

**THE 1989 OREGON  
OCEAN SALMON FISHERIES**

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

THE 1989 OREGON OCEAN SALMON FISHERIES

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by

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## INTRODUCTION

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

In FY 1989 we sampled and analyzed data on catch and fishing effort, collected average weight data from commercial landings, investigated chinook age composition, and recovered coded-wire tagged salmon caught in offshore fisheries. Other activities included evaluating a troll season extension for chinook salmon off southern Oregon, collecting coho scales from coded-wire tagged fish for a reference collection of hatchery coho scales, and starting an at sea study to evaluate coho bycatch and hooking mortality in the May and June troll fishery in the Coos Bay area.

We continued the program of telephoning "key buyer" processors to estimate daily troll coho landings and to monitor the chinook quotas north of Cape Falcon and south of Cape Blanco. The key buyers represented about 90% of the total area landings.

We sampled at 10 major ports along the coast utilizing 8 troll, 17 recreational, 3 combination samplers and 2 crew chiefs. Several samplers were shifted from one port to another for short periods of time as extra sampling was needed. Two permanent crew chiefs acted as liaison between the seasonal samplers and the project leader in Newport and helped sample when necessary. They also brought the survey data and coded wire tags to Newport each week. Three seasonal employees helped Newport staff edit, and computer process the sampled data.



## THE 1989 OCEAN TROLL SALMON FISHERY

### REGULATIONS

#### General

Single point, single shank barbless hooks were required in all troll fisheries again in 1989. In any area closed to salmon fishing for a period of three days or less, it was unlawful for any vessel with a salmon troll permit from any state to have any type of troll gear in the water during such a closure.

#### Chinook

The area from Cape Falcon north to the Queets River was scheduled to run from May 1 to June 15 with a quota of 39,500 chinook. The season was closed June 8 when it was anticipated that the quota had been reached, and reopened from June 13-15 to finish up the quota. Actual catch was 39,900 chinook. An August/September season for coho between Cape Falcon and Leadbetter Point allowed a daily landing limit of 4 chinook from August 21 to August 27 and 8 chinook per daily landing from August 28 to September 10. The chinook quota was 4,000 fish, but the actual catch was 3,100 chinook. This fishery is discussed in more detail in the following section on coho fisheries. The minimum size limit for all chinook taken north of Cape Falcon was 28".

The area from Cape Falcon south to the Orford Reef Red Buoy (ORRB) was open for chinook fishing from May 1 to October 31 with the exception of the following closures:

1. Cape Falcon to ORRB from July 15 to 17.
2. Cascade Head to ORRB from June 24 to 30.
3. Cape Arago to ORRB from July 15 to 31.
4. Cape Arago to ORRB from August 18 to 31.

No chinook quotas were in effect for this area. Minimum size for chinook was 26".

The Klamath River Management Zone (KMZ) extends south from ORRB to Horse Mountain. The fringe areas of Humbug Mountain north to ORRB, and Punta Gorda south to Horse Mountain were closed the entire season. A number of fisheries with small quotas occurred in the KMZ in 1989. A fishery on returning Rogue River spring chinook was open from Sisters Rocks south to House Rock and seaward 6 miles. This fishery was scheduled to run from May 1 to 14, but closed May 2 when it appeared that the quota of 7,500 had been reached. Later it was determined that only 5,000 chinook had been landed, and the 2,500 remaining chinook were added to the next KMZ troll fishery quota. The minimum size for chinook was 26" in all 1989 KMZ troll fisheries.

The second season in the KMZ was scheduled to run from June 5 to 16 from Humbug Mountain south to Punta Gorda. This fishery had a single daily landing limit of 20 chinook, and was open for coho with no restrictions on the number that could be landed per day. The original quota of 15,000 chinook was raised to 17,700 with the rollover from the May season. The fishery was closed June 8 when it was estimated that the quota had been met. Actual catch for this period was 16,200 chinook, and the remaining salmon were rolled over to the next KMZ troll fishery. All salmon caught in this fishery were required to be landed in the KMZ.

The third KMZ fishery, from Humbug Mountain to Punta Gorda, was scheduled to run from August 18 to 31 with a quota of 7,500 chinook. The quota was raised to 9,200 chinook with the rollover from the June season. The fishery was closed August 21 when it was thought that the quota had been met, and was reopened on August 22 and ran through its scheduled closing date. A single daily landing limit of 20 chinook per day was in effect, and all salmon were required to be landed in the KMZ.

The final 1989 KMZ chinook fishery was designed to target on returning Rogue River fall chinook. This fishery was open from Sisters Rocks south to Mack Arch and seaward six miles. It had a quota of 7,500 chinook, and was scheduled to run from September 1 to 15. The fishery was closed September 14 when the quota was reached.

A late season state waters chinook fishery in the Elk River area (Cape Blanco to Humbug Mountain, and seaward 3 miles) ran from October 1 to November 30. This fishery targeted on returning Elk River fall chinook hatchery stocks. The minimum size for chinook was 26", and there was no quota (Table 1).

### **Coho**

North of Cape Falcon there was a late August coho fishery with stringent landing limits in 1989 (there were no coho fisheries in this area in 1988). The original quota of 35,000 coho was lowered to 32,300 fish due to higher impacts from other north of Falcon fisheries. The fishery opened for one day on August 21 in the area from the Red Buoy Line at the Columbia River south to Cape Falcon, and reopened August 24 to September 10 in the area from Leadbetter Point to Cape Falcon. The mouth of the Columbia River was closed. A single daily landing limit of 40 coho and 4 chinook was in effect August 21, and from August 24 to 27; from August 28 to September 10 the daily landing limit was 40 coho and 8 chinook. All salmon were required to be landed in the area from Leadbetter Point to Cape Falcon. The total catch in the fishery was 37,100 coho.

From Cape Falcon south to the U.S./Mexico border, an overall catch quota of 474,000 coho was established for 1989. Subarea catch ceilings for the area from Cascade Head to the U.S./Mexico border were 430,000 coho, and 89,000 coho from ORRB to the U.S./Mexico border. At 75% of the south of Cascade Head catch ceiling the area from Cape Falcon to Punta Gorda was closed for 3 days to assess landings, modify regulations, and project the end of the season.

The area from Cape Falcon south to Cascade Head was open to salmon fishing without daily landing restrictions July 12 to 14, but then was closed to all trolling July 15 to 17. The season reopened July 18 to August 13 with a single daily landing limit of 50 coho; and from August 14 to 17, 2 coho were allowed for each chinook landed. Catches of coho from this area were not allowed to be landed south of Cascade Head unless they met the landing requirements of the area to the south.

From Cascade Head south to ORRB, coho fishing was open July 1 to 14 under a single daily landing of 50 coho plus 3 additional coho for each chinook landed. All chinook were required to be landed with the coho. The area was closed to all trolling July 15 through 17, reopened July 18 under a 2 coho for

Table 1. History of Actual Oregon Troll Regulations, 1948-89.

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 &amp; Chetco River areas</u> 11/1 - 12/31	All except coho	Chin. 26" - state waters only
1976 <u>N. 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 or whole bait or plugs which can be barbed. Chin. 26"; coho, 16"
<u>Elk &amp; 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 and 26" S./ Tillamook Head Coho, 16". Gear restrictions as above.
1978 Boundary moved to Cape Falcon	all other regulations 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 or whole bait or plugs which can be barbed. Chin. 28"; coho, 16"; troll fishing gear <sup>a</sup>
<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 or whole bait or plugs which can be barbed. Chin. 26"; coho, 16"; troll fishing gear <sup>a</sup> Chin. 26"; troll fishing gear <sup>a</sup>
<u>Elk &amp; Chetco River areas</u> 11/1 - 11/30	All except coho	Chin. 26"; troll fishing gear <sup>a</sup> . 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 or whole bait or plugs which can be barbed. Chin. 28"; coho, 16"; troll fishing gear <sup>a</sup>
<u>South of Cape Falcon</u> 5/1 - 5/31	All except coho	Chin. 26"; barbless hooks or whole bait or plugs which can be barbed.
<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"; troll fishing gear. <sup>a</sup> Chin. 26"; troll fishing gear. <sup>a</sup>
<u>Elk &amp; Chetco River areas</u> 11/1 - 11/30	All except coho	Chin. 26"; troll fishing gear. <sup>a</sup> 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 or whole bait or plugs which can be barbed. Chin. 28"; coho, 16"; troll fishing gear. <sup>a</sup> Chin. 28"; coho, 16"; troll fishing gear. <sup>a</sup> 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 or whole bait or plugs which can be barbed. Chin. 26"; coho, 16"; troll fishing gear. <sup>a</sup> Chin. 26"; coho, 16"; troll fishing gear. <sup>a</sup> State waters only.

Table 1 continued

AREA AND SEASON	SPECIES	SIZE, GEAR AND OTHER RESTRICTIONS
(1981 continued)		
<u>C. Falcon to Cape Sebastian</u>		
8/22 - 8/24	All except coho	Chin. 26"; whole bait or plugs 5" or larger.
8/25 - 9/8	All except coho	Chin. 26"; whole bait or plugs 5" or larger. State waters only.
<u>South of Cape Falcon</u>		
9/9 - 10/31	All except coho	Chin. 26"; troll fishing gear. <sup>a</sup>
<u>Elk &amp; Chetco River areas</u>		
11/1 - 11/30	All except coho	Chin. 26"; troll fishing gear. <sup>a</sup> State waters only.
1982		
<u>North of Cape Falcon</u>		
5/1 - 5/31	All except coho	Chin. 28"; barbless hooks or whole bait or plugs which can be barbed.
7/1 - 7/8	All salmon	Chin. 28"; coho, 16"; troll fishing gear. <sup>a</sup>
<u>South of Cape Falcon</u>		
5/1 - 5/31	All except coho	Chin. 26"; barbless hooks or whole bait which can be barbed.
6/1 - 6/15	All except coho	Chin 26"; whole bait or plugs not less than 5" long.
7/1 - 7/12	All salmon	Chin. 26"; coho 16"; troll fishing gear. <sup>a</sup>
7/13 - 9/5	All except coho	Chin. 26"; whole bait or plugs not less than 5" long.
9/6 - 10/31	All except coho	Chin. 26"; barbless hooks or whole bait or plugs which can be barbed.
<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 &amp; Chetco River areas</u>		
11/1 - 11/30	All except coho	Chin. 26"; troll fishing gear. <sup>a</sup> State waters only.
1983		
<u>North of Cape Falcon</u>		
5/1 - 5/31	All except coho	Chin 28"; barbless hooks or plugs not less than 5".
7/1 - 7/31	All salmon	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. Troll fishing gear. <sup>a</sup>
<u>Cape Falcon to Cape Blanco</u>		
5/1 - 5/31	All except coho	Chin. 26"; barbless hooks, whole bait or plugs not less than 5".
6/1 - 6/15	All except coho	Chin. 26"; whole bait or plugs not less than 5" long.
9/5 - 10/31	All except coho	Chin 26"; troll fishing gear. <sup>a</sup>
9/5 - 10/31	All except coho	Chin. 26"; troll fishing gear. <sup>a</sup>
<u>Cape Falcon to Cape Kiwanda</u>		
8/1 - 9/4	All salmon	Chin. 26"; coho, 16"; troll fishing gear. <sup>a</sup>
<u>Cape Kiwanda to Heceta Head</u>		
7/1 - 7/24 - 8/1 - 9/4	All Salmon	Chin. 26"; coho, 16"; troll fishing gear. <sup>a</sup>
<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>Cape Blanco to OR/CA border</u>		
5/16 - 5/31	All except coho	Chin. 26"; barbless hooks only, not more than 6 troll lines
6/1 - 6/15	All except coho	Chin. 26"; whole bait or plugs not less than 5" long.
7/1 - 7/25	All salmon	Coho, 16"; troll fishing gear.
7/26 - 8/31	All except coho	Chin. 26"; whole bait or plugs not less than 5" long.
9/1 - 9/15	All except coho	Chin. 26"; troll fishing gear. Open area is 12 x 24 mile rectangle around mouth of Rogue River.
10/1 - 10/31	All except coho	Chin. 26"; troll fishing gear. <sup>a</sup> Entire area open.
<u>Cape Blanco to Humbug Mtn.</u>		
11/1 - 11/30	All except coho	Chin. 26"; troll fishing gear. <sup>a</sup> State waters only.
1984		
<u>North of Cape Falcon</u>		
5/1 - 5/7	All except coho	Chin. 28"; barbless hooks only.
<u>S. Jetty, Col. R. to C.</u>		
8/4 - 8/6	All salmon	Chin. 28"; coho, 16"; barbless hooks only.
<u>Cape Falcon to Cape Blanco</u>		
5/1 - 6/15 - 7/1 - 8/31	All except coho	Chin. 26"; barbless hooks only.
9/1-21	All except coho	Chin. 26"; state waters only. Contravention of fed. regulation.
<u>Manhattan Beach to Pyramid Rock (Tillamook)</u>		
10/1 - 10/31	All except coho	Chin. 26"; barbless hooks. State waters only.

Table 1 continued

AREA AND SEASON	SPECIES	SIZE, GEAR AND OTHER RESTRICTIONS
(1984 continued)		
<u>Cape Blanco to OR/CA border</u> 5/16 - 6/6; 7/16 - 8/22	All except coho	Chin. 26"; barbless hooks only.
<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.
<u>S. Jetty of Columbia R. 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	All except coho All salmon	Chin. 26"; barbless hooks except on whole bait or plugs. Chin. 26", coho, 16"; barbless hooks only. One more coho than chinook may be kept, provided at least 1 chinook is kept.
7/27 - 10/31	All except coho	Chin. 26"; barbless hooks only.
<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 Mt.</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	All except coho All salmon	Chin. 26"; barbless hooks only. Chin. 26"; coho, 16"; barbless hooks only. 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.
7/25 - 10/31	All except coho	Chin. 26"; barbless hooks only.
<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	All except coho All salmon	Chin. 26"; barbless hooks only. Chin. 26"; Coho, 16"; barbless hooks only. No coho could be landed without landing chinook at a ratio of at least 1 chinook for each 2 coho.
7/23 - 24	All salmon	Same regulations as in Cape Falcon to Cape Perpetua (for 7/1-24 see above).
7/25 - 10/31	All except coho	Chin. 26"; barbless hooks only.
<u>Sisters Rock 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	All salmon	Chin. 26"; Coho, 22"; barbless hooks only. At least one chinook must be possessed or landed for each 2 coho possessed or landed.
7/25 - 8/26	All except coho	Chin. 26"; barbless hooks only.
<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.
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 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.

Table 1 continued

AREA AND SEASON	SPECIES	SIZE, GEAR AND OTHER RESTRICTIONS
(1987 continued)		
<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  9/16 - 10/31	All salmon  All except coho	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. 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  8/20 - 10/31	All salmon  All except coho	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. Chin. 26"; barbless hooks.
<u>Cascade Head to Cape Arago</u> 7/1 - 13  7/16 - 8/19 8/20 - 10/31	All salmon All except coho	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. As above but no ratio requirement. Chin. 26"; barbless hooks.
<u>Cape Arago to Orford Reef Red Buoy</u> 7/16 - 8/19  8/20 - 31; 9/16 - 10/31	All salmon All except coho	Chin. 26"; coho, 16"; barbless hooks. No ratio requirement. Chin. 26"; barbless hooks.
<u>Sisters Rock to Chetco Point</u> 5/1 - 4	All except coho	Chin. 26"; barbless hooks. From shore out to 6 miles only.
<u>Humbug Mtn to Punta Gorda</u> 6/5 - 7	All salmon	Chin. 26"; coho, 22"; barbless hooks. Sun. through Wed. only.
<u>Sisters Rock 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.

Table 1 continued

AREA AND SEASON	SPECIES	SIZE, GEAR AND OTHER RESTRICTIONS
(1989 continued) 8/21; 8/24 - 9/10	All salmon	Chin. 28"; coho, 16"; barbless hooks. Columbia River mouth 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</u> <u>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</u> <u>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 Rock 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.

<sup>a</sup> Troll fishing gear, for the Fishery Management Area (FMA) is defined as one or more lines that drag hooks with bait or lures behind a moving fishing vessel. In that portion of the FMA off Oregon and Washington the line or lines must be affixed to the vessel and must not be disengaged from the vessel at any time during the fishing operation.

each chinook ratio fishery, and continued until August 17 when the coho quota was met. The area from Cape Arago south to ORRB was closed to all salmon troll fishing from July 14 to 31.

South of Humbug Mountain to Punta Gorda the coho fishery was scheduled to be open from June 5 to 16, but it closed on June 8 when the chinook quota was met. All salmon caught in this fishery were required to be delivered in the KMZ (Table 1).

## EFFORT AND LANDING STATISTICS

Effort and catch statistics for the 1989 Oregon troll salmon fishery are preliminary. Poundages, dollar value, area of catch, and days fished are obtained directly from commercial fish receiving tickets. Pounds landed are converted to number of fish by utilizing average weight information. In early years, all troll catch statistics for Oregon were reported by port of landing; however, since 1979 catch and effort estimates have also been reported by catch area (Figure 1).

Data by port of landing are reported on a port area format that corresponds to the catch areas in Figure 1. The Astoria area includes the Astoria-Warrenton-Hammond complex and dory landings at Gearhart and Cannon Beach. The Garibaldi-Pacific City area includes the ports of Nehalem, Garibaldi, Netarts, and Pacific City. The Depoe Bay-Waldport area includes the ports of Depoe Bay, Newport, and Waldport. The Florence-Bandon area includes the ports of Florence, Winchester Bay, Coos Bay/Charleston, and Bandon. The Port Orford-Brookings area includes the ports of Port Orford, Gold Beach, and Brookings.

### Effort

Since 1979, Oregon's troll effort has been estimated in boat days. Troll effort for 1989 totaled 42,300 boat days, down 17% from the record high effort of 51,100 boat days in 1988 (Table 2). Effort was down due to a number of factors including a lower coho quota than in 1988, and substantially reduced prices being paid for salmon. The Coos Bay and Newport areas accounted for 76% of the effort with the Coos Bay area (catch area 5) predominating (Table 3). Effort levels were down in all areas except the Columbia River area (catch area 2). Effort levels were highest in July and August, and correspond with the general coho season.

### Landings

**Chinook:** The 1989 troll chinook landings were 25% below 1988 landings, and 33% below the record 1987 landings (Table 2, Figure 2). A total of 353,400 chinook weighing 3,531,900 pounds (dressed weight) were landed in 1989 as compared to 469,700 chinook in 1988, and an average of 212,000 chinook for 1979-82.

Of the 1989 chinook landings, 90% were caught from the Newport area south (Table 3). Catches in the Columbia River area were up 88% over 1988 levels, but were down in all other catch areas.

The troll landings of chinook peaked in May in the Coos Bay area, June in the Newport area, and August in the Brookings area (Tables 4, 5, and 6). The May



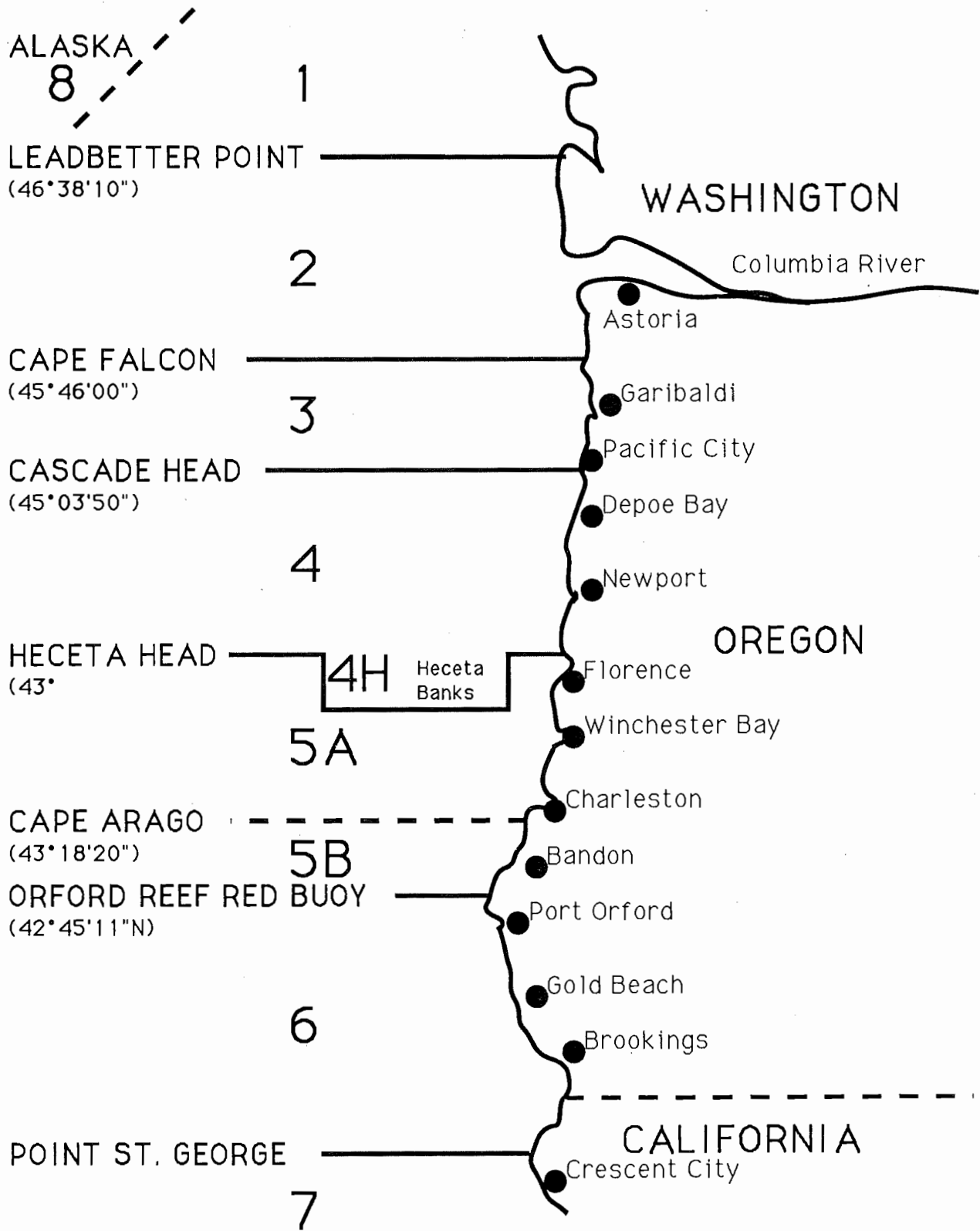


Figure 1. Ocean Salmon Management Catch Areas.

Table 2. Oregon Commercial Troll Salmon Effort and Landings in Number of Fish and Pounds Dressed, 1971-89<sup>a</sup>.

Year	Effort (boat days)	Chinook		Coho		Pinks	
		No.	lbs dr.	No.	lbs dr.	No.	lbs dr
1971	-	102,900	1,000,800	1,490,100	8,765,100	2,000	9,000
1972	-	127,300	1,303,700	824,600	4,856,300	<100	100
1973	-	363,300	3,461,300	795,500	5,137,100	3,200	14,200
1974	-	224,100	2,290,400	1,137,200	7,230,900	<100	100
1975	-	224,700	2,583,300	657,400	4,087,500	200	900
1971-75 Average	-	208,500	2,127,900	981,000	6,015,400	1,800 <sup>b</sup>	8,000 <sup>b</sup>
1976	-	184,300	1,921,600	1,827,000	9,061,200	0	0
1977	-	340,000	3,464,900	446,100	2,640,800	88,000	396,100
1978	-	191,500	1,893,600	611,600	2,779,000	<100	200
1979	48,800	245,500	2,580,000	714,600	4,586,300	20,500	106,300
1980	39,900	209,400	2,171,500	383,300	2,190,200	300	1,600
1981	45,200	160,400	1,573,400	620,300	3,324,300	60,200	324,000
1982	33,900	232,600	2,351,300	523,500	2,708,400	0	0
1979-82 Average	42,000	212,000	2,169,100	560,400	3,202,600	40,400 <sup>b</sup>	215,200 <sup>b</sup>
1983	22,200	79,600	655,500	319,700	1,097,900	<100	200
1984	7,900	64,300	549,900	14,000	71,000	0	0
1985	21,100	216,600	2,030,300	84,100	483,800	44,900	258,600
1986	32,500	403,100	3,370,400	440,500	1,905,100	<100	<100
1987	39,600	529,500	5,182,400	354,000	1,915,900	17,600	87,300
1988	51,100	469,700	4,384,800	623,100	3,335,900	<100	<100
1989	42,300	353,400	3,531,900	455,700	1,995,500	3,800	17,600

<sup>a</sup> Includes catches made off California, Washington and Alaska and landed in Oregon.

<sup>b</sup> Odd-year average

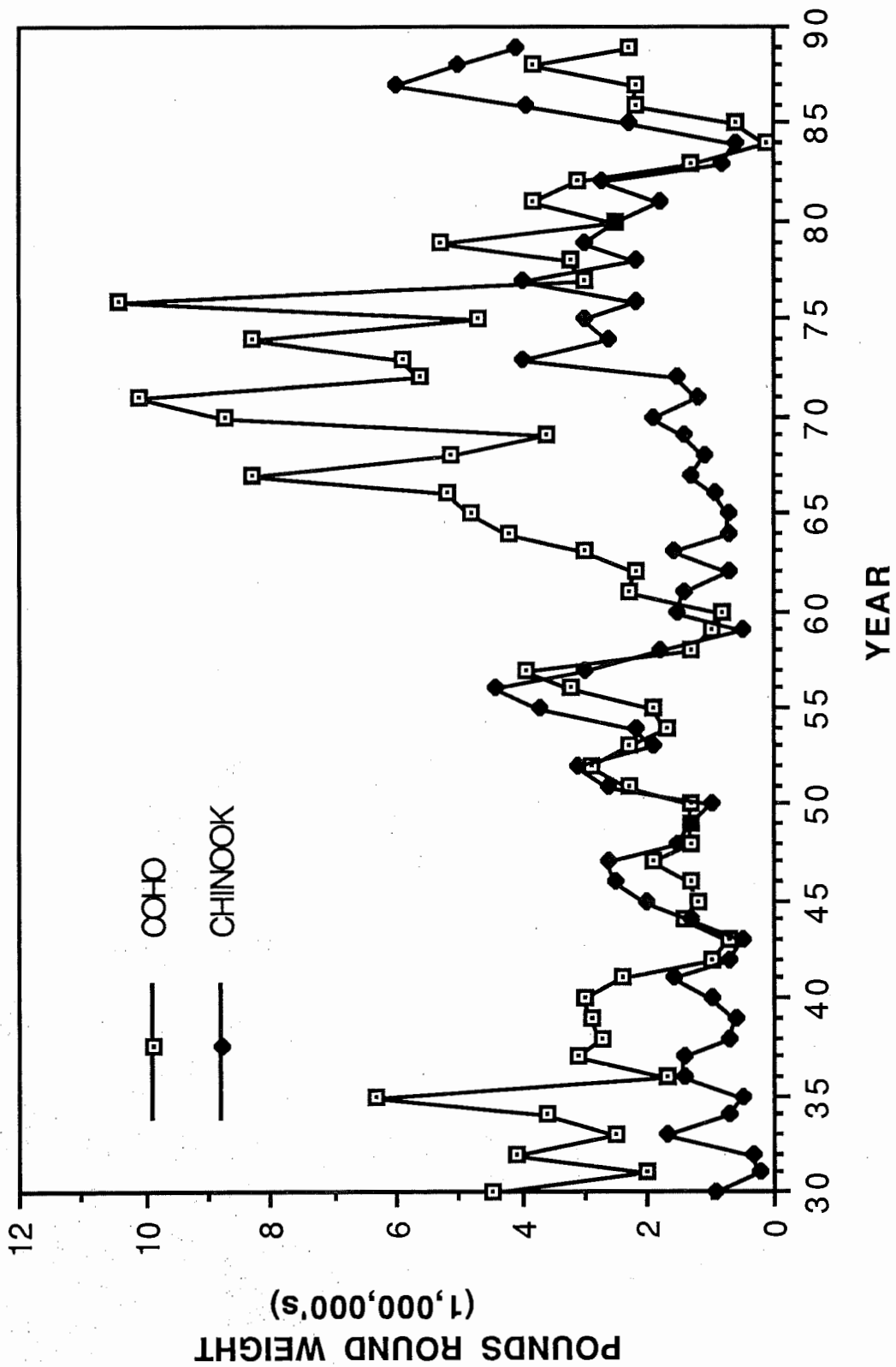


Figure 2. Oregon Troll Salmon Production, 1930-89.

Table 3. Summary of Oregon Commercial Troll Effort and Landings by Area of Catch, 1979-89.

Year	Area of Catch									Total
	Col. R. 2	Tillamook 3	Newport 4	Coos Bay 5	Brookings 6	OR Subtotal	Alaska 8	Wash. 1	Calif. 7	
<u>EFFORT (Boat Days)</u>										
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	15,700	3,200	32,400	0	<100	<100	32,500
1987	200	7,300	8,700	21,000	2,000	39,300	0	100	<100	39,500
1988	300	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
<u>Chinook</u>										
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	6,000	14,000	88,700	238,900	53,500	401,200	0	400	500	402,000
1987	4,600	41,400	87,700	350,400	39,900	524,000	0	3,700	1,800	529,400
1988	1,600	32,800	129,000	268,200	31,600	463,200	500	1,400	4,600	469,700
1989	2,900	30,400	70,600	232,400	17,000	353,200	0	200	100	353,400
<u>Coho</u>										
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	45,800	95,600	193,800	85,300	19,100	439,600	0	0	0	439,600
1987	7,400	74,700	83,000	177,000	4,100	346,200	0	7,500	300	354,000
1988	0	172,200	252,500	196,400	1,200	622,300	<100	0	800	623,100
1989	21,100	136,300	137,800	159,500	1,000	455,700	0	0	<100	455,700

Table 4. Oregon Commercial Troll Effort and Landings of Coho and Chinook in Number of Fish by Month, 1971-75, average and 1979-89<sup>a</sup>.

		April	May	June	July	Aug	Sept	Oct	Nov <sup>b</sup>	Total
<u>EFFORT (Boat Days)</u>										
1971-75										
Average		NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	Monthly	-	1,400	<100 <sup>c</sup>	21,500	21,700	1,300	200	800	
	Cumulative	-	1,400	1,500	23,000	44,007	46,000	48,000	48,800	48,008
1980	Monthly	-	2,100	3,700 <sup>d</sup>	12,100	14,600	4,600	2,300	500	
	Cumulative	-	2,100	5,800	17,900	32,500	37,100	39,400	39,900	39,900
1981	Monthly	-	3,300 <sup>e</sup>	-	21,300	16,700	1,600	1,900	500	
	Cumulative	-	3,300	3,300	24,600	41,300	42,800	44,700	45,200	45,200
1982	Monthly	-	2,300	2,100	18,800	5,600	2,800	1,500	600	
	Cumulative	-	2,300	4,500	23,300	29,000	31,800	33,300	33,900	33,900
1983	Monthly	-	1,600	1,900	12,200	4,100	1,200	1,100	100	
	Cumulative	-	1,600	3,500	15,700	19,800	21,000	22,100	22,200	22,200
1984	Monthly	-	400	400	2,100	4,300	200	300	200	
	Cumulative	-	400	900	2,900	7,200	7,400	7,700	7,900	7,900
1985	Monthly	-	3,100	2,100	6,300	6,600	1,900	900	200	
	Cumulative	-	3,100	5,200	11,500	18,100	20,000	20,900	21,100	21,100
1986	Monthly	-	4,000	4,000	14,300	6,800	2,000	1,300	100	
	Cumulative	-	4,000	8,000	22,300	29,100	31,100	32,400	32,500	32,500
1987	Monthly	-	3,600	3,900	16,300	7,300	5,500	2,700	300	
	Cumulative	-	3,600	7,500	23,700	31,100	36,500	39,200	39,500	39,500
1988	Monthly	-	4,700	6,700	17,000	14,100	3,600	4,500	400	
	Cumulative	-	4,700	11,400	28,400	42,600	46,200	50,700	51,100	51,100
1989	Monthly	-	6,300	7,100	13,600	8,800	3,500	2,200	700	
	Cumulative	-	6,300	13,400	27,000	35,800	39,300	41,600	42,300	42,300
<u>Chinook</u>										
1971-75										
Average		500	8,300	27,500	56,600	69,700	31,400	13,700	1,300	
	Cumulative	500	8,800	36,400	93,000	162,800	194,200	207,200	209,200	209,200
1978	Monthly	-	3,200	40,600	63,100	46,900	25,000	9,300	3,500	
	Cumulative	-	3,200	43,800	106,900	153,800	178,800	188,100	191,500	191,500
1979	Monthly	-	11,000	200 <sup>c</sup>	73,600	119,500	13,200	25,200	2,600	
	Cumulative	-	11,000	11,300	84,900	204,400	217,700	242,900	245,500	245,500
1980	Monthly <sup>b</sup>	-	25,800	29,700 <sup>d</sup>	47,700	64,000	25,200	16,000	1,000	
	Cumulative	-	25,800	55,400	103,200	167,200	192,300	208,400	209,400	209,400
1981	Monthly	-	28,600 <sup>e</sup>	-	34,900	65,700	16,900	13,200	1,200	
	Cumulative	-	28,600	28,600	63,500	129,200	146,100	159,200	160,400	160,400
1982	Monthly	-	23,000	14,800	125,400	46,100	15,000	6,900	1,400	
	Cumulative	-	23,000	37,800	163,200	209,300	224,300	231,200	232,600	232,600
1983	Monthly	-	9,500	16,300	34,100	11,500	2,700	4,600	900	
	Cumulative	-	9,500	25,800	59,900	71,400	74,100	78,700	79,600	79,600
1984	Monthly	-	4,600	2,400	17,800	36,900	700	1,000	900	
	Cumulative	-	4,600	7,000	24,800	61,700	62,400	63,400	64,300	64,300
1985	Monthly	-	39,900	14,900	57,900	76,300	21,400	5,300	900	
	Cumulative	-	39,900	54,800	112,700	189,000	210,400	215,700	216,600	216,600
1986	Monthly	-	37,200	50,000	138,500	115,100	33,900	26,500	800	
	Cumulative	-	37,200	87,200	225,700	340,800	374,700	401,200	402,000	402,000

Table 4 Continued

		April	May	June	July	Aug	Sept	Oct	Nov <sup>b</sup>	Total
1987	Monthly	-	43,400	56,500	264,200	87,600	60,800	15,100	1,900	
	Cumulative	-	43,400	99,900	364,100	451,600	512,400	527,500	529,400	529,400
1988	Monthly	-	62,600	100,100	100,500	133,800	26,600	44,300	1,700	
	Cumulative	-	62,600	162,700	263,200	397,100	423,700	468,000	469,700	469,700
1989	Monthly	-	100,300	62,500	71,200	75,200	25,100	16,400	2,800	
	Cumulative	-	100,300	162,800	234,000	309,200	334,200	350,600	353,400	353,400
<b>COHO</b>										
<b>1971-75</b>										
Average	Monthly	-	-	227,800	414,400	305,800	29,700	3,300	-	
	Cumulative	-	-	227,800	642,200	948,000	977,700	981,000	-	981,000
1978	Monthly	-	-	279,600	227,200	92,800	10,400	1,600	-	
	Cumulative	-	-	279,600	506,800	599,700	610,000	611,600	-	611,600
1979	Monthly	-	-	400 <sup>c</sup>	534,000	178,700	1,600	-	-	
	Cumulative	-	-	400	534,400	713,100	714,600	-	-	714,600
1980	Monthly	-	-	-	228,700	137,500	17,100	-	-	
	Cumulative	-	-	-	228,700	366,200	383,300	-	-	383,300
1981	Monthly	-	-	-	350,300	270,000	-	-	-	
	Cumulative	-	-	-	350,300	620,300	-	-	-	620,300
1982	Monthly	-	-	-	522,200	-	-	-	-	
	Cumulative	-	-	-	522,200	-	-	-	-	522,200
1983	Monthly	-	-	-	275,300	36,100	8,400	-	-	
	Cumulative	-	-	-	275,300	311,400	319,800	-	-	319,800
1984	Monthly	-	-	-	-	14,000	-	-	-	
	Cumulative	-	-	-	-	14,000	-	-	-	14,000
1985	Monthly	-	-	-	65,700	18,300	-	-	-	
	Cumulative	-	-	-	65,700	84,000	-	-	-	84,000
1986	Monthly	-	-	12,000	381,800	45,800	-	-	-	
	Cumulative	-	-	12,000	393,800	439,600	-	-	-	439,600
1987	Monthly	-	-	4,400	266,200	63,700	19,800	-	-	
	Cumulative	-	-	4,400	270,600	334,200	354,000	-	-	354,000
1988	Monthly	-	-	1,600	387,800	233,800	-	-	-	
	Cumulative	-	-	1,600	389,300	623,100	-	-	-	623,100
1989	Monthly	-	-	1,000	374,800	70,000	9,900	-	-	
	Cumulative	-	-	1,000	375,800	445,900	455,700	-	-	455,700

<sup>a</sup> Statistics from 1971-78 & 1987-89 are reported by calendar months; monthly totals from 1979-82 are the sum of statistical weeks with closest fit to calendar months. Includes catches made off California, Washington, and Alaska and landed in Oregon.

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

<sup>c</sup> Caught off California and landed in Oregon.

<sup>d</sup> Totals for June 1980 include landings made through July 6.

<sup>e</sup> Totals for May 1981 include landings made through June 7.

Table 5. Oregon Troll Salmon Effort and Landings, in Number of Fish by Area of Catch and by Statistical Month, 1989.

Year	Area of Catch									Total
	Col. R. 2	Tillamook 3	Newport 4	Coos Bay 5	Brookings 6	OR Subtotal	Alaska 8	Wash. 1	Calif. 7	
<u>EFFORT (Boat Days)</u>										
May	100	500	900	4,500	200	6,200	0	<50	<50	6,300
June	<50	700	1,800	4,200	300	7,100	0	<50	<50	7,100
July	0	3,200	4,100	6,400	-	13,600	0	0	<50	13,600
August	600	1,500	1,400	4,900	400	8,800	0	0	<50	8,800
September	200	1,300	600	1,100	300	3,500	0	0	<50	3,500
October	0	600	500	1,200	<50	2,200	0	0	0	2,200
November	0	0	0	700	<50	700	0	0	0	700
Total	900	7,800	9,300	22,900	1,300	42,200	0	<50	<50	42,300
<u>Chinook</u>										
May	700	5,400	12,400	64,800	4,600	87,900	0	200	<50	88,100
June	400	8,100	19,600	45,600	1,900	75,600	0	<50	<50	75,600
July	0	6,600	20,100	42,400	0	69,000	0	0	<50	69,100
August	1,500	4,300	10,100	59,000	4,500	79,500	0	0	<50	79,500
September	300	4,500	2,900	8,500	5,800	22,100	0	0	<50	22,100
October	0	1,500	5,400	8,800	<50	15,700	0	0	0	15,700
November	0	0	0	3,200	200	3,400	0	0	0	3,400
Total	2,900	30,400	70,600	232,400	17,000	353,200	0	200	100	353,400
<u>Coho</u>										
June	0	0	0	0	1,000	1,000	0	0	<50	1,000
July	0	117,100	129,800	125,200	0	372,200	0	0	<50	372,200
August	15,600	19,200	8,000	34,300	0	77,000	0	0	0	77,000
September	5,500	0	0	0	0	5,500	0	0	0	5,500
Total	21,100	136,300	137,800	159,500	1,000	455,700	0	0	<50	455,700

Table 6. Oregon Troll Salmon Landings by Species in Pounds Dressed, by Calendar Month and Port Area, 1989.

Month	Port of Landing					Total
	Astoria	Garibaldi to Pacific City	Depoe Bay to Waldport	Florence to Bandon	Port Orford to Brookings	
<u>Chinook</u>						
May	16,244	35,183	219,346	636,105	79,153	986,031
June	8,817	50,689	148,019	347,489	28,979	583,993
July	4,746	57,284	220,715	439,242	24,342	746,329
August	11,553	42,253	98,430	408,147	158,044	718,427
September	8,681	90,915	40,884	61,756	72,642	274,878
October	64	25,826	49,416	58,092	39,002	172,400
November	-	-	-	2,683	47,171	49,854
Total	50,105	302,150	776,810	1,953,514	449,333	3,531,912
<u>Coho</u>						
June	-	-	-	-	4,654	4,654
July	20,598	448,644	576,224	539,304	31,869	1,616,639
August	51,220	78,591	38,721	132,613	26,726	327,871
September	43,245	3,106	-	-	-	46,351
Total	115,063	530,341	614,945	671,917	63,249	1,995,515

landings of chinook in the Coos Bay area were the highest on record, and were partially a result of excellent ocean conditions and concentrations of fishing effort in the Coos Bay area.

**Coho:** The 1989 coho landings totaled 455,700 fish for 1,995,500 pounds (dressed weight). This was 27% fewer fish than in 1988, 40% fewer pounds landed than in 1988, and 19% below the 1979-82 average number of coho landed (Table 2, Figure 2).

Of the 1989 coho landings, 95% were caught in the Tillamook, Newport, and Coos Bay catch areas. July was the peak month for coho catches in all areas except the Columbia River area (August) and the Brookings area (June)(Tables 4, 5, and 6).

**Pinks:** The 1989 pink salmon troll landings were only 3,800 fish for 17,600 pounds. This is only 9% of the 1979-82 odd year average (Table 2).

#### THE DOLLAR VALUE OF THE LANDINGS

The chinook landings in 1989 were worth \$7,868,500 to the fishermen, and the coho \$2,130,400. The average price per pound for chinook was \$2.22, and was 30% below the record price of \$3.17 per pound paid in 1988. The average price per pound for coho was \$1.06, and was 54% below the record price of \$2.28 per pound that was paid in 1988. Prices were depressed for a number of reasons including: holdover stocks of frozen fish, competition in the market from pen-reared salmon, a change in the value of the dollar on the worldwide market, and availability of salmon from other foreign and domestic sources (Table 7).

#### EXTENDED TROLL SEASON LANDINGS

Chinook landings during the 1989 Elk River area extended season were an estimated 4,500 fish. There was no quota for this season. This fishery targeted on returning local hatchery stocks and had a minimal impact on other stocks, as evidenced by coded wire tag recoveries.

#### AVERAGE WEIGHT DATA

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

The seasonal average dressed weight for chinook in 1989 was 10.0 pounds (Table 8), and is up substantially from the 1988 average weight of 9.3 pounds.

The seasonal average dressed weight for coho in 1989 was 4.4 pounds (Table 9), and down from the 1988 average weight of 5.4. Although the marked decrease in average weight indicated poor ocean feed conditions, the weight was still well above the 1983 average weight of 3.4 pounds when the most recent major El Nino event occurred.



Table 7. Estimates of Ex-vessel Value<sup>a</sup> of Oregon Troll Salmon Landings and Average Price per Pound, 1971-89.

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	1,514,00	2.75	118,000	1.67	1,632,000
1985	5,045,000	2.48	729,000	1.51	5,773,000
1986	5,976,000	1.77	1,978,000	1.04	7,954,000
1987	13,324,000	2.57	3,264,000	1.70	16,588,000
1988	13,923,000	3.17	7,614,000	2.28	21,537,000
1989	7,868,458	2.22	2,130,358	1.06	9,998,816

<sup>a</sup> Dressed weight value

Table 8. Observed Average Dressed Weight and Calculated Number of Chinook Landed in Oregon by Calendar Month and Port, 1989.

Port of Landing	Month							Total
	May	June	July	Aug.	Sept.	Oct.	Nov.	
<u>Astoria</u>								
Numbers	1,773	992	534	1,006	736	5	-	5,046
Pounds	16,244	8,817	4,746	11,553	8,681	64	-	50,105
Ave. wt.	9.2	8.9	8.9	11.5	11.8	12.8	-	9.9
<u>Garibaldi-Pacific City</u>								
Numbers	3,695	6,392	5,771	3,616	4,643	1,477	-	25,594
Pounds	35,183	50,689	57,284	42,253	90,915	25,826	-	302,150
Ave. wt.	9.5	7.9	9.9	11.7	19.6	17.5	-	11.8
<u>Depoe Bay-Waldport</u>								
Numbers	20,981	14,291	21,360	9,773	3,982	5,741	-	76,128
Pounds	219,346	148,019	220,715	98,430	40,884	49,416	-	776,810
Ave. wt.	10.4	10.4	10.3	10.1	10.3	8.6	-	10.2
<u>Florence-Bandon</u>								
Numbers	67,128	38,611	41,457	43,667	7,161	7,284	197	205,505
Pounds	636,105	347,489	439,242	408,147	61,756	58,092	2,683	1,953,514
Ave. wt.	9.5	9.0	10.6	9.4	8.6	8.0	13.6	9.5
<u>Port Orford-Brookings</u>								
Numbers	6,674	2,252	2,074	17,132	8,544	1,897	2,600	41,173
Pounds	79,153	28,979	24,342	158,044	72,642	39,002	47,171	449,333
Ave. wt.	11.9	12.9	11.7	9.2	8.5	20.6	18.1	10.9
<u>Total</u>								
Numbers	100,251	62,538	71,196	75,194	25,066	16,404	2,797	353,446
Pounds	986,031	583,993	746,329	718,427	274,878	172,400	49,854	3,531,912
Ave. wt.	9.8	9.4	10.5	9.6	11.0	10.5	17.8	10.0

Table 9. Observed Average Dressed Weight and Calculated Number of Coho Landed in Oregon by Calendar Month and Port, 1989.

Port of Landing	June	July	August	September	Total
<u>Astoria</u>					
Numbers	-	5,008	11,150	9,246	25,404
Pounds	-	20,598	51,220	43,245	115,063
Ave. wt.	-	4.1	4.6	4.7	4.5
<u>Garibaldi- Pacific City</u>					
Numbers	-	111,882	17,907	623	130,412
Pounds	-	448,644	78,591	3,106	530,341
Ave. wt.	-	4.0	4.4	5.0	4.1
<u>Depoe Bay- Waldport</u>					
Numbers	-	131,520	7,854	-	139,374
Pounds	-	576,224	38,721	-	614,945
Ave. wt.	-	4.4	4.9	-	4.4
<u>Florence- Bandon</u>					
Numbers	-	119,589	27,662	-	147,251
Pounds	-	539,304	132,613	-	671,917
Ave. wt.	-	4.5	4.8	-	4.6
<u>Port Orford- Brookings</u>					
Numbers	1,007	6,801	5,477	-	13,285
Pounds	4,654	31,869	26,726	-	63,249
Ave. wt.	4.6	4.7	4.9	-	4.8
<u>Total</u>					
Numbers	1,007	374,800	70,050	9,869	455,726
Pounds	4,654	1,616,639	327,871	46,351	1,995,515
Ave. wt.	4.6	4.3	4.7	4.7	4.4

## TROLL SALMON MARK SAMPLING

In 1989, two troll samplers were assigned to Newport; two to Charleston; and one each to Astoria, Garibaldi, Pacific City, Florence, Winchester Bay, Port Orford, and Brookings. The Astoria, Pacific City, and Brookings samplers also sampled the recreational fisheries. During peak troll salmon periods, the two crew chiefs also sampled the troll fishery. In 1989, 21% of all chinook and 22% of all coho were examined for coded wire tags (Tables 10 and 11).

### Chinook

Samplers obtained 5,015 random snouts from adipose-clipped chinook in the 1989 troll landings. Technicians found tags in 4,624 or 92% of the snouts. The main agencies contributing the tags were:

Oregon Department of Fish and Wildlife	54%
California Department of Fish and Game	31%
Washington Department of Fisheries	7%

### Coho

Samplers obtained 4,910 random snouts from adipose-clipped coho in 1989 troll landings. Technicians found coded-wire tags in 4,069 or 83% of the snouts. The main agencies contributing tags were:

Oregon Department of Fish and Wildlife	60%
Washington Department of Fisheries	26%
Anadromous, Inc.	7%
Oregon Aqua-foods, Inc.	4%

Table 10. Oregon Troll Chinook Mark Sampling by Best Fit Calendar Month and Port, 1989.

Port of Landing	Month							Total
	May	June	July	Aug.	Sept.	Oct.	Nov.	
<u>Astoria</u>								
No. Examined	1,066	61	0	539	121	0	0	1,537
No. Landed	1,650	1,115	533	1,416	327	0	0	5,046
% Examined	65	6	0	38	37	0	0	30
No. Marks	71	4	0	35	9	0	0	119
<u>Garibaldi-Pacific City</u>								
No. Examined	0	422	1,389	661	437	56	0	2,965
No. Landed	3,312	6,830	5,438	4,324	4,195	1,495	0	25,594
% Examined	0	6	26	15	10	4	0	12
No. Marks	0	18	62	29	13	6	0	128
<u>Depoe Bay-Waldport</u>								
No. Examined	2,831	3,368	4,155	3,749	712	648	0	15,463
No. Landed	14,578	21,059	20,660	10,750	3,344	5,737	0	76,128
% Examined	19	16	20	35	21	11	0	20
No. Marks	144	182	289	301	33	33	0	982
<u>Florence-Bandon</u>								
No. Examined	5,250	8,755	5,247	7,722	511	451	24	27,960
No. Landed	62,088	44,078	40,417	45,169	6,330	6,986	437	205,505
% Examined	8	20	13	17	8	6	5	14
No. Marks	276	479	233	440	20	14	1	1,463
<u>Port Orford-Brookings</u>								
No. Examined	4,058	1,445	1,528	10,019	5,196	1,233	1,337	24,816
No. Landed	6,426	2,537	2,037	17,849	7,830	1,598	2,896	41,173
% Examined	63	57	75	56	66	77	46	60
No. Marks	254	74	82	580	312	449	598	2,349
<u>Total</u>								
No. Examined	13,205	14,051	12,319	22,690	6,977	2,388	1,361	72,991
No. Landed	88,054	75,619	69,085	79,508	22,026	15,821	3,333	353,446
% Examined	15	19	18	29	32	15	41	21
No. Marks	745	757	666	1,385	387	502	599	5,041

Table 11. Oregon Troll Coho Mark Sampling by Best Fit  
Calendar Month and Port, 1989.

Port of Landing	Month				Total
	June	July	Aug.	Sept.	
<u>Astoria</u>					
No. Examined	0	0	5,189	2,645	7,834
No. Landed	0	4,964	15,236	5,204	25,404
% Examined	0	0	34	51	31
No. Marks	0	0	252	139	391
<u>Garibaldi- Pacific City</u>					
No. Examined	0	34,437	3,854	0	38,291
No. Landed	0	110,555	19,534	323	130,412
% Examined	0	31	20	0	29
No. Marks	0	1,367	141	0	1,508
<u>Depoe Bay- Waldport</u>					
No. Examined	0	22,549	2,653	0	25,202
No. Landed	0	131,305	8,069	0	139,374
% Examined	0	17	33	0	18
No. Marks	0	1,278	159	0	1,437
<u>Florence- Bandon</u>					
No. Examined	0	15,787	5,116	0	20,903
No. Landed	0	118,553	28,698	0	147,251
% Examined	0	13	18	0	14
No. Marks	0	759	307	0	1,066
<u>Port Orford- Brookings</u>					
No. Examined	428	5,142	3,457	0	9,027
No. Landed	1,007	6,801	5,477	0	13,285
% Examined	42	76	63	0	68
No. Marks	22	345	213	0	580
<u>Total</u>					
No. Examined	428	77,915	20,269	2,645	101,257
No. Landed	1,007	372,178	77,014	5,527	455,726
% Examined	42	21	26	48	22
No. Marks	22	3,749	1,072	139	4,982

## THE 1989 RECREATIONAL OCEAN SALMON FISHERY

Oregon's ocean anglers that fished North of Cape Falcon had restrictions somewhat relaxed with the most fishing days since 1983. South of Cape Falcon, calm ocean and bar conditions and higher than average catch rates resulted in early attainment of the coho quota with resultant dampening measures and a closure to the fishery in mid-August.

We estimated a catch of 32,069 chinook and 272,240 coho from 266,605 salmon angler trips and 48,786 bottomfishing trips during the 1989 salmon season. Ocean upwelling events were infrequent along much of the Oregon Coast in 1989. This lack of upwelling resulted in abnormally warm sea surface temperatures along much of the coast with cooler water to the South and to the North. Correspondingly, we saw higher than average catches of coho to the South.

### REGULATIONS

The Oregon coast is divided into three salmon management areas, each with different regulations. The regulations were set by the Pacific Fishery Management Council and the Oregon Department of Fish and Wildlife. The Oregon Department of Fish and Wildlife also adopted some special seasons in state waters. Table 12 gives a historical perspective of recreational ocean salmon regulations.

#### North of Cape Falcon

The recreational fishery from Cape Falcon to the US/Canada border had an overall quota of 47,500 chinook and 225,000 coho. A conservation zone closure was in effect from Buoy 10 out to 200 miles at the Columbia River mouth (Figure 3). A subarea quota of 111,400 coho and 14,300 chinook was established between Leadbetter Point and Cape Falcon. The daily bag limit was 2 salmon. Minimum size limits were 24" for chinook and 16" for other salmon. Only single point barbless hooks were permitted. There was an annual bag limit of 40 salmon but no weekly possession limit.

An early season experimental all species except coho season was open Sundays and Mondays from May 28 through June 12 with a guideline of 5,000 chinook. This experimental fishery was open inside of 6 miles from Cape Falcon to the US/Canada border (Table 13). The general all species fishery opened June 26 (Sundays through Thursdays only) and continued through August 17.

#### Cape Falcon to Orford Reef Red Buoy

South of Cape Falcon, the recreational coho quota was 283,000 fish. Again this year there was a provision to roll over to the troll fishery any portion of the quota that was projected to be in excess of the sport fishery needs. The daily bag limit was 2 salmon. Minimum lengths were 16" for coho and 20" for chinook. Single point barbless hooks were required. The annual bag limit was 40 salmon, but no more than six salmon could be caught in 7 consecutive days.

The season in the Cape Falcon to Orford Reef Red Buoy area was open May 1 through May 26 within the 27 fathom curve. From May 27 through August 20, and

Table 12. Summary of Oregon's Recreational Ocean Salmon Regulations, 1946-88.

Year	Season	Regulations
1946	All Year	3 fish/day; 9 in possession.
1947	All year	2 fish/day; 6 in possession
1948-54	All year	2 fish/day; 4 in possession; 20 fish annual limit.
1955-57	All year	2 fish/day; 4 in possession; 20 fish annual limit; 20" minimum size, both species.
1958-64	All year	2 fish/day; 4 in possession; 20 fish annual limit; 20" minimum size, both species, except 22" minimum size north of Tillamook Head (July 1-October 31).
1965-69	All year	3 fish/day; 6 in possession; 20 fish annual limit; 20" minimum size, both species.
1970-75	All year	3 fish/day; no possession limit; 40 fish annual limit; North of Tillamook Head, 20" minimum size both species. South of Tillamook Head, no size limits.
1976	4/10 -12/31	3 fish/day; 40 fish annual limit. North of Tillamook Head--Chinook, 24" minimum size; coho, 16" minimum size. South of Tillamook Head, no size limits.
1977	4/30 - 10/31	Same as in 1976.
	11/1-31	(State waters off Elk and Chetco rivers)--3 chinook/day; no size limit.
1978	4/29 - 10/31	3 fish/day; 40 fish annual limit. North of Cape Falcon--chinook, 24" minimum size; coho, 16" minimum size. South of Cape Falcon--chinook, 22" minimum size; coho, 16" minimum size.
	11/1-30	(State waters off Elk and Chetco rivers)--3 chinook/day; 22" minimum size.
1979	5/12 - 9/16	2 fish/day south of Cape Falcon; 3 fish/day north of Cape Falcon, of which only 2 may be chinook or coho; 40 fish annual limit. Size limits as in 1978.
	11/1-30	(State waters off Elk and Chetco rivers)--2 chinook/day; 22" minimum size.
1980	5/10 - 9/14 <sup>a</sup>	3 fish/day lowered to 2 fish/day on July 16; 40 fish annual limit. Size limits as in 1978.
	9/15 - 10/31	(South of Cape Falcon) 2 chinook/day; 22" minimum size.
	11/1-30	(State waters off Elk and Chetco rivers)--as above.
1981	5/15 - 9/20 <sup>b</sup>	(South of Cape Falcon) 2 fish/day; increased to 3 fish/day on August 14; 40 fish annual limit. Size limits as in 1978.
	5/23 - 9/7 <sup>b</sup>	(North of Cape Falcon) 2 fish/day; 40 fish annual limit. Size limit as in 1978.
	9/21 - 10/31	(South of Cape Blanco) 2 chinook per day; 22" minimum size.
	11/1-30	(State waters off Elk and Chetco rivers)--as above.
1982	5/28 - 6/11	(Between Cape Blanco and Cape Falcon in state waters) first 2 chinook taken per day; barbless hook only.
	5/28 - 8/1 <sup>c</sup>	(South of Cape Blanco)--as above.
	6/12 - 8/1 <sup>c</sup>	(Entire coast) 2 fish/day north of Cape Falcon; first 2 fish taken/day south of Cape Falcon, regardless of size. Size limit north of Cape Falcon same as in 1978. 40 fish annual limit.



Table 12 continued

Year	Season	Regulations
1982 cont.	8/2 - 10/31	(South of Cape Blanco) first 2 chinook taken/day.
	11/1-30	(State waters off Elk and Chetco rivers) first 2 chinook taken/day.
1983	5/28 - 9/18	(South of Cape Blanco) first 2 fish taken/day regardless of size. 40 fish annual limit.
	6/18 - 9/18	(Entire coast south of Cape Falcon) as above.
	6/18 - 9/11	(North of Cape Falcon) 2 fish/day
	9/19 - 10/31	(South of Cape Blanco) first 2 chinook taken/day.
	11/1-30	(State waters off Elk River) first 2 chinook taken/day.
1984	7/9 - 8/7	(South of Cape Falcon) 2 fish/day; 40 fish annual limit. Minimum size 20". Single-point barbless hooks.
	7/28 - 8/8	(Cape Falcon to Columbia River, South Jetty) 2 coho/day; 40 fish annual limit. Minimum size 16". No chinook allowed. Single-point barbless hooks.
	8/9-24	Cape Blanco to OR/CA border) 2 chinook/day; 20" minimum size. Single-point barbless hooks.
	8/25 - 9/3	(Cape Falcon to Cape Blanco) 1 fish/day; 20" minimum size. Single-point barbless (State waters only) hooks. (Cape Blanco to OR/CA border) 2 fish/day, one of which can be coho; 20" minimum size. Single-point barbless hooks.
	9/4 - 10/31	(Cape Blanco to OR/CA border) 2 chinook/day; 20" minimum size. Single-point barbless hooks.
	9 15-21 <sup>d</sup>	(Manhattan Beach to Pyramid Rock off Tillamook Bay) 2 chinook/day; 20" minimum size. (State waters only) Single-point barbless hooks.
	11/1-30	(Cape Blanco to Humbug Mountain-Elk River) 2 chinook/day; 20" minimum size. (State waters only) Single-point barbless hooks.
1985	5/25-31	(OR-CA border to Cape Blanco) first 2 fish taken per day; no more than 6 fish may be retained in 7 consecutive days.
	7/1-9/30	(OR-CA border to Cape Falcon)--as above.
	6/30 - 8/22	(Cape Falcon to Leadbetter Pt.) 2 fish per day; 40 fish annual bag limit. Minimum size 24" for chinook, 16" for coho and other salmon. Barbless hooks. Area closure: Red Buoy line on Columbia R. mouth north to Klipsan Beach. Fishery closed Fridays and Saturdays.
	9/3 - 10/31	(OR-CA border to Cape Blanco) first 2 salmon except coho taken per day; no more than 6 fish may be retained in 7 consecutive days.
	9/15 - 10/31	(Twin Rocks to Pyramid Rock off Tillamook Bay; state waters only) first 2 salmon except coho taken per day; no more than 6 fish may be retained in 7 consecutive days.
	10/1 - 11/30	(Tower Rock to Humbug Mt.; state waters near Elk R.) first 2 salmon except coho taken per day; no more than 6 fish may be retained in 7 consecutive days.
1986	5/24 - 9/7	(OR-CA border to Cape Blanco) from May 24 through June 22, not more than 1 coho and 1 chinook per day; after June 22, 2 salmon of any species. Not more than 6 fish may be retained in 7 consecutive days. Minimum size 20" for all salmon; barbless hooks.

Table 12 continued

Year	Season	Regulations
1986 cont.	5/24 - 5/26 and 6/28 - 8/13	(Cape Blanco to Cape Falcon) first 2 fish hooked per day; not more than 6 fish in 7 consecutive days. On July 27, Sundays and Mondays were closed to salmon fishing. On July 29 possession limit reduced to not more than 2 fish in 7 consecutive days.
	6/29 - 8/19	(Cape Falcon to Leadbetter Point) 2 fish per day; minimum size 24" for chinook and 16" for other salmon. Barbless hooks. Area closure: Red Buoy line at Columbia River mouth north to Klipsan Beach. Fishery closed Fridays and Saturdays.
	9/15 - 11/15	(Twin Rocks to Pyramid Rock off Tillamook Bay in state waters) first 2 salmon except coho per day; not more than 6 fish in 7 consecutive days; barbless hooks allowed.
	10/1 - 11/26	(South of Cape Blanco to Humbug Mountain in state waters) 2 salmon except coho per day; not more than 6 fish in 7 consecutive days; barbless hooks only. Minimum size 20".
	10/1-31	(South of Bird Island to OR-CA border in state waters) 2 salmon except coho per day; not more than 6 fish in 7 consecutive days; barbless hooks only. Minimum size 20".
1987	5/23 - 9/13	(Cape Blanco to OR/CA Border) 2 salmon per day; not more than 6 salmon may be retained in 7 consecutive days; 40 salmon annual limit, minimum size 20". Single point barbless hooks.
	6/13 - 9/13	(Cape Falcon to Cape Blanco) First 2 salmon per day; not more than 6 salmon may be retained in 7 consecutive days; 40 salmon annual limit.
	6/29 - 8/19	(Leadbetter Point to Cape Falcon) 2 salmon per day; 40 salmon annual limit. Open Sunday through Thursday only. Area closures inside 3 miles from Cape Falcon to Red Buoy Line, 0-200 miles from Red Buoy line to Klipsan Beach, and inside 3 miles from Klipsan Beach to Leadbetter Point. Minimum size 24" for chinook and 16" for coho. Single point barbless hooks.
	9/15 - 10/31	(Twin Rocks to Pyramid Rock; state waters off Tillamook Bay) First 2 salmon except coho per day, not more than 6 salmon may be retained in 7 consecutive days; 40 salmon annual limit.
	10/1 - 11/30	(Cape Blanco to Humbug Mountain; state water off Elk River) 2 salmon per except coho; not more than 6 salmon may be retained in 7 consecutive days; 40 salmon annual limit. Minimum size 20" chinook Single point barbless hooks.
10/1 - 31	(Bird Island to OR/CA Border east of 124° 20'w; state waters off of Chetco River) 2 salmon per day except coho; not more than 6 salmon may be retained in 7 consecutive days; 40 salmon annual limit. Minimum size 20" chinook. Single point barbless hooks.	
1988	5/1 - 27	(Cape Falcon to Orford Reef Red Buoy inside the 27 fathom curve only) 2 salmon per day; 6 salmon in 7 consecutive days; 40 salmon annual limit. Minimum size 20" chinook, 16" coho. Single point barbless hooks.
	5/28 - 9/11	(Cape Falcon to Orford Reef Red Buoy) As above.
	5/28 - 7/9	(Orford Reef Red Buoy to OR/CA border) 2 salmon per day; 6 salmon in 7 consecutive days; 40 salmon annual limit. Minimum size 20". Single point barbless hooks.
	7/10 - 9/11	(Orford Reef Red Buoy to OR/CA Border) As above except bag decreased to 1 salmon per day.
	9/12 - 10/31	(Twin Rocks to Pyramid Rock; state waters off Tillamook Bay) 2 salmon except coho per day; 6 salmon in 7 consecutive days; 40 salmon annual limit. Barbed hooks are permitted. No minimum length.

Table 12 continued

Year	Season	Regulations
1988 cont.	10/1 - 31	(Orford Reef Red Buoy to Humbug Mountain, state waters off Elk River) 2 salmon except coho per day; 6 salmon in 7 consecutive days; 40 salmon annual limit. Single point barbless hooks. No minimum length.
	11/1 - 30	(Cape Blanco to Humbug Mountain; state waters off Elk River) as above.

- a Federal waters (3-200 miles) closed to coho fishing effective September 1.
- b Federal waters closed August 26-September 20 for all species of salmon.
- c Federal waters closed to coho fishing on July 21, north of Cape Falcon and July 25 south of Cape Falcon.
- d Pacific Ocean between 45 degrees 38 minutes N. Latitude and 45 degrees 29 minutes 45 seconds N. latitude and seaward 3 miles.

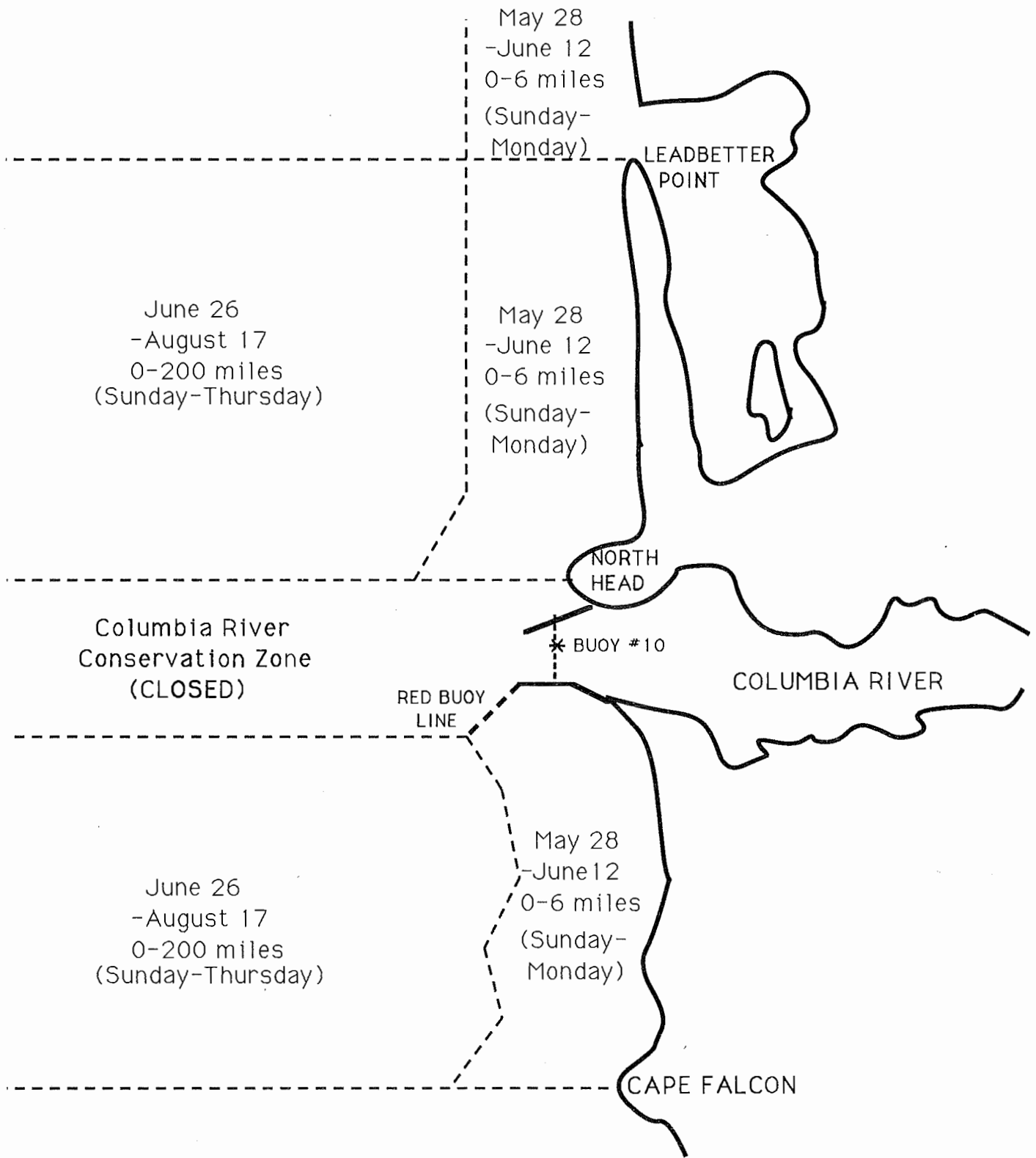


Figure 3. Open Areas in the Ocean Recreational Salmon Fishery in the Columbia River Area, 1989.

Table 13. Summary of Actual Ocean Recreational Salmon Fishing Regulations for 1989<sup>a</sup>.

Area and Season	Salmon Species	Actual Quota or Guideline(*)		Daily Limit and Special Restrictions <sup>b</sup>
		Chinook	Coho	
U.S.-Canada Border to Cape Falcon 5/28 - 6/12 (10 days) Sunday through Monday only.	All except coho	5,000*	--	Two salmon per day. Closed from 6 to 200 miles of shore. Columbia River mouth is closed.
U.S.-Canada Border to Queets River 7/2-7/26 (19 days) Sunday through Thursday only.	All	3,900*	22,500	
Queets River to Leadbetter Point 6/26-8/30 (48 days) Sunday through Thursday only.	All	24,300*	91,100	Two salmon per day.
Leadbetter Point to Cape Falcon 6/26-8/17 (39 days) Sunday through Thursday only	All	14,300*	111,400	Two salmon per day. Columbia River mouth is closed.
Cape Falcon to Orford Reef Red Buoy 5/1-26 (26 days) Within the 27 fathom curve. 5/27-7/27 (62 days) 7/28-8/20 (16 days) Sunday through Thursday only 9/2-4 (3 days)	All	None	<sup>c</sup>	Two salmon per day, no more than 6 salmon in 7 consecutive days. As above. As above.
Orford Reef Red Buoy to Horse Mountain 5/1-9/30 (153 days)	All	80,000*	<sup>c</sup>	Two salmon per day, no more than 6 salmon in 7 consecutive days.
Horse Mountain to U.S.-Mexico Border 2/18-11/12 (268 days)	All	None	<sup>c</sup>	Two salmon per day.

<sup>a</sup> In addition to the seasons listed here, ODFW established limited late season all-salmon-except coho fisheries inside state waters near the mouths of the Elk and Sixes rivers and at the mouth of Tillamook Bay. Details of these seasons are provided in Table 14.

<sup>b</sup> Single point, single shank barbless hooks were required from U.S.-Canada border to Pt. Conception, CA. Minimum size limits were (1) 24 inches for chinook and 16 inches for coho north of Cape Falcon, OR; (2) 20 inches for chinook and 16 inches for coho from Cape Falcon to Orford Reef Red Buoy, OR; and (3) 20 inches for both chinook and coho south of Orford Reef Red Buoy.

<sup>c</sup> The overall recreational impact was limited to a preseason quota of 283,000 coho salmon from Cape Falcon to the U.S.-Mexico border. The fishery south of Orford Reef Red Buoy was not affected by inseason management based on the coho quota.

September 2 through 4 the fishery was open from 0-200 miles. Accelerated catches in July precipitated action by the PFMC to slow catches, and resulted in Fridays and Saturdays being closed from July 28 through August 20. The fishery was reopened for Labor Day weekend when it became apparent that some fish remained on the quota.

#### **Orford Reef Red Buoy to Horse Mountain**

The coho catch in this management area counted against the 283,000 fish quota, but the fishery would continue after the quota was met. A chinook guideline of 80,000 fish was set with provisions for dampening. The daily bag limit was 2 salmon of any species, and the size limit for all species was 20". Single point barbless hooks were required. The annual bag limit in Oregon was 40 salmon, and not more than six salmon could be caught in 7 consecutive days. The area south of Orford Reef Red Buoy opened on May 1 and went until its scheduled close on September 30 (Table 13).

There were two state water salmon fisheries after the general seasons closed (Table 14). State waters off Tillamook Bay were open to chinook fishing from September 16 through October 31. The Port Orford area also had a state waters fishery scheduled from October 1 through November 30 but this area is not accessible to most recreational anglers. Neither of these fisheries were sampled.

#### **OCEAN SALMON SAMPLING**

Twenty seasonal aides sampled the ocean recreational fishery in 1989. Newport had four samplers; Astoria, Winchester Bay, and Brookings each had three; Garibaldi and Coos Bay each had two samplers; and Depoe Bay, Pacific City, and Florence had one. We started with limited sampling in May in all ports except Pacific City and Florence. We increased staffing in early June in some ports and started sampling Pacific City and Florence. Gold Beach was not sampled systematically in 1989. All samplers made boat counts and sampled anglers. Total sampler months decreased from 1988 levels due to funding concerns early in the season (Table 15).

A modified random sampling design was used at each port to survey the ocean recreational fishery. Catch per angler data was collected at least 4 days a week, including all weekends and holidays through interviews with ocean anglers at boat ramps, moorages, and charter docks. The salmon catch was sampled for species, marks, and scales. Snouts were collected from marked (adipose-clipped) fish and their coded wire tags were later recovered. Information on bottomfish catch was also collected.

Effort estimates were primarily obtained through boat counts by ODFW samplers, but Coast Guard bar crossing counts and information from charter boat offices were also used. In Pacific City, total effort was estimated from a combination of trailer counts and angler interviews. All catch and effort data were entered and expanded on the Department's Burroughs computer. The survey provided accurate weekly estimates of Oregon's ocean recreational effort and catch within 7 days after the week ended.

Table 14. Extended 1989 Oregon Ocean Salmon Fisheries for All Species Except Coho.

Location	Fishery	Season	Open Area	Special Restrictions and Comments
Tillamook Bay Area	Recreational	9/16 - 10/31	S of Latitude of Twin Rocks (45°35'49" N Lat), N of latitude of Pyramid Rock (45°29'45"), and seaward to 3 miles (state waters).	Bag limit: 2 salmon except coho per day; no more than 6 fish in 7 consecutive days. Barbed hooks allowed. No quota.
Port Orford Area	Troll	10/1-31	S of Port Orford Reef Red Buoy (42°45'11" N Lat), N of Latitude of Humbug Mtn. (42°40'30"), and seaward to 3 miles (state waters).	Minimum length chinook 26" head-on, 19.5" head-off. Barbless hooks only. No quota.
		11/1-30	S of Cape Blanco (42°50'20" N Lat) N of Latitude of Humbug Mtn. (42°40'30"), and seaward to 3 miles (state waters).	Same as 10/1-31.
Port Orford Area	Recreational	10/1 - 11/30	Cape Blanco to Humbug Mtn.	Bag limit: 2 salmon except coho per day; no more than 6 fish in 7 consecutive days. Barbless hooks only. No quota.

Table 15. Recreational Ocean Salmon Sampling Rates at Oregon Ports, 1977-89.

Port	Percentage of Catch Sampled <sup>a</sup>												
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Astoria	9	29	35	20	40	42	44	31	57	38	39	49	44
Garibaldi	48	33	43	39	36	55	61	35	47	37	40	32	37
Pacific City	-	41	-	-	82	87	82	71	72	75	75	79	70
Depoe Bay	26	49	47	45	50	68	60	65	60	55	57	50	56
Newport	15	15	31	39	40	31	34	48	36	35	33	39	35
Florence	-	-	-	-	30	37	44	27	29	41	38	46	51
Winchester Bay	21	22	35	33	26	32	33	27	34	33	31	36	44
Coos Bay	32	51	47	49	57	63	47	54	48	50	54	46	46
Gold Beach	29	23	42	50	48	62	43	47	43	63	64	<sup>b</sup>	-
Brookings	19	20	29	22	21	30	36	42	49	62	57	51	65
Coastwide percentage	19	27	37	34	39	44	42	42	47	44	44	43	43
Number of samplers	8	11	13	14	16	16	19	20	23	23	23	20	20
Sampler months	27	36	47	54	62	51	60	55	47	62	79	79	70

<sup>a</sup> Percentage of total catch observed by samplers = number of salmon observed/estimated catch of salmon

<sup>b</sup> Sampling at Gold Beach in 1988 was conducted on a spot-check basis.

Department samplers checked 130,456 salmon in 1989 compared to 114,026 salmon in 1988. Catch sampling rates in 1989 ranged from 70% at Pacific City to 31% at Newport. Overall, 43% of the total combined salmon catch from all ports was sampled in 1989 the same percentage as in 1988 (Table 15).

## EFFORT AND CATCH STATISTICS

### Effort

Historically, ocean fishing effort data have always included a small number of bottomfishing trips. Since 1979, salmon fishing trips have been tallied separately. The majority of ocean anglers choose salmon fishing over bottomfishing when both fisheries are available. However, halibut fishing has become increasingly popular on the central coast, and bottomfishing trips predominated in May in Newport and Depoe Bay. In 1989, 266,600 trips (86%) targeted on salmon and 48,800 trips went out for bottomfish during the salmon season for a combined total of 311,700 angler trips. This total is less than the sum of the salmon and bottomfish trips because of a small number of combination trips. The 1989 salmon angler trip total was 6% above the 1979-88 average. The total effort was 5% below the 1971-88 average of 329,100 angler trips which includes years with no closed season or 8 month seasons (Table 16).

In 1989, 122,600 angler trips or 46% of the total salmon trips occurred in July and 69,700 trips or 26% of the total took place in August. Historically, July has the highest salmon effort, especially from Winchester Bay south while August is the top month for the Tillamook and Astoria areas. The trend is less defined on the central coast but July is usually the peak month (Table 17).

August was the top month for bottomfishing effort with 15,900 trips or 33% of the total bottomfishing trips (Table 18). This reflects the Friday and Saturday salmon fishing closures from July 28 through August 20, and the total closure from August 21 through September 1 for salmon fishing.

Brookings had the highest salmon effort in 1989 with 66,100 (23%) of the state's total salmon trips. Newport had the highest bottomfish effort, and the second highest salmon effort with 55,800 angler trips followed by Winchester Bay with 35,800. Salmon effort was similar to the 1988 levels in all areas except the Columbia River which saw a 250% increase, and Brookings which saw a 27% increase in salmon effort (Table 17). Table 19 shows past ocean recreational effort and catch by management areas.

### Catch

The sport sampling survey estimated the total salmon catch for 1989 by species for Oregon's ocean fishery except for minor landings at unsurveyed ports. Fish landed at these unsurveyed ports represent less than one percent of the total catch, and catch estimates are available later from salmon punch cards. The 1989 success rates were stable or up slightly in all ports except Florence when compared to 1988. The estimated OPI coho stock size in 1989 was only 7% below that of 1988 and a good showing of chinook contributed to the increased success.



Table 16. Oregon Ocean Recreational Salmon Catch and Effort for 1966-89<sup>a</sup>

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 <sup>b</sup>	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	186,483	212,600	211,666	22,366	0	1.26
1987	255,048	279,500	177,439	58,595	904	0.93
1988	251,979	288,523	226,403	38,617	0	1.05
Long-term average	249,401	329,057	243,481	39,807	2,029 <sup>b</sup>	0.93 <sup>c</sup>
1989	266,605	311,713	272,240	32,069	1,325	1.15

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

<sup>b</sup> Odd year average

<sup>c</sup> 1979-88 average

Table 17. Oregon Recreational Effort in Salmon Angler Trips by Area<sup>a</sup> and Month for 1982-89 and 1979-81 Average.

Area	May	June	July	August	Sept.	Oct.	Nov.	Season <sup>b</sup>
<u>Columbia R</u>								
1979-81 avg.	1,000	5,900	14,200	19,800	3,800	-	-	44,800
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	7,800	-	-	-	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
<u>Tillamook</u>								
1979-81 avg.	900	4,600	13,500	16,400	3,600	-	-	38,900
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 <sup>c</sup>	-	38,600
1986	0	1,900	13,000	3,000	-	-	-	17,900
1987	-	1,800	12,400	10,900	3,800	-	-	29,100
1988	300	2,100	9,600	13,800	2,400	-	-	33,200
1989	300	3,000	15,400	9,500	3,100	-	-	31,300
<u>Newport</u>								
1979-81 avg.	2,000	11,000	33,300	27,700	3,800	-	-	77,900
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	38,700	7,900	-	-	-	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	22,800	4,300	-	-	82,800
<u>Coos Bay</u>								
1979-81 avg.	4,500	22,500	41,400	20,700	2,800	-	-	92,900
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	33,700	4,200	-	-	-	43,600
1987	-	3,900	40,600	12,800	5,200	-	-	62,500
1988	1,400	9,800	33,100	21,000	3,600	-	-	69,000
1989	800	16,200	33,900	13,600	2,100	-	-	66,600
<u>Brookings</u>								
1979-81 avg.	1,100	11,700	24,900	15,900	3,600	3,400	500	61,000
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	3,500	10,400	20,000	12,900	600	5,000	-	52,400
1987	2,300	10,000	29,000	15,200	7,100	5,900	-	69,400
1988	800	14,300	25,500	12,000	1,900	-	-	54,400
1989	3,100	15,700	26,600	14,600	6,200	-	-	66,100
<u>All Areas</u>								
1979-81 avg.	9,500	55,600	127,300	100,600	17,600	3,400	500	314,600
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	21,800	117,500	35,900	600	5,000	-	186,500
1987	2,300	21,500	130,500	62,900	24,700	5,900	-	255,000
1988	3,600	33,300	111,800	81,000	22,400	-	-	252,000
1989	5,200	53,400	122,600	69,600	15,700	-	-	266,600

<sup>a</sup> 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.

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

<sup>c</sup> Only 600 were ocean only trips. Most were combination bay-ocean trips.

Table 18. Oregon Ocean Recreational Effort by Port, by Month and by Trip Type, 1989.

Port/Trip Type	Month					Total
	May	June	July	August	Sept.	
Columbia R.	146	1,238	9,267	9,245	-	19,896
Salmon	146	1,221	9,222	9,245	-	19,834
Bottomfish	0	17	45	0	-	62
Garibaldi	1,561	4,308	14,677	13,558	324	34,428
Salmon	293	2,430	12,807	10,488	318	26,296
Bottomfish	1,268	1,878	1,870	3,110	6	8,132
Pacific City	-	642	2,685	1,933	-	5,260
Salmon	-	591	2,599	1,807	-	4,997
Bottomfish	-	51	86	126	-	263
Depoe Bay	2,101	7,666	14,562	11,495	347	36,171
Salmon	307	5,866	12,569	7,936	266	26,944
Bottomfish	1,794	1,800	1,993	3,559	81	9,227
Newport	5,228	16,451	27,721	24,912	1,696	76,008
Salmon	635	11,371	24,906	18,370	547	55,829
Bottomfish	4,593	5,080	2,815	6,542	1,149	20,179
Florence	49	1,413	6,775	3,962	-	12,199
Salmon	49	1,392	6,775	3,962	-	12,178
Bottomfish	0	21	0	0	-	21
Winchester Bay	566	9,213	18,246	7,886	80	35,991
Salmon	527	9,172	18,200	7,824	80	35,803
Bottomfish	39	41	46	62	0	188
Coos Bay	403	5,967	9,966	4,942	58	21,336
Salmon	227	5,672	8,908	3,821	0	18,628
Bottomfish	176	295	1,058	1,121	58	2,708
Brookings	5,049	17,967	27,260	17,684	6,142	74,102
Salmon	3,065	15,735	26,565	16,270	4,461	66,096
Bottomfish	1,984	2,232	695	1,414	1,681	8,006
Total south of Cape Falcon	14,957	63,627	121,892	86,372	8,647	295,495
Salmon	5,103	52,229	113,329	70,438	5,672	246,771
Bottomfish	9,854	11,398	8,563	15,934	2,975	48,724
State Total	15,103	64,865	131,159	95,617	8,647	315,391
Salmon	5,249	53,450	122,551	79,683	5,672	266,605
Bottomfish	9,854	11,415	8,608	15,934	2,975	48,786

The 1989 total ocean recreational salmon catch was 305,600 fish, a 15% increase from the 1988 level. While well below the record 580,700 fish catch in 1976, this is 7% above the 1966-88 average of 285,300 salmon (Table 16). Figure 4 shows the trend in recreational ocean catches since 1966.

**Chinook:** The recreational harvest of 32,100 chinook in 1989 was 17% below the 1988 catch, and was only 81% of the 1966-88 average of 39,800 fish (Tables 16 and 19). As expected, Brookings and Winchester Bay dominated the chinook landings, taking 66% and 10% of the total catch, respectively (Table 20). Historically, the Columbia River area has been an important chinook catch area, but complex fishery issues and tight quotas north of Cape Falcon dampened catches (Tables 19 and 22). July accounted for 46% of the catch (14,700 fish) with Brookings taking 64% of those chinook (Tables 20 and 22).

**Coho:** The ocean recreational coho catch of 272,200 fish was the third best since 1976, and slightly exceeded the 1971-75 average of 271,800 coho, and was 12% above the long term (1966-88) average coho catch of 243,500 fish (Table 16).

Of the total harvest, 55,670 coho or 20% were landed in June, which compares to the historical shares of 13% to 25% (1979-81 and 1974-75 averages). July was the peak harvest month with 143,000 fish or 53% of the season's total. Newport landed the most coho, 66,100 fish or 24% of the total, but the Columbia River area, Winchester Bay, Depoe Bay, and Brookings each landed more than 33,000 fish, together accounting for another 53% of the total catch (Table 21). Landings were up from 1988 in the Columbia River area, Coos Bay, Winchester Bay, and Brookings. All other ports had landings similar to 1988. A historical perspective on coho catch by month and management area is shown in Tables 19 and 23.

## CHARTER/PRIVATE BOAT FISHERIES

There were 317 charter boat licenses issued in 1989 but only about 145 vessels (46%) were active in ocean fisheries. This compares to about 157 vessels (50%) active last year out of 313 licensed. No estimate is available of the number of individual private boats that fished. Since 1973, catch and effort statistics have been compiled by boat type at all ports sampled.

### Charters

**Effort:** The 1989 charter boat effort was estimated at 60,200 salmon angler trips, down 4% from the 1988 level but 9% above the 1979-87 average (55,100) for charter angler trips. The data prior to 1979 includes bottomfish effort. Charter anglers made up 23% of the total ocean salmon trips in 1989, compared to 25% in 1988 (Table 24, Figure 5).

Charter boats operate out of most major Oregon ports but vary in size and number of vessels. The Astoria-Warrenton-Hammond area had the largest fleet in 1989 (42 boats), and 9,100 salmon angler trips in the ocean. Depoe Bay, with 24 active charter boats, had the most salmon effort with 15,600 angler trips, followed by Newport (31 boats) with 12,700 trips. Salmon charter effort was down in all ports except the Columbia River area, Pacific City, Coos Bay, and Brookings compared to 1988 (Table 24).

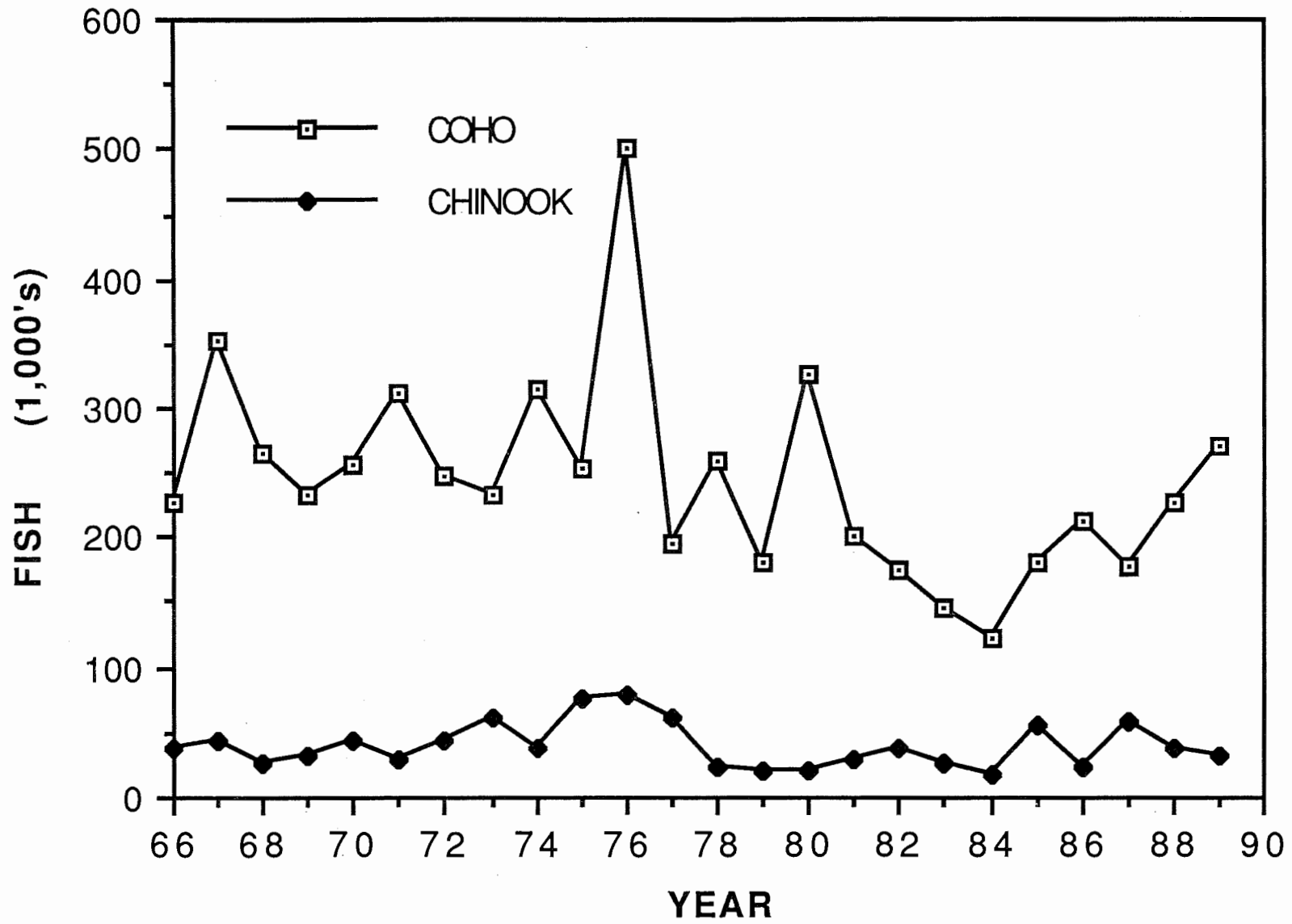


Figure 4. Trends in Oregon's Recreational Ocean Salmon Catch, 1966-89.

Table 19. Summary of Oregon Recreational Ocean Salmon Effort and Catch by Area, 1974-75 Average and 1976-89.

Year	Area <sup>a</sup>					Total
	Columbia R.	Tillamook	Newport	Coos Bay	Brookings	
<b>EFFORT (Salmon Angler Trips)<sup>b</sup></b>						
1974-75 Avg.	75,900	40,900	91,300	104,300	59,200	371,700
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	51,900	43,600	52,400	186,500
1987	17,100	29,100	76,900	62,500	69,400	255,000
1988	5,700	33,200	89,600	69,000	54,400	252,000
1989 <sup>c</sup>	19,800	31,300	82,800	66,600	66,100	266,600
<b>CATCH - Chinook</b>						
1974-75 Avg.	32,600	2,000	4,300	6,800	10,600	56,200
1976	44,600	2,300	4,600	14,600	13,200	79,300
1977	22,600	1,500	2,600	22,700	11,800	61,400
1978	7,900	800	2,100	4,800	7,300	22,800
1979	7,500	1,000	1,400	4,500	6,400	20,900
1980	5,500	1,600	1,800	5,300	4,800	19,000
1981	11,500	1,900	2,400	4,500	8,900	29,200
1982	8,200	1,400	3,500	10,100	15,500	38,700
1983	3,400	700	1,600	6,600	12,400	24,700
1984	<100	1,100	2,000	4,900	9,000	17,000
1985	3,600	2,600	4,100	9,500	36,100	55,900
1986	1,900	500	2,200	5,900	11,800	22,400
1987	4,000	3,500	6,400	18,900	25,800	58,600
1988	500	2,700	5,300	8,100	22,000	38,600
1989 <sup>c</sup>	1,500	900	1,800	6,700	21,300	32,100
<b>Coho</b>						
1974-75 Avg.	70,700	27,200	65,100	90,100	30,200	283,400
1976	116,700	50,000	118,100	164,800	51,800	501,300
1977	55,300	15,600	34,000	76,300	14,000	195,300
1978	60,200	8,500	61,200	82,800	47,100	259,800
1979	38,000	9,400	36,300	79,000	18,200	180,800
1980	55,600	28,900	72,400	135,900	33,000	325,800
1981	54,300	17,700	61,900	57,600	8,300	199,800
1982	35,500	23,100	44,000	55,600	16,900	175,100
1983	37,200	8,800	21,800	62,700	16,300	146,900
1984	10,900	20,300	41,200	39,400	11,500	123,300
1985	31,000	31,000	61,900	51,200	7,400	182,500
1986	36,900	23,500	78,500	61,100	11,700	211,700
1987	25,300	16,300	64,400	54,000	17,500	117,400
1988	9,800	29,600	100,700	71,000	15,200	226,200
1989 <sup>c</sup>	34,200	30,100	101,800	86,200	33,000	272,200

<sup>a</sup> 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.

<sup>b</sup> 1979-1987 effort consists of salmon angler trips only.

<sup>c</sup> Preliminary

Table 20. Oregon Ocean Recreational Chinook Catch by Port by Month<sup>a</sup>, 1989.

Port	Month					Total
	May	June	July	Aug.	Sept.	
Columbia R.	29	154	207	1,074	-	1,464
Garibaldi	13	57	250	344	14	678
Pacific City	-	28	76	89	0	193
Depoe Bay	31	200	144	154	22	551
Newport	45	536	391	286	15	1,273
Florence	4	337	1,331	73	0	1,745
Winchester Bay	65	909	2,037	338	2	3,351
Coos Bay	30	502	883	142	0	1,557
Brookings	397	3,632	9,370	6,757	1,101	21,257
Total South of Cape Falcon	585	6,201	14,482	8,183	1,154	30,605
Statewide Total	614	6,355	14,689	9,257	1,154	32,069

<sup>a</sup> Monthly totals are the sum of statistical weeks estimates with closest fit to calendar month.

Table 21. Oregon Ocean Recreational Coho Catch by Port by Month<sup>a</sup>, 1989.

Port	Month					Total
	May	June	July	Aug.	Sept.	
Columbia R	0	1,644	17,464	15,103	0	34,211
Garibaldi	36	2,514	15,578	4,939	114	23,181
Pacific City	0	924	4,051	1,991	0	6,966
Depoe Bay	171	9,753	18,116	7,535	98	35,673
Newport	595	14,268	28,993	21,785	478	66,119
Florence	0	1,539	6,084	3,095	0	10,718
Winchester Bay	424	13,542	22,035	6,379	19	42,399
Coos Bay	245	7,261	10,339	2,094	0	19,939
Brookings	172	4,225	20,295	7,518	824	33,034
Total South of Cape Falcon	1,643	54,026	125,491	55,336	1,533	238,029
Statewide Total	1,643	55,670	142,955	70,439	1,533	272,240

<sup>a</sup> Monthly totals are the sum of statistical weeks estimates with closest fit to calendar month.

Table 22. Oregon Ocean Recreational Chinook Catch (Number of Fish) by Catch Area and Month, 1982-89, with 1974-75 and 1979-81 Averages.

Area <sup>a</sup>	Chinook								Season <sup>b</sup>
	April	May	June	July	August	Sept.	Oct.	Nov.	
<b>Columbia R</b>									
1974-75 ave.	100	600	2,800	12,800	10,500	5,700	100	-	32,600
1979-81 ave.	-	250	1,100	2,200	4,100	700	-	-	8,200
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	1,800	-	-	-	4,000
1988	-	-	-	500	-	-	-	-	500
1989	-	<50	200	200	1,100	-	-	-	1,500
<b>Tillamook</b>									
1974-75 ave.	<50	<50	100	200	1,100	300	200	-	2,000
1979-81 ave.	-	<50	100	500	700	200	-	-	1,500 <sup>c</sup>
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
<b>Newport</b>									
1974-75 ave.	<50	<50	600	1,800	1,400	300	100	-	4,300
1979-81 ave.	-	100	300	700	600	150	-	-	1,900 <sup>d</sup>
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	1,800	100	-	-	-	2,200
1987	-	-	200	2,300	2,100	1,700	-	-	6,400
1988	-	100	800	2,200	1,700	500	-	-	5,300
1989	-	100	700	500	400	<50	-	-	1,800
<b>Coos Bay</b>									
1974-75 ave.	<50	200	700	1,600	2,900	1,000	200	-	6,800
1979-81 ave.	-	100	1,400	2,200	800	200	-	-	4,800
1982	-	<50	1,000	9,100	-	-	-	-	10,100
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	4,400	500	-	-	-	2,200
1987	-	-	900	10,600	4,500	2,800	-	-	18,900
1988	-	200	1,700	2,800	3,100	200	-	-	8,100
1989	-	100	1,700	4,300	600	<50	-	-	6,700
<b>Brookings</b>									
1974-75 ave.	<50	<50	300	3,400	4,200	1,200	1,000	-	10,600
1979-81 ave.	-	200	1,300	2,300	2,000	200	400	<100	6,700
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	2,700	3,500	3,900	<50	600	-	11,800
1987	-	100	3,800	9,300	5,600	5,900	1,100	-	25,800
1988	-	100	12,400	6,500	2,800	200	-	-	22,000
1989	-	400	3,600	9,400	6,800	1,100	-	-	21,300
<b>All Areas</b>									
1974-75 ave.	200	900	4,800	19,700	19,700	9,200	1,800	-	56,200
1979-81 ave.	-	700	4,100	8,000	8,500	1,200	400	<100	23,000
1982	-	<50	4,700	31,900	1,500	200	200	<50	38,700 <sup>b</sup>
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	4,000	11,100	5,400	<50	600	-	22,400
1987	-	100	5,200	25,100	16,000	11,000	1,100	-	58,600
1988	-	400	15,000	12,400	8,900	2,000	-	-	38,600
1989	-	600	6,400	14,700	9,300	1,200	-	-	32,100

<sup>a</sup> 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.

<sup>b</sup> 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.

<sup>c</sup> Includes Nehalem Bay

<sup>d</sup> Includes Salmon and Siletz Rivers and Alsea Bay



Table 23. Oregon Ocean Recreational Coho Catch (Number of Fish) by Catch Area and Month, 1982-89, with 1974-75 and 1979-81 Averages.

Area <sup>a</sup>	Coho							Season <sup>b</sup>	
	April	May	June	July	August	Sept.	Oct.		Nov.
<b>Columbia R</b>									
1974-75 ave	200	800	3,900	17,600	35,000	11,700	100	-	70,700
1979-81	-	1,300	10,700	17,100	17,400	2,900	-	-	49,300
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	-	-	1,300	21,500	14,000	-	-	-	36,900
1987	-	-	900	12,200	12,200	-	-	-	25,300
1988	-	-	-	9,800	-	-	-	-	9,800
1989	-	-	1,600	17,500	15,100	-	-	-	34,200
<b>Tillamook</b>									
1974-75 ave.	<50	100	1,500	5,000	15,300	4,500	200	-	27,200
1979-81 ave.	-	200	3,100	6,300	8,500	700	-	-	18,700 <sup>c</sup>
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	3,300	15,200	5,000	-	-	-	23,500
1987	-	-	600	10,200	4,900	700	-	-	16,300
1988	-	100	1,800	8,000	14,100	5,700	-	-	29,641
1989	-	<50	3,400	19,600	6,900	100	-	-	30,100
<b>Newport</b>									
1974-75 ave.	100	100	8,100	24,800	26,400	4,500	100	-	65,100
1979-81 ave.	-	300	9,500	27,000	18,300	2,800	-	-	56,900 <sup>d</sup>
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	45,700	1,400	-	-	61,900
1986	-	1,500	7,300	56,100	13,600	-	-	-	78,500
1987	-	-	1,300	42,500	14,300	6,300	-	-	64,400
1988	-	200	6,400	45,800	42,900	5,600	-	-	100,700
1989	-	800	24,000	47,100	29,300	600	-	-	101,800
<b>Coos Bay</b>									
1974-75 ave.	300	3,400	17,900	39,100	21,000	6,700	200	-	90,100
1979-81 ave.	-	5,000	28,100	39,100	13,900	900	-	-	90,800
1982	-	-	12,200	43,400	-	-	-	-	55,600
1983	-	20,700	28,300	9,200	4,500	-	-	-	62,700
1984	-	-	-	19,600	19,700	100	-	-	39,400
1985	-	-	-	30,900	19,700	500	-	-	51,200
1986	-	1,000	7,700	46,300	6,000	-	-	-	61,100
1987	-	-	1,000	44,500	6,400	2,100	-	-	54,000
1988	-	100	10,700	42,100	17,200	1,000	-	-	71,000
1989	-	700	22,300	38,500	11,600	<50	-	-	73,100
<b>Brookings</b>									
1974-75 ave.	100	900	4,100	16,000	5,300	3,100	100	-	30,200
1979-81 ave.	-	200	7,300	9,800	2,400	200	-	-	19,800
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	2,500	5,600	2,100	0	0	-	11,700
1987	-	1	500	12,400	3,100	1,400	<50	-	17,500
1988	-	<50	1,000	12,100	1,900	100	-	-	15,200
1989	-	200	4,200	20,300	7,500	800	-	-	33,000
<b>All Areas</b>									
1974-75 ave.	800	5,800	36,500	102,500	103,000	33,900	900	-	283,400
1979-81 ave.	-	6,900	58,800	100,200	63,300	6,300	-	-	235,700
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	108,300	2,300	-	-	182,500
1986	-	4,000	22,200	144,700	40,800	-	-	-	211,700
1987	-	<50	4,300	121,700	41,000	10,500	<50	-	177,400
1988	-	300	19,900	117,900	76,000	12,300	-	-	226,400
1989	-	1,600	55,700	143,000	70,400	1,500	-	-	272,200

<sup>a</sup> 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.

<sup>b</sup> 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.

<sup>c</sup> Includes Nehalem Bay.

<sup>d</sup> Includes Salmon and Siletz Rivers and Alsea Bay.

Table 24. Oregon Ocean Recreational Salmon Effort and Catch by Boat Type, 1989.

Port	Salmon Charter Boats					Salmon Private Boats				
	Boat Trips	Angler Trips	Salmon Catch			Boat Trips	Angler Trips	Salmon Catch		
			Chinook	Coho	Pink			Chinook	Coho	Pink
Columbia R.	1,109	9,124	524	16,814	3	3,452	10,710	940	17,397	9
Garibaldi	530	4,946	113	7,058	24	8,141	21,350	565	16,123	25
Pacific City <sup>a</sup>	61	254	5	383	0	1,473	4,743	188	6,583	11
Depoe Bay	1,757	15,591	313	21,240	124	3,921	11,353	238	14,433	41
Newport	1,417	12,729	357	18,499	22	15,351	43,100	916	47,620	30
Florence <sup>a</sup>	0	0	0	0	0	4,501	12,178	1,745	10,718	5
Winchester Bay	1,445	9,583	709	12,688	46	9,460	26,220	2,642	29,711	81
Coos Bay	426	3,551	213	4,691	19	5,661	15,077	1,344	15,248	71
Brookings	697	4,400	1,903	3,767	91	25,133	61,696	19,354	29,267	723
Total	7,442	60,178	4,137	85,140	329	77,093	206,427	27,932	187,100	996
Combined totals for all Oregon craft	84,535	266,605	32,069	272,240	1,325					

<sup>a</sup> Sampling started in early June instead of May.

Not all charter anglers go salmon fishing during the salmon season. Salmon is the primary pursuit in all ports, but bottomfishing is important to the Garibaldi, Pacific City, Depoe Bay, Newport, Coos Bay, Gold Beach, and Brookings charter fleets. Halibut fishing is especially important in Newport during May and June (Table 25). Coastwide in 1989, 32,100 trips (35%) of the total 92,300 charter trips targeted on bottomfish during the sampling season. In 1988, 26,000 (29%) of the total charter anglers went bottomfishing during the salmon season.

**Catch:** Charter anglers landed 85,100 coho and 4,100 chinook salmon in 1989. The total catch of 89,600 salmon by charter anglers in 1989 was 11% higher than 1988 even though the effort decreased by 4% this year. The charter fleet landed 29% of the total recreational salmon catch in 1989, down from a 30% share in 1988, and a 32% share in 1987 (Figure 5).

The Depoe Bay charter fleet landed 21,677 salmon or 24% of the total charter catch in 1989. Success varied through most of the season at Depoe Bay with an average of 1.4 salmon/angler. Astoria, Newport, and Winchester Bay charters took 17,300, 18,900, and 13,400 salmon respectively and averaged 1.9, 1.5, and 1.4 salmon/angler. These four ports made up 80% of the charter catch (Table 26). The state-wide average charter angler success was 1.5 salmon/angler, well above the 1979-88 average of 1.2 salmon/angler.

### Private Anglers

**Effort:** The 1989 salmon effort by private boats was estimated at 206,400 angler trips or 77% of the total salmon effort. This total compares with the 1988 effort of 189,000 and the 1979-88 average of 193,600 trips (Table 24, Figure 5). Brookings as usual had the most effort with 61,700 private salmon trips or 30% of the coast total. Brookings' relatively long salmon season, safe bar, large population of retired people, and the attractiveness of chinook and excellent bottomfishing all contribute to make this the leading small boat port on the Oregon coast. Newport, often a contender with Brookings for the most effort, had 43,100 angler trips or 21% of the total followed by Winchester Bay with 26,200 salmon angler trips. These three ports accounted for 63% of the total private boat effort.

As with charters, some private boats only fish for bottomfish, even during the salmon season. Effort data by trip type (salmon or bottomfish) was collected through interviews and applied proportionately to the total effort counts. This data showed that 16,700 angler trips or 7% of the private trips targeted on bottomfish, compared to 10,200 angler trips or 5% in 1988. Newport had the most private bottomfish anglers, followed closely by Brookings (Table 25). Almost all anglers target on salmon in the Columbia River, Florence, and Winchester Bay area.

**Catch:** Anglers from private boats landed 187,100 coho and 27,900 chinook in 1989. The total salmon catch of 206,400 fish in 1989 was 12% above the 1988 catch, and 13% above the 1973-88 average of 182,000 fish (Figure 5). Private boat anglers caught 71% of the total recreational salmon catch in 1989 compared to the 1973-88 average of 66%.

Table 25. Oregon Ocean Recreational Effort and Catch by Boat and Trip Type<sup>a</sup> 1989.

Port	Charter						Private					
	Boat Trips		Angler Trips		Total Catch		Boat Trips		Angler Trips		Total Catch	
	Sal	Bot <sup>b</sup>	Sal	Bot <sup>b</sup>	Sal <sup>c</sup>	Bot <sup>b</sup>	Sal	Bot <sup>c</sup>	Sal	Bot <sup>c</sup>	Sal <sup>c</sup>	Bot <sup>c</sup>
Columbia R.	1,109	0	9,124	0	17,341	89	3,452	25	10,710	62	18,346	715
Garibaldi	530	564	4,946	6,931	7,195	55,400	8,141	377	21,350	1,201	16,713	7,645
Pacific City	61	0	254	0	388	63	1,473	70	4,743	263	6,782	4,106
Depoe Bay	1,757	874	15,591	8,747	21,677	57,733	3,921	188	11,353	480	14,712	4,105
Newport	1,417	1,286	12,729	13,426	18,878	89,927	15,351	2,360	43,100	6,753	48,566	23,722
Florence	0	0	0	0	0	0	4,501	8	12,178	21	12,468	533
Winchester Bay	1,445	16	9,583	98	13,443	648	9,460	19	26,220	90	32,434	997
Coos Bay	426	194	3,551	1,529	4,923	10,165	5,661	401	15,077	1,179	16,663	9,782
Brookings	697	213	4,400	1,386	5,761	13,916	25,133	3,067	61,696	6,620	49,344	62,538
Total	7,442	3,147	60,178	32,117	89,606	227,941	77,093	6,515	206,427	16,669	216,028	114,143

<sup>a</sup> Trip-types are separated by boat trips that target for salmon (SAL) and for bottomfish (BOT). Combination salmon and bottomfish trips are included in salmon trip estimates.

<sup>b</sup> Bottomfish include rockfish, lingcod, flatfish and miscellaneous species.

<sup>c</sup> Includes chinook, coho, pink, and chum salmon.

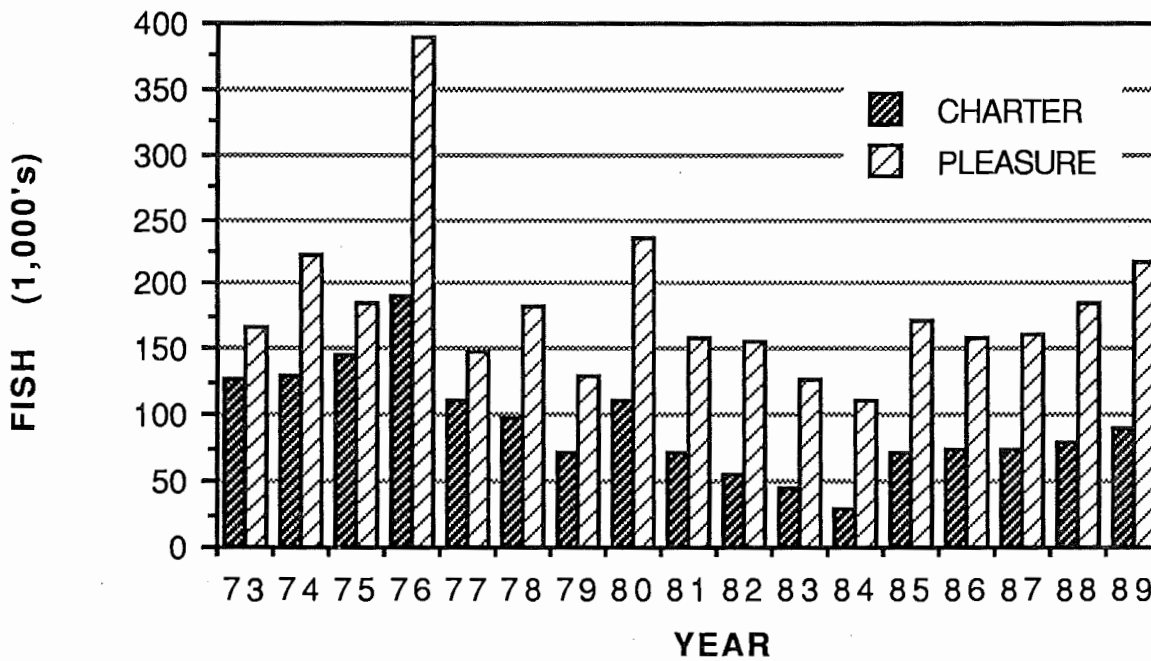
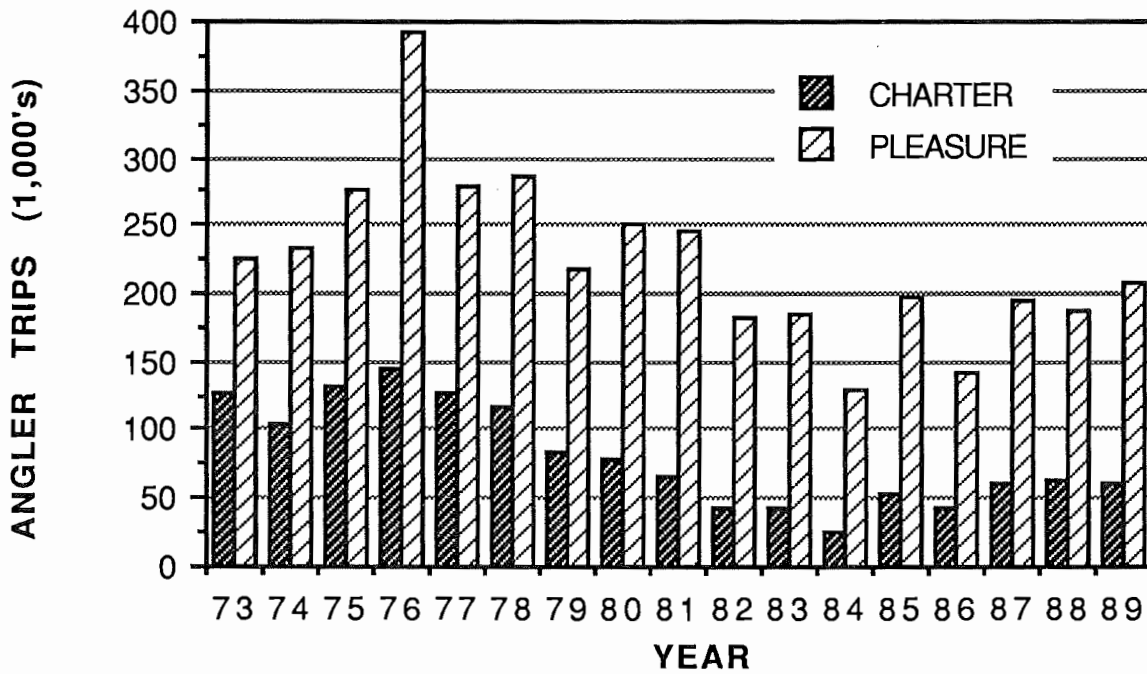


Figure 5. A Comparison of Effort and Catch by Oregon Ocean Salmon Charter and Pleasure Anglers, 1973-89.

Brookings anglers caught the most salmon, 49,300, or 23% of the total private boat angler catch. Angler success was 0.8 salmon/angler in Brookings. Anglers in Newport and Winchester Bay landed 48,600 and 32,400 salmon with an average success rate of 1.1 and 1.2 fish/angler respectively. These three ports accounted for 60% of the total private boat angler catch. The average angler success on private boats was 1.0 salmon/angler, compared to 1.0 in 1988 and the 1979-87 average of 0.8 (Table 24).

## EVALUATION OF MINIMUM SIZE LIMITS

### North of Cape Falcon

The number of shakers (undersized salmon or prohibited species) was estimated from interview data collected during the ocean sampling survey. The data set depends on people correctly recalling numbers and species of salmon released and varies with the expertise of the angler. We estimated that 500 chinook (26%) were released in the Columbia River area during the ocean season. This is considerably below the 1979-88 average (less 1984) shaker rate of 56% (Table 26). The minimum size limit was 24".

The minimum size limit for coho in the Columbia River area was 16". The shaker rate was 7% in 1989 and identical to the 1979-88 average (Table 27).

### South of Cape Falcon

The chinook released (shaker) information from most ports resembled historical patterns. Winchester Bay and Coos Bay traditionally encounter small chinook during part of the salmon season. The Brookings shaker rate was lower than expected (Table 28). The coho data also resembled historical patterns with a 3% statewide shaker rate (Table 29).

## SPECIAL RECREATIONAL SEASONS

Oregon anglers had two ocean salmon fishing opportunities in addition to the seasons set by the Pacific Fishery Management Council; a mid September through October chinook fishery off Tillamook Bay, and an October through November fishery from Cape Blanco to Humbug Mountain. In addition, the Buoy 10 fishery in the Columbia River estuary was popular with many ocean anglers.

### September-October Fishery off Tillamook Bay

The Fish and Wildlife Commission set an open season for all salmon except coho in state waters off Tillamook Bay between Twin Rocks and Pyramid Rock. The season lasted from September 16 through October 31. The bag limit remained two fish, and barbed hooks were permitted.

This fishery targets on returning fall chinook and most of the effort and catch is inside Tillamook Bay. Some of the boats will troll back and forth across the bar. Our 1985 creel between September 15 and October 31 estimated a total 19,300 angler trips of which 2,650 (18%) crossed the Tillamook Bay bar but only 600 (3%) fished only in the ocean. Our 1985 survey estimated an

Table 26. Chinook Salmon Released by Oregon Ocean Recreational Anglers in the Columbia River Area, 1979-89.

Year	Number Retained	Number Released	Total Fish Caught	Percentage of Catch Released
1979	7,072	8,719	15,791	55
1980	5,503	7,891	13,394	59
1981	11,516	21,664	33,180	65
1982	8,235	6,949	15,185	46
1983	3,440	3,671	7,111	52
1984	26 <sup>a</sup>	1,410	1,436	98
1985	3,565	5,235	8,800	59
1986	1,909	2,320	4,229	55
1987	4,019	2,467	6,486	38
1988	481	289	770	38
<b>1979-88 Average<sup>b</sup></b>	<b>5,082</b>	<b>6,578</b>	<b>11,661</b>	<b>56</b>
1989	1,464	522	1,986	26

<sup>a</sup> Illegal or taken south of Cape Falcon

<sup>b</sup> Excluding 1984

Table 27. Coho Salmon Released by Oregon Ocean Recreational Anglers in the Columbia River Area, 1979-89.

Year	Number Retained	Number Released	Total Fish Caught	Percentage of Catch Released
1979	37,894	4,905	42,799	12
1980	55,647	1,905	57,552	3
1981	54,294	1,643	55,937	3
1982	35,476	2,082	37,558	6
1983	37,245	8,318	45,563	18
1984	10,874	654	11,528	6
1985	31,010	1,275	32,285	4
1986	36,666	2,197	38,863	6
1987	25,299	2,145	27,444	8
1988	9,844	481	10,325	5
<b>1979-88 Average</b>	<b>33,425</b>	<b>2,560</b>	<b>35,985</b>	<b>7</b>
1989	34,211	2,616	36,827	7

Table 28. Chinook Salmon Released by Ocean Recreational Anglers in 1989 by Port.

Port	Number Retained	Number Released	Total Fish Caught	Percentage of Catch Released
Columbia R.	1,464	522	1,986	26
Garibaldi	678	6	684	1
Pacific City	193	5	198	3
Depoe Bay	551	21	572	4
Newport	1,273	72	1,345	5
Florence	1,745	18	1,763	1
Winchester Bay	3,351	648	3,999	16
Coos Bay	1,557	98	1,655	6
Brookings	21,257	232	21,489	1
<b>Total</b>	<b>32,069</b>	<b>1,622</b>	<b>33,691</b>	<b>5</b>

Table 29. Coho Salmon Released by Ocean Recreational Anglers in 1989 by Port.

Port	Number Retained	Number Released	Total Fish Caught	Percentage of Catch Released
Columbia R.	34,211	2,616	36,827	7
Garibaldi	23,181	114	23,295	<1
Pacific City	6,966	231	7,197	3
Depoe Bay	35,673	371	36,044	1
Newport	66,119	773	66,892	1
Florence	10,718	286	11,004	3
Winchester Bay	42,399	1,485	43,884	3
Coos Bay	19,939	493	20,432	2
Brookings	33,034	2,600	35,634	7
<b>Total</b>	<b>272,240</b>	<b>8,969</b>	<b>281,209</b>	<b>3</b>



ocean catch of 66 chinook and 5 coho (illegal). We have not had a statistical creel of this late fishery since 1985.

#### **October-November Fisheries South of Cape Blanco**

Traditionally, the recreational fishery off Brookings stayed open through October, but due to anticipated low stock sizes this fishery did not take place in 1989.

The October and November chinook fisheries in state waters between Cape Blanco and Humbug Mountain are not readily accessible to many recreational anglers and were not sampled.

#### **Buoy 10 Fishery Inside the Columbia River**

The river mouth opened August 16 with catch guidelines of 30,000 chinook and 200,000 coho. The Oregon/Washington combined effort was 144,848 angler trips with a catch of 15,900 chinook and 78,720 coho. This fishery is discussed in detail in the Annual Report "The 1989 Lower Columbia River and Buoy 10 Recreational Fisheries" by Samuel S. Hess and Steven D. King of the Department's Columbia River Management Group.

### **RECREATION OCEAN SALMON CODED-WIRE TAG SAMPLING**

Samplers at ten ports observed 43% of the combined chinook and coho landed during the 1989 port sampling survey.

#### **Chinook**

The samplers examined 14,826 chinook and found 677 or 5% had been adipose fin clipped (Table 30). Department staff found readable tags in 611 of the 690 chinook heads for an 89% recovery rate.

Major contributors of the chinook tags were:

California Department of Fish and Game	58%
Oregon Department of Fish and Wildlife	24%
Washington Department of Fisheries	8%

#### **Coho**

The samplers examined 115,630 coho and found that 5,658 or 5% had their adipose fin clipped (Table 31). We found 4,917 readable tags in the 5,719 coho heads. This is 86% recovery rate.

Major agencies contributing coho tags were:

Oregon Department of Fish and Wildlife	63%
Washington Department of Fisheries	24%
Anadromous, Inc.	6%
Oregon Aqua-foods, Inc.	4%

Table 30. Chinook Coded-wire Tag Sampling from the Ocean Recreational Fishery, by Port and Month, 1989.

Port	May	June	July	August	September	Total
<u>Columbia R.</u>						
Total Catch	29	154	207	1,074	-	1,464
No. Sampled	11	99	104	343	-	557
% Sampled	38%	64%	50%	32%	-	38%
No. Ad Marks	1	4	9	22	-	36
<u>Garibaldi</u>						
Total Catch	13	57	250	344	14	678
No. Sampled	8	23	58	145	6	240
% Sampled	62%	40%	23%	42%	43%	35%
No. Ad Marks	1	2	2	4	0	9
<u>Pacific City</u>						
Total Catch	-	28	76	89	0	193
No. Sampled	-	25	52	63	0	140
% Sampled	-	89%	68%	71%	-	73%
No. Ad Marks	-	3	2	1	-	6
<u>Depoe Bay</u>						
Total Catch	31	200	144	154	22	551
No. Sampled	14	121	71	92	14	312
% Sampled	45%	61%	49%	60%	64%	57%
No. Ad Marks	0	7	4	6	0	17
<u>Newport</u>						
Total Catch	45	536	391	286	15	1,273
No. Sampled	17	161	94	93	7	372
% Sampled	38%	30%	24%	33%	47%	29%
No. Ad Marks	2	4	6	12	0	24
<u>Florence</u>						
Total Catch	4	337	1,331	73	0	1,745
No. Sampled	1	170	631	42	0	844
% Sampled	25%	50%	47%	58%	-	48%
No. Ad Marks	0	10	31	2	-	43
<u>Winchester Bay</u>						
Total Catch	65	909	2,037	338	2	3,351
No. Sampled	44	385	634	160	1	1,224
% Sampled	68%	42%	31%	47%	50%	37%
No. Ad Marks	2	22	26	14	0	64
<u>Coos Bay</u>						
Total Catch	30	502	883	142	0	1,557
No. Sampled	16	248	426	75	0	765
% Sampled	53%	49%	48%	53%	-	49%
No. Ad Marks	1	25	21	6	-	53
<u>Brookings</u>						
Total Catch	397	3,632	9,370	6,757	1,101	21,257
No. Sampled	199	2,017	4,251	3,420	485	10,372
% Sampled	50%	56%	45%	51%	44%	49%
No. Ad Marks	7	86	182	132	18	425
<u>Total</u>						
Total Catch	614	6,355	14,689	9,257	1,154	32,069
No. Sampled	310	3,249	6,321	4,433	513	14,826
% Sampled	50%	51%	43%	48%	44%	46%
No. Ad Marks	14	163	283	199	18	677

Table 31. Coho Coded-wire Tag Sampling Data from the Ocean Recreational Fishery, by Port and Month, 1989.

Port	May	June	July	August	September	Total
<u>Columbia R.</u>						
Total Catch	0	1,644	17,464	15,103	-	34,211
No. Sampled	0	1,111	7,097	5,557	-	13,765
% Sampled	-	68%	41%	37%	-	40%
No. Ad Marks	-	32	271	163	-	466
<u>Garibaldi</u>						
Total Catch	36	2,514	15,578	4,939	114	23,181
No. Sampled	35	1,100	4,938	1,947	50	8,070
% Sampled	97%	44%	32%	39%	44%	35%
No. Ad Marks	1	43	143	70	0	257
<u>Pacific City</u>						
Total Catch	-	924	4,051	1,991	0	6,966
No. Sampled	-	814	2,779	1,312	0	4,905
% Sampled	-	88%	69%	66%	-	70%
No. Ad Marks	-	50	148	73	-	271
<u>Depoe Bay</u>						
Total Catch	171	9,753	18,116	7,535	98	35,673
No. Sampled	128	6,148	8,822	4,392	64	19,554
% Sampled	75%	63%	49%	58%	65%	55%
No. Ad Marks	4	283	480	243	4	1,014
<u>Newport</u>						
Total Catch	595	14,268	28,993	21,785	478	66,119
No. Sampled	266	4,916	7,348	7,595	215	20,340
% Sampled	45%	34%	25%	35%	45%	31%
No. Ad Marks	15	249	445	416	12	1,137
<u>Florence</u>						
Total Catch	-	1,539	6,084	3,095	0	10,718
No. Sampled	-	803	2,999	1,750	0	5,552
% Sampled	-	52%	49%	57%	-	52%
No. Ad Marks	-	50	176	87	-	313
<u>Winchester Bay</u>						
Total Catch	424	13,542	22,035	6,379	19	42,399
No. Sampled	119	6,036	7,839	3,236	8	17,238
% Sampled	28%	45%	36%	51%	42%	41%
No. Ad Marks	4	351	380	138	0	873
<u>Coos Bay</u>						
Total Catch	245	7,261	10,339	2,094	0	19,939
No. Sampled	130	3,712	4,842	1,002	0	9,686
% Sampled	53%	51%	47%	48%	-	49%
No. Ad Marks	7	204	236	43	-	490
<u>Brookings</u>						
Total Catch	172	4,225	20,295	7,518	824	33,034
No. Sampled	101	2,487	9,357	4,160	415	16,520
% Sampled	59%	59%	46%	55%	50%	50%
No. Ad Marks	6	106	511	195	19	837
<u>Total</u>						
Total Catch	1,643	55,670	142,955	70,439	1,533	272,240
No. Sampled	779	27,127	56,021	30,951	752	115,630
% Sampled	47%	49%	39%	44%	49%	42%
No. Ad Marks	37	1,368	2,790	1,428	35	5,658

## **ACKNOWLEDGMENTS**

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