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**INCIDENTAL CATCHES OF SALMONIDS
BY U.S. GROUND FISH FISHERIES
IN THE BERING SEA/ALEUTIAN ISLANDS,
GULF OF ALASKA, AND THE PACIFIC COAST, 1990-1995**

by

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ABSTRACT

Incidental catches of Pacific salmonids in U.S. groundfish trawl fisheries of Alaska and the Pacific West Coast are presented for 1977 through September 23, 1995. Estimated numbers of salmonids caught incidentally in the domestic U.S. groundfish fisheries in the Bering Sea/Aleutian Islands were 30,501 in 1990; 79,133 in 1991; 83,405 in 1992; 289,210 in 1993; and 140,811 in 1994. In the Gulf of Alaska, incidental catches were 21,085 in 1990; 53,844 in 1991; 38,308 in 1992; 80,853 in 1993; and 54,486 in 1994. The Pacific Coast domestic groundfish fisheries off Washington, Oregon, and California caught 617 salmon in 1990; 6,331 salmon in 1991; 5,100 salmon in 1992; 8,373 salmon in 1993; and 4,001 salmon in 1994. Through September 23, 1995, the incidental catches were 40,947 salmon in the Bering Sea/Aleutian Islands, 64,713 salmon in the Gulf of Alaska, and 15,964 salmon off the Pacific Coast. The last joint venture operations took place in 1990 in the Bering Sea/Aleutian Islands and off the Pacific Coast. Their incidental catches of salmon were 152 and 9,308, respectively.

INTRODUCTION

Groundfish fisheries are conducted primarily by the use of trawl gear that occasionally encounters and catches Pacific salmonids. Other gear used to harvest groundfish - longline and pots - generally do not catch many salmonids. U.S. fishing regulations consider salmonids to be prohibited species for the groundfish fisheries, and when taken, they must immediately be returned to the sea. The incidental catches of salmonids are monitored by the U.S. National Marine Fisheries Service (NMFS) and estimated by its scientific observer program. At present, there are no specific limits set for salmonid bycatch in the Gulf of Alaska nor off the Pacific Coast. In 1994, time-area closures were established in the Bering Sea to minimize the incidental catches of chum salmon (*Onchorhynchus keta*). Additionally, incidental catch rates of individual vessels and the fleet average are monitored closely and made known to the fleet, so individual vessels can take voluntary actions to minimize their bycatch.

The observer program coverage for the groundfish fisheries off Alaska is 100% for the large-sized vessel fleet (greater than 125 ft. length overall) and 30% for the medium-sized vessel fleet (60-125 ft. length overall). The small-sized vessel fleet (less than 60 ft. length overall) is not monitored by direct observer coverage. Instead, some of their catches are sampled when they deliver to motherships or shore-based processing plants. Motherships are staffed 100% of the time by observers and shore-based plants are staffed 30%-100%, depending upon the volume of fish processed. For the Pacific Coast, only the at-sea processors (catcher-processors and motherships) are included in these estimates.

RESULTS

Observers count salmonids, take length-weight measurements of salmonid samples, and estimate total groundfish catch weight. Tables 1-4 summarize the estimates from the observer sampling.

Table 1. Total groundfish catch and estimated bycatch of chinook and other Pacific salmon in U.S. groundfish fisheries, 1990-1995*.

Year	Region	Groundfish Catch (mt)	Chinook	Chum	Coho	Sockeye	Pink	Total
			-----numbers of fish-----					
Domestic								
1990	BSAI	1,706,379	14,085	16,202	153	30	31	30,501
1991	BSAI**	2,154,903	48,873	29,706	396	79	79	79,133
1992	BSAI	1,963,523	41,955	-----	41,450	-----	-----	83,405
1993	BSAI**	1,754,384	45,964	-----	243,246	-----	-----	289,210
1994	BSAI	1,855,031	44,380	-----	96,431	-----	-----	140,811
1995	BSAI	1,725,970	20,439	-----	20,508	-----	-----	40,947
1990	GOA	244,397	16,913	2,541	1,482	85	64	21,085
1991	GOA	269,616	38,894	13,713	1,129	51	57	53,844
1992	GOA	269,797	20,462	-----	17,846	-----	-----	38,308
1993	GOA	255,434	24,465	-----	56,388	-----	-----	80,853
1994	GOA	239,503	13,973	-----	40,513	-----	-----	54,486
1995	GOA	187,301	10,822	-----	53,891	-----	-----	64,713
1990	WOC***	4,478	617	0	0	0	0	617
1991	WOC***	198,953	6,165	11	132	0	23	6,331
1992	WOC***	155,333	4,863	-----	237	-----	-----	5,100
1993	WOC***	99,698	4,843	-----	3,530	-----	-----	8,373
1994	WOC***	175,731	3,626	-----	375	-----	-----	4,001
1995	WOC***	103,553	11,550	-----	4,414	-----	-----	15,964
Joint Venture								
1990	BSAI	133,438	147	2	2	0	0	152
1990	GOA	0	0	0	0	0	0	0
1990	WOC	172,069	9,141	133	34	0	0	9,308

Regions: BSAI = Bering Sea/Aleutian Islands
 GOA = Gulf of Alaska
 WOC = Washington-Oregon-California

* Through 9/23/95

** 1 steelhead was reported in 1991 and 5 steelheads were reported in 1993

*** At sea processing only

Note: Many of the numbers in this table have changed since last year's report. This is primarily due to a NMFS revision of the 1991-93 catch estimates. Also, for the years 1992-95, the estimates of non-chinook salmon have not yet been separated by species. Thus, the number of non-chinook salmon are listed as a single value for each year.

Table 2. Average body weight of chinook salmon incidentally caught in groundfish fisheries, 1990-1995.

Year	Region	Male Average Weight (kg)	Female Average Weight (kg)
1990	BSAI	3.74	3.87
1991	BSAI	2.83	3.03
1992	BSAI	3.26	3.32
1993	BSAI	3.76	4.07
1994	BSAI	4.37	4.29
1995	BSAI	-----	5.43-----*
1990	GOA	3.57	3.88
1991	GOA	3.03	3.43
1992	GOA	3.46	3.32
1993	GOA	2.84	2.77
1994	GOA	3.70	3.68
1995	GOA	-----	3.13-----*
1990	WOC	2.14	2.65
1991	WOC	3.18	3.40
1992	WOC	2.93	4.08
1993	WOC	2.22	2.88
1994	WOC	2.26	2.69
1995	WOC	-----	2.35-----*

Regions: BSAI = Bering Sea/Aleutian Islands
 GOA = Gulf of Alaska
 WOC = Washington-Oregon-California

* Data presented for 1995 are based on preliminary in-season reports.

Table 3. Average body weight of chum salmon incidentally caught in groundfish fisheries, 1990-1995.

Year	Region	Male Average weight (kg)	Female Average weight (kg)
1990	BSAI	2.28	2.18
1991	BSAI	2.44	2.29
1992	BSAI	2.53	2.51
1993	BSAI	2.16	1.96
1994	BSAI	2.72	2.65
1995	BSAI	NA	NA
1990	GOA	3.36	3.11
1991	GOA	3.11	2.89
1992	GOA	3.32	3.06
1993	GOA	2.40	2.27
1994	GOA	3.40	3.20
1995	GOA	NA	NA
1990	WOC	--*	--*
1991	WOC	4.55**	4.35**
1992	WOC	4.58	4.55
1993	WOC	3.37	1.07
1994	WOC	5.35	5.27
1995	WOC	NA	NA

Regions: BSAI = Bering Sea/Aleutian Islands
 GOA = Gulf of Alaska
 WOC = Washington-Oregon-California

* None caught

** The average weights reported in last year's document were in error.

NA - not available

Table 4. Estimated incidental catches of Pacific salmonids previously reported to the International North Pacific Fisheries Commission, 1977-1989.

Year	Bering Sea/ Aleutian*	Gulf of Alaska**	Washington- Oregon-California*
1977	47,840	5,222	14,627
1978	44,548	45,603	5,924
1979	107,706	21,460	8,666
1980	122,002	36,069	8,433
1981	43,191	30,860	11,474
1982	23,623	6,967	11,798
1983	42,666	13,874	5,143
1984	84,138	75,846	10,255
1985	20,423	14,102	2,288
1986	20,983	20,820	43,790
1987	14,234	1,221	13,285
1988	9,380	147	16,168
1989	14,153	0	9,199

* Reported in INPFC Doc. 3588, October 1990

** Reported in INPFC Doc. 3417, September 1989