Cascade Head remained closed through September to allow extra protection for extremely depressed natural coho stocks in the Tillamook Basin. The area south of Humbug Mountain saw limited troll chinook salmon opportunities in 1994 after being completely closed in 1992 and 1993 (Figure 2). In addition, the first state waters fall chinook terminal area troll target fishery since 1983 took place off Brookings in October.

SAMPLING METHODOLOGY

Sampling Areas and Staffing

For 1994, a seasonal staff of four troll salmon samplers and five combination (troll/recreational) samplers were deployed at Oregon coastal ports (Appendix Tables 1 and 2). Samplers worked at both permanent and temporary buying stations in Garibaldi, Newport, Florence, Winchester Bay, Charleston, Gold Beach, and Port Orford. Troll sampling was supplemented at times by permanent staff.

Sampling Design

Sampling was conducted via an established sampling plan using a stratified random design. Samplers were instructed to sample proportionate landings from trip boats and day boats, from landings throughout the week, and from all significant buyers. Sampling data were recorded by individual vessel landings on forms designed to be read by an optical scanner. Data forms were transferred to the Newport office and scanned into a personal computer. Future data collection is scheduled to move to handheld data entry units possibly as early as 1995. All individual landings are kept confidential.

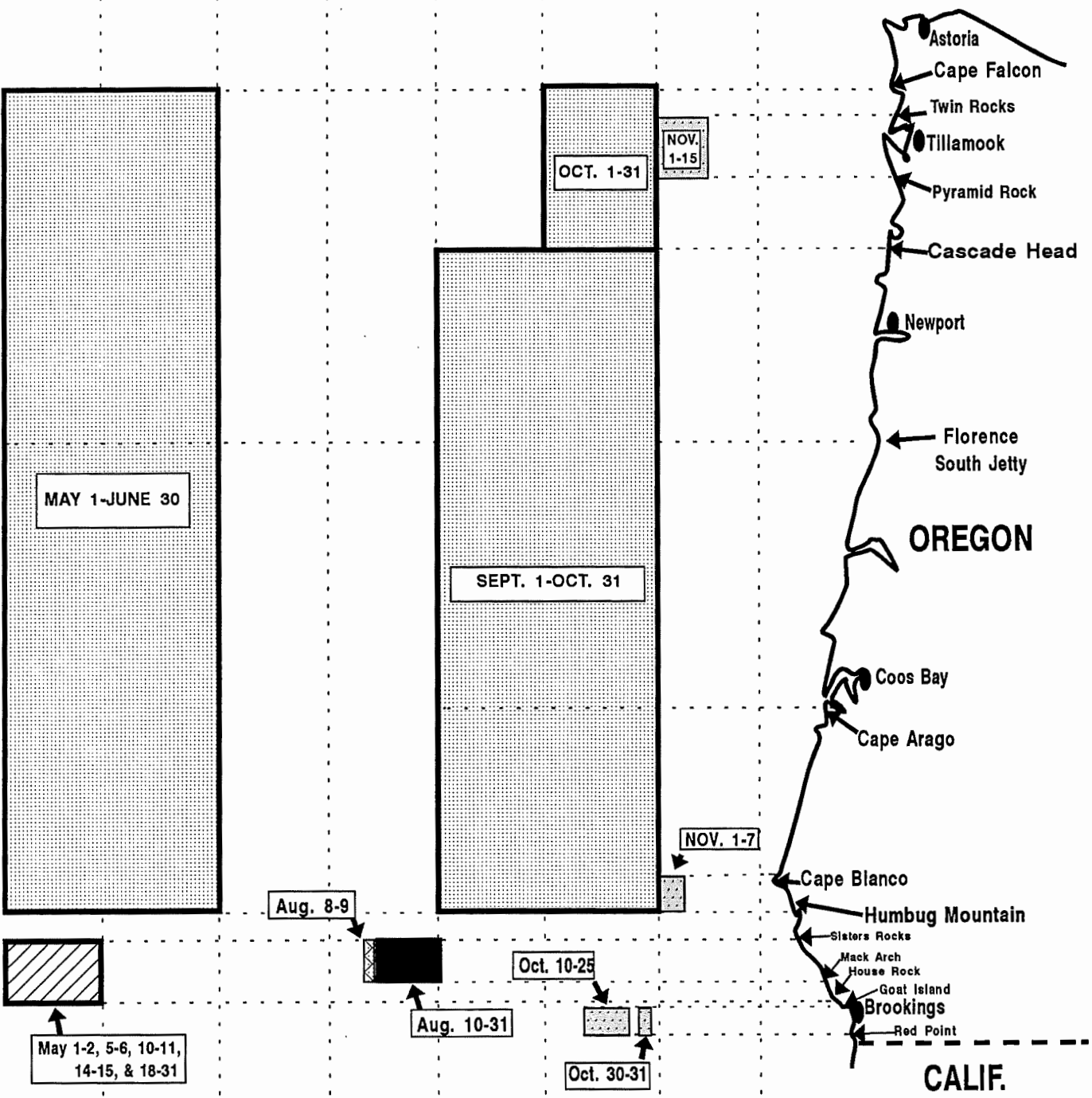
Average Weights and Coded Wire Tags

Salmon were sorted and weighed by fish plant personnel. Simultaneously, OSMP employees tallied the fish by species and grade, recorded corresponding total weights, and examined the salmon for clipped adipose fins. A clipped adipose fin indicated that the fish had a coded wire tag (CWT) implanted in its snout.

Quota Assessment

Ocean salmon harvests within the PFMC area are managed to achieve specific spawning escapement goals for regional salmon stocks as adopted by the PFMC, provide for in-river fisheries, and Native American treaty requirements. Quotas or

MAY | JUNE | JULY | AUG. | SEPT. | OCT. | NOV.



- All salmon except coho, no more than 4 spreads per wire.
- All salmon except coho, no more than 4 spreads per wire, 0-6 miles.
- ⊗ Special registration fishery, all salmon except coho, no more than 4 spreads per wire, 0-6 miles, daily landing limit of 20 chinook.
- Special registration fishery, all salmon except coho, no more than 4 spreads per wire, 0-6 miles, daily landing limit of 60 chinook.
- All salmon except coho, no more than 4 spreads per wire, state waters only (0-3 miles).

Figure 2. Open ocean troll seasons off Oregon, 1994.

Table 2. Oregon troll salmon effort (boat days) and landings (number of fish), by area of catch and by statistical month, 1994.

Year	Area of Catch									Total
	Col. R. 2	Tillamook 3	Newport 4	Coos Bay 5	Brookings OR 6	Subtotal	Alaska 8	Wash. 1	Calif. 7	
<u>Effort</u>										
May	-	<50	800	100	<50	1,000	0	0	0	1,000
June	-	100	800	300	<50	1,200	0	0	0	1,200
July	-	-	-	-	-	0	0	0	<50	<50
Aug.	-	-	-	-	100	100	0	0	<50	100
Sept.	-	100	200	100	<50	300	0	0	0	300
Oct.	-	300	300	300	200	1,100	0	0	0	1,100
Nov.	-	<50	<50	100	<50	100	0	0	0	100
Total	0	600	2,100	800	300	3,800	0	0	<50	3,800
<u>Chinook</u>										
May	-	100	7,200	400	200	7,900	0	0	0	7,900
June	-	300	7,000	1,500	-	8,800	0	0	0	8,900
July	-	-	<100	<50	-	100	0	0	100	100
Aug.	-	-	-	-	200	200	0	0	<50	200
Sept.	-	-	900	200	-	1,100	0	0	0	1,400
Oct.	-	1,300	2,900	1,500	1,000	6,600	0	0	0	6,200
Nov.	-	<50	<50	400	-	500	0	0	0	600
Total	0	1,700	18,000	4,000	1,500	25,200	0	0	100	25,300

Table 3. Oregon troll chinook salmon landings in pounds dressed, by calendar month, and port of landing, 1994.

Month	May	June	July	August	Sept.	Oct.	Nov.	Total
<u>Chinook</u>								
Astoria	0	0	0	0	0	196	0	196
Garibaldi	1,293	3,220	0	0	0	21,090	424	26,027
Netarts	0	0	0	0	0	62	0	62
Pacific City	273	254	0	0	0	2,648	0	3,175
Salmon River	0	0	0	0	237	0	0	237
Depoe Bay	447	823	0	0	231	74	0	1,575
Newport	67,124	62,993	504	0	6,578	25,567	254	163,020
Florence	1,310	7,622	0	0	1,633	690	0	11,255
Winchester	2,092	5,639	0	0	617	1,280	0	9,628
Charleston	8,064	7,045	253	98	875	3,312	0	19,647
Bandon	1,171	3,234	0	0	110	64	0	4,579
Port Orford	0	1,243	0	264	79	18,457	5,987	26,030
Gold Beach	0	0	0	1,061	0	0	0	1,061
Brookings	2,527	0	1,091	1,481	0	15,089	0	20,188
Total	84,301	92,073	1,848	2,904	10,360	88,529	6,665	286,680

harvest ceilings for specific time and area fisheries are a primary tool of harvest management. Quotas are set based on estimates of adult recruitment, stock mix, anticipated ocean harvest patterns, impacts on critical stocks, and spawning escapement goals.

A fish receiving ticket is required for each troll salmon landing. Estimates of the number of salmon landed are derived by taking poundages from fish receiving tickets and applying average weight data from our port sampling program. Intensive ocean troll fisheries and quotas make it necessary for managers to be able to monitor catches timely and with reasonable accuracy. Standard processing of fish ticket data may take more than three weeks, and cannot be effectively used for in-season quota management.

To overcome the fish ticket time lag, the OSMP developed a "key buyer" program in 1983. This program monitors daily or periodic troll landings at major ("key") buyers along the coast as needed to provide assessment of landings. Sampling staff contact major salmon buyers in each port and summarize total pounds of salmon purchased for a specific time period and fishery. The sampler then contacts OSMP staff at the Newport office with the poundages and the summarized sample data for the same period. Total poundages landed at the key buyers are expanded to account for the buyers who were not contacted. By dividing the estimated poundage of salmon landed within a given port by the average weight from the sampling data for that port, a reasonable estimate of the landings can be made within 24 hours. Key buyers typically represent more than 90% of the landings and allow for expansion of the landings with minimal error.

Estimates are also made of fish "on the water", and buyer percentages are adjusted in season to reflect current delivery patterns. As "hard data" from the fish ticket system becomes available, it is used to replace the early key buyer "soft data". Assessment of fish on the water becomes less precise as the level of trip boat participation increases, and can be complicated by buyer boats, out of area landings, and mobile buying stations.

REGULATIONS

Ocean salmon regulations are set by the PFMC for all ocean salmon fisheries in the Exclusive Economic Zone (EEZ) from 3 to 200 miles. For state waters (0 to 3 miles), ocean salmon regulations are set by the Oregon Fish and Wildlife Commission within the ocean salmon harvest impact guidelines established by the Council. Special all-species-except-coho fisheries are set by the Oregon Fish and Wildlife Commission for state waters within 3 miles of shore.

All 1994 Oregon and PFMC area ocean troll salmon fisheries had the gear restrictions of single-point, single-shank, barbless hooks; and not more than four terminal gear

spreads per wire. Minimum length restrictions were 26 inches total length for chinook caught south of Cape Falcon (Figure 2, Appendix Table 3).

Cape Falcon to Cascade Head

The all-salmon-except-coho fishery from Cape Falcon to Cascade Head was open from May 1 through June 30, and from October 1 through 31 (92 fishing days). There were no chinook quota restrictions in this area. In addition, a special all-salmon-except-coho season was authorized for state waters off Tillamook Bay (Twin Rocks to Pyramid Rock) from November 1 through 15 (15 fishing days).

Cascade Head to Humbug Mountain

The all-salmon-except-coho season from Cascade Head to Humbug Mountain was open from May 1 through June 30 and September 1 through October 31 (122 fishing days). Two subarea chinook quotas were adopted within this area: the first quota was for the period of May 1 through June 30 from the Florence South Jetty to Humbug Mountain for a total of 12,000 chinook, and the second quota of 10,000 chinook was for the September 1 through October 31 season from Cape Arago to Humbug Mountain. Neither quota was met, and the seasons continued to their scheduled closing dates.

Cape Blanco to Humbug Mountain

An all-salmon-except-coho season was authorized by the Oregon Fish and Wildlife Commission for state waters (0-3 miles) for the area from Cape Blanco to Humbug Mountain. This fishery was scheduled to open November 1 and continue through November 7 or the quota of 400 chinook. The season opened November 1 and continued through its scheduled closing date of November 7 (7 fishing days).

Humbug Mountain to Horse Mountain

An all-salmon-except-coho season for waters (0-6 miles) opened from Sisters Rocks (south of Port Orford) to House Rock (north of Brookings). This fishery was scheduled to open for two day periods from May 1 and continue through May 31 or the quota of 1500 chinook. The season was open May 1-2, 5-6, 10-11, 14-15 and May 18 through May 31 (22 fishing days).

An all-salmon-except-coho special registration fishery for waters (0-6 miles) was authorized for the area of Sisters Rock to Mack Arch (south of Pistol River). This fishery was scheduled to open August 8 and continue through August 31 or the quota of 800 chinook. The season opened on August 8 and continued through its scheduled closing date of August 31. Daily landing limits were 20 chinook August 8 and 9; and 60 chinook August 10 through 31. Vessels were required to land their fish at either Port Orford, Gold Beach or Brookings; and to notify the Oregon Department of Fish and Wildlife of the landing if a sampler was not present. Participation in the fishery was

initially limited to a small number of vessels via a lottery type drawing. Due to the low number of applicants, all 38 vessels that applied were issued permits. After the fishery opened, all additional vessels that requested a permit were also issued one.

An all-salmon-except-coho season was authorized by the Oregon Fish and Wildlife Commission for state waters (0-3 miles) off the mouth of the Chetco River at Brookings for the area from Goat Island to Red Point. This fishery was scheduled to open October 10 through October 31 or the quota of 1,000 chinook. The season opened October 10 and continued through October 25, was closed when it appeared the quota had been met, and then re-opened October 30 and 31 to finish off the quota (17 fishing days).

EFFORT AND CATCH STATISTICS

Poundages, dollar value, area of catch, and days fished were obtained directly from commercial fish receiving tickets. Pounds landed were converted to number of fish by using average weight information collected by port samplers. Prior to 1979, all Oregon troll catch statistics were reported by port of landing. Beginning in 1979, catch and effort estimates have also been reported by ocean catch area (Figure 3). Landings are allocated to correct catch areas to properly assess ocean fishery impacts. Area of catch data are recorded on fish tickets by buyers and are cross-checked with available OSMP sampling data.

Effort

Historically, Oregon's troll effort has been estimated in vessel deliveries and, since 1979, in boat days. Troll effort for 1994 totaled 3,800 boat days. This is a 60% decrease from the 9,500 boat days fished in 1993, 13% of the 1979-93 average of 29,600 boat days, and only 7% of the record 51,100 days observed in 1988 (Table 1). The lack of troll effort in 1994 was due to a number of factors including: no coho season, no ocean troll seasons in the Columbia River catch area, limited seasons within the KMZ, poor chinook catches especially in the Coos Bay catch area, the general season closure during July and August, and the arrival of abundant albacore tuna in late July.

Most 1994 effort (55%) occurred within the Newport catch area. Effort levels were down in all areas except the Brookings catch area. The Columbia River catch area had no effort or catch due to a complete troll closure (Table 2, Figure 4, and Appendix Tables 4 and 5).

Historically, peak effort levels have occurred during the general coho season in July and August. Most of the 1994 troll effort occurred in June and October, and coincided with the chinook openings from Cape Falcon to Humbug Mountain.

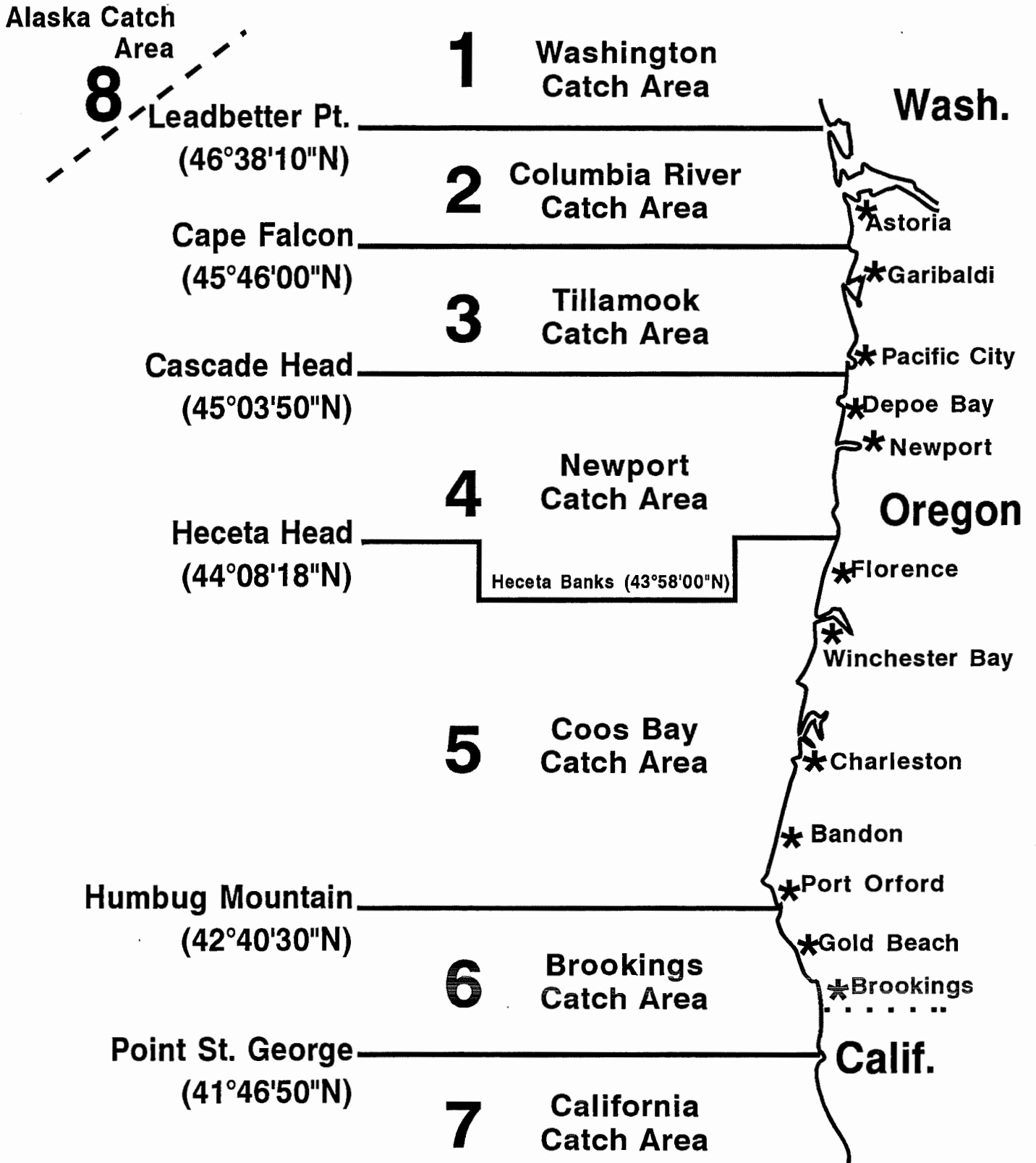


Figure 3. Oregon ocean catch areas and ports where commercial troll salmon are landed.

Effort

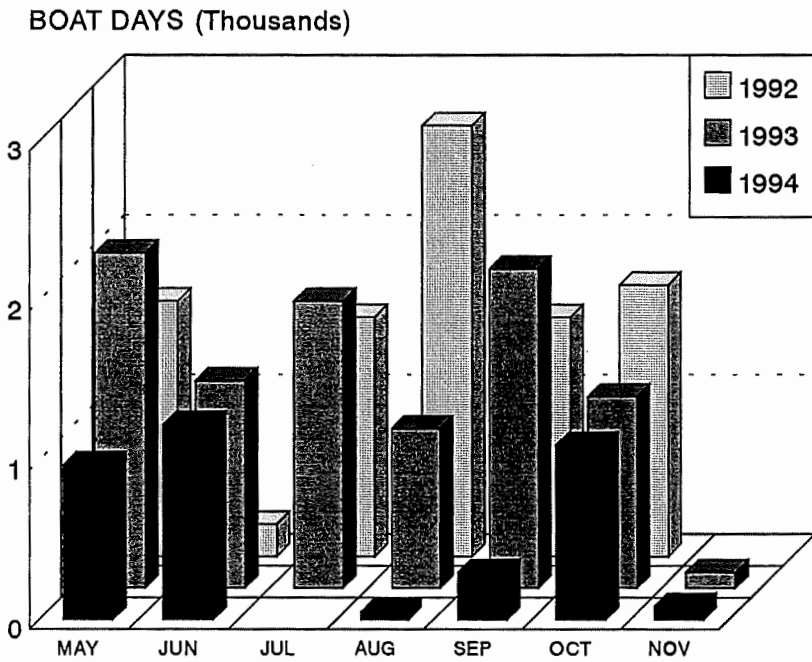
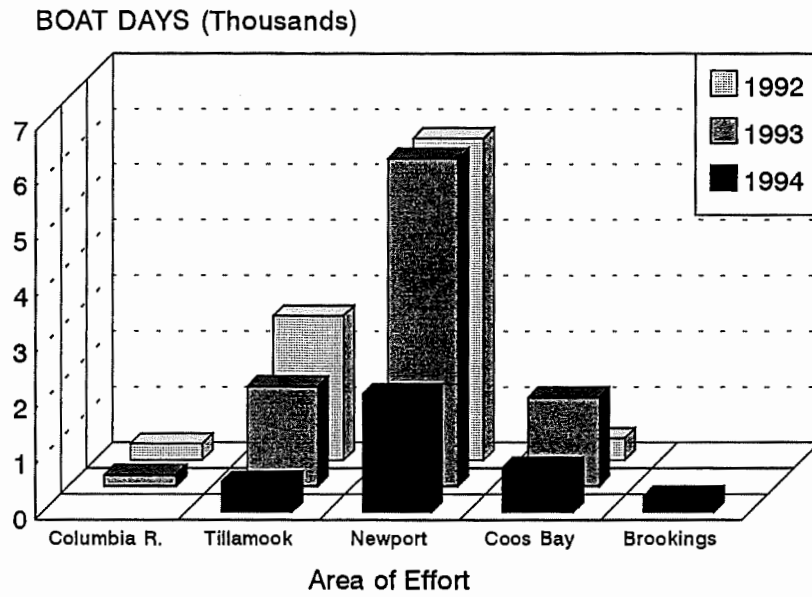


Figure 4. Oregon troll salmon effort in boat days by area of catch and by month, 1992-94.

Landings

Chinook: The 1994 chinook landings were a historic low of only 25,300 fish landed. The landings were down 69% from the 1993 catch of 81,500 chinook, and were only 11% of the 1979-93 average of 230,900 chinook (Table 1; Figure 5; and Appendix Tables 4, 5, and 6).

Most chinook were caught in the Newport catch area (71%). Catches were down from 1993 levels in all areas except the Brookings area. The increase in chinook catch in the Brookings catch area was a result of more time and area fishing opportunities (including a state waters fishery), and do not necessarily a result of changes in chinook abundance (Figure 6).

July is typically the month of greatest chinook landings. However, general statewide closures during July and August elevated in 1994, elevated June to 35%, May to 31%, and October to 25% of the chinook catch (Table 3).

AVERAGE WEIGHT DATA

Average ocean troll salmon weight data was gathered from most port landing locations by OSMP port samplers and allowed for conversion of fish ticket poundage information to fish numbers. The 1994 seasonal average dressed weight (head on, viscera removed) for chinook was 11.3 pounds (Table 4). This was 22% higher than the 1993 average weight of 9.3 pounds.

THE DOLLAR VALUE OF OCEAN SALMON LANDINGS

The 1994 Oregon troll chinook landings were only worth \$689,000 ex-vessel. This was a 59% decrease from 1993, and was only 15% of the 1971-93 average of \$4,665,000. The average price paid was \$2.40 per pound, up 9% from the 1993 average price of \$2.18 (Appendix Table 7).

CODED WIRE TAG SAMPLING

In 1994, the troll sampling program examined 23% of all landed chinook for CWTs (Table 5).

Chinook

Samplers observed 375 marked (adipose fin clip) chinook in 1994: 6.6% of the observed chinook were marked. Technicians recovered readable tags from 340 snouts (91%). Most of the CWTs recovered were released by Oregon Department of Fish and Wildlife (88%), and California Department of Fish and Game (6%). Most of the

SALMON (thousands)

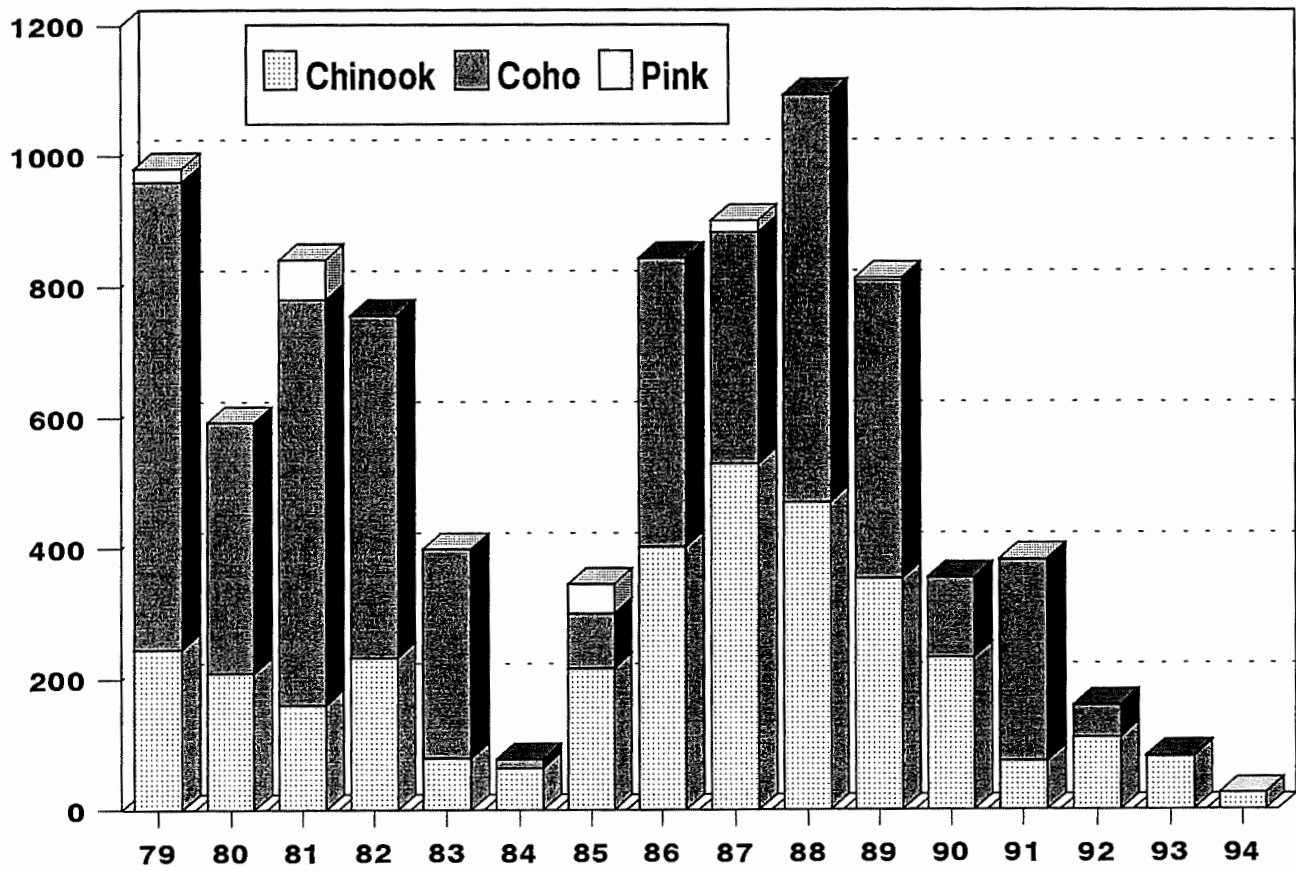


Figure 5. Oregon troll salmon landings, 1979-94.

Chinook

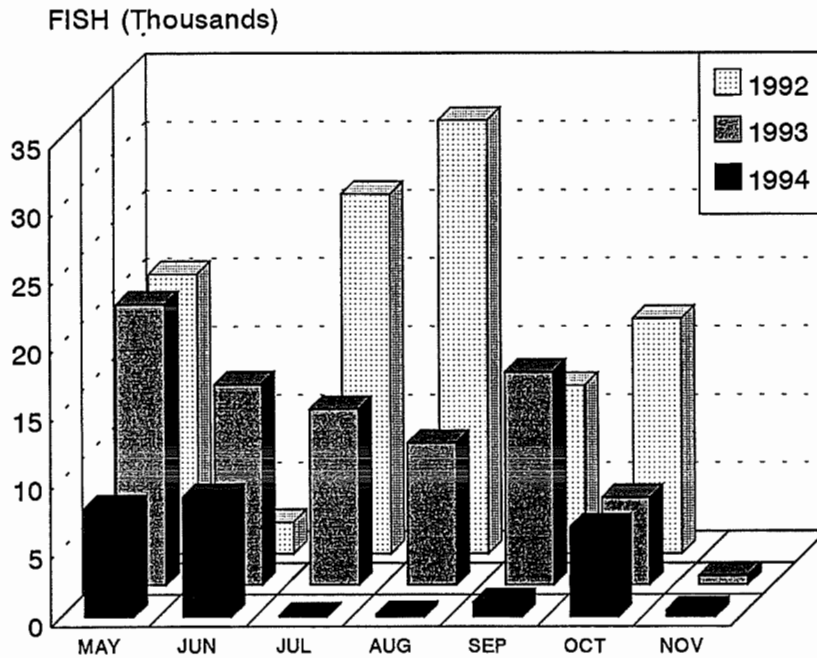
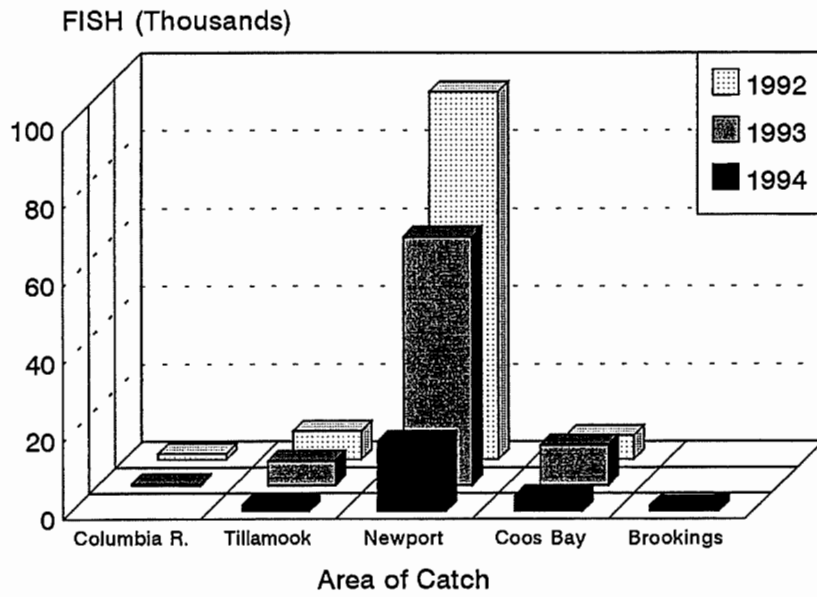


Figure 6. Oregon troll chinook landings by area of catch and by month, 1992-94.

Table 4. Observed average dressed weight and calculated number of chinook landed in the Oregon troll fishery by calendar month and area of catch, 1994.

Area of Landing	Month							Total
	May	June	July	Aug.	Sept.	Oct.	Nov.	
<u>Columbia R. (2)</u>								
Numbers	-	-	-	-	-	-	-	0
Pounds	-	-	-	-	-	-	-	0
Ave. wt.	-	-	-	-	-	-	-	NA
<u>Tillamook (3)</u>								
Numbers	98	279	-	-	-	1,252	22	1,651
Pounds	1,566	3,474	-	-	-	23,961	424	29,425
Ave. wt.	16.0	12.5	-	-	-	19.1	19.3	17.8
<u>Newport (4)</u>								
Numbers	7,248	6,911	66	-	897	2,883	34	18,039
Pounds	76,374	73,182	504	-	8,724	27,478	254	186,516
Ave. wt.	10.5	10.6	7.6	-	9.7	9.5	7.5	10.3
<u>Coos Bay (5)</u>								
Numbers	384	1,540	29	-	183	1,474	371	3,981
Pounds	3,834	15,417	274	-	1,627	22,001	5,987	49,140
Ave. wt.	10.0	10.0	9.5	-	8.9	14.9	16.1	12.3
<u>Brookings (6)</u>								
Numbers	224	-	-	222	-	1,039	-	1,485
Pounds	2,527	-	-	2,885	-	15,089	-	20,501
Ave. wt.	11.3	-	-	13.0	-	14.5	-	13.8
<u>Oregon Subtotal</u>								
Numbers	7,954	8,730	95	222	1,080	6,648	427	25,156
Pounds	84,301	92,073	778	2,885	10,351	88,529	6,665	285,582
Ave. Wt.	10.6	11.5	8.2	13.0	9.6	13.3	15.6	11.4
<u>Alaska (8)</u>								
Numbers	-	-	-	-	-	-	-	0
Pounds	-	-	-	-	-	-	-	0
Ave. Wt.	-	-	-	-	-	-	-	NA
<u>Washington (1)</u>								
Numbers	-	-	-	-	-	-	-	0
Pounds	-	-	-	-	-	-	-	0
Ave. Wt.	-	-	-	-	-	-	-	NA
<u>California (7)</u>								
Numbers	-	-	117	2	-	-	-	119
Pounds	-	-	1,070	28	-	-	-	1,098
Ave. Wt.	-	-	9.2	14.0	-	-	-	9.2
<u>Total</u>								
Numbers	7,954	8,730	212	224	1,080	6,648	427	25,275
Pounds	84,301	92,073	1,848	2,913	10,351	88,529	6,665	286,680
Ave. wt.	10.6	11.5	8.7	13.0	9.6	13.3	15.6	11.3

Table 5. Oregon ocean troll chinook mark sampling by statistical month and port of landing, 1994.

Port	Month							Total
	May	June	July	Aug. ^a	Sept.	Oct.	Nov.	
<u>Astoria</u>								
No. Examined	-	-	-	-	-	0	-	0
No. Landed	-	-	-	-	-	11	-	11
% Examined	-	-	-	-	-	0	-	0
No. Marks	-	-	-	-	-	-	-	0
<u>Garibaldi</u>								
No. Examined	1	7	-	-	67	381	1	457
No. Landed	81	265	-	-	114	995	22	1,477
% Examined	1	3	-	-	60	38	5	31
No. Marks	0	2	-	-	1	9	0	12
<u>Netarts</u>								
No. Examined	-	-	-	-	-	0	-	0
No. Landed	0	0	-	-	0	3	0	3
% Examined	-	-	-	-	-	0	-	0
No. Marks	-	-	-	-	-	-	-	0
<u>Pacific City</u>								
No. Examined	0	0	-	-	0	0	-	0
No. Landed	16	15	-	-	20	111	0	162
% Examined	0	0	-	-	0	0	-	0
No. Marks	-	-	-	-	-	-	-	0
<u>Salmon River</u>								
No. Examined	-	-	-	-	0	-	-	0
No. Landed	0	0	-	-	11	0	0	11
% Examined	-	-	-	-	0	-	-	0
No. Marks	-	-	-	-	-	-	-	0
<u>Depoe Bay</u>								
No. Examined	0	0	-	-	0	0	-	0
No. Landed	31	83	-	-	17	8	0	139
% Examined	0	0	-	-	0	0	-	0
No. Marks	-	-	-	-	-	-	-	-
<u>Newport</u>								
No. Examined	1,210	1,147	-	-	170	243	-	2,770
No. Landed	6,365	6,072	-	-	832	2,585	-	15,854
% Examined	19	19	-	-	20	9	-	17
No. Marks	37	65	-	-	3	9	-	114
<u>Florence</u>								
No. Examined	3	135	-	-	0	0	-	138
No. Landed	106	737	-	-	182	68	-	1,093
% Examined	3	18	-	-	0	0	-	13
No. Marks	0	2	-	-	-	-	-	2
<u>Winchester Bay</u>								
No. Examined	1	0	-	-	0	0	-	1
No. Landed	185	564	-	-	74	137	-	960
% Examined	0.5	0	-	-	0	0	-	0.1
No. Marks	0	-	-	-	-	-	-	0

Table 5 continued.

Port	Month							Total
	May	June	July	Aug. ^a	Sept.	Oct.	Nov.	
<u>Charleston</u>								
No. Examined	52	317	-	-	46	84	-	499
No. Landed	748	734	-	9	101	351	-	1,943
% Examined	7	43	-	-	46	24	-	26
No. Marks	0	15	-	-	5	5	-	25
<u>Bandon</u>								
No. Examined	0	0	-	-	0	0	-	0
No. Landed	125	327	-	-	10	8	-	470
% Examined	0	0	-	-	0	0	-	0
No. Marks	-	-	-	-	-	-	-	-
<u>Port Orford</u>								
No. Examined	-	0	-	21	0	635	308	964
No. Landed	0	100	-	21	8	1,077	371	1,577
% Examined	-	0	-	100	0	59	83	61
No. Marks	-	-	-	0	-	98	73	171
<u>Gold Beach</u>								
No. Examined	-	-	-	112	-	-	-	112
No. Landed	-	-	-	72	-	-	-	72
% Examined	-	-	-	156	-	-	-	156
No. Marks	-	-	-	3	-	-	-	3
<u>Brookings</u>								
No. Examined	31	0	95	87	-	563	-	776
No. Landed	218	7	117	122	-	1,039	-	1,503
% Examined	14	0	81	73	-	54	-	54
No. Marks	0	-	3	1	-	44	-	48
<u>Total</u>								
No. Examined	1,298	1,606	95	220	283	1,906	309	5,717
No. Landed	7,875	8,904	117	224	1,369	6,393	393	25,275
% Examined	16	18	81	98	21	30	79	23
No. Marks	37	84	3	4	9	165	73	375

^a Fish sampled may exceed fish landed during August in individual ports due to special sampling protocol adopted for the Rogue River fall chinook Genetic Stock Identification Study. This sampling protocol resulted in salmon being sampled prior to delivery to a fish dealer. Many fish were trucked from Gold Beach to other buyers.

recovered CWTs were released in Oregon coastal streams (71%), the Columbia basin (11%), and in the Sacramento/San Joaquin basin (7%) (Figure 7).

NOTE: The above information cannot be used to estimate stock contribution since tagging is not representative of stocks, and most stocks of wild fish have no tagging programs or population estimators associated with them. Also many experimental programs have very high mark rates which may give a false impression of high contribution rates.

SPECIAL FISHERIES AND STUDIES

Tillamook Bay Area State Waters Fall Chinook Fishery

A troll fishery designed to target on fall chinook of Tillamook Basin origin was opened off Tillamook Bay between the area of Twin Rocks and Pyramid Rock by the Oregon Fish and Wildlife Commission. The fishery opened immediately following the general season November 1 and continued through November 15, 1994. A total of 22 chinook were landed with an average weight of 19.3 pounds. There were no adipose clipped fish sampled in this fishery.

Elk River Area State Waters Fall Chinook Fishery

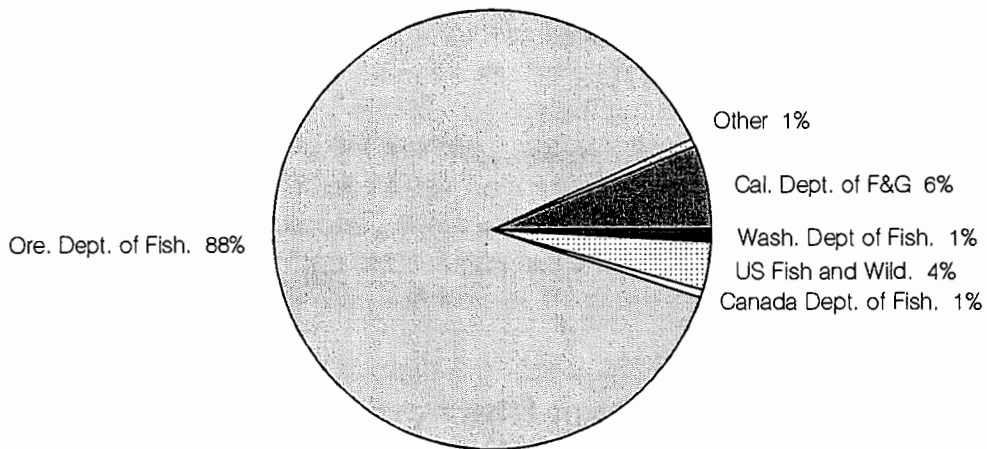
A terminal ocean troll fishery designed to target returning Elk River fall chinook salmon opened immediately following the end of the general season. This fishery was open from November 1-7 within state waters (0-3 miles) in the area between Cape Blanco and Humbug Mountain.

A total of 371 chinook were landed in this fishery with an average weight of 16.1 pounds. There were 73 snouts collected from adipose fin clipped chinook from which 67 readable CWTs were recovered (92%). All 67 CWTs were from Elk River chinook releases (100%). Of the Elk River CWTs, there were 14 three year olds (1991 brood), 48 four year olds (1990 brood), and 5 five year olds (1989 brood).

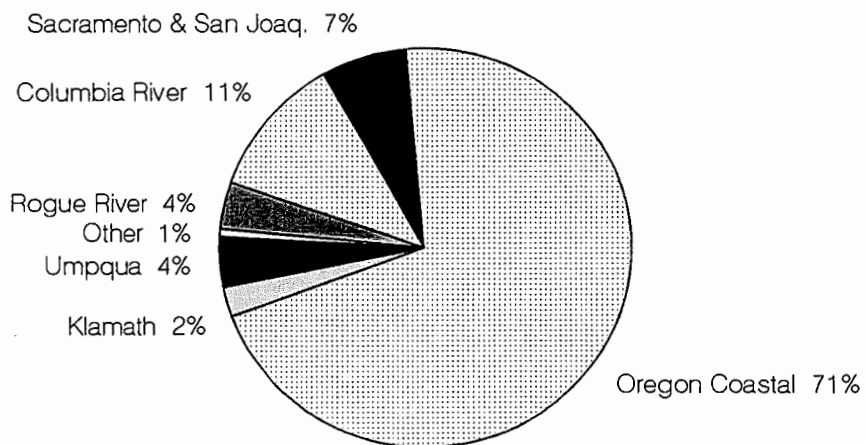
Rogue River Area Fall Chinook Genetic Stock Identification Study

Introduction: The PFMC authorized an experimental August ocean troll chinook fishery in waters near the Rogue River. This fishery was designed to test whether a nearshore troll fishery could target on returning Rogue River fall chinook with a reduced harvest rate on other critical stocks (i.e. Klamath River fall chinook). The test would involve the collection of tissue samples to allow for the post season estimation of the stock composition through genetic stock identification (GSI) analysis. The GSI process relies on genetic differences between stocks of salmon that can be measured using starch gel electrophoretic techniques.

RELEASE AGENCY
n=340



BASIN OF RELEASE
n=340



NOTE: Does not represent stock contribution rates, since tagging is not representative of all stocks.

Figure 7. Observed recoveries of chinook coded wire tags from Oregon troll salmon landings by release agency and by basin of release, 1994.

The fishery was scheduled to open August 8 and continue through the earlier of August 31 or the 800 chinook quota. The open area included waters from 0-6 miles between Sisters Rocks and Mack Arch, except that the area within a three mile radius of the Rogue River remained closed to all commercial salmon fishing due to state statute. The GSI sampling would require a minimum sample size of 500 fish to accurately estimate stocks with low contribution rates to the fishery. To insure that ODFW could adequately sample the fishery: all salmon were required to be landed into either Port Orford, Gold Beach, or Brookings. Fishermen were required to pre-register for the fishery; a daily landing limit of 20 salmon was established to start the fishery (later expanded to 60 salmon). Fishermen were required to contact ODFW via electronic pagers if samplers did not meet the boat immediately at landing.

A total of 38 fishing permits were issued for the fishery, but only 12 vessels actually made landings during the fishery. Many fishermen chose not to fish because of the low catch rates by boats that were fishing, and the arrival of albacore tuna that became readily available just prior to the opening of this season.

Results: A total of 222 chinook were landed in the GSI test fishery by participating trollers. The ODFW staff collected GSI tissue samples from 220 of the landed chinook. Although the minimum sampling goal was not met, the samples were analyzed. Results are presented in Figure 8 and Table 6. By not meeting the minimum sampling goal, we are unable to accurately estimate stocks that contribute at a low level.

Most of the chinook sampled came from California stocks (50%), with another 44% from Oregon streams, and 6% from the Columbia Basin. The Southern Oregon and Rogue River showed as the highest contributing stock group at 39%, with the Sacramento/San Joaquin Basin contributing 23%, and the Klamath River making up 16% of the chinook sampled.

Four of the sampled chinook also had CWT's that were recovered for analysis. Three of the CWTs were from Klamath River fall chinook, and the remaining tag was from a Winchuck River fall chinook.

Discussion and conclusion: The fishery demonstrated some potential to target on returning Rogue River fall chinook. It will be important to collect additional samples in future fisheries to evaluate this potential. In addition, the fishery may need to be rescheduled to start in late July to better match the run return timing of the Rogue River fall chinook. The statutory closure at the mouth of the Rogue River needs to be addressed to allow the fishery to better target returning Rogue River chinook salmon.

Chetco River State Waters Chinook Fishery

A troll fishery designed to target on returning Chetco River fall chinook opened on October 10 and continued through October 31, 1994. This fishery was open within

state waters (0-3 miles) in the area between Goat Island and Red Point and had a quota of 1,000 chinook.

A total of 1,039 chinook were landed in this fishery with an average weight of 14.5 pounds. There were 44 snouts taken from adipose fin-clipped chinook from which 42 readable CWTs were recovered (95%). Chetco River releases accounted for 26 of the CWTs; 7 were from the Winchuck River; 5 from Pistol River; 3 from the Sacramento River; and 1 from Salmon River (Oregon). Of the Chetco River CWTs, 5 were three year olds (1991 brood), 20 were four year olds (1990 brood), and one was a five year old (1989 brood).

PERCENT

24

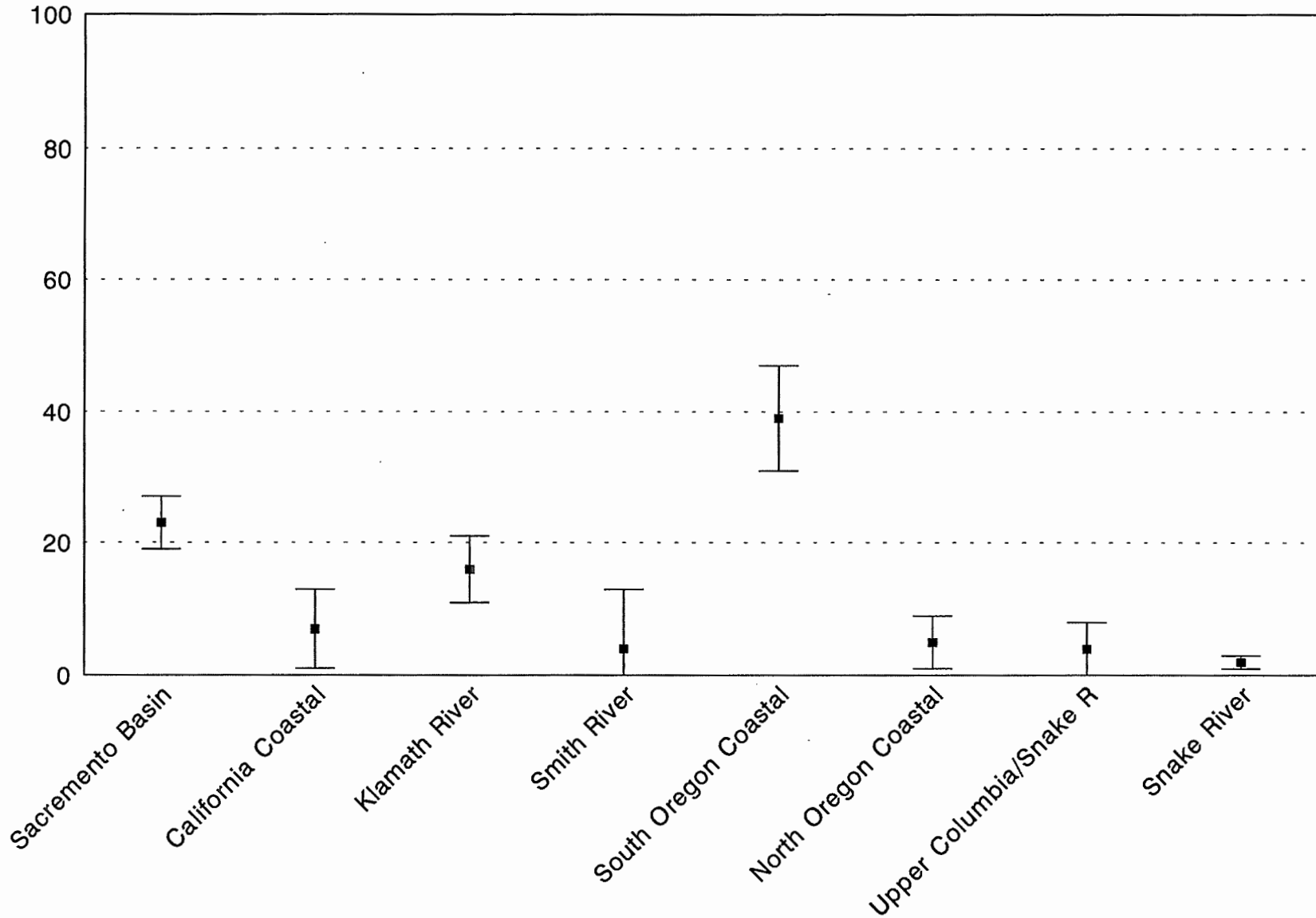


Figure 8. Estimated 1994 Oregon chinook stock composition from the troll fishery off the Rogue River, August 1994. Estimates are from genetic stock identification tissue samples(n=220). mean estimates and one standard deviation are displayed.

Table 6. Estimated chinook stock contribution rates from the Oregon troll fishery off the Rogue River August 8-31, 1994. Estimates based on Genetic Stock Identification (GSI) tissue samples, and analysis (n=220).^{a b c}

Stock Grouping	Estimated Contribution rate (X)	Standard Deviation (+/- 1SD)
Sacramento Basin (ChS+ChF+ChW)	0.230	0.040
California Coastal/Eel River (ChF)	0.070	0.060
Klamath River (ChS+ChF)	0.160	0.050
Smith River (ChF)	0.040	0.090
Southern Oregon Coastal (ChS+ChF) ^a	0.390	0.080
Northern Oregon Coastal (ChS+ChF) ^b	0.050	0.040
Upper Columbia (ChSu/ChF) & Snake River (ChF)	0.040	0.040
Snake River (ChSu+ChS)	0.020	0.010

^a Southern Oregon Coastal includes: Rogue River, Chetco River, Pistol River and the Winchuck River. Rogue River stock releases in the Lower Columbia River also fall into this stock grouping.

^b Northern Oregon Coastal includes all Oregon Coastal stocks from the Elk River north.

^c ChS = Spring chinook
 ChSu = Summer chinook
 ChF = Fall chinook
 ChW = Winter chinook

THE 1994 OCEAN RECREATIONAL SALMON FISHERY

BACKGROUND

Oregon's ocean recreational salmon fishery originated with boats fishing in the bays on stocks returning to freshwater in the fall. A few boats would venture out into the ocean on favorable days. The late 1940s and early 1950s marked the beginning of increasing effort by both the charter and private boat fleet in the ocean. Better and safer equipment plus the development of small boat basins and launching ramps and other support facilities in many coastal towns encouraged ocean fishing (PFMC, 1978).

The primary targeted species of the recreational fleet has traditionally been coho salmon with chinook a distant second. The fishery has been sampled by ODFW's Ocean Salmon Management Program since the early 1960s. Ocean creel data was supplemented by salmon/steelhead tag license data through the 1980 season. Creel data alone have been used since 1981.

The peak catch and effort year was 1976 when 538,400 angler trips resulted in a catch of 79,300 chinook and 501,300 coho. The daily bag limit in 1976 was 3 salmon and the season lasted from mid-April to December 31. In 1994, the seasons and catch quotas were the most restrictive ever; and resulted in an ocean catch of 6,037 chinook and 46 coho (illegal landings) from 26,897 salmon angler trips (Table 7).

SAMPLING METHODOLOGY

Sampling areas and staffing

Twelve seasonal employees sampled the ocean recreational fishery at eight major ports in 1994. Newport had two recreational samplers and one combination sampler; Coos Bay had one recreational sampler and one combination; Garibaldi had one recreational sampler and Winchester Bay had one roving combination sampler that also sampled at Coos Bay, Florence and Brookings. Brookings had two port samplers, and Pacific City and Depoe Bay each had one. Florence had one combination sport and troll sampler (Appendix Table 1).

Limited sampling began in May in all ports. Some of the early sampling was supported by other funds such as halibut tag monies. Additional personnel were added to cover state waters salmon fisheries at Garibaldi and Brookings during September and October. All samplers counted ocean boats and checked returning anglers. Total sampler months decreased slightly from 1993 levels due to restricted seasons and funding constraints (Appendix Table 8).

Table 7. Oregon ocean recreational salmon catch and effort for 1966-94^a.

Year	Effort (Angler Trips)		Salmon Catch			Fish/Angler
	Salmon	Total	Coho	Chinook	Pink	
1966	-	-	227,900	37,400	-	-
1967	-	-	351,000	42,800	-	-
1968	-	-	265,800	25,100	-	-
1969	-	-	232,900	31,800	-	-
1970	-	-	257,400	42,900	-	-
1971	-	303,700	311,700	29,600	121	1.12
1972	-	331,700	248,400	44,100	58	0.88
1973	-	350,400	232,068	60,984	2,008	0.84
1974	-	335,849	314,501	36,729	34	1.05
1975	-	407,498	252,209	75,719	1,218	0.81
1971-75 Avg	-	345,829	271,776	49,426	1,115 ^b	0.93
1976	-	538,414	501,306	79,316	50	1.08
1977	-	404,534	195,277	61,364	4,037	0.62
1978	-	403,740	259,769	22,844	24	0.70
1979	301,343	341,770	180,834	20,902	607	0.67
1980	331,443	362,015	325,843	19,014	24	1.04
1981	311,027	350,937	199,812	29,173	1,589	0.74
1982	226,022	275,947	175,128	38,716	14	0.95
1983	226,029	261,456	146,904	24,677	69	0.76
1984	153,061	203,591	123,325	16,992	3	0.91
1985	251,583	270,860	182,486	55,867	7,711	0.97
1986	186,971	216,068	218,907	22,829	8	1.29
1987	255,074	279,517	180,534	59,420	930	0.94
1988	250,657	282,849	226,873	38,327	0	1.06
1989	266,260	311,393	273,271	32,043	1,328	1.15
1990	246,555	294,031	200,646	26,548	3	.92
1991	190,062	228,103	259,086	14,416	280	1.44
1992	165,317	219,330	185,845	12,573	19	1.20
1993	80,345	141,586	59,281	6,495	25	0.82
1979-93 average	229,450	269,297	195,918	27,866	1,567 ^b	0.98
1994	26,897	95,143	46	6,037	0	0.22

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

^b Odd year average.

Sampling Design

A statistical creel survey using a modified random sampling design has been used in all recent years. Catch per angler data was collected at least 4 days a week, including all weekends and holidays if salmon fishing was open. Ocean anglers were interviewed at boat ramps, moorages, and charter docks. Samplers usually worked from early morning to late afternoon, but varied their hours to reflect fishing activity. The salmon catch was sampled for species, fin marks, scales and lengths. Snouts were collected from marked (adipose fin-clipped) fish and forwarded to the ODFW tag recovery laboratory in Clackamas for decoding. Bottomfish catch was also recorded. Interview data used for catch estimates, and coded wire tag recovery data were recorded on forms designed for optical scanning. Data was collected on a weekly basis and transported to the Newport ODFW office for error checking and scanned via an optical scanner into a personal computer. In 1995 all OSMP ocean sampling data will be collected with hand held data collection computers.

Effort information was primarily obtained through boat counts by ODFW samplers, but Coast Guard bar crossing counts, and data from charter boat offices were also used. ODFW boat counters worked from dawn until 1 PM. They tallied both out-going and incoming boats crossing the bar. In Pacific City and Depoe Bay, total effort was estimated from a combination of boat trailer/moorage slip counts and a tally of outgoing vessels.

Quota Assessment

Catch and effort data were error-checked and then processed on the Department's Unisys computer (Portland) by Newport data staff. Angler interviews, stratified by charter and private boat angler, provide average catch rates by species. These catch rates, when multiplied by the total effort for a particular period, give a catch estimate for that period. The same method was used to estimate total number of angler trips. The survey provided weekly estimates of Oregon's ocean recreational effort and catch within 7 days after the week ended. A preliminary catch estimate was available within one day of the end of the week. These catch estimates were necessary for timely monitoring of catch quotas.

Department samplers checked 1,607 salmon in 1994 compared to 28,769 in 1993. Catch sampling rates in 1994 ranged from a high of 40% at Depoe and Winchester Bay to a low of 24% at Garibaldi. Samplers checked 26% of the total salmon catch from all ports in 1994 compared to 43% in 1993 (Appendix Table 8).

REGULATIONS

General

The Oregon Coast is divided into three general salmon management areas: north of Cape Falcon (closed to all salmon angling), Cape Falcon to Humbug Mountain, and south of Humbug Mountain. The 1994 regulations (Figure 9) were adopted by the PFMC and the Oregon Fish and Wildlife Commission and signed into law by the Secretary of Commerce. The Oregon Fish and Wildlife Commission also adopted three special seasons in state waters. Appendix Table 9 gives an annual historical summary of recreational ocean salmon regulations.

Cape Falcon to Humbug Mountain

The daily bag limit was 2 salmon, not more than 2 fish were allowed in 7 consecutive days, and the annual limit was 10 salmon. Minimum size limits were 20" for chinook and there was no size restriction for pink salmon. Single point, barbless hooks were required.

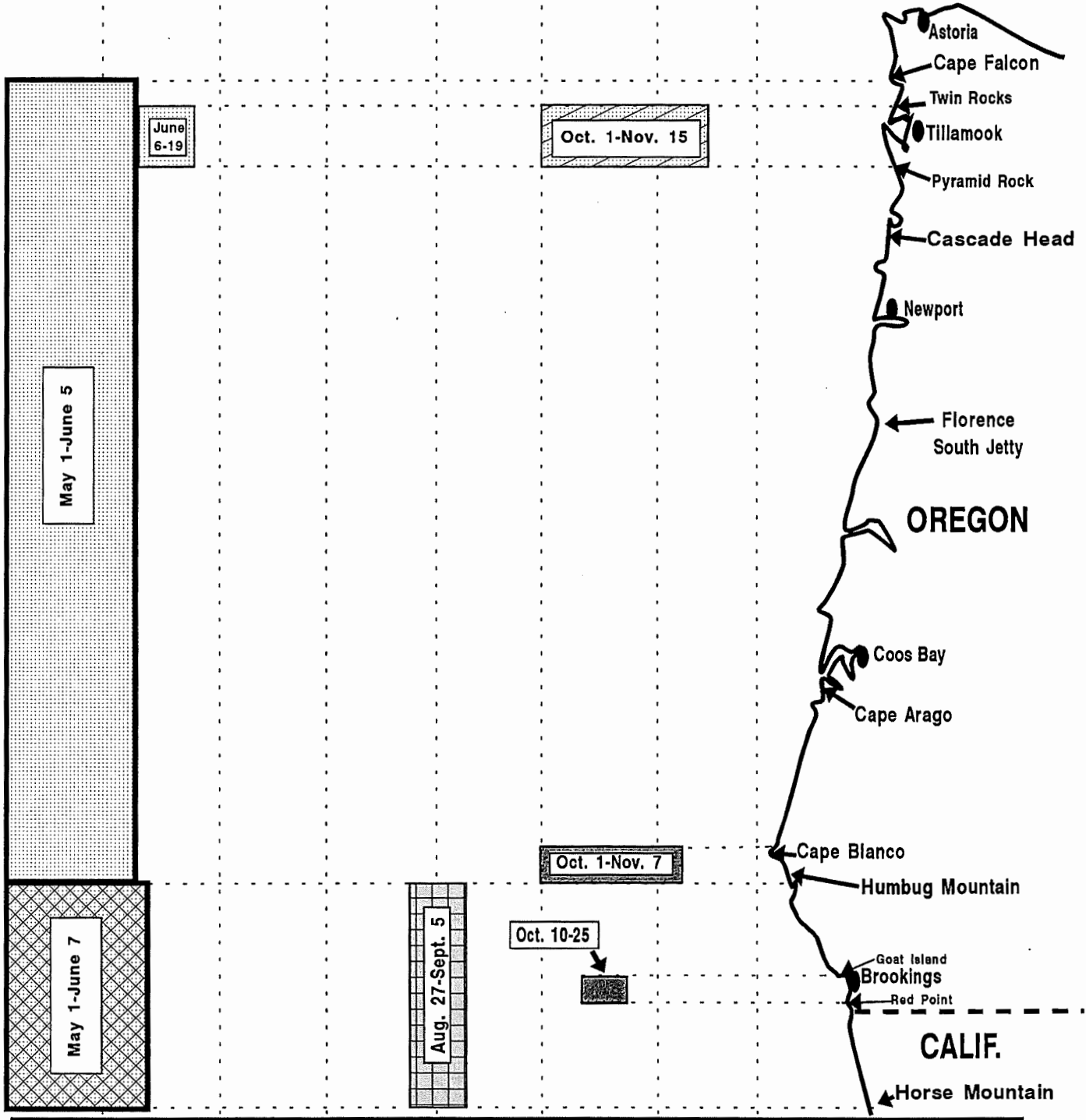
The season was open May 1 through June 5, but was restricted to inside the 27 fathom curve¹. An additional season opened from Twin Rocks to Pyramid Rock on June 6 and ended on June 19 with the same restrictions as the Cape Falcon to Humbug Mountain fishery.

Humbug Mountain to Horse Mountain, California

The chinook quota was the limiting factor in the area from Humbug Mountain, Oregon to Horse Mountain, California. This area is referred to as the Klamath Management Zone (KMZ). From May 1 through June 7, a 10,300 fish quota was in effect. The next open season ran August 27 through August 31 with a quota of 500 chinook. The Klamath River Control Zone, at the mouth of the Klamath River was closed. The season re-opened September 1 through September 5 for five days with no chinook quota.

¹ The 27 fathom curve is defined as follows: Within an area bounded by a line from Cape Falcon to 45°46'N, 124°01'20"W (approximately 1.6 nautical miles west of Cape Falcon) to 45°04'15"N, 123°04'W (approximately 2.2 nautical miles northwest of Cascade Head) to 44°40'40"N, 129°09'15"W (approximately 3 nautical miles west of Yaquina Head) to 44°08'30"N, 124°12'W (approximately 3 nautical miles west of Heceta Head) to 43°40'15"N, 124°14'30"W (approximately 0.5 miles west of the Umpqua Whistle Buoy) to 43°31'30"N, 124°17'W (approximately 1.7 nautical miles west of the beach) to 43°15'15"N, 124°28'W (approximately 3 nautical miles west of the beach) to 43°01'30"N, 124°29'50"W (approximately 2 nautical miles west of Four Mile Creek) to 42°56'N, 124°33'10"W (approximately 2.4 nautical miles west of Floras Creek) to 42°50'N, 124°38'30"W (approximately 3.4 nautical miles west of Cape Blanco) to 42°40'30"N, 124°28'45"W (approximately 1.1 nautical miles west of Humbug Mountain) to Humbug Mountain.

MAY | JUNE | JULY | AUG. | SEPT. | OCT. | NOV.



- ⊙ All salmon except coho, 2 per day, not more than 2 in 7 days, and not more than 10 per year. Open within the 27 fathom curve.
- ⊙ All salmon except coho, 2 per day, no more than 6 in 7 days. Open in state waters (0-3 miles).
- ⊙ All salmon except coho, 2 per day, no more than 6 in 7 days.
- ⊙ All salmon except coho, 2 per day.
- ⊙ All salmon except coho, 1 per day, not more than 4 in 7 days. Open in state waters (0-3 miles).

Figure 9. Open ocean recreational salmon seasons off Oregon, 1994.

The daily catch limit was two salmon per day . Not more than six salmon could be taken in seven consecutive days; Oregon had an annual bag limit of 40 salmon. The minimum size limit for chinook was 20" and there was no size restriction for pink salmon. Single point barbless hooks were required. There was no 27 fathom restriction within the Klamath Management Zone.

Late season, state waters fisheries

September-October Fishery off Tillamook Bay: The Oregon Fish and Wildlife Commission set a state waters (0-3 miles) season for all-salmon-except-coho off Tillamook Bay between Twin Rocks and Pyramid Rock. The open period was October 1 through November 15. A bag limit of two fish per day, and not more than six fish in seven consecutive days. In this fishery, barbed hooks were permitted. There was no quota for this fishery.

October/November Fishery off Port Orford: This state waters (0-3 miles) all-species-except-coho fishery extended from Cape Blanco south to Humbug Mountain and had no quota. The area was open to both commercial and recreational fishers. The recreational season opened October 1 and closed November 7. Anglers were allowed two fish per day, and up to six fish in seven consecutive days. We did not sample the recreational portion of this fishery but concentrated on the commercial landings. The sport catch was minimal.

October Fishery off of Brookings: The Oregon Fish and Wildlife Commission set a state waters (0-3 miles) season for all-salmon-except-coho off Brookings between Goat Island and Red Point. This season opened on October 10 with a quota of 1,000 chinook, and was scheduled to continue through the earlier of October 31 or quota. The season closed October 25 when the quota was met. A bag limit of one fish per day and no more than four in seven days was in effect.

EFFORT AND CATCH STATISTICS

Effort

Before 1979, ocean recreational effort data included a small number of bottomfishing trips. Since 1979, salmon fishing trips have been tallied separately from bottomfishing trips. Usually ocean anglers choose salmon fishing over bottomfishing when both fisheries are available. However, bottomfishing trips tend to predominate in May and early June, especially in the Newport area where halibut fishing has become popular. The 27 fathom restriction also discourages salmon fishing since most coho salmon are well offshore in May. This year, the 27 fathom closure lasted until June 6 except in the KMZ which did not have such a restriction.

In 1994, 26,897 trips (28%) targeted on salmon coastwide, and 68,250 (72%) additional trips fished for bottomfish during the salmon season for a combined total of 95,143 angler trips. Salmon angler trips in 1994 were only 34% of the 1993 value and 88% below the 1979-93 average.

The sharp drop in effort caused by limited salmon seasons was not buffered by a comparable increase in bottomfishing effort. Bottomfishing trips increased by only 9% over the 1993 season. Total combined salmon and bottomfishing effort was down 33% from 1993 and 35% below the 1971-93 average of 272,784 angler trips. (Tables 7 and 8).

October was the peak month for salmon effort with 12,974 salmon angler trips or 40% of the total. August was the top month for bottomfishing effort with 21,507 trips or 32% of the total (Table 8, Figures 10 and 12, and Appendix Table 10). Historically, July has the highest effort for salmon, especially from Depoe Bay south, while August is often the top month for the Tillamook and Astoria areas. Early closures and reduced fishing seasons have obscured this trend in recent years (Appendix Table 13).

Total effort decreased from 1993 levels in all ports except Garibaldi which increased 37% and Brookings which stayed the same. Brookings had the highest salmon fishing effort in 1994 with 16,158 angler trips or 60% of the state's total. Garibaldi followed with 10,285 angler trips (Figure 11). It should be noted that 9,100 (85%) of the Garibaldi angler trips occurred during the fall state waters fishery. This is a fishery that typically has not been sampled or included in the data reporting.

Newport had the highest bottomfishing effort with 17,598 trips. Brookings and Depoe Bay followed with 15,008 and 13,074 bottomfishing trips each respectively (Table 8). Appendix Table 11 shows past ocean recreational effort and catch by catch areas. Note that port and catch areas are not synonymous.

Catch

As with effort, catches were strongly influenced by reduced quotas and restrictive seasons. The sport sampling survey estimated Oregon's 1994 ocean salmon catch by species, except for minor landings from some unsurveyed ports and time periods. Fish landed at minor ports usually represent less than two percent of the total catch.

The 1994 Oregon ocean recreational salmon catch was estimated at 6,083 salmon, a 91% decrease from 1993. There was no coho season in 1994, and this decrease primarily reflects the closure of the coho fishery. This is still well below the record catch of 580,000 in 1976 and the 1979-93 average of 224,600 salmon (Table 7). Figure 13 shows the trend in recreational ocean catches since 1966.

Table 8. Oregon ocean recreational effort in angler trips by port, by month and by trip type^a, 1994.

Port/Trip Type	Month						Total ^b
	May	June	July	August	Sept.	Oct.	
Garibaldi	2,570	3,569	3,045	4,259	648	8,752	22,843
Salmon	602	931	-	-	-	8,752	10,285
Bottomfish	1,968	2,638	3,045	4,259	648	NA	12,558
Pacific City	98	764	773	535	20	NA	2,221
Salmon	1	0	-	-	-	-	1
Bottomfish	97	764	773	535	20	NA	2,220
Depoe Bay	1,958	3,098	3,074	4,279	686	NA	13,095
Salmon	18	3	-	-	-	-	21
Bottomfish	1,940	3,095	3,074	4,279	686	NA	13,074
Newport	4,911	3,714	3,630	4,529	879	NA	17,663
Salmon	59	6	-	-	-	-	65
Bottomfish	4,582	3,708	3,630	4,529	879	NA	17,598
Florence	137	199	64	323	NA	NA	723
Salmon	74	63	-	-	-	-	137
Bottomfish	63	136	64	323	NA	NA	586
Winchester Bay	122	245	138	139	NA	NA	644
Salmon	103	74	-	-	-	-	177
Bottomfish	19	171	138	139	NA	NA	467
Coos Bay	790	1,632	1,379	2,621	370	NA	6,792
Salmon	34	19	-	-	-	-	53
Bottomfish	756	1,613	1,379	2,621	370	NA	6739
Brookings	7,006	6,266	3,941	6,174	3,469	4,306	31,162
Salmon	6,347	1,296	-	1,383	2,910	4,222	16,158
Bottomfish	663	4,970	3,941	4,791	559	84	15,008
State Total	17,592	19,487	16,044	22,890	6,072	13,058	95,143
Salmon	7,238	2,392	-	1,383	2,910	12,974	26,897
Bottomfish	10,358	17,095	16,044	21,507	3,162	84	68,250

^a Bottomfish effort is estimated only for those time periods when port sampling occurred.

^b Totals may be less than the sum of trip types because of a small number of combination trips on charter boats.

ANGLER TRIPS (Thousands)

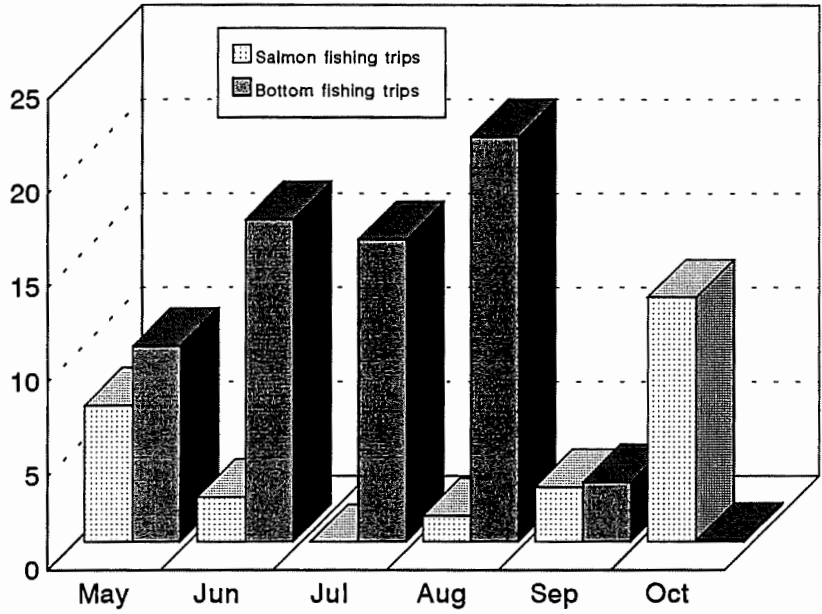


Figure 10. Oregon ocean angler trips by target species during the 1994 salmon season.

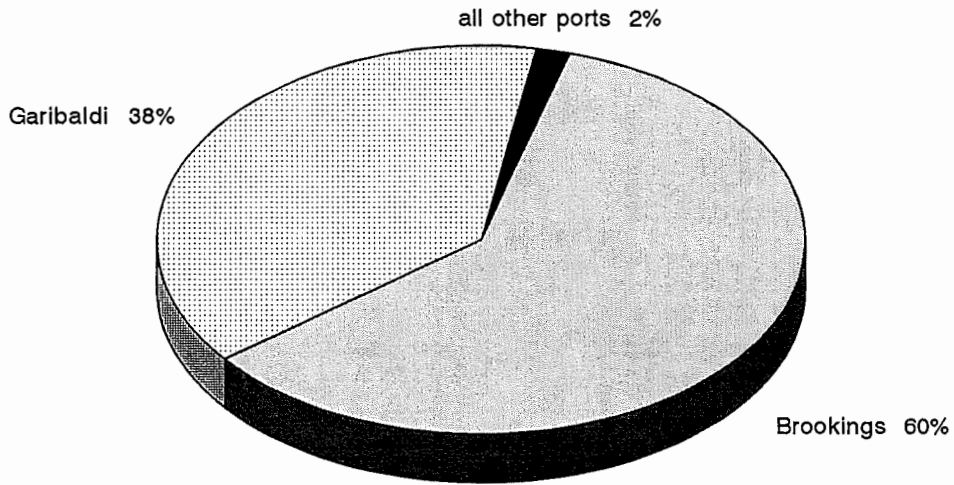


Figure 11. Recreational ocean salmon angler trips by port, 1994.

Effort

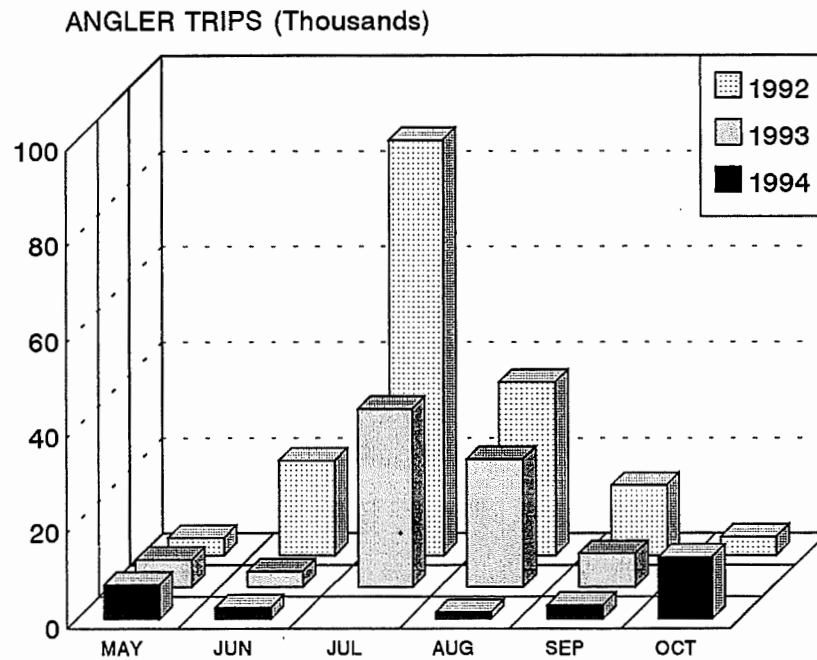
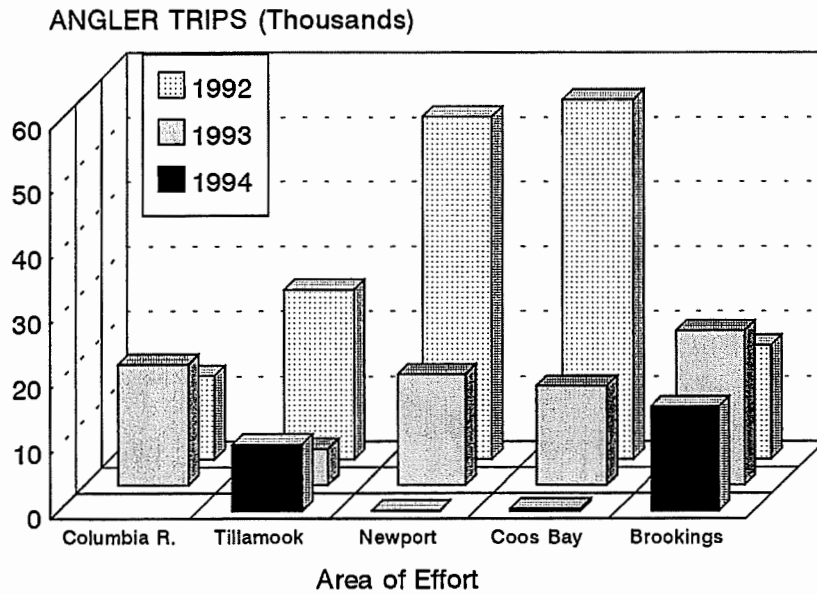
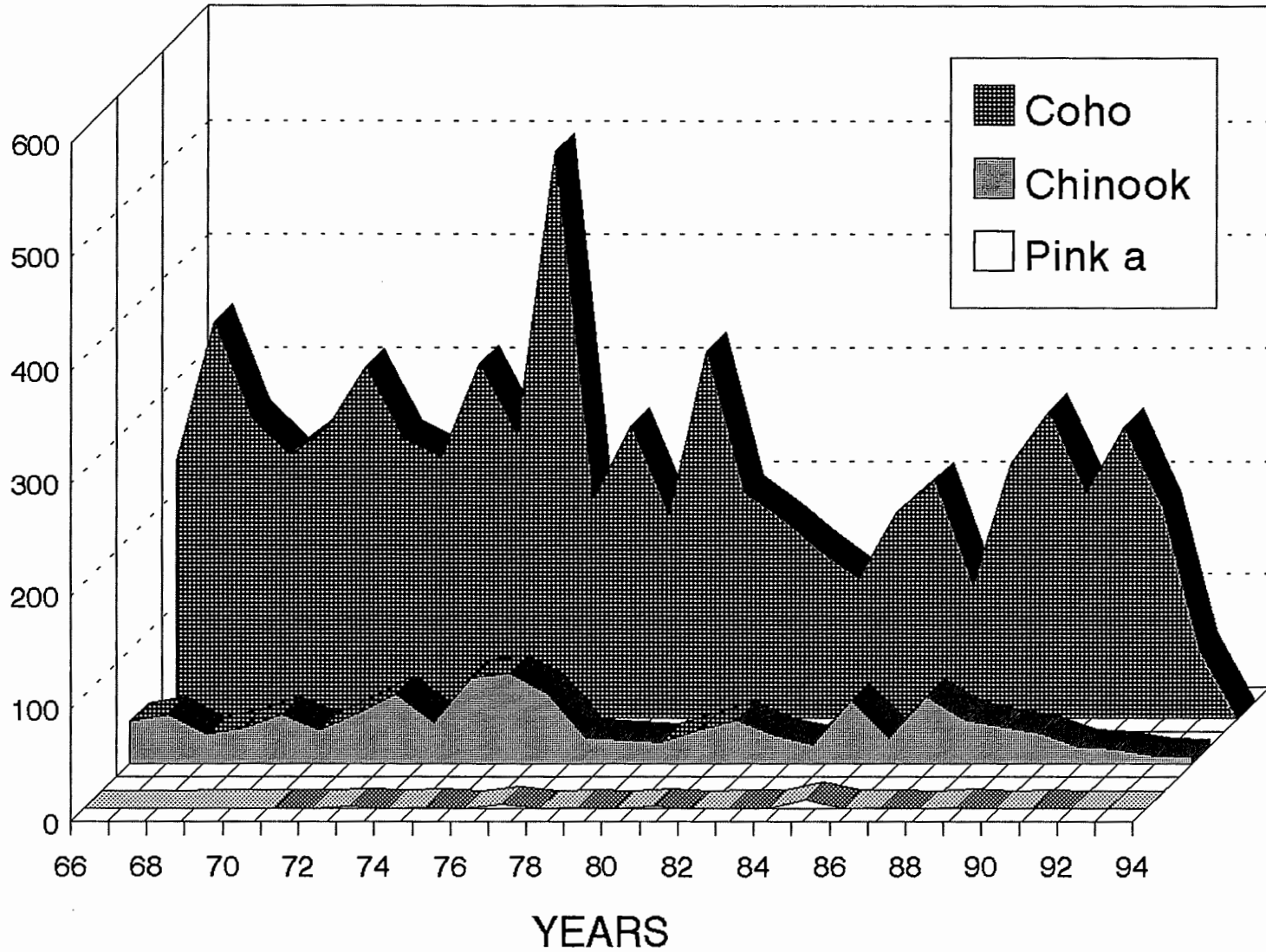


Figure 12. Oregon ocean recreational salmon angler trips by catch area and by month, 1992-94.

FISH (Thousands)



**Figure 13. Trends in Oregon's recreational ocean salmon catch, 1966-94.
a Pink salmon data from 1971-94 only.**

Table 9. Oregon ocean recreational chinook catch by port by month^a, 1994.

Port	Month						Total
	May	June	July	Aug.	Sept.	Oct.	
Garibaldi	59	135	-	-	-	2,204	2,398
Pacific City	0	0	-	-	-	-	0
Depoe Bay	5	0	-	-	-	-	5
Newport	0	0	-	-	-	-	0
Florence	0	3	-	-	-	-	3
Winchester Bay	6	9	-	-	-	-	15
Coos Bay	0	0	-	-	-	-	0
Brookings	1,878	104	-	272	284	1,078	3,616
Statewide Total	1,948	251	0	272	284	3,282	6,037

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

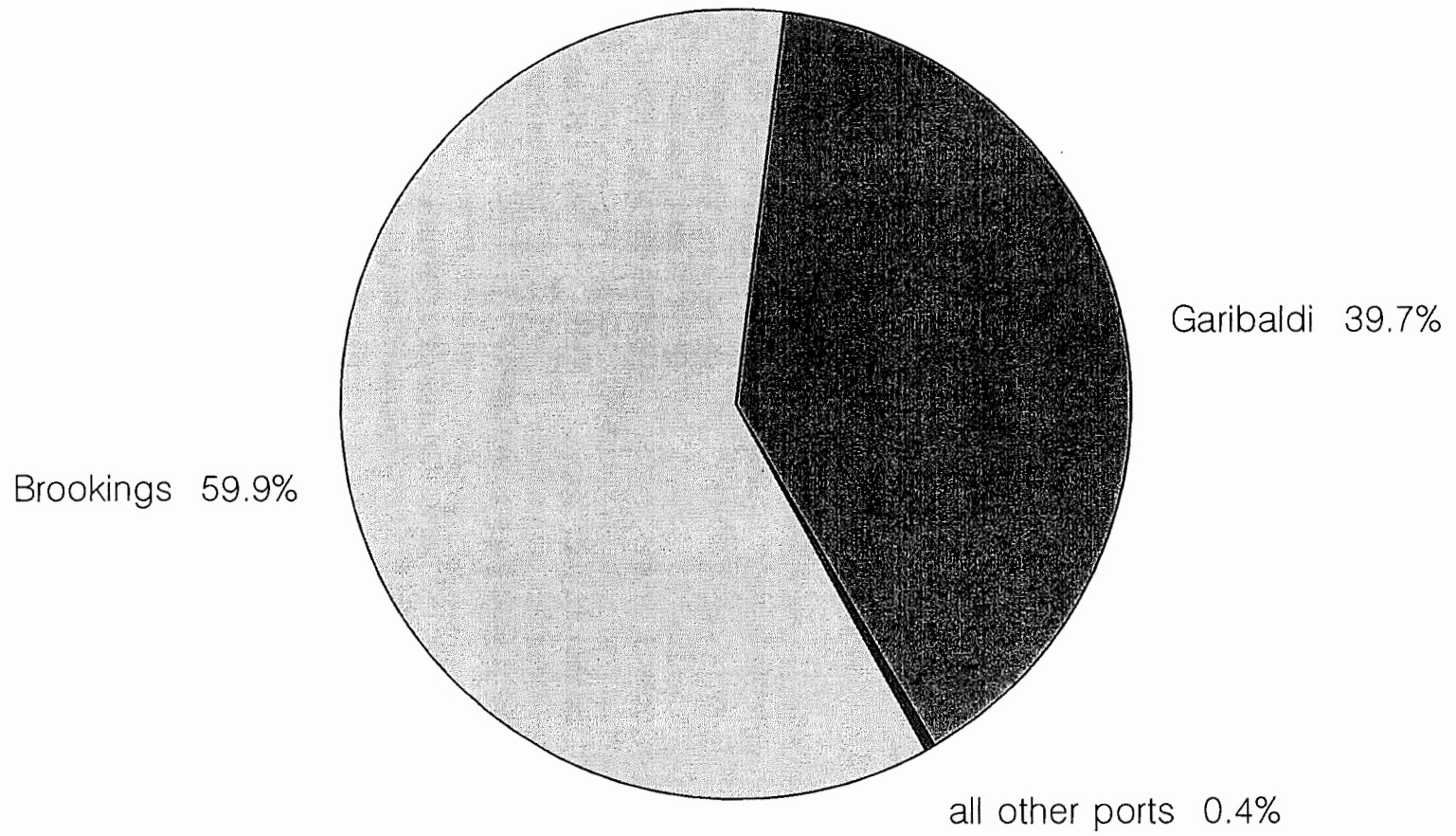


Figure 14. Oregon ocean recreational chinook catch by port, 1994.

Chinook: The recreational harvest of 6,037 chinook in 1994 was the lowest on record, 6% below the 1993 level and 22% of the 1979-93 average of 27,798 fish. Traditionally, many chinook are caught incidental to the coho fishery which was closed in 1994.

Brookings took 3,616 chinook or 60% of the total catch. The rest of the coast had minimal landings except Garibaldi with 194 chinook caught during the general season, and an additional 2,204 taken in the fall state waters fishery. (Table 9, and Figures 14 and 15). Historically, the Columbia River area has been an important chinook catch area but was closed to all salmon angling in 1994.

Monthly landings coastwide deviated from the expected July peak since the salmon season was closed in July. Fifty-four percent of the catch was landed in October while 32% was taken in May. Brookings predominated in all months, especially May and October (Table 9 and Figure 15). Historical catch patterns are shown in Appendix Tables 12, 13, and 14.

CHARTER/PRIVATE BOAT FISHERIES

Background

Approximately 81 charter boats actively participated in Oregon ocean fisheries in 1994, compared to 103 vessels in 1993. Exact estimates of actively participating vessels is difficult due to no logbook requirements and the fact that not all licensed vessels actively participate in the fishery. Some "river guides" also participate in the ocean fishery, but are not included in the charter boat estimates. Since 1983, we have monitored charter boat participation in Oregon. Active vessels have ranged from 158 boats in 1988 to 81 boats this year (Appendix Table 17). Salmon is the primary pursuit in all ports when available, but bottomfishing is also important to the Garibaldi, Depoe Bay, Newport, Coos Bay, Gold Beach, and Brookings charter fleets.

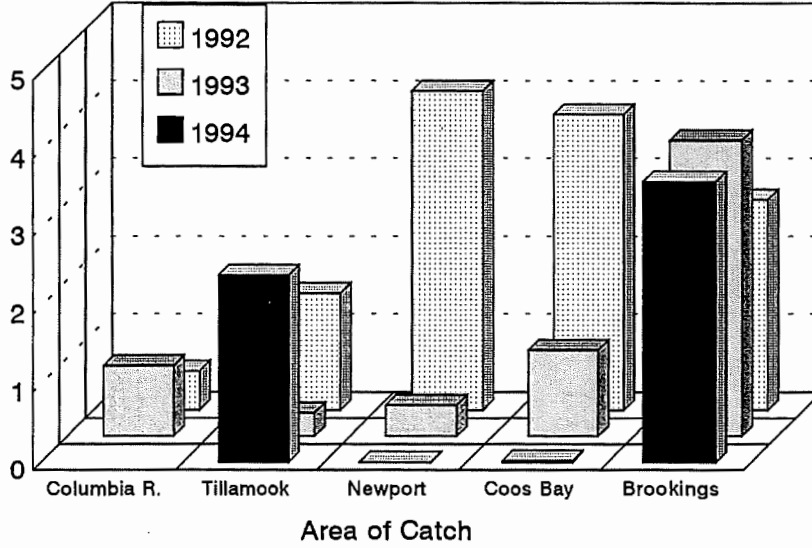
No estimate is available on the number of individual private boats that fished in the ocean. Estimates of total boat trips are calculated for private boats but the number of vessels fishing is unknown.

Charter angler effort: The 1994 charter boat effort was estimated at 1,427 salmon angler trips, down 89% from the 1993 level and only 3% of the 1979-93 average of 49,893. Charter anglers made up 5% of the total ocean salmon trips in 1994, compared to 17% in 1993 and the 1979-93 average of 22%. With bottomfishing trips added in; charter effort in 1994 constituted 39% of the total effort compared to 34% in 1993 (Tables 10 and 11, and Figure 16).

Charter boats operate at most major Oregon ports, but boat and fleet sizes vary. Newport, with 33 boats, had the largest fleet and the most effort of any port for bottom fishing with 11,481 bottomfish angler trips, closely followed by Depoe Bay (20 boats)

Chinook

FISH (Thousands)



FISH (Thousands)

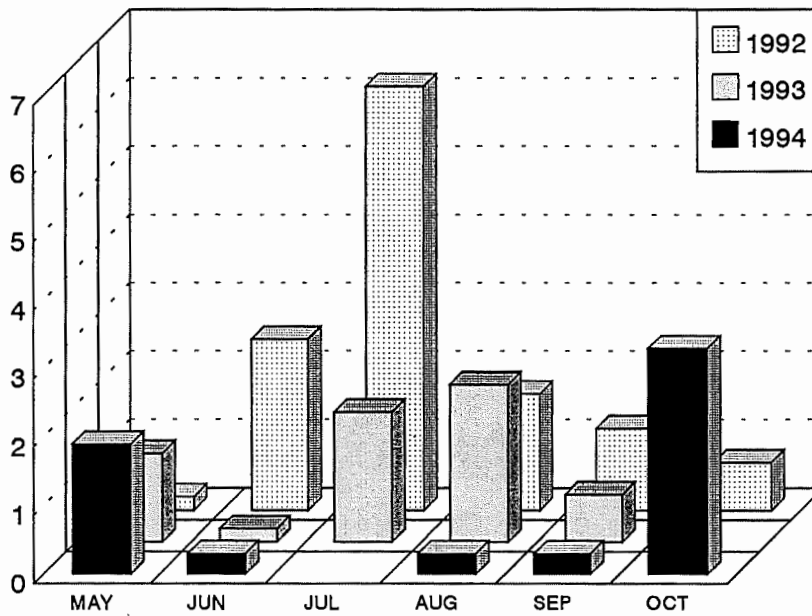


Figure 15. Oregon ocean recreational chinook catch by catch area and by month, 1992-94.

Table 10. Oregon ocean recreational salmon effort and catch by boat type, 1994.

Port	Salmon Charter Boats ^a					Salmon Private Boats				
	Boat Trips	Angler Trips	Salmon Catch			Boat Trips	Angler Trips	Salmon Catch		
			Chinook	Coho	Pink			Chinook	Coho	Pink
Garibaldi	235	1,228	427	0	0	3,797	9,057	1,971	29 ^b	0
Pacific City	0	0	0	0	0	1	1	0	0	0
Depoe Bay	0	0	2	0	0	13	21	3	0	0
Newport	0	0	0	0	0	36	65	0	0	0
Florence	0	0	0	0	0	62	137	3	0	0
Winchester Bay	1	6	1	0	0	82	171	14	0	0
Coos Bay	0	0	0	0	0	24	53	0	0	0
Brookings	52	193	63	0	0	7,306	15,965	3,553	17 ^b	0
Total	288	1,427	493	0	0	11,321	25,470	5,544	46	0
Combined totals for all Oregon craft		26,897	6,037	46	0					

^a Includes combination salmon & bottomfish trips.

^b Illegal coho landings.

Table 11. Oregon ocean recreational salmon and bottomfish effort and catch by boat and trip type^a, 1994.

Port	Charter						Private							
	Boat Trips			Angler Trips			Total Catch		Boat Trips		Angler Trips		Total Catch	
	Salmon	Combination	Bottom	Salmon	Combination	Bottom	Salmon ^b	Bottom ^c	Salmon	Bottom	Salmon	Bottom	Salmon ^b	Bottom ^c
Garibaldi	235	0	758	1,228	0	8,790	427	57,163	3,797	1,439	9,057	3,768	2,000	10,812
Pacific City	0	0	0	0	0	0	0	0	1	746	1	2,220	0	7,355
Depoe Bay	0	0	1,313	0	0	10,963	2	46,515	13	814	21	2,111	3	5,986
Newport	0	0	1,424	0	0	11,481	0	54,856	36	2,326	65	6,117	0	13,903
Florence	0	0	25	0	0	249	0	1,833	62	134	137	337	3	2,510
Winchester Bay	1	0	48	6	0	291	1	1,789	82	65	171	176	14	611
Coos Bay	0	0	240	0	0	2,401	0	20,842	24	1,756	53	4,338	0	18,821
Brookings	51	1	287	189	4	1,747	63	16,299	7,306	5,529	15,965	13,257	3,570	61,972
Total	287	1	4,095	1,423	4	35,922	493	199,297	11,321	12,809	25,470	32,324	5,590	121,970

^a Trip types are separated by trips that target salmon, bottomfish, or combination trips. For private boats, combination trips are included as salmon trips.

^b Includes: coho, chinook and pink salmon.

^c Bottomfish includes: rockfish, lingcod, flatfish, and miscellaneous species.

with 10,963 bottomfish trips. Garibaldi (15 boats) ranked third with 8,790 bottomfish angler trips, and led the coast with 1,228 salmon angler trips. The salmon charter effort during the May through September season was down from 1993 levels in all ports.

The severe restrictions on salmon fishing increased the percentage of charter anglers that went bottomfishing in 1994. Ninety-six percent or 35,922 charter anglers coastwide targeted on bottomfish during the salmon season. The comparable value for 1993 was 72%. An additional four angler trips were taken on combination trips that fished for both salmon and bottomfish. The high interest in bottomfishing reflected both the tight restrictions on salmon fishing and an increasing interest in halibut fishing. It is important to remember that some additional bottomfishing effort takes place before and after the salmon season.

Charter angler catch: The total catch of 493 salmon by charter anglers was down 97% from 1993. The charter fleet landed 8% of the total recreational salmon catch in 1994, compared to 26% in 1993 and the 1979-93 average of 30% (Tables 10 and 11, and Figure 16).

The Garibaldi charter fleet took 427 fish or 87% of the charter caught salmon. Brookings caught 63 salmon, the remaining 13% of the charter catch. Salmon per angler averages ranged from 0.35 in Garibaldi to 0.32 salmon per angler in Brookings. In 1994 the state-wide charter average of 0.35 salmon/angler was down from the 1993 level of 1.4 salmon/angler.

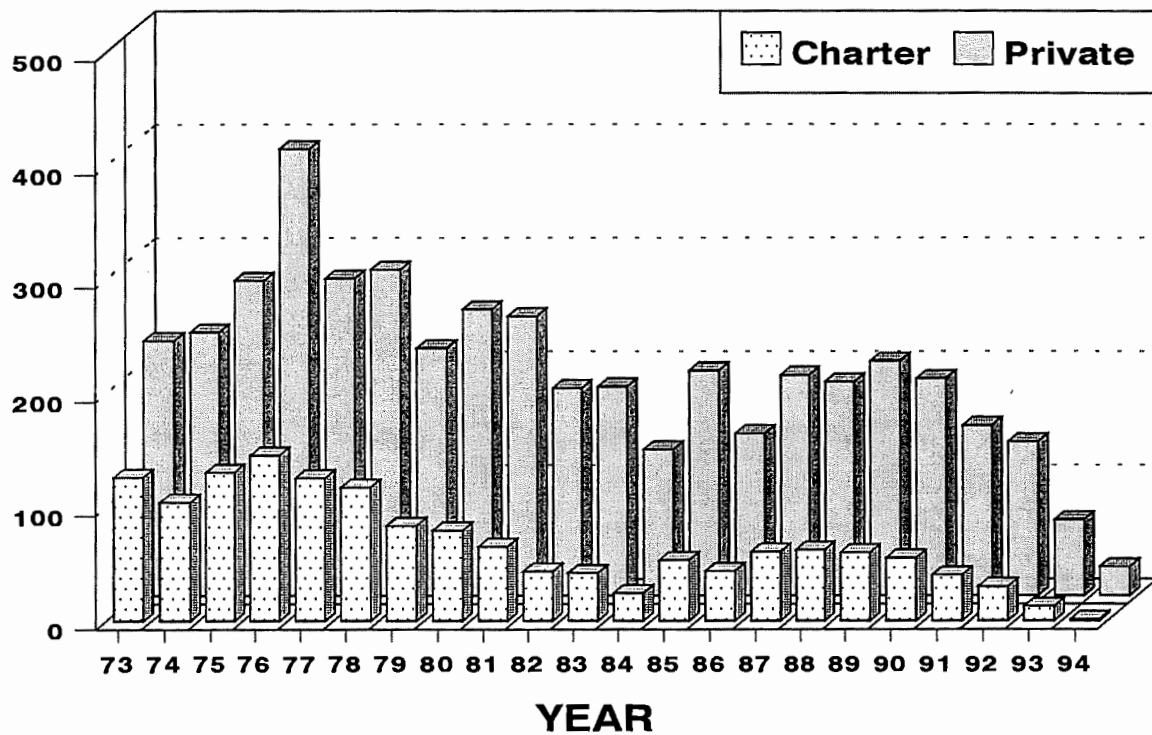
Private boat angler effort: The 1994 salmon effort from private boats was estimated at 25,470 angler trips or 95% of the total salmon effort. This is 60% less than observed in 1993 and 85% below the 1979-93 average of 174,700 angler trips (Table 11 and Figure 16).

Brookings and Garibaldi recorded the most private boat effort for salmon in 1994. Brookings had 15,965 salmon angler trips or 63% of the private boat total, followed by Garibaldi with 9,057 trips (36%).

Some private boats fish only for bottomfish even during the salmon season. Trip type (salmon or bottomfish) ratios were calculated from angler interviews, and applied to the total effort. In years with full salmon seasons, that figure has been less than 10%. In the restricted 1994 season, 32,324 angler trips or 56% of the private trips targeted on bottomfish, compared to 26,800 angler trips or 33% in 1993. Brookings had the most private bottomfish anglers with 13,257; followed by Newport with 6,117; and Coos Bay with 4,338 angler trips.

Private boat angler catch: Anglers from private boats landed 5,544 chinook and 46 coho (illegal landings) in 1994. The total catch of 5,590 salmon was 89% below the 1993 catch and only 4% of the 1979-93 average of 156,030 fish. Private boat anglers

ANGLER TRIPS (Thousands)



SALMON (Thousands of fish)

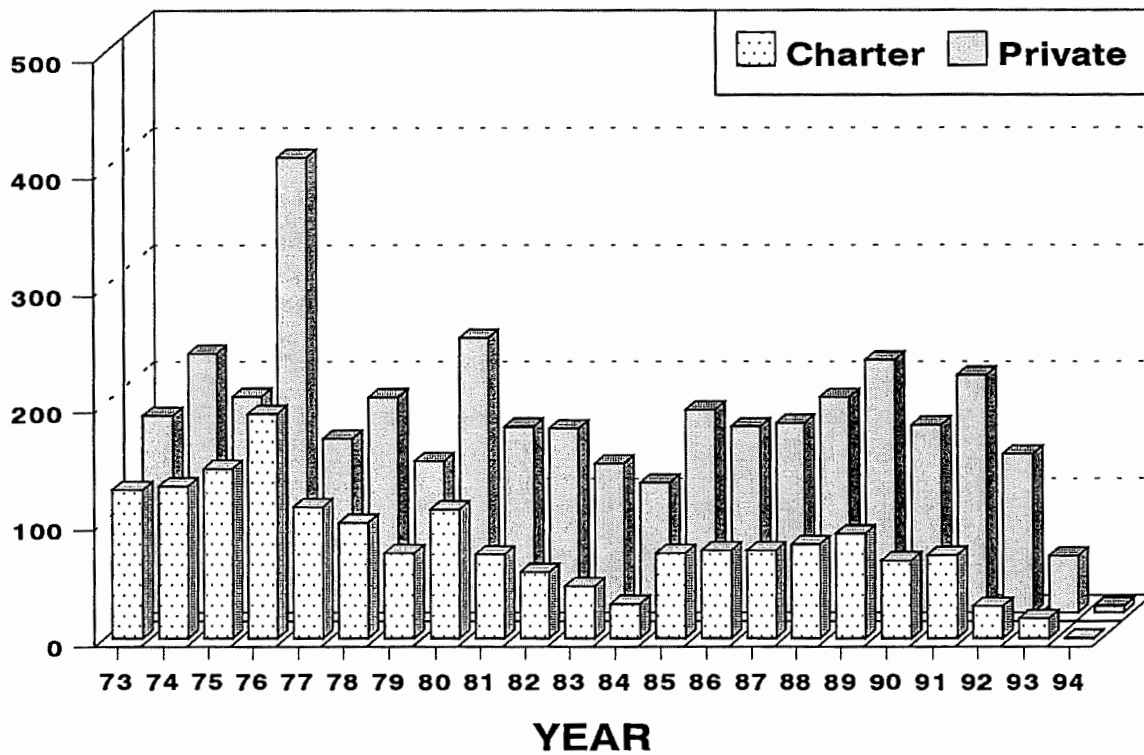


Figure 16. A comparison of effort and catch by Oregon ocean salmon charter and private anglers, 1973-94.

caught 92% of the total recreational salmon landed in 1994, compared to 75% in 1993, and the 1979-93 average of 71% (Table 11 and Figure 16).

Brookings private boat anglers averaged 0.2 salmon per angler, but landed 3,570 salmon (64%) of the total private boat angler catch. Angler success averaged 0.2 salmon per angler. Garibaldi private boat anglers had landings of 2,000 salmon with an average success rate of 0.2 salmon per angler. These two ports accounted for 99% of the total private boat angler catch. The coastwide angler success rate was 0.2 salmon per angler, compared to 0.7 in 1993 and the 1979-93 average of 0.9 salmon per angler.

ESTIMATES OF RELEASED SALMON

Background

The number of salmon released, "shakers", in the recreational fishery is estimated each year from interview data collected during the ocean sampling survey. The data depends on anglers correctly recalling the number and species of salmon released and varies with the expertise and attitude of the angler. This information, while not exact, is valuable to assess trends in released fish by time and catch area. In 1993, we discovered a programming error in the computer program that tallies this data. The error resulted in an underestimate of salmon released, especially chinook, for the years 1987 through 1992. The corrected information is published in this annual report. This data is not used in active management, but can be used as a rough estimate to evaluate shaker mortality or other regulation impacts.

South of Cape Falcon

The 1994 information on released chinook showed Coos Bay, Newport and Pacific City with no chinook being retained during the general season, and therefore, a 100% release rate on chinook for the season (Table 12). Brookings and Garibaldi had the lowest release rates on chinook but also caught the majority of the fish. Brookings' one salmon regulation also resulted in increased handling of fish. In 1994, the chinook shaker rates were uniformly lower from Florence south, but elevated on the central coast similar to that seen in 1993.

RECREATIONAL OCEAN SALMON CODED WIRE TAG SAMPLING

Samplers at nine Oregon coastal ports observed 26% of the chinook landed during the 1994 ocean recreational season.

Table 12. Chinook and coho salmon released by Oregon ocean recreational anglers in 1994, by port.

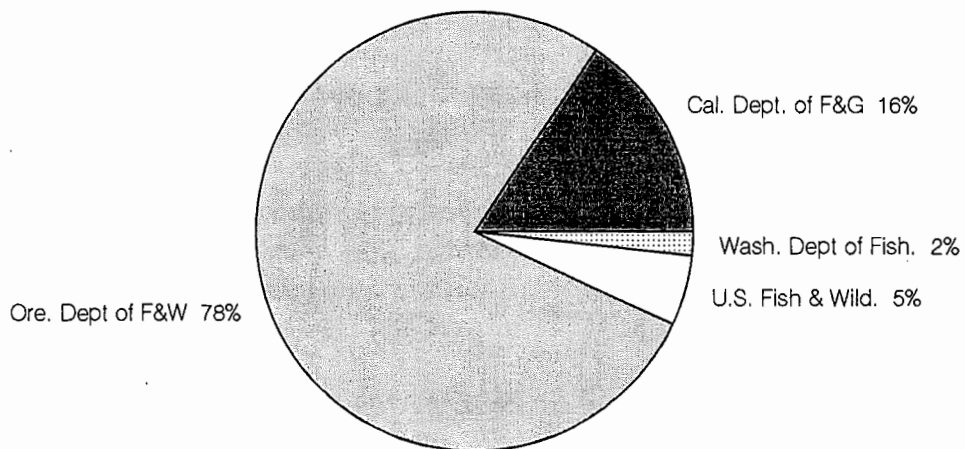
Port	Number Retained		Number Released		Percent Released	
	Chinook	Coho	Chinook	Coho	Chinook	Coho
Garibaldi	2,398	29	25	382	1	93
Pacific City	0	0	1	79	100	100
Depoe Bay	5	0	16	160	76	100
Newport	0	0	34	112	100	100
Florence	3	0	0	0	0	-
Winchester Bay	15	0	2	3	12	100
Coos Bay	0	0	16	71	100	100
Brookings	3,616	17	157	442	4	96
Total	6,037	46	251	1,249	4	96

Table 13. Chinook coded-wire tag sampling from the ocean recreational fishery, by port and month, 1994.

Port	May	June	July	August	September	October	Total
<u>Columbia R.</u>							
Total Catch	-	-	-	-	-	-	-
No. Sampled	-	-	-	-	-	-	-
% Sampled	-	-	-	-	-	-	-
No. Ad Marks	-	-	-	-	-	-	-
<u>Garibaldi</u>							
Total Catch	59	135	-	-	-	2,204	2,398
No. Sampled	21	54	-	-	-	511	586
% Sampled	36	40	-	-	-	23	24
No. Ad Marks	2	8	-	-	-	10	20
<u>Pacific City</u>							
Total Catch	0	0	-	-	-	-	0
No. Sampled	0	0	-	-	-	-	0
% Sampled	0	0	-	-	-	-	0
No. Ad Marks	0	0	-	-	-	-	0
<u>Depoe Bay</u>							
Total Catch	5	-	-	-	-	-	5
No. Sampled	2	-	-	-	-	-	2
% Sampled	40	-	-	-	-	-	40
No. Ad Marks	0	-	-	-	-	-	0
<u>Newport</u>							
Total Catch	-	-	-	-	-	-	-
No. Sampled	-	-	-	-	-	-	-
% Sampled	-	-	-	-	-	-	-
No. Ad Marks	-	-	-	-	-	-	-
<u>Florence</u>							
Total Catch	-	3	-	-	-	-	3
No. Sampled	-	1	-	-	-	-	1
% Sampled	-	33	-	-	-	-	33
No. Ad Marks	-	0	-	-	-	-	0
<u>Winchester Bay</u>							
Total Catch	6	9	-	-	-	-	15
No. Sampled	3	3	-	-	-	-	6
% Sampled	50	33	-	-	-	-	40
No. Ad Marks	0	0	-	-	-	-	0
<u>Coos Bay</u>							
Total Catch	-	-	-	-	-	-	-
No. Sampled	-	-	-	-	-	-	-
% Sampled	-	-	-	-	-	-	-
No. Ad Marks	-	-	-	-	-	-	-
<u>Brookings</u>							
Total Catch	1,878	104	-	272	284	1,078	3,616
No. Sampled	466	27	-	103	69	335	1,000
% Sampled	25	26	-	38	24	31	28
No. Ad Marks	6	3	-	2	0	29	40
<u>Total</u>							
Total Catch	1,948	251	-	272	284	3,282	6,037
No. Sampled	492	85	-	103	69	846	1,595
% Sampled	25	34	-	38	24	26	26
No. Ad Marks	8	11	-	2	0	39	60

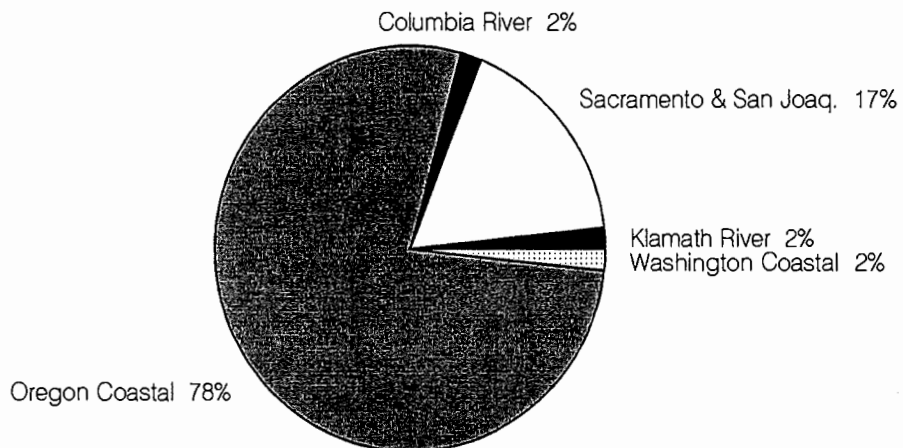
RELEASE AGENCY

n=58



BASIN OF RELEASE

n=58



NOTE: Does not represent stock contribution rates, since tagging is not representative of all stocks.

Figure 17. Recoveries of chinook coded wire tags, by release agency and by basin of release, from Oregon's ocean recreational catch, 1994.

Chinook

Samplers examined 1,595 chinook, and found 60 (3.8%) that had adipose fin clips (Table 15). Department staff found readable tags in 58 of the 67 chinook heads for an 86% recovery rate. Most of the observed CWTs were released by the Oregon Department of Fish and Wildlife (77%), California Department of Fish and Game (14%), and the U.S. Fish and Wildlife Service (7%) (Table 13 and Figure 17).

NOTE: The above information cannot be used to estimate stock contribution since tagging is not representative of stocks, and most stocks of wild fish have no tagging programs or population estimators associated with them.

SPECIAL FISHERIES AND STUDIES

October Chinook Fishery off Tillamook Bay

The fall state waters (0-3 miles) recreational fishery off Tillamook targets on fall chinook returning to streams that enter Tillamook Bay area streams. This season was open October 1 through November 15, 1994, and coincided with the much larger fishery within the Tillamook estuary and local rivers. Effort for the terminal ocean state waters fishery totaled 9,123 angler trips, 8,509 (93%) of which occurred the first two weeks of the season. There were no angler trips in the final two weeks of the season due to rough ocean conditions. The chinook catch totaled 2,223 fish with 2,075 (93%) chinook being caught in the initial two weeks. Incidentally, 98% of the total coho catch occurred in the same two week period. Twenty-six coho were illegally landed, while 405 were released in this fishery. Angler success ranged from 0.16 to 0.35 chinook per angler with a season average of 0.24 chinook per angler. In comparison, the angler success in the Tillamook bay fishery during the same time period was 0.08 chinook per angler. An average ratio of 5.2 chinook per coho was observed during the fall state waters season.

Tillamook Bay Fall Creel

The Tillamook Bay fall creel project began just after Labor Day on September 5 and continued through the end of the season on November 15. The bay fishery was divided into three sampling zones: the lower bay zone (mouth to the Garibaldi boat basin entrance); the mid bay zone (Garibaldi boat basin entrance to Bay City flats); and the upper bay zone (Bay City flats to the confluence to the Trask and the Tillamook Rivers) (Figure 18). The creel was designed to determine the amount of effort, angler success rates, release rates of chinook and coho, and the gear-salmon relationship (eg. bait size, plug size and spinner size).

Boat counts were made daily at two hour intervals and Area Under the Curve (AUC) methodology was used to determine boat effort. Counts were made for all three zones

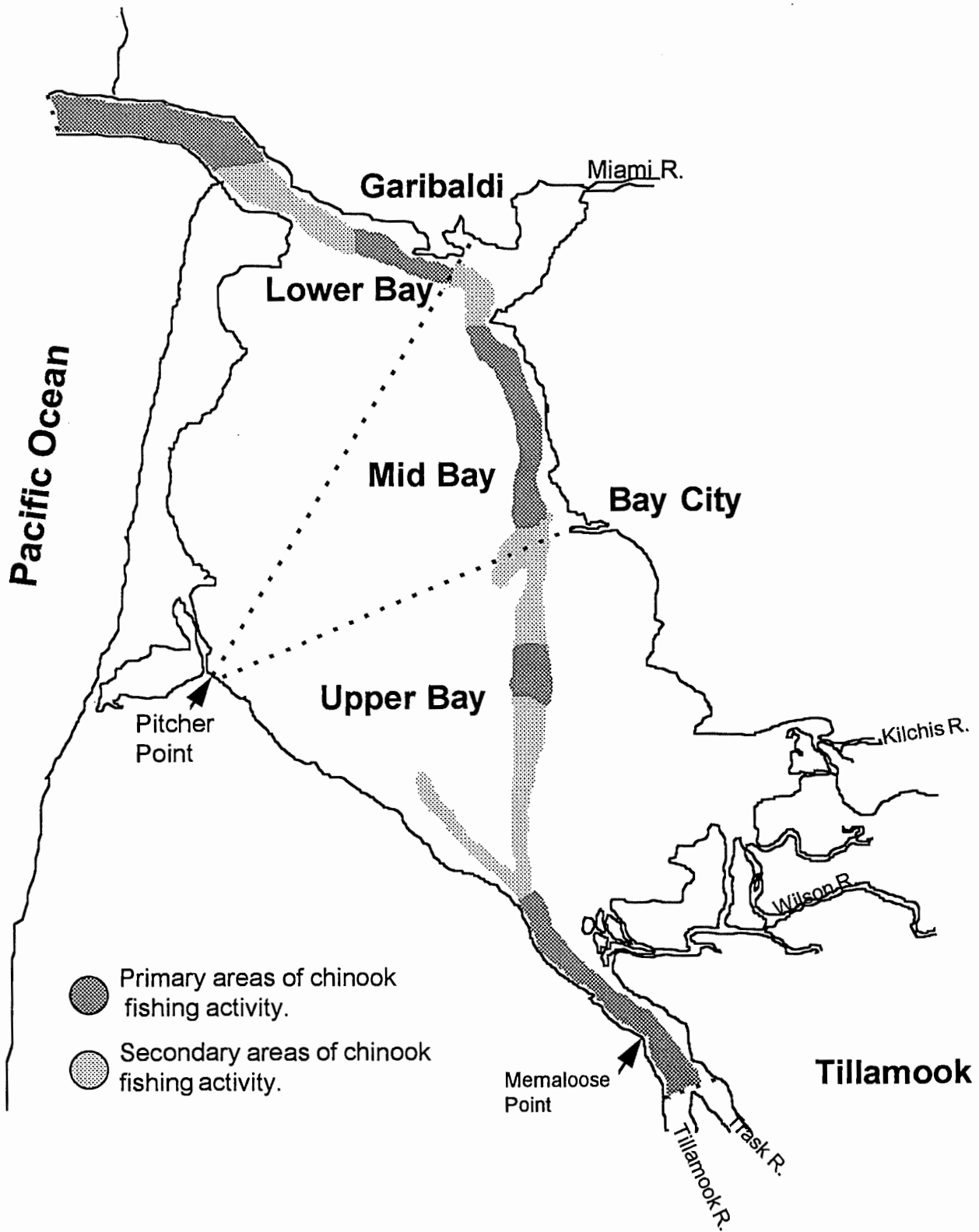


Figure 18. Map of Tillamook Bay, Oregon showing the boundaries for the bay zones used in the 1994 creel survey, and areas of primary and secondary fishing activity.

Table 14. Tillamook Bay recreational fishery creel 1994; effort and catch estimates by statistical week and by zone.

Lower Bay (Garibaldi Boat Basin entrance to mouth)

Statistical Week	Boat Trips	Angler Trips	Landed Chinook	Landed Coho	Released Chinook	Released Coho	Chinook/Angler	Chinook/Coho
37 Sept. 5-11	275	676	86	5	0	20	0.13	3.4
38 Sept. 12-18	472	1,092	35	7	3	58	0.03	0.6
39 Sept. 19-25	434	1,052	80	2	0	63	0.08	1.2
40 Sept. 26-Oct. 2	878	2,072	213	11	0	114	0.10	1.7
41 Oct. 3-9	1,455	3,468	210	0	0	41	0.06	5.1
42 Oct. 10-16	1,269	3,165	390	8	0	57	0.12	6.0
43 Oct. 17-23	1,126	2,963	213	0	0	11	0.07	19.4
44 Oct. 24-30	261	669	67	0	0	2	0.10	33.5
45 Oct. 31-Nov. 6	37	44	6	0	0	0	0.14	NA
46 Nov. 7-13	87	234	0	0	0	0	0.00	NA
Totals	6,294	15,435	1,300	33	3	366	0.08	3.3

Mid Bay (Bay City Flats to Garibaldi Boat Basin)

Statistical Week	Boat Trips	Angler Trips	Landed Chinook	Landed Coho	Released Chinook	Released Coho	Chinook/Angler	Chinook/Coho
37 Sept. 5-11	168	379	52	0	0	22	0.14	2.4
38 Sept. 12-18	380	857	60	5	15	35	0.09	1.9
39 Sept. 19-25	663	1,550	159	9	0	78	0.10	1.8
40 Sept. 26-Oct. 2	471	961	76	0	0	46	0.08	1.7
41 Oct. 3-9	944	2,227	129	12	0	8	0.06	6.5
42 Oct. 10-16	840	2,034	85	0	0	6	0.04	14.2
43 Oct. 17-23	824	1,975	118	0	0	13	0.06	9.1
44 Oct. 24-30	486	1,090	156	0	0	3	0.14	52.0
45 Oct. 31-Nov. 6	263	530	37	0	0	0	0.07	NA
46 Nov. 7-13	178	344	5	0	0	0	0.01	NA
Totals	5,217	11,947	877	26	15	211	0.07	3.8

Upper Bay (Confluence of Trask and Tillamook Rivers to Bay City Flats)

Statistical Week	Boat Trips	Angler Trips	Landed Chinook	Landed Coho	Released Chinook	Released Coho	Chinook/Angler	Chinook/Coho
37 Sept. 5-11	94	198	21	0	2	30	0.12	0.8
38 Sept. 12-18	245	593	40	0	0	28	0.07	1.4
39 Sept. 19-25	404	1,014	113	5	2	76	0.11	1.4
40 Sept. 26-Oct. 2	526	1,310	148	0	0	153	0.11	1.0
41 Oct. 3-9	825	2,125	245	2	9	36	0.12	6.7
42 Oct. 10-16	549	1,319	106	0	4	7	0.08	15.7
43 Oct. 17-23	490	1,237	157	0	1	0	0.13	NA
44 Oct. 24-30	240	532	15	0	0	5	0.03	3.0
45 Oct. 31-Nov. 6	NA	NA	NA	NA	NA	NA	NA	NA
46 Nov. 7-13	NA	NA	NA	NA	NA	NA	NA	NA
Totals	3,373	8,328	845	7	18	335	0.10	2.5

All Areas Combined

Statistical Week	Boat Trips	Angler Trips	Landed Chinook	Landed Coho	Released Chinook	Released Coho	Chinook/Angler	Chinook/Coho
37 Sept. 5-11	537	1,253	159	5	2	72	0.13	2.1
38 Sept. 12-18	1,097	2,542	135	12	18	121	0.06	1.2
39 Sept. 19-25	1,501	3,616	352	16	2	217	0.10	1.5
40 Sept. 26-Oct. 2	1,875	4,343	437	11	0	313	0.10	1.3
41 Oct. 3-9	3,224	7,820	584	14	9	85	0.08	6.0
42 Oct. 10-16	2,658	6,518	581	8	4	70	0.09	7.5
43 Oct. 17-23	2,440	6,175	488	0	1	24	0.08	20.4
44 Oct. 24-30	987	2,291	238	0	0	10	0.10	23.8
45 Oct. 31-Nov. 6	300	574	43	0	0	0	0.07	NA
46 Nov. 7-13	265	578	5	0	0	0	0.01	NA
Totals	14,884	35,710	3,022	66	36	912	0.09	3.1

of the bay. Total effort consisted of 35,710 angler trips, 43% of which took place in the lower bay zone. October had the highest number of angler trips at 22,804, 64% of the total (Table 14).

Anglers were interviewed to determine zone fished, number of fish caught and released by species, number of anglers per boat, and bait type and size. The total number of chinook caught in the fishery was 3,022, with 1,300 or 43% caught in the lower bay zone 877 (29%) caught in the mid bay zone, and 845 (28%) in the upper bay zone. Out of the 66 total coho landed (illegal landings), 33 (50%) were caught in the lower bay zone. A total of 36 chinook and 912 coho were released in the Tillamook Bay fishery, with release rates of 1.1% and 93.3% respectively. Angler success was highest in the upper bay zone with 0.10 chinook per angler. The highest chinook catch rate (0.13 chinook per angler) was observed during statistical week 37 (Sept. 5-11).

Coho are returning in low numbers to the Tillamook Basin and incidental hooking of coho is of concern. Chinook per coho ratios throughout the season (between bay zones) averaged between 2.52 to 3.76 chinook per coho with the mid bay zone being the highest and the upper bay zone the lowest. The month of September averaged 1.44 chinook per coho, while the month of October averaged 9.03 chinook per coho. This coincides with the coho migrations further into freshwater, and the return of coho to Trask hatchery. Throughout the season chinook per coho ratios averaged 3.13 for the entire bay with the lowest values at the beginning of September (1.15-2.09 chinook per coho) and the highest values toward the end of October (20.38-23.80 chinook per coho).

A gear use and success survey was conducted in this fishery. Table 15 shows that the majority of fishermen chose bait (almost entirely frozen herring) as their gear with 78% of these using small bait (less than 6" long). The majority of fishermen in the lower and mid bay zones chose to use bait, while the upper bay fishermen tended to choose spinners and plugs. This table shows that in this fishery with all three gear types an angler is more likely to catch a chinook than a coho; however, use of spinners increases the chances of hooking coho.

October/November Fishery off Port Orford

We did not sample the recreational portion of this fishery in 1994 but concentrated on the commercial landings. The sport catch in this fishery has been nonexistent or minimal (<50 fish) in all years.

Oregon Coastal Lower Bay/Bar Recreational Salmon Fishery

Introduction: Typically, modest chinook target fisheries develop in the lower bays and on the bars of many Oregon coastal estuaries beginning in mid-August and continuing through September. However in 1991, the lower bay recreational salmon fishery was a "windfall" to coastal anglers who had seen their ocean season close in late July. The

Table 15. Salmon gear usage and catch success in the 1994 Tillamook Bay fall salmon fishery.

		<u>Boats with Chinook</u>		<u>Boats with Coho</u>		Total Boats
		Number	Percent	Number	Percent	
Lower Bay						
Bait ^a	Large (> 6")	44	13.0	17	5.0	339
	Small (< 6")	210	18.4	73	6.4	1,143
	Total	254	17.1	90	6.1	1,482
Spinners ^b		1	4.8	1	4.8	21
Plugs ^c	Large (> 6")	0	NA	0	NA	0
	Small (< 6")	0	NA	0	NA	5
	Total	0	NA	0	NA	5
Middle Bay						
Bait ^a	Large (> 6")	48	19.5	6	2.4	246
	Small (< 6")	146	16.0	35	3.8	916
	Total	194	16.7	41	3.5	1,162
Spinners ^b		10	18.7	3	5.7	53
Plugs ^c	Large (> 6")	0	NA	0	NA	0
	Small (< 6")	1	12.5	1	12.5	8
	Total	1	12.5	1	12.5	8
Upper Bay						
Bait ^a	Large (> 6")	0	NA	0	NA	4
	Small (< 6")	5	20.8	2	8.3	24
	Total	5	17.9	2	7.1	28
Spinners ^b		136	21.5	67	10.6	634
Plugs ^c	Large (> 6")	8	32.0	1	4.0	25
	Small (< 6")	19	23.8	1	1.3	80
	Total	27	25.7	2	1.9	105
All Areas Total						
Bait ^a	Large (> 6")	92	15.6	23	3.9	589
	Small (< 6")	361	17.3	110	5.3	2,083
	Total	453	17.0	133	5.0	2,672
Spinners ^b		147	20.8	71	10.0	708
Plugs ^c	Large (> 6")	8	32.0	1	4.0	25
	Small (< 6")	20	21.5	2	2.2	93
	Total	28	23.7	3	2.5	118

^a Bait defined as baitfish only (eg. herring). Roe, sandshrimp, etc. not included.

^b Spinners defined as all spinners, spoons, and metal or hardware type lures.

^c Plugs defined as all full-bodied lures including traditional salmon plugs, hotshots, flatfish, etc.

unprecedented and unexpected coho landings that occurred throughout August had not been accounted for in the preseason planning process for coho management. They resulted in harvest levels that cut into the spawning escapement and were above historical impacts. To a somewhat lesser degree, this problem occurred again in 1992. In 1993, more extensive regulations were added to reduce coho interception in the bays and rivers in the late summer.

The 1994 recreational ocean salmon seasons from Cape Falcon to Humbug Mountain were expected to be the shortest ever. This raised concerns over the estuary fisheries that were likely to develop when the ocean fishery was closed increasing potential impacts on local Oregon Coastal Natural (OCN) coho stocks. To address these concerns, ODFW established emergency regulations in the lower bays beginning June 20.

Most coastal rivers, bays, and estuaries were closed to coho angling from June 20 through December 31. Exceptions to the closure included: Eel Lake and Isthmus Slough (Coos Bay) which were open the entire year for all coho, and the Rogue River was open to the take of fin marked hatchery coho from September 1 through December 31. All lower bays¹ from Cape Falcon to Humbug Mountain were closed to chinook salmon angling from June 20 through August 15, except lower Tillamook Bay which was closed from June 20 through September 30.

The bay fisheries in Yaquina and Coos bays were surveyed by OSMP samplers from August 16 through September 5; and in Siuslaw August 20-21 and August 27-28; and the Lower Umpqua Estuary August 19-21, 27-28 and September 3-6. The effort and catch expansions only estimate boat anglers that fished the lower portions of the estuaries. Shore anglers throughout the estuaries and boat anglers fishing the upper bays and tributaries were not surveyed. It is important to note that traditional bay fisheries which develop in mid-September, (except Tillamook Bay), were not surveyed by OSMP.

Methods: Samplers conducted a stratified creel survey which contacted private and charter boat anglers to gather data on number of anglers per boat, hours per boat and fish per angler. They also recovered snouts from coded wire tagged salmon. Effort estimates were made using Area Under the Curve (AUC) methodology by taking counts of the number of boats fishing in the lower estuary on regular intervals, then calculating total boat hours under the curve, and finally dividing total boat hours by the average hours per boat to estimate the number of boats that fished. This methodology is discussed in more detail in the 1991 Oregon Ocean Salmon Fisheries Annual Report.

¹ Lower bays were defined as all tidewaters west of Highway 101, except: lower Nehalem Bay was defined as tidewaters seaward of a line from the Nehalem Bay State Park boat ramp to Fishery Point; lower Tillamook Bay was defined as tidewaters seaward of a line from Green Hill to Kincheloe Point; and lower Nestucca Bay was defined as tidewaters seaward from the northern point of Cannery Hill.

Table 16. Estimates of Oregon lower estuary summer (Aug. 16-Sept 5, 1994)¹ recreational salmon effort and catch, sampled in 1994.

Port	Effort		Catch			
	Boat Trips	Angler Trips	Chinook		Coho	
			Adults	Released	Adults	Released
Yaquina Bay Bar	191	268	0	0	11	0
Siuslaw River Bar ¹	132	267	9	0	0	225
Umpqua River Bar ²	699	992	186	11	-	240
Coos Bay Bar	1,047	1,464	106	2	18	565
Total	2,069	2,991	301	13	29	1,030

¹ Estimate for the Siuslaw River Bay is only for the period of August 20-21 and Aug. 27-28.

² Estimate for the Umpqua River Bay is only for the period of August 15-21, Aug. 27-28, Sept. 3-4, and Sept. 5-6.

Results and discussion: We estimated that 2,069 boat trips and 2,991 angler trips were made in the four estuaries surveyed in 1994. This is an 27% reduction from the 1991 record effort. Coos Bay accounted for 49% of the angler effort in 1994 with 1,464 angler trips. The lower Umpqua estuary had 992 angler trips (Table 16).

A total of 1,030 coho and 13 chinook were released by anglers. Coos Bay accounted for the vast majority of coho that were released with 565. Most were caught and released during the last two weeks of August, when 101 chinook were landed, and 482 coho were released. Releasing almost five coho for each chinook kept in a year of record low coho abundance is a substantial concern.

Conclusions: The emergency regulations allowed most fall chinook estuary fisheries to develop normally along much of the coast. The issue of the ability of the recreational fishery to selectively harvest chinook came into question when the incidence of released coho for the four sampled estuaries exceeded the harvest of chinook (3.4 coho were released for each chinook kept). The value of the late summer/early fall chinook fishery needs to be weighed against the hooking mortality concern on the OCN stock of coho, and the risks to future production. This is especially important on the north coast where wild coho stocks are severely depressed and substantial fall chinook fisheries develop each fall.

The emergency regulations, although successful in getting compliance with the intent of the ocean harvest guidelines, did generate substantial confusion among anglers. It is difficult to quickly reach resident and non-resident sport anglers over a large fishing area in a short period of time with complex regulation changes. Department news releases were produced and numerous regulation signs were posted, but many anglers seemed overwhelmed by the added layer of regulations.

ACKNOWLEDGMENTS

Almost everyone in the Ocean Salmon Management Program at one time or another provided assistance to the ocean sampling program. However, we especially appreciate the help of sampling coordinator David Nuzum and all seasonal samplers. Special recognition is due the Data Management Project Leader Phil Flanders and his assistant John Denton, and to Administrative Assistant Donna Lamb for their help in accessing the data and general assistance throughout the year.

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APPENDIX

Appendix Table 1. Seasonal field sampling personnel hired by the ODFW Ocean Salmon Management Program, 1994.

Port	Troll		Recreational	
	Sampler	Dates	Sampler	Dates
Garibaldi	Michael Lambert Steve Liebhardt ¹	Oct. 1-Nov. 5 Nov.1-15	Rachel Lippert Michael Majerus Ty Wyatt	May 2-Oct. 30 Sept. 6-Oct. 30 Sept. 17-Oct. 30
Pacific City			Michael Majerus	May 2-Sept. 5
Depoe Bay			Sonya Kenyon	May 2-Sept. 5
Newport	Erin Coffey ¹	May 2-Oct. 31	Erik White Leslie Ortiz	May 7-Aug. 26 May 27-Aug. 24
Florence	Shawn Rapp ¹	May 1-June 22		
Winchester Bay			William Barnes ²	May 2-Sept. 5
Coos Bay	Steve Liebhardt ¹	May 18-Oct. 31	Rachel Johnson	May 2-Sept. 5
Port Orford	Ken Fliszar ³	Oct. 15-Nov. 7		
Gold Beach	Alan Dietricks ⁴	Aug. 8-19		
Brookings	Mike Slater ⁴	Oct. 10-17	Rod Black Lynn Dunbar Lynn Dunbar Fred Mitchell ¹	May 2-Sept. 5 May 2-Sept. 5 Oct. 10-23 Oct. 10-31

¹ Combination troll/recreational sampler.

² Roving combination sampler that covered several different ports and fisheries.

³ On loan from Elk River Fall Chinook Indicator Stock Study.

⁴ On loan from Columbia River Management.

Appendix Table 2. Ocean troll fishery mark sampling rates by port, year, and species, 1985-94.

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CHINOOK										
Astoria	36	46	75	24	36	25	11	52	2	0
Gearhart	0	0	0	-	27	12	8	0	0	-
Cannon Beach	0	0	0	16	0	0	0	0	0	-
Garibaldi	34	29	34	20	10	22	7	39	13	31
Pacific City	27	20	32	15	19	27	19	2	0	0
Depoe Bay	0	3	73	38	0	0	0	0	0	0
Newport	47	34	59	28	21	34	29	32	30	17
Florence	0	0	67	30	15	30	52	38	9	13
Winchester Bay	24	42	39	29	18	35	15	0	0	0.1
Coos Bay	42	32	31	24	14	26	21	0	20	26
Bandon	2	0	2	0	0	0	0	0	0	0
Port Orford	89	88	74	59	61	24	0	92	45	61
Gold Beach	0	12	1	10	10	0	0	0	-	156
Brookings	0	58	66	71	62	65	58	0	0	54
Total	39	35	44	30	21	27	24	29	24	23
COHO										
Astoria	40	81	35	6	34	34	24	14	8	-
Gearhart	0	0	0	-	22	8	40	0	0	-
Cannon Beach	0	0	0	0	6	0	2	0	0	-
Garibaldi	72	39	35	32	28	25	21	45	0	-
Pacific City	13	14	44	21	32	32	30	18	0	-
Depoe Bay	0	8	80	63	0	0	2	0	-	-
Newport	58	19	57	27	22	41	29	32	0	-
Florence	1	0	73	28	13	39	47	49	-	-
Winchester Bay	26	51	34	35	16	40	28	0	-	-
Coos Bay	48	31	28	31	16	28	27	0	0	-
Bandon	48	0	3	0	0	0	0	0	-	-
Port Orford	76	84	73	66	70	10	0	-	-	-
Gold Beach	-	1	3	0	-	0	-	-	-	-
Brookings	0	34	41	49	41	44	1	-	-	-
Total	41	24	43	30	22	29	28	30	5	NA
# Samplers	8	10	14	9^b	8^b	10^a	6^a	4^a	2^b	2^c

^a Two additional employees sampled the troll fishery on a part-time basis.

^b Three additional employees sampled the troll fishery on a part-time basis.

^c Six additional employees sampled the troll fishery during limited periods or on a part time basis.

Appendix Table 3. History of actual Oregon ocean commercial troll fishery regulations, 1948-94.

AREA AND SEASON	SPECIES	SIZE, GEAR, AND OTHER RESTRICTIONS
Prior to 1948	No restrictions	
1948 <u>Oregon Coast</u> 1/1 - 12/31 7/1 - 11/15	All except coho All salmon	size limit: chinook - 27", no gear restrictions. chinook - 27", coho - none.
1949-55 <u>Oregon Coast</u> 3/15 - 10/31 6/15 - 10/31	All except coho All salmon	Chin. 26". Chin. 26".
1956-75 <u>Oregon Coast</u> 4/15 - 10/31 6/15 - 10/31	All except coho All salmon	Chin. 26". Chin. 26"; coho 15" beginning in 1965.
1974-75 <u>Elk & Chetco River areas</u> 11/1 - 12/31	All except coho	Chin. 26" - state waters only.
1976 <u>North of Tillamook Head</u> 5/1 - 6/14 7/1 - 9/15	All except coho All salmon	Chin. 28"; until 6/6; then 26". Chin. 26"; coho, 16".
<u>South of Tillamook Head</u> 5/1 - 6/14 6/15 - 10/31	All except coho All salmon	Chin. 26"; barbless hooks, except on whole bait or plugs. Chin. 26"; coho, 16".
<u>Elk & Chetco River areas</u> 11/1 - 11/30	All except coho	Chin. 26" - state waters only.
1977 as above	as above	Chin. 28" N. of Tillamook Head; 26" S. of Tillamook Head. Coho 16". Gear restrictions as above.
1978 Area boundary moved from Tillamook Head to Cape Falcon	as above	
1979 <u>North of Cape Falcon</u> 5/1 - 5/31 7/1 - 24; 8/4 - 31	All except coho All salmon	Chin. 28"; barbless hooks, except on whole bait or plugs. Chin. 28"; coho 16".
<u>South of Cape Falcon</u> 5/1 - 5/31 7/1 - 9/3 9/4 - 10/31	All except coho All salmon All except coho	Chin. 26"; barbless hooks except on whole bait or plugs. Chin. 26"; coho 16". Chin. 26".
<u>Elk & Chetco River areas</u> 11/1 - 11/30	All except coho	Chin. 26". State waters only.
1980 <u>North of Cape Falcon</u> 5/1 - 5/31 7/15 - 9/8	All except coho All salmon	Chin. 28"; barbless hooks, except on whole bait or plugs. Chin. 28"; coho 16".
<u>South of Cape Falcon</u> 5/1 - 5/31	All except coho	Chin. 26"; barbless hooks, except on whole bait or plugs.
<u>Cape Falcon to Cape Blanco</u> 6/16 - 6/30	All except coho	Chin. 26"; whole bait, or plugs 6" or longer.
<u>South of Cape Falcon</u> 7/15 - 9/8 9/9 - 10/31	All salmon All except coho	Chin. 26"; coho 16". Chin. 26".
<u>Elk & Chetco River areas</u> 11/1 - 11/30	All except coho	Chin. 26". State waters only.
1981 <u>North of Cape Falcon</u> 5/1 - 5/31 7/15 - 8/21 8/22 - 8/24	All except coho All salmon All salmon	Chin. 28", barbless hooks, except on whole bait or plugs. Chin. 28"; coho 16". Chin. 28"; coho 16". State waters only.
<u>South of Cape Falcon</u> 5/1 - 5/31 7/1 - 8/21 8/22 - 8/24	All except coho All salmon All salmon	Chin. 26"; barbless hooks, except on whole bait or plugs. Chin. 26"; coho 16". Chin. 26"; coho 16". State waters only.
<u>C. Falcon to Cape Sebastian</u> 8/22 - 8/24 08/25 - 9/8	All except coho All except coho	Chin. 26"; whole bait, or plugs 5" or larger. Chin. 26"; whole bait, or plugs 5" or larger. State waters only.

Appendix Table 3 continued.

AREA AND SEASON	SPECIES	SIZE, GEAR, AND OTHER RESTRICTIONS
(1981 continued)		
<u>South of Cape Falcon</u> 9/9 - 10/31	All except coho	Chin. 26".
<u>Elk & Chetco River areas</u> 11/1 - 11/30	All except coho	Chin. 26". State waters only.
1982 <u>North of Cape Falcon</u> 5/1 - 5/31 7/1 - 7/8	All except coho All salmon	Chin. 28"; barbless hooks, except on whole bait or plugs. Chin. 28"; coho 16".
<u>South of Cape Falcon</u> 5/1 - 5/31 6/1 - 6/15 7/1 - 7/12 7/13 - 9/5 9/6 - 10/31	All except coho All except coho All salmon All except coho All except coho	Chin. 26"; barbless hooks, except on whole bait. Chin. 26"; whole bait, or plugs not less than 5" long. Chin. 26"; coho 16". Chin. 26"; whole bait, or plugs not less than 5" long. Chin. 26"; barbless hooks, except on whole bait or plugs.
<u>South of Cape Blanco</u> 5/1 - 6/8	All except coho	Chin. 26"; whole bait, or plugs not less than 5" long.
<u>Elk & Chetco River areas</u> 11/1 - 11/30	All except coho	Chin. 26". State waters only.
1983 <u>North of Cape Falcon</u> 5/1 - 5/31 7/1 - 7/31	All except coho All salmon	Chin. 28"; barbless hooks, except on plugs not less than 5". Chin. 28"; coho, 16"; only plugs not less than 6". Must land 2 chin. for each coho retained.
<u>Columbia River S. Jetty to Cape Falcon</u> 8/10 - 9/8	All salmon	Chin. 28"; coho 16"; open out to 10 miles only.
<u>Cape Falcon to Cape Blanco</u> 5/1 - 5/31 6/1 - 6/15 9/5 - 10/31	All except coho All except coho All except coho	Chin. 26"; barbless hooks, except on whole bait or plugs (not less than 5"). Chin. 26"; whole bait, or plugs not less than 5" long. Chin. 26".
<u>Cape Falcon to Cape Kiwanda</u> 8/1 - 9/4	All salmon	Chin. 26"; coho 16".
<u>Cape Kiwanda to Heceta Head</u> 7/1 - 7/25; 8/1 - 9/4	All salmon	Chin. 26"; coho 16".
<u>Cape Perpetua to Cape Blanco</u> 7/26 - 7/31	All except coho	Chin. 26"; whole bait or plugs not less than 5".
<u>Heceta Head to Cape Blanco</u> 7/1 - 25 8/1 - 9/9	All All except coho	Chin. 26", coho 16". Chin. 26"; whole bait, or plugs not less than 5".
<u>Cape Blanco to OR/CA border</u> 5/16 - 5/31 6/1 - 6/15 7/1 - 7/25 7/26 - 8/31 9/1 - 9/15 10/1 - 10/31	All except coho All except coho All salmon All except coho All except coho All except coho	Chin. 26"; barbless hooks only, not more than 6 troll lines. Chin. 26"; whole bait, or plugs not less than 5" long. Chin. 26", coho 16". Chin. 26"; whole bait, or plugs not less than 5" long. Chin. 26". Open area is 12 x 24 mile rectangle around mouth of Rogue River. Chin. 26".
<u>Cape Blanco to Humbug Mtn.</u> 11/1 - 11/30	All except coho	Chin. 26". State waters only.
1984 <u>North of Cape Falcon</u> 5/1 - 5/7	All except coho	Chin. 28"; barbless hooks. Columbia River Mouth Conservation Zone closed.
<u>Columbia River S. Jetty to Cape Falcon</u> 8/4 - 8/6	All salmon	Chin. 28"; coho 16"; barbless hooks.
<u>Cape Falcon to Cape Blanco</u> 5/1 - 6/15; 7/1 - 8/31 9/1 - 9/21	All except coho All except coho	Chin. 26"; barbless hooks. Chin. 26"; state waters only. Contravention of fed. regulation.

Appendix Table 3 continued.

AREA AND SEASON	SPECIES	SIZE, GEAR, AND OTHER RESTRICTIONS
(1984 continued)		
<u>Manhattan Beach to Pyramid Rock (Tillamook)</u> 10/1 - 10/31	All except coho	Chin. 26"; barbless hooks. State waters only.
<u>Cape Blanco to OR/CA border</u> 5/16 - 6/6; 7/16 - 8/22	All except coho	Chin. 26"; barbless hooks.
<u>Cape Blanco to Humbug Mtn.</u> 10/1 - 11/30	All except coho	Chin. 26"; state waters only; barbless hooks.
1985 <u>North of Cape Falcon</u> 5/1 - 5/14; 5/21 - 5/31	All except coho	Chin. 28"; barbless hooks, except on whole bait or plugs. Columbia River Mouth Conservation Zone closed.
<u>Columbia River S. Jetty to Cape Falcon</u> 8/21	All salmon	Chin. 28"; coho 16"; barbless hooks, except on whole bait or plugs.
<u>Cape Falcon to Cape Blanco</u> 5/1 - 6/30 7/1 - 7/26 7/27 - 10/31	All except coho All salmon All except coho	Chin. 26"; barbless hooks, except on whole bait or plugs. Chin. 26"; coho 16"; barbless hooks. One more coho than chinook may be kept, provided at least 1 chinook is kept. Chin. 26"; barbless hooks.
<u>Tower Rock to Cape Blanco</u> 11/1 - 11/30	All except coho	Chin. 26"; barbless hooks. State waters only.
<u>Cape Blanco to Humbug Mtn.</u> 10/1 - 11/30	All except coho	Chin. 26"; barbless hooks. State waters only.
1986 <u>North of Cape Falcon</u> 5/1-10; 5/14-17; 5/24-27; 5/30-31 8/2-3; 8/7-9	All except coho All salmon	Chin. 28"; barbless hooks. Columbia River Mouth Conservation Zone closed. Chin. 28"; Coho 16". Barbless hooks.
<u>Cape Falcon to Cape Perpetua</u> 5/1 - 6/30 7/1-20; 7/23-24 7/25 - 10/31	All except coho All salmon All except coho	Chin. 26"; barbless hooks. Chin. 26"; coho 16"; barbless hooks. Single daily landing or possession of up to 50 coho. No additional coho can be landed or possessed unless chinook are also landed at a ratio of at least 1 chinook for every 2 coho. Chin. 26"; barbless hooks.
<u>Twin Rocks to Pyramid Rock (Tillamook)</u> 11/1 - 15	All except coho	Chin. 26"; barbless hooks. State waters only.
<u>Cape Perpetua to Cape Blanco</u> 5/1 - 6/30 7/1 - 20 7/23 - 24 7/25 - 10/31	All except coho All salmon All salmon All except coho	Chin. 26"; barbless hooks. Chin. 26"; Coho 16"; barbless hooks. No coho could be landed without landing chinook at a ratio of at least 1 chinook for each 2 coho. Same regulations as in Cape Falcon to Cape Perpetua (for 7/1-24 see above). Chin. 26"; barbless hooks.
<u>Sisters Rocks to Chetco Point</u> 5/1 - 6/6	All except coho	Chin. 26"; barbless hooks. Open only within 6 nautical miles of shore.
<u>Cape Blanco to OR/CA border</u> 6/16 - 19; 6/23 - 26 6/30 - 7/5; 7/17-24 7/25 - 8/26	All salmon All except coho	Chin. 26"; Coho 22"; barbless hooks. At least one chinook must be possessed or landed for each 2 coho possessed or landed. Chin. 26"; barbless hooks.
<u>Sisters Rock to Mack Arch</u> 8/29	All except coho	Chin. 26"; barbless hooks. Open only within 6 nautical miles of shore.
<u>Cape Blanco to Humbug Mtn.</u> 10/1 - 11/26	All except coho	Chin. 26"; barbless hooks. State waters only.

Appendix Table 3 continued.

AREA AND SEASON	SPECIES	SIZE, GEAR, AND OTHER RESTRICTIONS
1987 <u>North of Cape Falcon</u> 5/1-10; 5/14-15	All except coho	Chin. 28"; barbless hooks. Columbia River Mouth Conservation Zone closed. Chinook harvested in this fishery must be landed north of Cape Falcon unless reported to the U.S. Coast Guard.
7/25-26	All salmon	Chin. 28"; coho 16"; barbless hooks. Landing restrictions as above. Columbia River Mouth Conservation Zone closed; nearshore area closure 0 to 3 miles from Tillamook Head to Red Buoy Line and 0 to 10 miles between Red Buoy Line and Queets River.
<u>Cape Falcon to Cape Perpetua</u> 5/1 - 7/14 7/15-28; 8/1-28	All except coho All salmon	Chin. 26"; barbless hooks. Chin. 26"; coho 16"; barbless hooks. Single daily possession or landing of up to 100 coho/vessel. At least 1 chinook required for each 2 coho over 100.
<u>Cape Falcon to Cape Blanco</u> 8/29 - 9/15	All salmon	Chin. 26"; coho 16"; barbless hooks. 200 coho may be possessed or landed without chinook restrictions. Over 200 coho, at least 1 chinook must be possessed or landed for each 2 coho possessed or landed.
9/16 - 10/31	All except coho	Chin. 26"; barbless hooks. All commercial salmon fishing closed 9/16-18 from Cape Arago to Cape Blanco.
<u>Cape Perpetua to Cape Blanco</u> 5/1 - 6/30 7/1-28; 8/1-28	All except coho All salmon	Chin. 26"; barbless hooks. Chin. 26"; coho, 16"; barbless hooks. At least 1 chinook must be possessed or landed for each 2 coho possessed or landed except that 1 coho may be possessed or landed without having a chinook.
<u>Sisters Rocks to Chetco Point</u> 5/1-14	All except coho	Chin. 26"; barbless hooks.
<u>Cape Blanco to OR/CA border</u> 6/1-3; 6/7-10; 6/14-25	All salmon	Chin. 26"; coho 22"; barbless hooks. At least 1 chinook must be possessed or landed for each 1 coho except that 1 coho may be possessed or landed without having a chinook.
<u>Cape Blanco to Humbug Mtn.</u> 10/1 - 11/30	All except coho	Chin. 26"; barbless hooks. State waters fishery.
1988 <u>North of Cape Falcon</u> 5/1 - 6/14	All except coho	Chin. 28"; barbless hooks. Columbia River Mouth Conservation Zone closed.
<u>Cape Falcon to Orford Reef Red Buoy</u> 5/1 - 6/30	All except coho	Chin. 26"; barbless hooks.
<u>Cape Falcon to Cascade Head</u> 7/1 - 8/19	All salmon	Chin. 26"; coho 16"; barbless hooks. From 7/1-13 mixed loads of chinook and coho or coho only loads could not be landed between Cascade Head and Cape Arago unless the load met the possession and landing ratios for that area.
8/20 - 10/31	All except coho	Chin. 26"; barbless hooks.
<u>Cascade Head to Cape Arago</u> 7/1 - 13	All salmon	Chin. 26"; coho 16"; barbless hooks. At least 1 chinook must be possessed or landed for each 2 coho possessed or landed except there was a single daily possession or landing per vessel of 2 coho w/o the ratio requirement. Mixed loads of chinook and coho or coho only loads must be delivered in the sub-area.
7/16 - 8/19 8/20 - 10/31	All salmon All except coho	As above but no ratio requirement. Chin. 26"; barbless hooks.
<u>Cape Arago to Orford Reef Red Buoy</u> 7/16 - 8/19	All salmon	Chin. 26"; coho 16"; barbless hooks. No ratio requirement.
8/20 - 31; 9/16 - 10/31	All except coho	Chin. 26"; barbless hooks.
<u>Sisters Rocks to Chetco Point</u> 5/1 - 4	All except coho	Chin. 26"; barbless hooks. From shore out to 6 miles only.

Appendix Table 3 continued.

AREA AND SEASON	SPECIES	SIZE, GEAR, AND OTHER RESTRICTIONS
(1988 continued)		
<u>Humbug Mtn. to Punta Gorda</u> 6/5 - 7	All salmon	Chin. 26"; coho 22"; barbless hooks. Sun. through Wed. only.
<u>Sisters Rocks to Mack Arch</u> 9/1 - 14	All except coho	Chin. 26"; barbless hooks.
<u>Orford Reef Red Buoy to Humbug Mountain</u> 10/1 - 31	All except coho	Chin. 26"; barbless hooks. State waters only.
<u>Cape Blanco to Humbug Mtn.</u> 11/1 - 30	All except coho	As above.
1989 <u>North of Cape Falcon</u> 5/1 - 6/8; 6/13 - 15	All except coho	Chin. 28"; barbless hooks. Columbia River Mouth Conservation Zone closed.
8/21; 8/24 - 9/10	All salmon	Chin. 28"; coho 16"; barbless hooks. Columbia River Mouth Conservation Zone closed. Open south of Columbia River 8/21; and extended north to Leadbetter Point from 8/24. Daily landing limit of 40 coho and 4 chinook in effect through 8/27; daily landing of 40 coho and 8 chinook from 8/28 through 9/10. All salmon must be landed within this area.
<u>Cape Falcon to Cascade Head</u> 5/1 - 7/11; 8/18 - 10/31 7/12 - 7/14	All except coho All salmon	Chin. 26"; barbless hooks. Chin. 26"; coho 16"; barbless hooks. Mixed loads of coho and chinook, or coho only must be landed in this area.
7/18 - 8/17	All salmon	Chin. 26"; coho 16"; barbless hooks. A daily landing limit of 50 coho through 8/13; from 8/14 through 17 at least 1 chinook must be possessed or landed for each 2 coho possessed or landed; except that if no chinook were possessed, a single daily landing of 2 coho was permitted. Mixed loads of coho and chinook, or coho only must be landed in this area.
<u>Cascade Head to Orford Reef Red Buoy</u> 5/1 - 6/23; 8/18 - 10/31	All except coho	Chin. 26"; barbless hooks. The subarea from Cape Arago to Port Orford Reef Red Buoy was closed 8/18 - 31.
7/1 - 14	All salmon	Chin. 26"; coho 16"; barbless hooks. A daily landing limit of 50 coho, plus 3 coho for each chinook landed. Mixed loads of chinook and coho, or coho only must be landed in this area. All chinook must be delivered with the coho.
7/18 - 8/17	All salmon	Chin. 26"; coho 16"; barbless hooks. At least 1 chinook must be landed for each 2 coho, except that a single daily landing of 2 coho without any chinook is permitted. Mixed loads of coho & chinook, or coho only loads must be landed in this area. All chinook must be delivered with the coho.
<u>Orford Reef Red Buoy to Humbug Mountain</u> 10/1 - 31	All except coho	Chin. 26"; barbless hooks. State waters only.
<u>Cape Blanco to Humbug Mountain</u> 11/1 - 30	All except coho	As above.
<u>Sisters Rocks to House Rock</u> 5/1 - 2	All except coho	Chin. 26"; barbless hooks. Open from 0-6 nautical miles only.
<u>Sisters Rocks to Mack Arch</u> 9/1 - 14	All except coho	As above.
<u>Humbug Mountain to OR/CA Border</u> 6/5 - 8	All salmon	Chin. 26"; coho 22"; barbless hooks. A single daily landing of 20 chinook per day. All salmon must be delivered in this area.
8/18 - 20; 8/22 - 31	All except coho	As above.
1990 <u>US-Canada Border to Cape Falcon</u> 5/1 - 5/14; 5/18 - 5/27; 5/31 - 6/2; 6/8 - 6/11; 6/14	All except coho	Chin. 28"; barbless hooks. Columbia River Mouth Conservation Zone closed.

Appendix Table 3 continued.

AREA AND SEASON	SPECIES	SIZE, GEAR, AND OTHER RESTRICTIONS
(1990 continued) 8/18 - 21; 8/25 - 26	All	Chin. 28"; coho 16"; barbless hooks. Columbia River Mouth Conservation Zone closed. Open period restriction of 20 chinook & 200 coho per vessel. All fish must be landed and delivered in the area.
<u>Leadbetter Point to Cape Falcon</u> 8/30-9/14; 9/18-19; 9/22-10/15	All	Chin. 28"; coho 16"; barbless hooks. Columbia River Mouth Conservation Zone closed. Single daily landing of 50 coho, with one additional coho for each chinook landed. From 9/22 - 10/15 daily landing increased to 100 coho. All salmon must be landed in the area.
<u>Cape Falcon to Humbug Mtn.</u> 5/1 - 6/25; 9/1 - 10/31	All except coho	Chin. 26"; barbless hooks.
<u>Cape Falcon to Cascade Head</u> 7/4 - 7/15 7/16 - 8/31	All except coho All	Chin. 26"; barbless hooks. Chin. 26"; coho 16"; barbless hooks. Single daily landing of 50 coho plus 1 coho for each chinook. All coho must be landed in area or in adjacent closed areas.
<u>Cascade Head to Humbug Mtn.</u> 7/4 - 31 (Cape Arago to Humbug Mtn. closed 7/10-17 & 7/24-31)	All	Chin. 26"; coho 16"; barbless hooks. At least one chinook must be landed for each coho, except a landing of 1 coho and no chinook is permitted. Loads with coho must be delivered in this area.
8/1 - 31 (Cape Arago to Humbug Mtn. closed 8/7-14)	All except coho	Chin. 26"; barbless hooks.
<u>Sisters Rocks to House Rock</u> 5/1 - 24	All except coho	Chin. 26"; barbless hooks. Open 0-6 miles from shore. All salmon must be landed in this area.
<u>Sisters Rocks to Punta Gorda</u> 8/1 - 6; 8/8 - 31	All except coho	Chin. 26"; barbless hooks. All salmon must be landed in this area.
<u>Sisters Rocks to Mack Arch</u> 9/3 - 16	All except coho	Chin. 26"; barbless hooks. All salmon must be landed in this area.
<u>43°30'00"N to Cape Arago</u> 11/1 - 14	All	Chin. 26"; coho 16"; barbless hooks. Open 0-3 miles from shore. Experimental fishery 10 vessels selected through drawing. All salmon must be landed into Coos Bay.
1991 <u>US-Canada Border to Cape Falcon</u> 5/1 - 6/15	All except coho	Chin. 28"; barbless hooks. Columbia River Mouth Conservation Zone closed.
<u>Leadbetter Point to Cape Falcon</u> 8/10 - 11	All	Chin. 28"; coho 16"; barbless hooks. Columbia River Mouth Conservation Zone closed. Open period landing restriction of 100 coho per vessel.
<u>Copalis Head to Cape Falcon</u> 9/1 - 2	All	Chin. 28"; coho 16"; barbless hooks. Columbia River Mouth Conservation Zone closed. Open period landing restriction of 75 coho per vessel. All salmon must be landed North of Cape Falcon.
<u>Cape Falcon to Cascade Head</u> 5/1 - 6/30 7/1 - 14 7/15 - 23; 8/1 - 10/31	All except coho All All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per line. Chin. 26"; coho 16"; barbless hooks. Chin. 26"; barbless hooks.
<u>Cascade Head to Florence S. Jetty</u> 5/1 - 6/23 6/24 - 7/11 7/12 - 23; 8/1 - 10/31	All except coho All All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per line. Chin. 26"; coho 16"; barbless hooks. Chin. 26"; barbless hooks.
<u>Florence S. Jetty to Cape Arago</u> 6/24 - 7/11 7/12 - 14; Aug. 1 - 9	All All except coho	Chin. 26"; coho 16"; barbless hooks. Chin. 26"; barbless hooks.
<u>Florence S. Jetty to Humbug Mtn.</u> 9/1 - 10/31	All except coho	Chin. 26"; barbless hooks.

Appendix Table 3 continued.

AREA AND SEASON	SPECIES	SIZE, GEAR, AND OTHER RESTRICTIONS
(1991 continued) <u>Sisters Rocks to Mack Arch</u> 9/1 - 15	All except coho	Chin. 26"; barbless hooks. Open 0-6 miles from shore. All salmon must be landed in this area.
1992 <u>US-Canada Border to Cape Falcon</u> 5/1 - 6/15	All except coho	Chin. 28"; barbless hooks. Columbia River Mouth Conservation Zone closed.
7/20 - 21	All	Chin. 28"; coho 16"; barbless hooks. Columbia River Mouth Conservation Zone closed. No more than 4 spreads per line, 6 inch or larger plugs only. Open period landing restriction of 30 coho per vessel. All salmon must be delivered in this area or adjacent closed areas within 24 hours of closure.
7/25 - 27; 7/31 - 8/2; 8/6 - 8; 8/12 - 14; 8/20 - 22	All	Chin. 28"; coho 16"; barbless hooks. Columbia River Mouth Conservation Zone closed. No more than 4 spreads per line, 6 inch or larger plugs only. Open period landing restriction of 44 coho per vessel. All salmon must be delivered in this area or adjacent closed areas within 24 hours of each closure.
<u>Cape Falcon to Florence S. Jetty</u> 5/1 - 31	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per line.
<u>Cape Falcon to Cascade Head</u> 7/22 - 8/21	All	Chin. 26"; coho 16"; barbless hooks. At least one chinook must be landed for each two coho. All loads with coho must be delivered in this area or in adjacent closed areas north of Cascade Head.
8/22 - 31	All	Chin. 26"; coho 16"; barbless hooks. Single daily landing limit of 25 coho plus 2 coho for each chinook. All loads with coho must be delivered in this area or in adjacent closed areas north of Cascade Head.
9/1 - 10/31	All except coho	Chin. 26"; barbless hooks.
<u>Cascade Head to Florence S. Jetty</u> 7/22 - 8/7	All	Chin. 26"; coho 16"; barbless hooks. At least one chinook must be landed for each two coho. All loads with coho must be delivered in this area or in adjacent closed areas south of Cascade Head.
8/8 - 10/31	All except coho	Chin. 26"; barbless hooks.
<u>Cape Blanco to Humbug Mtn.</u> 10/24 - 26	All except coho	Chin. 26"; barbless hooks. State waters fishery.
1993 <u>US-Canada Border to Cape Falcon</u> 5/1 - 6/15	All except coho	Chin. 28"; barbless hooks. Columbia River Mouth Control Zone closed.
7/14 - 17, 7/21 - 24 7/28 - 31, 8/4 - 6	All	Chin. 28"; coho 16"; barbless hooks. Columbia River Mouth Control Zone closed. No more than 4 spreads per line. Gear restricted to plugs and/or whole bait 6 inches or larger. Open period landing restriction at 50 coho per opening. All salmon must be delivered in this area or adjacent closed area within 24 hours of each closure.
<u>Queets River to Cape Falcon</u> 8/27 - 28	All	Chin. 28"; coho 16"; barbless hooks. Columbia River Mouth Control Zone closed. Open period landing restriction of 35 coho per opening. All salmon must be delivered in this area or adjacent closed area within 24 hours of each closure.
9/1 - 4; 9/9 - 12; 9/16 - 19	All	Chin. 28"; coho 16"; barbless hooks. Columbia River Mouth Control Zone closed. Open period landing restriction of 70 coho per opening. All salmon must be delivered in this area or in adjacent closed area within 24 hours of each closure.
<u>Cape Falcon to Florence S. Jetty</u> 5/1 - 10/31	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per line.
<u>Florence S. Jetty to Cape Arago</u> 5/1 - 6/30; 9/1 - 10/31	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per line.
<u>Cape Arago to Humbug Mtn.</u> 5/1 - 31; 9/1 - 10/31	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per line.
<u>Cape Blanco to Humbug Mtn.</u> 11/1 - 30	All except coho	Chin. 26"; barbless hooks. State waters fishery.
1994 <u>US-Canada border to Cape Falcon</u>	All salmon	Closed to all salmon trolling.
<u>Cape Falcon to Humbug Mtn</u> 5/1 - 6/30	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per wire.

Appendix Table 3 continued.

AREA AND SEASON	SPECIES	SIZE, GEAR, AND OTHER RESTRICTIONS
(1994 continued)		
<u>Cape Falcon to Cascade Head</u> 10/1 - 31	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per wire.
<u>Twin Rocks to Pyramid Rock</u> 11/1 - 15	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per wire.
<u>Cascade Head to Humbug Mtn.</u> 9/1 - 10/31	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per wire. State waters only (0-3 miles).
<u>Cape Blanco to Humbug Mtn.</u> 11/1 - 7	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per wire. State waters only (0-3 miles).
<u>Sisters Rock to House Rock</u> 5/1 - 2; 5/5 - 6; 5/10 - 11; 5/14 - 15; 5/18 - 31.	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per wire. (0-6 miles). All salmon must be landed at Gold Beach, Port Orford, or Brookings within 24 hours of each closure.
<u>Sisters Rock to Mack Arch</u> 8/8 - 9	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per wire. (0-6 miles). Special registration fishery. Daily landing limit of 20 fish. All salmon must be landed at Gold Beach, Port Orford, or Brookings. Trip length limited to 3 days (72 hours).
8/10 - 31	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per wire. (0-6 miles). Special registration fishery. Daily landing limit of 60 fish. All salmon must be landed at Gold Beach, Port Orford, or Brookings. Trip length limited to 3 days (72 hours).
<u>Goat Island to Red Point</u> 10/10 - 25; 10/30 - 31	All except coho	Chin. 26"; barbless hooks. No more than 4 spreads per wire. State waters only (0-3 miles).

Appendix Table 4. Summary of Oregon ocean commercial troll effort and landings of chinook and coho by area of catch, 1979-94.

Year	Area of Catch						Alaska 8	Wash. 1	Calif. 7	Total
	Col. R. 2	Tillamook 3	Newport 4	Coos Bay 5	Brookings 6	OR Subtotal				
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	<100	700	30	39,900
1981	2,500	8,600	11,000	13,400	9,300	44,800	0	200	100	45,200
1982	800	3,600	5,800	13,600	8,900	32,800	0	700	400	33,900
1983	1,100	3,000	7,100	6,900	3,700	21,700	0	200	300	22,200
1984	500	500	1,900	2,300	2,600	7,800	0	100	<100	7,900
1985	600	1,400	4,100	14,000	600	20,800	0	300	<100	21,100
1986	1,200	3,700	8,600	15,800	3,200	32,500	0	<100	<100	32,500
1987	300	7,300	8,700	21,000	2,000	39,300	0	100	<100	39,500
1988	200	10,500	12,500	26,300	1,400	50,800	0	100	100	51,100
1989	900	7,800	9,300	22,900	1,300	42,200	0	<100	<100	42,300
1990	700	5,100	4,300	15,600	400	26,200	0	100	<100	26,200
1991	700	3,400	5,000	5,500	<100	14,600	0	<100	<100	14,700
1992	300	2,600	5,800	400	0	9,100	0	100	0	9,200
1993	200	1,800	5,900	1,600	0	9,600	0	<100	<100	9,600
1994	0	600	2,100	800	300	3,800	0	0	<100	3,800
Chinook										
1979	5,900	5,000	38,600	68,700	123,800	242,000	0	2,600	900	245,500
1980	5,600	7,800	48,700	74,800	68,400	205,300	300	2,900	900	209,400
1981	8,400	12,200	27,100	24,400	86,000	158,200	0	1,000	1,300	160,400
1982	7,300	9,000	27,600	109,200	69,500	222,600	0	7,000	3,100	232,600
1983	5,400	4,900	24,000	19,800	22,000	76,100	0	1,600	1,900	79,600
1984	1,500	1,600	18,700	15,400	24,600	61,800	0	200	300	64,300
1985	5,500	3,300	41,700	155,600	6,100	212,200	0	3,600	800	216,600
1986	6,100	14,100	88,000	240,000	53,700	401,900	0	400	400	402,700
1987	4,600	41,400	87,600	350,400	39,800	523,800	0	3,700	1,800	529,300
1988	1,600	32,800	129,000	268,500	31,600	463,500	500	1,400	4,600	470,000
1989	2,900	30,400	70,700	232,300	17,000	353,200	0	200	100	353,500
1990	2,300	12,400	39,400	175,800	2,200	232,100	0	300	<100	232,500
1991	900	9,500	33,400	30,600	100	74,600	0	<100	100	74,800
1992	1,500	7,300	94,700	6,200	0	109,700	0	800	0	110,500
1993	400	6,300	64,100	10,500	0	81,400	0	0	<100	81,400
1994	0	1,700	18,000	4,000	1,500	25,200	0	0	100	25,300
Coho										
1979	48,700	77,900	211,800	263,100	101,200	702,700	0	11,300	600	714,600
1980	23,500	80,600	137,300	99,200	33,500	374,200	1,800	7,200	40	383,300
1981	41,900	160,400	192,400	161,400	53,500	609,600	0	10,400	300	620,300
1982	24,100	114,800	117,800	227,900	22,300	506,800	0	14,100	1,200	522,200
1983	4,900	63,300	118,000	109,700	22,500	318,400	0	100	1,300	319,800
1984	13,900	0	0	0	0	13,900	0	200	0	14,000
1985	18,300	1,600	12,600	29,400	200	62,100	0	21,900	<100	84,100
1986	46,300	96,700	192,300	86,200	19,100	440,600	0	0	0	440,600
1987	7,400	74,700	83,000	177,000	4,100	346,200	0	7,500	300	354,000
1988	0	172,300	252,500	196,400	1,200	622,400	<100	0	800	623,200
1989	21,100	136,300	137,800	159,500	1,000	455,700	0	0	<100	455,700
1990	10,900	53,300	13,800	43,400	0	121,400	0	900	<100	122,300
1991	26,700	89,000	89,700	101,100	0	306,500	0	300	100	306,900
1992	1,400	7,900	34,900	5,300	0	49,500	0	100	0	49,700
1993	1,600	0	<100	<100	0	1,600	0	<100	0	1,600
1994	0	0	0	0	0	0	0	0	0	0

Appendix Table 5. Oregon commercial troll effort and landings of chinook and coho in number of fish by month, 1979-94^a.

	May	June	July	Aug	Sept	Oct	Nov ^b	Total
EFFORT (Boat Days)								
1979	1,400	<100 ^c	21,500	21,700	1,300	200	800	48,000
1980	2,100	3,700 ^d	12,100	14,600	4,600	2,300	500	39,900
1981	3,300 ^e	-	21,300	16,700	1,600	1,900	500	45,200
1982	2,300	2,100	18,800	5,600	2,800	1,500	600	33,900
1983	1,600	1,900	12,200	4,100	1,200	1,100	100	22,200
1984	400	400	2,100	4,300	200	300	200	7,900
1985	3,100	2,100	6,300	6,600	1,900	900	200	21,100
1986	4,000	4,000	14,300	6,800	2,000	1,300	100	32,500
1987	3,600	3,900	16,300	7,300	5,500	2,700	300	39,500
1988	4,700	6,700	17,000	14,100	3,600	4,500	400	51,100
1989	6,300	7,100	13,600	8,800	3,500	2,200	700	42,300
1990	2,900	3,700	8,300	8,200	1,800	1,000	<100	26,200
1991	800	3,900	4,000	2,400	2,000	1,700	-	14,700
1992	1,600	200	1,500	2,700	1,500	1,700	-	9,200
1993	2,100	1,300	1,800	1,000	2,000	1,200	100	9,600
1994	1,000	1,200	<100	100	300	1,100	100	3,800
Chinook								
1979	11,000	200 ^c	73,600	119,500	13,200	25,200	2,600	245,500
1980	25,800	29,700 ^d	47,700	64,000	25,200	16,000	1,000	209,400
1981	28,600 ^e	-	34,900	65,700	16,900	13,200	1,200	160,400
1982	23,000	14,800	125,400	46,100	15,000	6,900	1,400	232,600
1983	9,500	16,300	34,100	11,500	2,700	4,600	900	79,600
1984	4,600	2,400	17,800	36,900	700	1,000	900	64,300
1985	39,900	14,900	57,900	76,300	21,400	5,300	900	216,600
1986	36,500	52,600	134,100	118,100	34,400	26,100	800	402,700
1987	43,400	56,500	264,200	87,600	60,600	15,100	1,900	529,300
1988	62,600	100,100	100,500	133,900	26,600	44,600	1,700	470,000
1989	100,300	62,500	71,300	75,200	25,100	16,000	3,100	353,500
1990	15,500	33,000	105,900	64,800	9,100	4,200	<100	232,500
1991	3,500	12,800	11,200	16,100	19,600	11,600	-	74,800
1992	20,500	2,300	26,400	31,700	12,300	17,400	-	110,500
1993	21,000	15,500	11,500	11,000	14,600	7,000	1,000	81,400
1994	7,900	8,900	100	200	1,000	6,600	600	25,300
Coho								
1979	-	400 ^c	534,000	178,700	1,600	-	-	714,600
1980	-	-	228,700	137,500	17,100	-	-	383,300
1981	-	-	350,300	270,000	-	-	-	620,300
1982	-	-	522,200	-	-	-	-	522,200
1983	-	-	275,300	36,100	8,400	-	-	319,800
1984	-	-	-	14,000	-	-	-	14,000
1985	-	-	65,700	18,300	-	-	-	84,000
1986	-	12,100	382,200	46,300	-	-	-	440,600
1987	-	4,400	266,100	63,700	19,800	-	-	354,000
1988	-	1,600	387,800	233,800	-	-	-	623,200
1989	-	1,000	374,800	70,000	9,900	-	-	455,700
1990	-	100	82,400	33,200	6,200	300	-	122,300
1991	-	91,100	188,700	16,700	10,400	-	-	306,900
1992	-	-	18,100	31,600	<100	<100 ^f	-	49,700
1993	-	-	200	600	800	<100	-	1,600
1994	-	-	-	-	-	-	-	0

^a Catch statistics 1986-94 are reported by calendar months; monthly effort totals for 1986-94 and catch and effort for 1979-85 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). For 1994, also includes state waters off Tillamook Bay.

^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.

^f Illegal landings.

Appendix Table 6. Oregon commercial ocean troll salmon chinook catch, in number of fish, by statistical week^a and area of catch, 1994.

Stat. Week	Area of Catch									Total
	Col. R. 2	Tillamook 3	Newport 4	Coos Bay 5	Brookings 6	OR Subtotal	Alaska 8	Wash. 1	Calif. 7	
18	-	7	17	11	5	40	0	0	0	40
19	-	16	996	66	38	1,116	0	0	0	1,116
20	-	9	2,649	87	18	2,763	0	0	0	2,763
21	-	28	1,222	167	3	1,420	0	0	0	1,420
22	-	37	2,294	51	154	2,536	0	0	0	2,536
23	-	31	2,861	172	6	3,070	0	0	0	3,070
24	-	60	1,579	303	-	1,942	0	0	0	1,942
25	-	39	968	337	-	1,344	0	0	0	1,344
26	-	51	1,152	593	-	1,796	0	0	0	1,796
27	-	99	487	166	-	752	0	0	0	752
28	-	-	-	-	-	0	0	0	117	117
29	-	-	-	-	-	0	0	0	0	0
30	-	-	-	-	-	0	0	0	0	0
31	-	-	-	-	-	0	0	0	0	0
32	-	-	-	-	-	0	0	0	0	0
33	-	-	-	-	85	85	0	0	0	85
34	-	-	-	-	81	81	0	0	0	81
35	-	-	-	-	44	44	0	0	2	46
36	-	-	167	44	12	223	0	0	0	223
37	-	-	374	66	-	440	0	0	0	440
38	-	-	188	37	-	225	0	0	0	225
39	-	-	67	13	-	80	0	0	0	80
40	-	134	244	37	-	415	0	0	0	415
41	-	600	866	158	-	1,624	0	0	0	1,624
42	-	338	740	280	311	1,669	0	0	0	1,669
43	-	98	602	565	524	1,789	0	0	0	1,789
44	-	82	475	457	121	1,135	0	0	0	1,135
45	-	15	91	296	83	485	0	0	0	485
46	-	7	-	75	-	82	0	0	0	82
47	-	0	-	-	-	0	0	0	0	0
Total	0	1,651	18,039	3,981	1,485	25,156	0	0	119	25,275

^a Refer to Appendix Table 20 for 1994 statistical week calendar.

Appendix Table 7. Estimates of nominal ex-vessel value^a for Oregon ocean troll salmon landings and average price per pound, 1971-94.

Year	Chinook		Coho		Total Value
	\$ Value	\$/lb	\$ Value	\$/lb	
1971	587,000	0.59	3,155,000	0.36	3,742,000
1972	982,000	0.75	2,475,000	0.51	3,457,000
1973	3,520,000	1.02	4,004,000	0.78	7,524,000
1974	2,412,000	1.05	5,525,000	0.76	7,937,000
1975	2,680,000	1.04	3,128,000	0.77	5,808,000
1976	3,410,000	1.77	11,458,000	1.26	14,868,000
1977	7,938,000	2.29	3,546,000	1.34	11,484,000
1978	3,584,000	1.89	3,756,000	1.35	7,340,000
1979	6,639,000	2.57	10,350,000	2.26	16,988,000
1980	5,259,000	2.42	2,926,000	1.34	8,185,000
1981	4,036,000	2.57	5,535,000	1.66	9,571,000
1982	6,094,000	2.59	3,801,000	1.40	9,895,000
1983	1,244,000	1.90	1,052,000	0.96	2,296,000
1984	1,514,000	2.75	118,000	1.67	1,632,000
1985	5,045,000	2.48	729,000	1.51	5,773,000
1986	5,978,000	1.77	1,979,000	1.03	7,958,000
1987	13,324,000	2.57	3,264,000	1.70	16,588,000
1988	13,931,000	3.17	7,614,000	2.28	21,544,000
1989	7,830,000	2.21	2,131,000	1.06	9,961,000
1990	5,454,000	2.50	1,009,000	1.59	6,462,000
1991	1,704,000	2.45	1,395,000	0.98	3,099,000
1992	2,490,000	2.45	222,000	1.07	2,712,000
1993	1,661,000	2.18	10,000	1.13	1,671,000
1994	689,000	2.40	0	NA	689,000

^a Dressed weight value

Appendix Table 8. Recreational ocean salmon sampling rates at Oregon ports, 1985-94.

Port	Percent of Catch Sampled ^a									
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Astoria	57	38	39	49	44	42	50	44	42	-
Garibaldi	47	37	40	32	37	46	34	37	52	24
Pacific City	72	75	75	79	70	72	69	72	84	-
Depoe Bay	60	55	57	50	56	45	48	46	74	40
Newport	36	35	33	39	35	35	28	36	36	-
Florence	29	41	38	46	51	46	33	34	40	33
Winchester Bay	34	33	31	36	44	42	26	25	45	40
Coos Bay	48	50	54	46	46	41	30	39	38	-
Gold Beach	43	63	64	-	-	-	-	-	-	-
Brookings	49	62	57	51	65	47	34	34	58	28
Coastwide percentage	47	44	44	43	43	42	35	37	43	26
Number of samplers	23	23	23	20	20	22	21	21	24 ^b	17
Sampler months	47	62	79	79	70	80	62	64	69 ^b	62

^a Percentage of total catch observed by samplers = number of salmon observed/estimated catch of salmon.

^b Includes 4 samplers (8 sampler months) participating in the Columbia River Control Zone test fishery.

Appendix Table 9. Summary of Oregon's recreational ocean salmon regulations, 1946-94.

Year	Open Area	Open Season	Open Days	Catch Limits			Size Limits (inches)			Gear Restrictions	Misc Regulations
				Daily	7 Day	Annual	Chin.	Coho	Pink		
1946	Statewide	All year	All	3	NA	NA	none	none	none	None	Possession limit of 9 salmon.
1947	Statewide	All year	All	2	NA	NA	none	none	none	None	Possession limit of 6 salmon.
1948-54	Statewide	All year	All	2	NA	20	none	none	none	None	Possession limit of 4 salmon.
1955-57	Statewide	All year	All	2	NA	20	20	20	20	None	Possession limit of 4 salmon.
1958-64	North of Tillamook Head	1/1-6/30; 11/1-12/31	All	2	NA	20	20	20	20	None	Possession limit of 4 salmon.
	North of Tillamook Head	7/1-10/31	All	2	NA	20	22	22	22	None	Possession limit of 4 salmon.
	South of Tillamook Head	All year	All	2	NA	20	20	20	20	None	Possession limit of 4 salmon.
1965-69	Statewide	All year	All	3	NA	20	20	20	20	None	Possession limit of 6 salmon.
1970-75	North of Tillamook Head	All year	All	3	NA	40	20	20	20	None	
	South of Tillamook Head	All year	All	3	NA	40	none	none	none	None	
1976	North of Tillamook Head	4/10-12/31	All	3	NA	40	24	16	none	None	
	South of Tillamook Head	4/10-12/31	All	3	NA	40	none	none	none	None	
1977	North of Tillamook Head	4/30-10/31	All	3	NA	40	24	16	none	None	
	South of Tillamook Head	4/30-10/31	All	3	NA	40	none	none	none	None	
	State waters off Elk and Chetco Rivers	11/1-30	All	3	NA	40	none	NA	NA	None	Chinook only fishery.
1978	North of Cape Falcon	4/29-10/31	All	3	NA	40	24	16	none	None	
	South of Cape Falcon	4/30-10/31	All	3	NA	40	22	16	none	None	
	State waters off Elk and Chetco Rivers	11/1-30	All	3	NA	40	22	NA	NA	None	Chinook only fishery.
1979	North of Cape Falcon	5/12-9/16	All	3	NA	40	24	16	none	None	Only 2 can be chinook or coho.
	South of Cape Falcon	5/12-9/2	All	2	NA	40	22	16	none	None	
	South of Cape Falcon	9/3-16	All	2	NA	40	22	NA	none	None	Closed to coho.
	State waters off Elk River	11/1-30	All	2	NA	40	22	NA	NA	None	Chinook only fishery.
	State waters off Chetco River	9/17-11/30	All	2	NA	40	22	NA	NA	None	Chinook only fishery.
1980	North of Cape Falcon	5/10-7/15	All	3	NA	40	24	16	none	None	
	North of Cape Falcon	7/16-8/31	All	2	NA	40	24	16	none	None	
	North of Cape Falcon (0-3 miles)	9/1-14	All	2	NA	40	24	16	none	None	

Appendix Table 9. Summary of Oregon's recreational ocean salmon regulations, 1946-94.

Year	Open Area	Open Season	Open Days	Catch Limits			Size Limits (inches)			Gear Restrictions	Misc Regulations
				Daily	7 Day	Annual	Chin.	Coho	Pink		
1981	South of Cape Falcon	5/10-7/15	All	3	NA	40	22	16	none	None	
	South of Cape Falcon	7/16-8/31	All	2	NA	40	22	16	none	None	
	South of Cape Falcon (0-3 miles)	9/1-14	All	2	NA	40	22	16	none	None	
	South of Cape Falcon (0-3 miles)	9/15-10/31	All	2	NA	40	22	NA	NA	None	Chinook only fishery.
	State waters off Elk and Chetco Rivers	11/1-30	All	2	NA	40	22	NA	NA	None	Chinook only fishery.
	North of Cape Falcon	5/23-8/25	All	2	NA	40	24	16	none	None	
	North of Cape Falcon (0-3 miles)	8/26-9/7	All	2	NA	40	24	16	none	None	
	South of Cape Falcon	5/15-8/13	All	2	NA	40	22	16	none	None	
	South of Cape Falcon	8/14-25	All	3	NA	40	22	16	none	None	
	South of Cape Falcon (0-3 miles)	8/26-9/20	All	3	NA	40	22	16	none	None	
1982	South of Cape Blanco	9/21-10/31	All	2	NA	40	22	NA	NA	None	Chinook only fishery.
	State waters off Elk and Chetco Rivers	11/1-30	All	2	NA	40	22	NA	NA	None	Chinook only fishery.
	North of Cape Falcon	6/12-7/21	All	2	NA	40	24	16	none	None	
	North of Cape Falcon (0-3 miles)	7/22-7/25	All	2	NA	40	24	16	none	None	
	North of Cape Falcon (0-3 miles)	7/26-8/1	All	2	NA	40	24	16	none	Barbless hooks	Only 1 coho.
	Cape Falcon to Cape Blanco	5/29-6/11	All	2	NA	40	none	NA	NA	Barbless hooks	First 2 chinook only.
	Cape Falcon to Cape Blanco	6/12-7/25	All	2	NA	40	none	none	none	None	First 2 salmon only.
	Cape Falcon to Cape Blanco (0-3 miles)	7/26-8/1	All	2	NA	40	none	none	none	None	First 2 salmon only.
	South of Cape Blanco	5/29-8/1	All	2	NA	40	none	none	none	None	First 2 salmon only.
	South of Cape Blanco	8/2-10/31	All	2	NA	40	none	NA	NA	None	First 2 chinook only.
1983	State waters off Elk and Chetco Rivers	11/1-30	All	2	NA	40	22	NA	NA	None	Chinook only fishery.
	Columbia R. S. Jetty to 46°06'00" (0-3 miles)	6/18-7/29	All	2	NA	40	24	16	none	None	
	46°06'00" to Cape Falcon (0-6 miles)	6/18-7/29	All	2	NA	40	24	16	none	None	
	North of Cape Falcon	7/30-8/15	All	2	NA	40	24	16	none	None	
	Columbia R. S. Jetty to Cape Falcon (0-10 miles)	8/16-9/11	All	2	NA	40	24	16	none	None	
	Cape Falcon to Cape Blanco	6/18-9/18	All	2	NA	40	none	none	none	None	First 2 salmon only.
	Twin Rocks to Pyramid Rock (inside of whistle buoy)	9/19-10/31	All	2	NA	40	none	NA	NA	None	First 2 chinook only.
	South of Cape Blanco	5/28-9/18	All	2	NA	40	none	none	none	None	First 2 salmon only.
1984	South of Cape Blanco	9/19-10/31	All	2	NA	40	none	NA	NA	None	First 2 salmon, except closed to coho.
	State waters off Elk River	11/1-30	All	2	NA	40	none	NA	NA	None	First 2 chinook only.
	Columbia R. S. Jetty to Cape Falcon (0-10 miles)	7/28-8/8	All	2	NA	40	NA	16	none	Barbless hooks	Closed to chinook.
	South of Cape Falcon	7/9-8/7	All	2	NA	40	20	20	none	Barbless hooks	
	Cape Falcon to Cape Blanco (0-3 miles)	8/25-9/3	All	1	NA	40	20	20	none	Barbless hooks	

Appendix Table 9. Summary of Oregon's recreational ocean salmon regulations, 1946-94.

Year	Open Area	Open Season	Open Days	Catch Limits			Size Limits (inches)			Gear Restrictions	Misc Regulations
				Daily	7 Day	Annual	Chin.	Coho	Pink		
	Manhattan Beach to Pyramid Rock (0-3 miles)	9/15-21	All	2	NA	40	20	NA	none	Barbless hooks	Closed to coho.
	South of Cape Blanco	8/8-24	All	2	NA	40	20	NA	none	Barbless hooks	Closed to coho.
	South of Cape Blanco (0-3 miles)	8/25-9/3	All	2	NA	40	20	20	none	Barbless hooks	Only 1 coho.
	South of Cape Blanco	9/4-10/31	All	2	NA	40	20	NA	none	Barbless hooks	Closed to coho.
	Cape Blanco to Humbug Mtn. (0-3 miles)	11/1-30	All	2	NA	40	20	NA	NA	Barbless hooks	Chinook only.
1985	North of Cape Falcon	6/30-8/22	Sun-Thurs	2	NA	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	Cape Falcon to Cape Blanco	7/1-9/2	All	2	6	40	none	none	none	None	First 2 salmon.
	Twin Rocks to Pyramid Rock (0-3 miles)	9/15-10/31	All	2	6	40	none	NA	none	None	First 2 salmon, closed to coho.
	South of Cape Blanco	5/25-9/2	All	2	6	40	none	none	none	None	First 2 salmon.
	South of Cape Blanco	9/3-10/31	All	2	6	40	none	NA	none	None	First 2 salmon, closed to coho.
	Tower Rock to Humbug Mtn. (0-3 miles)	10/1-11/30	All	2	6	40	none	NA	none	None	First 2 salmon, closed to coho.
1986	North of Cape Falcon	6/29-8/19	Sun-Thurs	2	NA	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	Cape Falcon to Cape Blanco	5/24-26; 6/28-7/26	All	2	6	40	none	none	none	None	First 2 salmon.
	Cape Falcon to Cape Blanco	7/27-28	Tues-Sat	2	6	40	none	none	none	None	First 2 salmon.
	Cape Falcon to Cape Blanco	7/29-8/13	Tues-Sat	2	2	40	none	none	none	None	First 2 salmon.
	Twin Rocks to Pyramid Rock (0-3 miles)	9/15-11/15	All	2	6	40	none	NA	none	None	First 2 salmon, closed to coho.
	South of Cape Blanco	5/24-6/22	All	2	6	40	20	20	none	Barbless hooks	Limit of 1 coho and 1 chinook.
	South of Cape Blanco	6/23-9/7	All	2	6	40	20	20	none	Barbless hooks	
	Cape Blanco to Humbug Mtn. (0-3 miles)	10/1-11/26	All	2	6	40	20	NA	none	Barbless hooks	Closed to the take of coho.
	Goat Island to OR/CA Border (east of 124°20'00")	10/1-31	All	2	6	40	20	NA	none	Barbless hooks	Closed to the take of coho.
1987	North of Cape Falcon	6/28-7/18	Sun-Thurs	2	NA	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	North of Cape Falcon (3-200 miles)	7/19-8/8	Sun-Thurs	2	NA	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	North of Cape Falcon	8/9-19	Sun-Thurs	2	NA	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	Cape Falcon to Cape Blanco	6/13-9/13	All	2	6	40	none	none	none	None	
	Twin Rocks to Pyramid Rock (0-3 miles)	9/14-10/31	All	2	6	40	none	NA	none	None	First 2 salmon, closed to coho.
	South of Cape Blanco	5/23-9/13	All	2	6	40	20	20	none	Barbless hooks	
	Cape Blanco to Humbug Mtn. (0-3 miles)	10/1-11/30	All	2	6	40	20	NA	none	Barbless hooks	Closed to the take of coho.
	Goat Island to OR/CA Border (east of 124°20'00")	10/1-31	All	2	6	40	20	NA	none	Barbless hooks	Closed to the take of coho.
1988	North of Cape Falcon (0-3 miles)	7/11-24	Sun-Thurs	2	NA	40	24	16	none	Barbless hooks	Only 1 chinook daily. CRCZ a/ closed.
	Cape Falcon to Orford Reef Buoy (0-27 fathoms)	5/1-27	All	2	6	40	20	16	none	Barbless hooks	First 2 salmon.
	Cape Falcon to Orford Reef Buoy	5/28-9/11	All	2	6	40	20	16	none	Barbless hooks	First 2 salmon.
	Twin Rocks to Pyramid Rock (0-3 miles)	9/12-10/31	All	2	6	40	none	NA	none	None	Closed to the take of coho.
	South of the Orford Reef Buoy	5/28-7/9	All	2	6	40	20	20	none	Barbless hooks	

Appendix Table 9. Summary of Oregon's recreational ocean salmon regulations, 1946-94.

Year	Open Area	Open Season	Open Days	Catch Limits			Size Limits (inches)			Gear Restrictions	Misc Regulations
				Daily	7 Day	Annual	Chin.	Coho	Pink		
	South of the Orford Reef Buoy	7/10-9/11	All	1	6	40	20	20	none	Barbless hooks	
	Orford Reef Red Buoy to Humbug Mtn. (0-3 miles)	10/1-31	All	2	6	40	none	NA	none	Barbless hooks	Closed to the take of coho.
	Cape Blanco to Humbug Mtn. (0-3 miles)	11/1-30	All	2	6	40	none	NA	none	Barbless hooks	Closed to the take of coho.
1989	North of Cape Falcon (0-6 miles)	5/28-6/12	Sun-Mon	2	NA	40	24	NA	none	Barbless hooks	Closed to coho. CRCZ a/ closed.
	North of Cape Falcon	6/26-8/17	Sun-Thurs	2	NA	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	Cape Falcon to Orford Reef Buoy (0-27 fathoms)	5/1-26	All	2	6	40	20	16	none	Barbless hooks	
	Cape Falcon to Orford Reef Buoy	5/27-7/27	All	2	6	40	20	16	none	Barbless hooks	
	Cape Falcon to Orford Reef Buoy	7/28-8/20	Sun-Thurs	2	6	40	20	16	none	Barbless hooks	
	Cape Falcon to Orford Reef Buoy	9/2-4	All	2	6	40	20	16	none	Barbless hooks	
	Twin Rocks to Pyramid Rock (0-3 miles)	9/16-10/31	All	2	6	40	none	NA	none	None	Closed to the take of coho.
	South of the Orford Reef Buoy	5/1-9/30	All	2	6	40	20	20	none	Barbless hooks	
	Cape Blanco to Humbug Mtn. (0-3 miles)	10/1-11/30	All	2	6	40	none	NA	none	Barbless hooks	Closed to the take of coho.
1990	North of Cape Falcon	6/24-8/30; 9/8-9	Sun-Thurs	2	NA	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	Cape Falcon to Humbug Mtn. (0-27 fathoms)	5/1-27	All	2	6	40	20	16	none	Barbless hooks	
	Cape Falcon to Humbug Mtn.	5/28-6/22	All	2	6	40	20	16	none	Barbless hooks	
	Cape Falcon to Humbug Mtn.	6/30-7/31	All	2	6	40	20	16	none	Barbless hooks	
	Cape Falcon to Humbug Mtn.	8/8-9/16	All	2	6	40	20	16	none	Barbless hooks	
	Twin Rocks to Pyramid Rock (0-3 miles)	9/17-10/31	All	2	6	40	none	NA	none	None	Closed to the take of coho.
	South of Humbug Mtn.	5/1-6/29	All	2	6	40	20	20	none	Barbless hooks	
	South of Humbug Mtn.	6/30-8/15	All	2	6	40	20	20	none	Barbless hooks	Not more than 1 chinook daily.
	South of Humbug Mtn.	8/16-9/9	All	2	6	40	20	20	none	Barbless hooks	
1991	North of Cape Falcon	6/24-8/12	Sun-Thurs	2	NA	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	North of Cape Falcon	9/15-18; 9/26	All	2	NA	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	Cape Falcon to Humbug Mtn. (0-27 fathoms)	5/1-26	All	2	6	40	20	16	none	Barbless hooks	
	Cape Falcon to Humbug Mtn.	5/27-7/28	All	2	6	40	20	16	none	Barbless hooks	
	Twin Rocks to Pyramid Rock (0-3 miles)	9/16-10/31	All	2	6	40	none	NA	none	None	Closed to the take of coho.
	South of Humbug Mtn.	5/25-7/28	Thurs-Mon	2	6	40	20	20	none	Barbless hooks	Not more than 1 chinook daily.
	South of Humbug Mtn.	7/23-28	Fri-Sun	2	6	40	20	20	none	Barbless hooks	Not more than 1 chinook daily.
	South of Humbug Mtn.	8/31-9/2	All	2	6	40	20	20	none	Barbless hooks	Not more than 1 chinook daily.
	South of Humbug Mtn.	9/6-29	Fri-Sun	2	6	40	20	20	none	Barbless hooks	Not more than 1 chinook daily.
1992	North of Cape Falcon (0-3 miles)	6/29-7/30	Sun-Thurs	2	4	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	North of Cape Falcon	8/2-6; 9/16-17; 9/27	Sun-Thurs	2	4	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	Cape Falcon to Humbug Mtn. (0-27 fathoms)	5/3-6/11	Sun-Thurs	2	4	20	20	16	none	Barbless hooks	

Appendix Table 9. Summary of Oregon's recreational ocean salmon regulations, 1946-94.

Year	Open Area	Open Season	Open Days	Catch Limits			Size Limits (inches)			Gear Restrictions	Misc Regulations
				Daily	7 Day	Annual	Chin.	Coho	Pink		
	Cape Falcon to Florence S. Jetty	6/14-9/10	Sun-Thurs	2	4	20	20	16	none	Barbless hooks	
	Twin Rocks to Pyramid Rock (0-3 miles)	9/16-10/31	All	2	6	40	none	NA	none	None	Closed to the take of coho.
	Florence S. Jetty to Humbug Mtn.	6/14-7/2	Sun-Thurs	2	4	20	20	16	none	Barbless hooks	
	Florence S. Jetty to Humbug Mtn.	7/5-8/31	Sun-Thurs	2	4	20	NA	16	none	Barbless hooks	Closed to the take of chinook.
	Florence S. Jetty to Humbug Mtn.	9/1-10	Sun-Thurs	2	4	20	20	16	none	Barbless hooks	
	Cape Blanco to Humbug Mtn. (0-3 miles)	10/24-26	All	1	6	40	20	NA	none	Barbless hooks	Closed to the take of coho.
	South of Humbug Mtn.	7/6-20	Mon-Wed	1	6	40	20	20	none	Barbless hooks	
	South of Humbug Mtn.	9/1-7	All	1	6	40	20	20	none	Barbless hooks	
	Goat Island to Red Point (0-3 miles)	10/15-26	All	1	6	40	20	NA	none	Barbless hooks	Closed to the take of coho
1993	North of Cape Falcon	7/5-9/9	Sun-Thurs	2	4	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	North of Cape Falcon	9/12-23	All	2	4	40	24	16	none	Barbless hooks	CRCZ a/ closed.
	Cape Falcon to Humbug Mtn. (0-27 fathoms)	5/1-6/6	All	2	2	10	20	16	none	Barbless hooks	
	Cape Falcon to Humbug Mtn.	7/13-8/10	Sun-Tues	2	2	10	20	16	none	Barbless hooks	
	Twin Rocks to Pyramid Rock (0-3 miles)	9/16-10/31	All	2	6	40	none	NA	none	None	Closed to the take of coho.
	Cape Blanco to Humbug Mtn. (0-3 miles)	10/1-11/30	All	2	6	40	20	NA	none	Barbless hooks	Closed to the take of coho.
	South of Humbug Mtn.	5/5-6/19	Wed-Sat	1	6	40	20	20	none	Barbless hooks	
	South of Humbug Mtn.	7/14-8/28	Wed-Sat	1	6	40	20	20	none	Barbless hooks	
	South of Humbug Mtn.	9/1-6	All	1	6	40	20	20	none	Barbless hooks	
1994	Cape Falcon to Humbug Mtn. (0-27 fathom)	5/1-6/5	All	2	2	10	20	NA	none	Barbless hooks	Closed to the take of coho
	Twin Rocks to Pyramid Rock (0-27 fathom)	6/6-19	All	2	2	10	20	NA	none	Barbless hooks	Closed to the take of coho
	Twin Rocks to Pyramid Rock (0-3 miles)	10/1-11/15	All	2	6	40	none	NA	none	Barbless hooks	Closed to the take of coho
	Cape Blanco to Humbug Mtn. (0-3 miles)	10/1-11/7	All	1	4	40	20	NA	none	Barbless hooks	Closed to the take of coho
	South of Humbug Mtn.	5/1-6/7	All	2	6	40	none	NA	none	Barbless hooks	Closed to the take of coho
	South of Humbug Mtn.	8/27-9/5	All	2	6	40	none	NA	none	Barbless hooks	Closed to the take of coho
	Goat Island to Red Point (0-3 miles)	10/10-25	All	1	4	40	20	NA	none	Barbless hooks	Closed to the take of coho

a/ CRCZ = Columbia River Conservation Zone. This fishery management area has changed in size during a number of years, but in general has been the area off the Columbia River between North Head, Washington and the red buoy line on the Oregon side. The name was changed to Columbia River Control Zone in 1992.

Appendix Table 10. Oregon ocean recreational salmon angler effort, by port and statistical week^a for 1994.

Stat. Week	Garibaldi	Pacific City	Depoe Bay	Newport	Florence	Winchester Bay	Coos Bay	Brookings	Total
18	0	0	0	0	0	2	0	0	2
19	140	0	2	0	37	22	12	1,423	1,636
20	73	0	12	12	6	42	0	1,582	1,727
21	389	0	0	37	25	31	16	1,795	2,294
22	0	1	4	10	6	6	6	1,547	1,579
23	355	0	3	6	63	74	19	1,238	1,758
24	391	-	-	-	-	-	-	58	449
25	185	-	-	-	-	-	-	-	185
26	-	-	-	-	-	-	-	-	0
27	-	-	-	-	-	-	-	-	0
28	-	-	-	-	-	-	-	-	0
29	-	-	-	-	-	-	-	-	0
30	-	-	-	-	-	-	-	-	0
31	-	-	-	-	-	-	-	-	0
32	-	-	-	-	-	-	-	-	0
33	-	-	-	-	-	-	-	-	0
34	-	-	-	-	-	-	-	-	0
35	-	-	-	-	-	-	-	1,383	1,383
36	-	-	-	-	-	-	-	2,535	2,535
37	-	-	-	-	-	-	-	375	375
38	-	-	-	-	-	-	-	-	0
39	5	-	-	-	-	-	-	-	5
40	2,097	-	-	-	-	-	-	-	2,097
41	4,223	-	-	-	-	-	-	-	4,223
42	1,845	-	-	-	-	-	-	2,723	4,568
43	305	-	-	-	-	-	-	1,499	1,804
44	274	-	-	-	-	-	-	-	274
45	3	-	-	-	-	-	-	-	3
46	0	-	-	-	-	-	-	-	0
Total	10,285	1	21	65	137	177	53	16,158	26,897

^a Refer to Appendix Table 20 for 1994 statistical week calendar.

Appendix Table 11. Oregon recreational effort in salmon angler trips by area and month for 1979-94.^a

Area	May	June	July	August	Sept.	Oct.	Nov.	Season ^b
<u>Columbia R.</u>								
1979	800	5,000	14,800	19,700	2,900	-	-	43,300
1980	1,300	7,800	13,700	19,700	3,800	-	-	46,300
1981	1,000	4,900	14,100	20,100	4,600	-	-	44,700
1982	-	4,900	22,300	-	-	-	-	27,200
1983	-	2,700	12,900	11,500	3,800	-	-	30,900
1984	-	-	2,000	5,100	-	-	-	7,100
1985	-	600	7,800	11,600	-	-	-	20,000
1986	-	700	12,100	7,700	-	-	-	20,600
1987	-	600	8,500	8,000	-	-	-	17,100
1988	-	-	5,700	-	-	-	-	5,700
1989	100	1,200	9,200	9,200	-	-	-	19,800
1990	-	1,900	8,900	13,200	1,400	-	-	25,500
1991	-	1,500	9,000	9,400	1,800	-	-	21,700
1992	-	-	-	9,800	1,800	1,300	-	-
1993	-	-	-	6,000	8,200	4,300	-	-
1994	-	-	-	-	-	-	-	-
<u>Tillamook</u>								
1979	900	3,200	11,800	14,500	600	-	-	31,000
1980	400	8,500	17,300	18,100	3,600	-	-	47,800
1981	1,300	2,200	11,500	16,500	6,600	-	-	38,000
1982	100	2,700	21,800	-	-	-	-	24,600
1983	-	1,200	12,600	7,800	3,700	-	-	25,300
1984	-	-	11,800	10,800	1,200	-	-	23,800
1985	-	-	13,000	21,700	2,200	1,600 ^c	-	38,600
1986	<50	1,900	13,000	3,100	-	-	-	17,900
1987	-	1,800	12,400	10,900	3,800	-	-	29,100
1988	300	2,100	9,600	13,800	7,400	-	-	33,300
1989	300	3,000	15,400	12,300	300	-	-	31,300
1990	100	1,200	9,900	16,300	6,000	-	-	33,500
1991	400	4,000	16,600	-	-	-	-	21,000
1992	1,200	3,400	11,700	7,100	2,800	-	-	26,100
1993	800	200	3,100	1,500	-	-	-	5,600
1994	600	900	-	-	-	8,800	0	10,300
<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
1984	-	-	24,000	19,200	800	-	-	44,000
1985	-	-	24,300	44,400	1,800	-	-	70,600
1986	1,400	3,900	38,900	8,000	-	-	-	51,900
1987	-	5,200	40,000	23,200	8,600	-	-	76,900
1988	1,000	7,100	37,900	34,200	9,400	-	-	89,600
1989	900	17,200	37,500	26,300	800	-	-	82,800
1990	700	5,500	32,800	28,300	4,100	-	-	71,400
1991	800	11,800	40,600	-	-	-	-	53,300
1992	1,100	7,100	27,900	14,600	2,400	-	-	53,000
1993	300	100	11,600	5,100	-	-	-	17,100
1994	100	<50	-	-	-	-	-	100

Appendix Table 11 continued.

Area	May	June	July	August	Sept.	Oct.	Nov.	Season ^b
<u>Coos Bay</u>								
1979	4,800	21,500	42,900	25,200	300	-	-	94,700
1980	2,200	32,100	46,200	14,300	2,600	-	-	97,400
1981	6,600	13,900	35,200	22,700	5,500	-	-	83,900
1982	100	12,000	77,300	-	-	-	-	59,400
1983	-	14,200	36,900	13,600	6,900	-	-	71,600
1984	-	-	22,000	17,900	300	-	-	40,200
1985	-	-	33,100	29,200	1,200	-	-	63,500
1986	800	4,900	33,600	4,300	-	-	-	43,600
1987	-	3,900	40,600	12,800	5,200	-	-	62,500
1988	1,300	9,900	33,100	21,000	3,700	-	-	69,000
1989	800	16,200	33,900	15,600	100	-	-	66,600
1990	600	8,800	24,300	24,900	6,400	-	-	65,000
1991	1,000	17,300	39,400	-	-	-	-	57,700
1992	1,400	9,400	28,600	12,800	3,300	-	-	55,600
1993	900	300	10,100	4,000	-	-	-	15,300
1994	200	200	-	-	-	-	-	400
<u>Brookings</u>								
1979	300	4,900	27,100	18,500	3,300	5,000	900	59,900
1980	200	13,300	23,900	10,000	5,300	2,900	400	56,000
1981	2,700	16,500	23,700	19,300	2,300	2,300	300	67,100
1982	400	5,200	39,700	10,200	3,000	2,600	300	61,400
1983	800	9,800	22,700	11,200	6,100	5,000	100	55,700
1984	-	-	15,100	16,800	2,900	3,100	-	38,000
1985	4,600	-	28,500	19,300	2,600	4,000	-	59,000
1986	3,600	10,400	20,100	13,000	600	5,000	-	52,700
1987	2,300	10,000	29,000	15,200	7,100	5,900	-	69,400
1988	800	14,200	25,200	11,300	1,600	-	-	53,100
1989	3,100	15,700	26,600	16,300	4,100	-	-	65,800
1990	1,400	14,500	22,800	11,500	800	-	-	51,100
1991	1,100	11,600	17,800	1,900	4,000	-	-	36,400
1992	-	-	8,900	-	4,900	3,900	-	17,600
1993	3,700	2,700	6,500	8,100	2,800	-	-	23,800
1994	6,300	1,300	-	1,400	2,900	4,200	-	16,100
<u>All Areas</u>								
1979	8,900	42,800	129,800	106,700	7,300	5,000	900	301,300
1980	5,900	78,400	140,000	84,700	19,100	2,900	400	331,400
1981	13,800	45,700	112,200	110,300	26,400	2,300	300	311,000
1982	700	32,100	177,100	10,200	3,000	2,600	300	226,000
1983	800	31,500	108,000	55,100	25,500	5,000	100	226,000
1984	-	-	74,900	69,800	5,300	3,100	-	153,100
1985	4,600	600	106,800	126,200	7,800	5,600	-	251,600
1986	5,700	21,900	117,700	36,000	600	5,000	-	187,000
1987	2,300	21,500	130,500	70,200	24,700	5,900	-	255,100
1988	3,500	33,200	111,500	80,400	22,100	-	-	250,700
1989	5,300	53,400	122,600	79,700	5,300	-	-	266,300
1990	2,800	32,000	98,700	94,300	18,800	-	-	246,600
1991	3,400	46,200	123,400	11,300	5,800	-	-	190,100
1992	3,700	19,900	86,900	36,300	14,700	3,900	-	165,300
1993	5,800	3,300	37,300	26,900	7,100	-	-	80,300
1994	7,200	2,400	-	1,400	2,900	13,000	0	26,900

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

^c Only 600 were ocean only trips. Most were combination bay-ocean trips.

Appendix Table 12. Summary of Oregon recreational ocean salmon effort and catch by area, 1976-94.

Year	Area ^a					Total
	Columbia R.	Tillamook	Newport	Coos Bay	Brookings	
EFFORT (Salmon Angler Trips)^b						
1976	100,900	56,500	132,200	154,600	94,200	538,400
1977	60,500	57,500	92,200	113,000	81,200	404,500
1978	63,400	31,700	115,600	104,400	88,600	403,700
1979	43,300	31,000	72,400	94,700	59,900	301,300
1980	46,300	47,800	83,900	97,400	56,000	331,400
1981	44,700	38,000	77,300	83,900	67,100	311,000
1982	27,200	24,600	53,500	59,400	61,300	226,000
1983	30,900	25,300	42,600	71,600	55,700	226,000
1984	7,100	23,800	44,000	40,200	38,000	153,100
1985	20,200	38,500	70,600	63,500	59,000	251,600
1986	20,600	17,900	52,200	43,600	52,700	187,000
1987	17,100	29,100	76,900	62,500	69,400	255,100
1988	5,700	33,300	89,600	69,000	53,100	250,700
1989	19,800	31,300	82,800	66,600	65,800	266,300
1990	25,500	33,500	71,400	65,000	51,100	246,600
1991	21,700	21,000	53,300	57,700	36,400	190,100
1992	12,900	26,100	53,000	55,600	17,600	165,300
1993	18,500	5,600	17,100	15,300	23,800	80,300
1994 ^c	0	10,300	100	400	16,100	26,900
Chinook						
1976	44,600	2,300	4,600	14,600	13,200	79,300
1977	22,600	1,500	2,600	22,700	11,800	61,400
1978	7,900	800	2,100	4,800	7,300	22,800
1979	7,500	1,000	1,400	4,500	6,400	20,900
1980	5,500	1,600	1,800	5,300	4,800	19,000
1981	11,500	1,900	2,400	4,500	8,900	29,200
1982	8,200	1,400	3,500	10,100	15,500	38,700
1983	3,400	700	1,600	6,600	12,400	24,700
1984	<100	1,100	2,000	4,900	9,000	17,000
1985	3,600	2,600	4,100	9,500	36,100	55,900
1986	1,900	500	2,300	6,100	12,000	22,800
1987	4,100	3,500	6,400	19,000	26,400	59,400
1988	500	2,700	5,300	8,100	21,700	38,300
1989	1,500	900	1,800	6,700	21,200	32,000
1990	3,300	1,200	2,700	6,600	12,700	26,500
1991	1,000	700	900	5,100	6,800	14,400
1992	500	1,500	4,100	3,800	2,700	12,600
1993	900	300	400	1,100	3,800	6,500
1994 ^c	0	2,400	<50	<50	3,600	6,000
Coho						
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	62,700	16,300	146,900
1984	10,900	20,300	41,200	39,400	11,500	123,300
1985	31,000	31,000	61,800	51,200	7,400	182,400
1986	39,100	24,300	80,400	63,200	12,000	218,900
1987	25,600	16,400	65,300	54,100	19,000	180,500
1988	9,800	29,900	100,800	71,200	15,000	226,900
1989	34,300	30,300	102,500	73,100	33,000	273,300
1990	36,100	22,900	64,100	62,200	15,300	200,600
1991	39,400	25,600	81,100	90,800	22,200	259,100
1992	22,300	20,800	63,500	76,000	3,300	185,800
1993	22,300	2,300 ^d	16,400	12,200	6,000	59,300
1994 ^c	0	<50 ^d	0	0	<50 ^d	<50 ^d

^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 1976-1978 effort includes a small number of bottomfishing trips.

^c Preliminary.

^d Represents illegal coho landings.

Appendix Table 13. Oregon ocean recreational chinook catch (number of fish) by catch area and month, 1979-94.

Area ^a	Chinook							Season ^b
	May	June	July	August	Sept.	Oct.	Nov.	
<u>Columbia River</u>								
1979	600	1,600	2,100	3,100	100	-	-	7,500
1980	100	1,200	1,400	2,500	400	-	-	5,500
1981	<50	400	3,200	6,700	1,200	-	-	11,500
1982	-	2,200	6,000	-	-	-	-	8,200
1983	-	1,000	1,600	500	200	-	-	3,400
1984	-	-	-	-	-	-	-	-
1985	-	100	1,300	2,200	-	-	-	3,600
1986	-	100	1,200	700	-	-	-	1,900
1987	-	200	2,000	1,900	-	-	-	4,100
1988	-	-	500	-	-	-	-	500
1989	<50	200	200	1,100	-	-	-	1,500
1990	-	100	900	2,200	100	-	-	3,300
1991	-	100	300	500	<50	-	-	1,000
1992	-	-	300	200	<50	-	-	500
1993	-	-	300	400	200	-	-	900
1994	-	-	-	-	-	-	-	0
<u>Tillamook</u>								
1979	<50	<50	600	300	<50	-	-	1,000 ^c
1980	<50	200	300	800	200	-	-	1,600 ^c
1981	<50	<50	600	900	400	-	-	1,900 ^c
1982	-	100	1,300	-	-	-	-	1,400
1983	-	100	400	200	100	-	-	700
1984	-	-	600	500	100	-	-	1,100
1985	-	-	1,100	1,400	100	<100	-	2,600
1986	0	<50	200	200	-	-	-	500
1987	-	100	800	2,000	600	-	-	3,500
1988	<50	100	300	1,300	1,000	-	-	2,700
1989	<50	100	300	400	<50	-	-	900
1990	0	100	500	400	300	100	-	1,200
1991	<50	300	400	-	-	-	-	700
1992	100	300	600	300	200	-	-	1,500
1993	100	<50	200	<50	-	-	-	300
1994	100	100	-	-	-	2,200	0	2,400
<u>Newport</u>								
1979	200	300	500	400	<50	-	-	1,400 ^d
1980	100	600	600	400	200	-	-	1,800 ^d
1981	<50	100	1,100	1,000	200	-	-	2,400 ^d
1982	-	600	2,900	-	-	-	-	3,500
1983	-	400	800	300	200	-	-	1,600
1984	-	-	1,100	900	100	-	-	2,000
1985	-	-	1,400	2,600	100	-	-	4,100
1986	100	100	1,900	100	-	-	-	2,300
1987	-	200	2,400	2,100	1,700	-	-	6,400
1988	100	800	2,200	1,700	500	-	-	5,300
1989	100	700	500	400	<50	-	-	1,800
1990	<50	300	1,400	800	200	-	-	2,700
1991	100	400	400	-	-	-	-	900
1992	100	300	2,800	900	100	-	-	4,100
1993	<50	0	300	100	-	-	-	400
1994	-	-	-	-	-	-	-	0
<u>Coos Bay</u>								
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

Appendix Table 13 continued.

Area ^a	Chinook							Season ^b
	May	June	July	August	Sept.	Oct.	Nov.	
<u>Coos Bay cont.</u>								
1983	-	1,300	2,400	1,100	1,700	-	-	6,600
1984	-	-	2,200	2,600	100	-	-	4,900
1985	-	-	4,400	4,900	100	-	-	9,500
1986	<50	1,000	4,500	500	-	-	-	6,100
1987	-	900	10,700	4,600	2,800	-	-	19,000
1988	200	1,700	2,800	3,100	200	-	-	8,100
1989	100	1,800	4,300	600	<50	-	-	6,700
1990	<50	600	2,800	2,300	800	-	-	6,600
1991	<50	2,100	2,900	-	-	-	-	5,100
1992	100	2,000	1,000	300	400	-	-	3,800
1993	100	<50	600	400	-	-	-	1,100
1994	0	0	-	-	-	-	-	0
<u>Brookings</u>								
1979	<50	300	2,100	3,400	<50	600	100	6,400
1980	<50	1,300	1,700	1,000	400	300	100	4,800
1981	500	2,200	3,200	2,600	100	300	<50	8,900
1982	<50	800	12,700	1,500	200	200	<50	15,500
1983	500	3,400	4,900	1,500	1,000	1,000	<50	12,400
1984	-	-	1,900	5,600	1,100	400	-	9,000
1985	2,500	-	23,000	9,700	400	600	-	36,100
1986	1,100	2,800	3,500	3,900	<50	600	-	12,000
1987	100	3,800	9,800	5,600	5,900	1,100	-	26,400
1988	100	12,400	6,500	2,600	100	-	-	21,700
1989	400	3,600	9,400	6,800	1,000	-	-	21,200
1990	400	4,600	6,500	1,200	<50	-	-	12,700
1991	<50	4,100	2,300	100	300	-	-	6,800
1992	-	-	1,500	-	400	700	-	2,700
1993	1,100	200	600	1,300	500	-	-	3,800
1994	1,900	100	-	300	300	1,100	-	3,600
<u>All Areas</u>								
1979	1,000	4,600	6,700	7,700	200	600	100	20,900
1980	300	4,700	6,900	5,400	1,300	300	100	19,000
1981	700	3,100	10,300	12,500	2,200	300	<50	29,200
1982	<50	4,700	31,900	1,500	200	200	<50	38,700
1983	500	6,100	10,100	3,600	3,300	1,000	-	24,700
1984	-	-	5,800	9,600	1,200	400	-	17,000
1985	2,500	100	31,400	20,800	600	600	-	55,900
1986	1,200	4,100	11,400	5,400	<50	600	-	22,800
1987	100	5,300	25,800	16,100	11,000	1,100	-	59,400
1988	400	15,000	12,400	8,700	1,900	-	-	38,300
1989	600	6,400	14,700	9,300	1,100	-	-	32,000
1990	400	5,700	12,100	6,900	1,400	100	-	26,500
1991	200	7,000	6,300	600	300	-	-	14,400
1992	200	2,500	6,200	1,700	1,200	700	-	12,600
1993	1,300	200	1,900	2,300	700	-	-	6,400
1994	1,900	300	0	300	300	3,300	-	6,000

^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 from 1979 through 1987.

^b Individual monthly catches may not equal season total due to rounding. Season totals for individual catch areas for 1974-75 data may not equal the sum of combined months due to some effort/landings not identified by port of landing. "All Areas" summary includes unidentified data.

^c Includes Nehalem Bay.

^d Includes Salmon and Siletz Rivers and Alsea Bay.

^e Catch estimates for the fall state waters fishery off the mouth of Tillamook Bay, are not included for 1983, 1984, 1986-89, or 1991-93.

Appendix Table 14. Oregon ocean recreational chinook catch, by port and statistical week^a for 1994.

Stat. Week	Garibaldi	Pacific City	Depoe Bay	Newport	Florence	Winchester Bay	Coos Bay	Brookings	Total
18	0	0	0	0	0	0	0	0	0
19	8	0	2	0	0	0	0	562	572
20	0	0	3	0	0	1	0	347	351
21	51	0	0	0	0	3	0	674	728
22	0	0	0	0	0	2	0	295	297
23	70	0	0	0	3	9	0	92	174
24	42	-	-	-	-	-	-	12	54
25	23	-	-	-	-	-	-	-	23
26	-	-	-	-	-	-	-	-	0
27	-	-	-	-	-	-	-	-	0
28	-	-	-	-	-	-	-	-	0
29	-	-	-	-	-	-	-	-	0
30	-	-	-	-	-	-	-	-	0
31	-	-	-	-	-	-	-	-	0
32	-	-	-	-	-	-	-	-	0
33	-	-	-	-	-	-	-	-	0
34	-	-	-	-	-	-	-	-	0
35	-	-	-	-	-	-	-	272	272
36	-	-	-	-	-	-	-	244	244
37	-	-	-	-	-	-	-	40	40
38	-	-	-	-	-	-	-	-	0
39	-	-	-	-	-	-	-	-	0
40	492	-	-	-	-	-	-	-	492
41	966	-	-	-	-	-	-	-	966
42	598	-	-	-	-	-	-	644	1,242
43	54	-	-	-	-	-	-	434	488
44	94	-	-	-	-	-	-	-	94
45	0	-	-	-	-	-	-	-	0
46	0	-	-	-	-	-	-	-	0
Total	2,398	0	5	0	3	15	0	3,616	6,037

^a Refer to Appendix Table 20 for 1994 statistical week calendar.

Appendix Table 15. Oregon ocean recreational coho catch (number of fish) by catch area and month, 1979-94.

Area ^a	Coho						
	May	June	July	August	Sept.	Oct.	Season ^b
<u>Columbia R.</u>							
1979	400	6,500	13,300	16,300	1,500	-	38,000
1980	1,800	17,300	19,800	15,600	1,200	-	55,600
1981	1,700	8,300	18,100	20,200	6,000	-	54,300
1982	-	5,300	30,200	-	-	-	35,500
1983	-	3,600	18,900	9,700	5,100	-	37,200
1984	-	-	3,600	7,300	-	-	10,900
1985	-	700	11,600	18,800	-	-	31,000
1986	-	1,700	23,300	14,100	-	-	39,100
1987	-	900	12,500	12,300	-	-	25,600
1988	-	-	9,800	-	-	-	9,800
1989	-	1,600	17,500	15,200	-	-	34,300
1990	-	3,500	14,700	16,600	1,300	-	36,100
1991	-	2,400	16,400	17,200	3,400	-	39,400
1992	-	-	17,900	3,000	1,400	-	22,300
1993	-	-	7,600	10,900	3,800	-	22,300
1994	-	-	-	-	-	-	0
<u>Tillamook</u>							
1979	100	1,100	2,600	5,600	<50	-	9,400 ^c
1980	100	7,100	10,800	10,300	600	-	28,900 ^c
1981	300	1,000	5,600	9,600	1,300	-	17,700
1982	-	1,300	21,800	-	-	-	23,100
1983	-	200	6,100	1,600	900	-	8,800
1984	-	-	9,300	10,600	500	-	20,300
1985	-	-	8,900	21,700	400	-	31,000
1986	0	3,400	15,800	5,100	-	-	24,300
1987	-	600	10,200	4,900	700	-	16,400
1988	100	1,800	8,200	14,200	5,700	-	29,900
1989	<50	3,400	19,700	7,000	100	-	30,100
1990	0	900	8,800	12,400	800	-	22,900
1991	<50	2,500	23,100	-	-	-	25,600
1992	100	1,800	11,300	6,100	1,400	-	20,800
1993	<50	<50	900	1,400	-	-	2,300
1994	-	-	-	-	<50 ^e	<50 ^e	<50 ^e
<u>Newport</u>							
1979	200	3,700	18,700	13,600	<50	-	36,300 ^d
1980	200	18,500	41,500	10,800	1,400	-	72,400 ^d
1981	400	6,300	20,700	30,500	7,000	-	61,900
1982	-	3,600	40,500	-	-	-	44,000
1983	-	600	13,500	4,300	3,500	-	21,800
1984	-	-	24,700	16,400	100	-	41,200
1985	-	-	14,900	45,600	1,400	-	61,800
1986	1,500	7,600	57,400	13,900	-	-	80,400
1987	-	1,300	43,100	14,500	6,300	-	65,300
1988	200	6,400	45,800	42,800	5,600	-	100,800
1989	800	24,200	47,400	29,600	600	-	102,500
1990	200	5,800	37,900	19,000	1,200	-	64,100
1991	100	15,200	65,800	-	-	-	81,100
1992	<50	9,700	34,700	16,900	2,200	-	63,500
1993	<50	<50	9,400	7,000	-	-	16,400
1994	-	-	-	-	-	-	0
<u>Coos Bay</u>							
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

Appendix Table 15 continued.

Area ^a	Coho						
	May	June	July	August	Sept.	Oct.	Season ^b
<u>Coos Bay cont.</u>							
1984	-	-	19,600	19,700	100	-	39,400
1985	-	-	30,900	19,700	500	-	51,200
1986	1,100	8,000	48,000	6,100	-	-	63,200
1987	-	1,000	44,600	6,400	2,100	-	54,100
1988	100	10,700	42,200	17,200	1,000	-	71,200
1989	700	22,300	38,500	11,600	<50	-	73,100
1990	<50	12,400	23,500	23,200	3,100	-	62,200
1991	800	23,400	66,500	-	-	-	90,800
1992	500	13,100	43,800	15,800	2,700	-	76,000
1993	100	100	7,600	4,400	-	-	12,200
1994	-	-	-	-	-	-	0
<u>Brookings</u>							
1979	<50	1,600	14,500	2,100	-	-	18,200
1980	100	17,700	13,400	1,400	500	-	33,000
1981	500	2,600	1,400	3,800	<100	-	8,300
1982	<50	1,700	15,200	-	-	-	16,900
1983	500	4,900	8,900	1,600	500	-	16,300
1984	-	-	7,400	4,000	200	-	11,500
1985	<50	-	4,900	2,500	<50	-	7,400
1986	1,500	2,600	5,700	2,100	0	<50	12,000
1987	<50	500	14,000	3,100	1,400	<50	19,000
1988	<50	1,000	12,100	1,800	100	-	15,000
1989	200	4,200	20,300	7,500	800	-	33,000
1990	100	8,400	5,000	1,800	<50	-	15,300
1991	0	10,200	10,600	500	900	-	22,200
1992	-	-	2,800	-	400	-	3,300
1993	100	100	1,900	3,400	500	-	6,000
1994	-	-	-	<50 ^e	<50 ^e	-	<50 ^e
<u>All Areas</u>							
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	12,900	-	200,600
1982	<50	24,100	151,000	-	-	-	175,100
1983	500	30,000	75,600	26,400	14,400	-	146,900
1984	-	-	64,600	57,900	900	-	123,300
1985	<50	700	71,100	108,200	2,300	-	182,400
1986	4,100	23,300	150,100	41,300	-	<50	218,900
1987	<50	4,300	124,400	41,200	10,500	<50	180,500
1988	300	20,000	118,200	76,100	12,300	-	226,900
1989	1,600	55,900	143,400	70,900	1,500	-	273,300
1990	300	31,000	89,800	73,000	6,500	-	200,600
1991	900	53,800	182,400	17,700	4,300	-	259,100
1992	600	24,700	110,600	41,700	8,200	-	185,800
1993	200	200	27,500	27,100	4,300	-	59,300
1994	0	0	0	<50 ^e	<50 ^e	<50 ^e	<50 ^e

- ^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. Season totals for individual catch areas for 1974-1975 data may not equal the sum of combined months due to some effort/landings not identified by port of landing. "All Areas" summary includes unidentified data.
- ^c Includes Nehalem Bay.
- ^d Includes Salmon and Siletz Rivers and Alsea Bay.
- ^e Illegal coho landings during closed season.

Appendix Table 16. Oregon ocean recreational coho catch, by port and statistical week^a for 1994.

Stat. Week	Astoria	Garibaldi	Pacific City	Depoe Bay	Newport	Florence	Winchester Bay	Coos Bay	Brookings	Total
19	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	13	13
36	-	-	-	-	-	-	-	-	4	4
37	-	-	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-
40	-	7	-	-	-	-	-	-	-	7
41	-	10	-	-	-	-	-	-	-	10
42	-	5	-	-	-	-	-	-	-	5
43	-	-	-	-	-	-	-	-	-	-
44	-	7	-	-	-	-	-	-	-	7
Total	0	29 ^b	0	0	0	0	0	0	17 ^b	46 ^b

^a Refer to Appendix Table 20 for 1994 statistical week calendar.

^b Coho were prohibited in 1994, these were illegal landings.

Appendix Table 17. The number of Oregon charter boats active during the ocean salmon fishery by port and year.

Port	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Astoria	50	42	46	50	48	42	41	34	30	24	NA
Garibaldi	18	22	20	20	24	20	18	17	17	13	15
Pacific City	4	4	3	2	3	3	0	0	0	0	0
Depoe Bay	19	17	19	24	24	24	24	23	23	21	20
Newport	33	33	30	32	32	31	33	30	33	30	33
Florence	0	1	1	1	1	1	1	2	1	1	1
Winchester Bay	10	10	12	10	10	8	9	8	8	6	2
Coos Bay	6	7	5	5	5	5	5	4	4	4	4
Gold Beach	3	3	3	2	2	1	1	1	1	1	2
Brookings	3	3	5	5	9	7	9	10	6	4	4
Total	146	142	144	151	158	139	141	129	123	103	81

Appendix Table 18. Oregon ocean recreational salmon effort and catch by boat type, 1979-94^a and 1979-93 average, in thousands.

Year	Angler Trips		Chinook Catch		Coho Catch	
	Charter	Private	Charter	Private	Charter	Private
1979	73.7	187.7	5.4	13.3	59.8	101.8
1980	79.0	218.9	5.1	11.9	98.3	207.5
1981	65.4	245.8	6.6	22.5	64.5	135.3
1982	43.3	182.7	8.2	30.6	48.5	126.7
1983	41.9	184.1	4.7	20.0	39.7	107.2
1984	24.3	128.7	2.2	14.8	27.3	96.1
1985	53.4	198.2	9.2	46.6	60.2	122.8
1986	43.7	143.3	4.2	18.7	75.0	143.9
1987	60.9	194.2	14.3	45.1	61.9	118.7
1988	62.5	188.2	7.3	31.0	73.5	153.3
1989	60.2	206.1	4.2	27.9	85.8	187.5
1990	55.3	191.2	5.1	21.5	61.6	139.1
1991	40.3	149.7	1.9	12.5	68.9	190.2
1992	30.0	135.4	2.7	9.9	46.2	139.6
1993	13.4	66.9	0.9	5.6	16.2	43.1
1979-93	49.8	174.7	5.5	22.1	59.2	134.2
1994 ^b	1.4	25.5	0.5	5.5	0.0	0.0

^a Salmon data from surveyed ports only. These include Astoria, Garibaldi, Depoe Bay, Newport, Winchester Bay, Coos Bay and Brookings. Since 1981 Pacific City and Florence have also been included. Gold Beach data are included from 1981-1987.

^b Preliminary.

Appendix Table 19. Oregon ocean recreational salmon effort and catch, by boat type and port, 1979-94.

	SALMON ANGLER TRIPS		CATCH			
	Charter	Private	Chinook		Coho	
			Charter	Private	Charter	Private
<u>Columbia River</u>						
1979	18,511	24,267	3,415	3,657	20,124	17,770
1980	26,250	20,065	3,122	2,381	37,666	17,981
1981	15,967	28,728	4,298	7,218	23,679	30,615
1982	11,794	15,442	3,950	4,285	17,184	18,292
1983	12,901	17,950	1,694	1,746	17,661	19,584
1984	2,704	4,406	5	21	4,409	6,465
1985	8,328	11,693	1,469	2,098	14,466	16,543
1986	7,717	12,826	660	1,396	16,429	22,634
1987	8,044	9,086	1,935	2,128	13,423	12,224
1988	2,425	3,243	231	250	4,306	5,539
1989	9,126	10,711	524	940	16,863	17,441
1990	8,497	17,024	1,107	2,212	14,140	21,970
1991	8,102	13,552	334	649	15,501	23,862
1992	4,589	8,336	172	336	8,766	13,514
1993	5,840	12,709	336	575	8,590	13,759
1979-93 avg.	10,053	14,003	1,550	1,993	15,547	17,213
1994	NA	NA	-	-	-	-
<u>Garibaldi</u>						
1979	2,786	16,288	47	664	1,246	4,722
1980	3,688	29,347	75	722	3,302	16,105
1981	2,862	30,907	177	1,601	1,936	12,992
1982	1,859	16,588	729	671	16,513	14,159
1983	1,743	21,516	54	543	1,203	6,708
1984	2,356	16,816	147	731	2,855	12,432
1985	4,855	26,824	465	1,710	6,536	17,101
1986	2,856	11,824	110	279	5,245	13,781
1987	5,217	18,986	872	2,205	4,782	7,886
1988	7,065	21,548	604	1,738	9,003	16,181
1989	4,945	21,355	114	564	7,229	16,127
1990	5,470	24,085	209	794	5,979	13,120
1991	2,535	15,269	44	558	4,446	16,316
1992	2,721	17,887	117	1,045	4,089	10,331
1993	476	3,802	18	238	295	925
1979-93 avg.	3,429	19,536	252	938	4,977	11,926
1994	1,228	9,057	427	1,971	-	29
<u>Pacific City</u>						
1979	NA	NA	-	-	-	-
1980	NA	NA	-	-	-	-
1981	230	4,012	9	108	110	2,655
1982	210	5,947	5	626	267	6,280
1983	90	1,958	3	92	35	862
1984	142	4,465	2	225	219	4,779
1985	477	6,400	36	399	650	6,696
1986	117	3,134	2	85	205	5,048
1987	238	4,610	27	440	328	3,432
1988	196	4,449	11	366	148	4,563
1989	254	4,743	5	187	383	6,584
1990	0	3,941	0	228	0	3,813
1991	0	3,220	0	84	0	4,888
1992	0	5,527	0	341	0	6,338
1993	0	1,293	0	41	0	1,103
1981-93 avg.	150	4,131	8	248	180	4,388
1994	0	1	0	0	0	0

Appendix Table 19 continued.

	SALMON ANGLER TRIPS		CATCH			
	Charter	Private	Chinook		Coho	
			Charter	Private	Charter	Private
<u>Depoe Bay</u>						
1979	14,535	7,511	197	130	8,435	3,867
1980	14,489	10,251	260	160	15,477	8,783
1981	12,423	9,584	382	399	11,376	7,406
1982	7,883	9,762	421	857	8,608	9,803
1983	5,699	7,464	138	244	3,150	3,900
1984	5,335	8,657	305	475	5,572	8,987
1985	11,918	13,069	691	808	13,155	13,580
1986	10,427	7,156	293	170	18,049	10,839
1987	14,669	11,638	1,394	1,115	14,976	10,697
1988	18,732	13,313	793	582	20,801	14,921
1989	15,592	11,342	310	237	21,255	14,413
1990	14,027	9,228	411	300	14,407	8,630
1991	9,018	6,592	147	82	14,937	10,650
1992	7,448	8,448	573	546	10,937	10,934
1993	2,304	2,297	41	65	2,397	2,781
1979-93 avg.	10,967	9,087	424	411	12,235	9,346
1994	0	21	2	3	-	-
<u>Newport</u>						
1979	12,144	37,848	249	832	5,770	18,055
1980	12,210	46,324	288	1,058	9,261	38,443
1981	13,104	42,231	480	1,151	12,000	31,071
1982	6,754	29,081	517	1,689	5,957	19,679
1983	5,836	23,560	308	918	3,561	11,237
1984	5,793	24,175	436	746	6,904	19,774
1985	11,216	34,351	669	1,924	12,052	23,100
1986	9,529	25,038	486	1,319	17,020	34,462
1987	13,725	36,917	1,600	2,332	13,250	26,343
1988	15,440	42,152	1,097	2,863	20,367	44,761
1989	12,731	43,098	361	925	18,899	47,914
1990	12,583	35,559	706	1,241	14,201	26,872
1991	10,214	27,431	219	432	17,358	38,122
1992	7,345	29,808	1,119	1,899	10,234	31,441
1993	2,431	10,080	80	250	2,903	8,303
1979-93 avg.	10,070	32,510	574	1,305	11,316	27,972
1994	0	65	0	0	-	-
<u>Florence</u>						
1979	-	-	-	-	-	-
1980	-	-	-	-	-	-
1981	13	13,179	0	764	1	7,050
1982	0	8,687	0	1,749	0	6,825
1983	98	7,732	13	564	33	3,003
1984	0	8,673	0	1,370	0	8,118
1985	396	13,350	57	1,460	365	8,968
1986	625	8,270	89	1,175	1,245	11,470
1987	625	12,927	196	3,166	450	9,794
1988	716	14,357	23	1,431	707	15,485
1989	0	12,176	0	1,755	0	10,744
1990	429	15,358	11	980	314	13,852
1991	468	12,048	24	1,008	615	19,195
1992	595	15,177	6	545	836	21,355
1993	173	3,726	5	173	141	2,173
1981-93 avg.	318	11,205	33	1,242	362	10,618
1994	0	137	0	3	-	-

Appendix Table 19 continued.

	SALMON ANGLER TRIPS		CATCH			
	Charter	Private	Chinook		Coho	
			Charter	Private	Charter	Private
<u>Winchester Bay</u>						
1979	14,795	34,133	668	2,089	15,385	28,473
1980	11,405	43,969	731	2,769	17,882	66,514
1981	11,096	33,393	523	2,036	7,767	22,776
1982	7,186	24,923	1,052	3,540	8,008	24,156
1983	8,273	32,654	905	3,212	8,124	27,682
1984	4,253	17,444	508	2,067	4,651	16,790
1985	8,691	25,708	2,249	3,802	8,960	20,571
1986	6,888	16,192	839	1,564	11,926	22,463
1987	10,169	22,087	4,777	6,906	9,518	18,817
1988	11,399	26,882	1,807	3,397	12,781	27,287
1989	9,582	26,219	712	2,659	12,696	29,734
1990	9,113	26,374	1,234	2,634	9,012	27,048
1991	5,553	23,400	380	2,054	9,964	36,714
1992	5,027	21,282	403	1,653	8,295	28,889
1993	1,145	5,483	134	357	1,022	4,277
1979-93 avg.	8,305	25,343	1,128	2,716	9,733	26,813
1994	6	171	1	14	-	-
<u>Coos Bay</u>						
1979	7,925	18,788	480	543	8,173	11,502
1980	8,241	21,254	349	861	13,275	28,199
1981	6,481	19,738	319	813	6,803	13,251
1982	4,231	14,328	1,012	2,732	5,203	11,392
1983	3,687	19,184	357	1,532	4,958	18,854
1984	1,647	8,219	152	757	1,934	7,945
1985	3,376	11,980	569	1,319	3,424	8,874
1986	2,129	9,501	469	1,921	3,729	12,408
1987	3,607	13,112	969	2,954	3,521	12,049
1988	3,446	12,213	488	934	4,130	10,860
1989	3,553	15,082	212	1,343	4,691	15,249
1990	2,689	11,066	269	1,479	2,294	9,675
1991	2,374	13,839	102	1,488	4,139	20,153
1992	1,768	11,709	161	995	2,897	13,693
1993	454	4,341	108	307	568	4,010
1979-93 avg.	3,707	13,624	401	1,332	4,649	13,208
1994	0	53	0	0	-	-
<u>Gold Beach</u>						
1979	1,515	5,840	154	974	201	625
1980	1,182	2,891	134	285	306	888
1981	1,482	3,131	246	658	247	644
1982	1,993	4,792	469	888	271	839
1983	2,174	6,685	511	1,557	366	1,192
1984	966	4,072	251	661	256	1,330
1985	1,755	4,786	723	1,857	168	539
1986	1,365	3,016	363	812	255	590
1987	1,399	2,709	394	992	446	1,176
1988	377	466	38	69	110	92
1989	NA	NA	-	-	-	-
1990	NA	NA	-	-	-	-
1991	NA	NA	-	-	-	-
1992	NA	NA	-	-	-	-
1993	NA	NA	-	-	-	-
1994	NA	NA	-	-	-	-

Appendix Table 19 continued.

	SALMON ANGLER TRIPS		CATCH			
	Charter	Private	Chinook		Coho	
			Charter	Private	Charter	Private
<u>Brookings</u>						
1979	1,507	42,995	160	4,446	497	16,811
1980	1,590	44,783	134	3,686	1,176	30,589
1981	1,753	60,891	216	7,775	595	6,838
1982	1,398	53,171	669	13,502	565	15,234
1983	1,415	45,403	697	9,589	610	14,181
1984	1,132	31,803	424	7,709	468	9,437
1985	2,417	49,993	2,296	31,266	318	6,847
1986	2,004	46,304	847	9,938	864	10,221
1987	3,210	62,099	2,180	22,838	1,171	16,251
1988	2,660	49,572	2,252	19,353	1,178	13,653
1989	4,415	61,336	1,918	19,277	3,796	29,253
1990	2,500	48,612	1,126	11,607	1,236	14,083
1991	2,080	34,367	663	6,148	1,897	20,329
1992	468	17,182	151	2,511	184	3,112
1993	626	23,165	211	3,556	300	5,734
1979-93 avg.	1,945	44,778	930	11,547	990	14,172
1994	193	15,965	63	3,553	-	17
<u>S. of Falcon</u>						
1979	55,207	163,403	1,955	9,678	39,707	84,055
1980	52,805	198,822	1,971	9,541	60,679	189,521
1981	49,444	217,066	2,352	15,305	40,835	104,683
1982	31,514	167,279	4,215	26,266	31,267	108,385
1983	29,015	166,156	2,986	18,251	22,040	87,619
1984	21,627	124,324	2,225	14,741	22,859	89,592
1985	45,101	186,461	7,755	44,545	45,701	106,276
1986	35,940	130,488	3,509	17,264	58,544	121,300
1987	52,859	185,085	12,409	42,948	48,442	106,445
1988	60,031	184,952	7,113	30,733	69,225	147,803
1989	51,072	195,351	3,632	26,947	68,949	170,018
1990	46,811	174,223	3,966	19,263	47,443	117,093
1991	32,242	136,166	1,579	11,854	53,356	166,367
1992	25,372	127,020	2,530	9,535	37,472	126,093
1993	7,609	54,187	597	4,987	7,626	29,306
1979-93 avg.	39,777	160,732	3,920	20,124	43,610	116,970
1994	1,427	25,470	495	5,544	0	46
<u>Grand Total</u>						
1979	73,718	187,670	5,370	13,335	59,831	101,825
1980	79,055	218,887	5,093	11,922	98,345	207,502
1981	65,411	245,794	6,650	22,523	64,514	135,298
1982	43,308	182,721	8,165	30,551	48,451	126,677
1983	41,916	184,106	4,680	19,997	39,701	107,203
1984	24,331	128,730	2,230	14,762	27,268	96,057
1985	53,429	198,154	9,224	46,643	60,167	122,819
1986	43,657	143,314	4,169	18,660	74,973	143,934
1987	60,903	194,171	14,344	45,076	61,865	118,669
1988	62,456	188,195	7,344	30,983	73,531	153,342
1989	60,198	206,062	4,156	27,887	85,812	187,459
1990	55,308	191,247	5,073	21,475	61,583	139,063
1991	40,344	149,718	1,913	12,503	68,857	190,229
1992	29,961	135,356	2,702	9,871	46,238	139,607
1993	13,449	66,896	933	5,562	16,216	43,065
1979-93 avg.	49,830	174,735	5,470	22,117	59,157	134,183
1994	1,427	25,470	495	5,544	0	46

Appendix Table 20. Statistical week calendar for 1994.

Stat. Week	Beginning Monday	Ending Sunday	Calendar Month
18	25 April	01 May	April
19	02 May	08 May	May
20	09 May	15 May	
21	16 May	22 May	
22	23 May	29 May	
23	30 May	05 June	June
24	06 June	12 June	
25	13 June	19 June	
26	20 June	26 June	
27	27 June	03 July	July
28	04 July	10 July	
29	11 July	17 July	
30	18 July	24 July	
31	25 July	31 July	
32	01 August	07 August	August
33	08 August	14 August	
34	15 August	21 August	
35	22 August	28 August	
36	29 August	04 September	September
37	05 September	11 September	
38	12 September	18 September	
39	19 September	25 September	
40	26 September	02 October	
41	03 October	09 October	October
42	10 October	16 October	
43	17 October	23 October	
44	24 October	30 October	
45	31 October	06 November	November
46	07 November	13 November	
47	14 November	20 November	
48	21 November	27 November	
49	28 November	04 December	December
50	05 December	11 December	
51	12 December	18 December	
52	19 December	25 December	
53	26 December		

Appendix Table 21. Oregon coastal freshwater and estuary exceptions to the coho salmon closure in coastal basins for the periods listed below.

Areas Open for Coho Angling	Open Period
Eel Lake	Entire year
Isthmus Slough (Coos Bay) from the mouth upstream to the tidegate.	Entire year
Rogue River is open for fin-clipped coho	Sept. 1 - Dec. 31, 1994

Appendix Table 22. Chinook and coho salmon released by Oregon ocean recreational anglers from 1987-1994, by port and year, as estimated from angler interviews.

Astoria:	Year	Number Retained		Number Released		Percent Released	
		Chinook	Coho	Chinook	Coho	Chinook	Coho
	1987	4,063	25,647	2,500	2,162	38%	8%
	1988	481	9,845	289	481	38%	5%
	1989	1,464	34,304	524	1,778	26%	5%
	1990	3,319	36,110	3,099	2,110	48%	6%
	1991	983	39,363	1,115	2,412	53%	6%
	1992	508	22,280	445	2,952	47%	12%
	1993	836	21,176	209	786	20%	4%
	Totals	11,654	188,725	8,181	12,681	41%	6%

Garibaldi:	Year	Number Retained		Number Released		Percent Released	
		Chinook	Coho	Chinook	Coho	Chinook	Coho
	1987	3,077	12,668	0	5	0%	0%
	1988	2,342	25,184	123	333	5%	1%
	1989	678	23,356	0	87	0%	0%
	1990	1,003	19,099	18	85	2%	0%
	1991	602	20,762	14	49	2%	0%
	1992	1,162	14,420	4	185	0%	1%
	1993	256	1,220	6	56	2%	4%
	1994	2,398	29	25	382	1%	93%
	Totals	11,518	116,738	190	1,182	2%	1%

Pacific City:	Year	Number Retained		Number Released		Percent Released	
		Chinook	Coho	Chinook	Coho	Chinook	Coho
	1987	467	3,760	0	0	0%	0%
	1988	377	4,711	3	35	1%	1%
	1989	192	6,967	5	231	3%	3%
	1990	228	3,813	6	18	3%	0%
	1991	84	4,888	2	7	2%	0%
	1992	341	6,338	3	17	1%	0%
	1993	41	1,103	12	32	23%	3%
	1994	0	0	1	79	100%	100%
	Totals	1,730	31,580	32	419	2%	1%

Depoe Bay:	Year	Number Retained		Number Released		Percent Released	
		Chinook	Coho	Chinook	Coho	Chinook	Coho
	1987	2,509	25,673	0	0	0%	0%
	1988	1,375	35,722	45	743	3%	2%
	1989	547	35,668	20	363	4%	1%
	1990	711	23,037	93	581	12%	2%
	1991	229	25,587	0	44	0%	0%
	1992	1,119	21,871	18	427	2%	2%
	1993	106	5,178	14	177	12%	3%
	1994	5	0	16	160	76%	100%
	Totals	6,601	172,736	206	2,495	3%	1%

Appendix Table 22. (cont.)

Newport: Year	Number Retained		Number Released		Percent Released	
	Chinook	Coho	Chinook	Coho	Chinook	Coho
1987	3,932	39,593	0	0	0%	0%
1988	3,960	65,128	145	1,884	4%	3%
1989	1,286	66,813	57	684	4%	1%
1990	1,947	41,073	177	911	8%	2%
1991	651	55,480	46	803	7%	1%
1992	3,018	41,675	164	1,581	5%	4%
1993	330	11,206	126	971	28%	8%
1994	0	0	34	112	100%	100%
Totals	15,124	320,968	749	6,946	5%	2%

Florence: Year	Number Retained		Number Released		Percent Released	
	Chinook	Coho	Chinook	Coho	Chinook	Coho
1987	3,362	10,244	0	0	0%	0%
1988	1,454	16,192	61	780	4%	5%
1989	1,755	10,744	18	290	1%	3%
1990	991	14,166	119	706	11%	5%
1991	1,032	19,810	38	607	4%	3%
1992	551	22,191	731	2,386	57%	10%
1993	178	2,314	12	85	6%	4%
1994	3	0	0	0	0%	0%
Totals	9,326	95,661	979	4,854	10%	5%

Winchester Bay: Year	Number Retained		Number Released		Percent Released	
	Chinook	Coho	Chinook	Coho	Chinook	Coho
1987	11,683	28,335	2	27	0%	0%
1988	5,204	40,068	1,100	1,232	17%	3%
1989	3,371	42,430	625	1,485	16%	3%
1990	3,868	36,060	1,665	3,753	30%	9%
1991	2,434	46,678	326	1,907	12%	4%
1992	2,056	37,184	1,515	2,266	42%	6%
1993	491	5,299	39	83	7%	2%
1994	15	0	2	3	12%	100%
Totals	29,122	236,054	5,274	10,756	15%	4%

Coos Bay: Year	Number Retained		Number Released		Percent Released	
	Chinook	Coho	Chinook	Coho	Chinook	Coho
1987	3,923	15,570	0	0	0%	0%
1988	1,422	14,990	180	182	11%	1%
1989	1,555	19,940	98	491	6%	2%
1990	1,748	11,969	125	322	7%	3%
1991	1,590	24,292	145	668	8%	3%
1992	1,156	16,590	906	2,491	44%	13%
1993	415	4,578	26	113	6%	2%
1994	0	0	16	71	100%	100%
Totals	11,809	107,929	1,496	4,338	11%	4%

Appendix Table 22. (cont.)

Year	Number Retained		Number Released		Percent Released	
	Chinook	Coho	Chinook	Coho	Chinook	Coho
1987	1,386	1,622	109	110	7%	6%
1988	107	202	1	4	1%	2%
Totals	1,493	1,824	110	114	7%	6%

Year	Number Retained		Number Released		Percent Released	
	Chinook	Coho	Chinook	Coho	Chinook	Coho
1987	25,018	17,422	7,552	2,676	23%	13%
1988	21,605	14,831	917	418	4%	3%
1989	21,195	33,049	229	2,612	1%	7%
1990	12,733	15,319	1,128	1,508	8%	9%
1991	6,811	22,226	698	1,740	9%	7%
1992	2,662	3,296	908	1,531	25%	32%
1993	3,767	6,034	295	408	7%	6%
1994	3,616	17	157	442	4%	96%
Totals	97,407	112,194	11,884	11,335	11%	9%

Year	Number Retained		Number Released		Percent Released	
	Chinook	Coho	Chinook	Coho	Chinook	Coho
1987	59,420	180,534	10,163	4,980	15%	3%
1988	38,327	226,873	2,864	6,092	7%	3%
1989	32,043	273,271	1,576	8,021	5%	3%
1990	26,548	200,646	6,430	9,994	19%	5%
1991	14,416	259,086	2,384	8,237	14%	3%
1992	12,573	185,845	4,694	13,836	27%	7%
1993	6,420	58,108	739	2,711	10%	4%
1994	6,037	46	251	1,249	4%	96%
Totals	195,784	1,384,409	29,101	55,120	13%	4%