

**SUMMARY OF BRISTOL BAY SOCKEYE SALMON CATCHES
BY GEAR TYPE, 1965-2003**

**A REPORT TO THE ALASKA
BOARD OF FISHERIES**



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INTRODUCTION

The purpose of this report is to provide the Board of Fisheries (BOF) with background information regarding the fishing effort and sockeye salmon catches by gear type. Data in this report was obtained from a previous report to the Board of Fisheries in 2001 (Weiland 2000), from the Commercial fisheries Entry Commission, and from the commercial fisheries fish ticket database. The information in this report is considered final for all years through 2002. The 2003 data are preliminary.

Drift and set gillnets are the only two types of legal fishing gear in the Bristol Bay commercial salmon fishery, per regulation (5AAC 06.330). Drift gillnet fishers are limited to 150 fathoms of gear while set gillnet fishers are limited to 50 fathoms. Set gillnets fished in the Naknek-Kvichak, Egegik, Ugashik, and Togiak districts must be at least 300 feet apart, while in the Nushagak District set nets must be at least 450 feet apart. There is no minimum distance required between drift gillnets, but drift gillnets must be at least 300 feet from the side of a setnet or at least 100 feet from the offshore end of a setnet out to the allowable offshore distance for setnets (see 5AAC 06.335 and 5AAC 06.331 (m) and (n)). In the Ugashik River Special Harvest Area (URSHA), the Wood River Special Harvest Area (WRSHA), and in the Naknek River Special Harvest Area (NRSHA) reduced limits of gear and reduced distances between gear apply (see URSHA 5AAC 06.357 (e), WRSHA 5AAC 06.358 (1) and (2), NRSHA 5AAC 06.360 (d) and (e)).

There are five fishing districts in Bristol Bay (Figure 1). The drift fleets' mobility enables them to fish more than one district and many drift fishers will land fish in more than one district in a given season. Most setnetters usually fish one district in a season. Setnet fishers are much less mobile and are limited by availability of fishing sites, existing tideland leases, and the base of operation that is necessary to conduct set net fishing activities; mainly fish delivery logistics. However, both gear groups have evolved to take full advantage of available fishing opportunities. Both gear groups are currently effective in harvesting substantial numbers of salmon in relatively short amounts of time and they compete intensely for these fish.

For the purposes of this report, the total annual effort in a district is defined as the total number of permits that made at least one sockeye salmon delivery in that district for the season. The average sockeye salmon harvests were calculated using total effort for each district.

In 1997, the Board allocated sockeye salmon harvests in the Naknek/Kvichak, Egegik, Ugashik, and Nushagak Districts between set and drift gillnet gear. In most cases, the allocation period is from June 1 to July 17. Some statistics in this report, as footnoted, are calculated using only that time frame.

The Bristol Bay commercial salmon fishery became a "Limited Entry" fishery in 1975, and due to court adjudication, the numbers of permits has fluctuated since then (Table 1). According to the Commercial Fisheries Entry Commission, the number of Bristol Bay permit holders that could have received licenses to fish during the 2003 season totaled 2,688 permits, or 1,867 drift gillnet permits and 1,001 set gillnet permits. Of these active permits, 1,729 drift gillnet and 993

set gillnet permits were actually renewed, and of these renewed permits, 1,424 drift gillnet and 761 set gillnet permits actually recorded landings (Table 1 and 14).

Effort

Fishing efforts by district from 1975 to 2003 are listed in Table 1. Effort has been the greatest in the districts with the largest sockeye salmon harvest predictions. The Egegik and Nushagak Districts have had the largest sockeye salmon harvest predictions in recent times, but the largest annual drift gillnet effort recorded for a single district was 1,387 permit holders in the Naknek/Kvichak District during 1990. The Naknek/Kvichak District drift gillnet effort has exceeded 1,000 permit holders in 14 of the 29 years from 1975 to 2003. The Egegik District has exceeded 1,000 drift fishers three times during that interval and the other three districts have yet to reach that level of effort. The largest set gillnet effort has also occurred in the Naknek/Kvichak District with a peak level of 441 permit holders in 1990. Recent drift gillnet effort in the Nushagak District has been increasing in numbers, while decreases in effort are occurring in the Naknek/Kvichak, Egegik and Ugashik Districts. Drift effort in the Naknek-Kvichak District increases on pre-peak and peak years. Set gillnet effort has remained relatively stable in most districts with the exception of Ugashik where effort has decreased by approximately 26% in the last ten years.

Sockeye Salmon Harvest

The 1965 to 2003 Bay-wide percentages of sockeye salmon harvest by gear type are listed in Table 2. Over the last 20 years, the average percent of the drift gillnet harvest is 85%, and for set gillnet harvest it is 15%. The average percent of the set gillnet harvest is up approximately 2% from what it was six years ago, due primarily to the allocation plans adopted by the Board of Fisheries in 1997. For the four districts the allocations are as follows: 1) Naknek/Kvichak, 84% drift gillnet, and 16% set gillnet which is split between Kvichak and Naknek setnetters at 8% each, 2) Nushagak, 74% drift gillnet, and 26% set gillnet which is split between Igushik and Nushagak setnetters at 6% and 20%, respectively; the Wood River Special Harvest Area (WRSOA) also has a 74% drift and 26% set gillnet split; 3) Egegik, 86% drift gillnet, and 14% set gillnet; and 4) Ugashik, 90% drift gillnet and 10% set gillnet. Since 1998, managers in the Naknek/Kvichak, Nushagak, Egegik, and Ugashik Districts have attempted to achieve the allocations by adjusting fishing times for the two gear groups. In some cases, this has meant separate fishing periods for each gear group.

Over the last six years, sockeye salmon harvests have generally been within two to four percent of the allocations (Tables 3–6 and Tables 11-13) with the exception of the Naknek/Kvichak District. The Naknek/Kvichak District has spent most to all of the season in the Naknek River Special Harvest Area (NRSOA) during four of the last six years. When the NRSOA is effect, fish periods are alternated between gear groups. Generally, the runs to these districts, with the exception of the Nushagak District, have been smaller than average, and small runs can make achieving allocations difficult.

The total set gillnet harvests by section for the Nushagak District (1978 to 2003) and the Naknek/Kvichak District (1985 to 2003) are listed in Tables 10 and 12. Tables 11 and 13 list the breakdown by sections and inriver fisheries for the allocation periods. In the last six years, Igushik section setnet average percent of the total harvest is 3% (Table 10), and in the last six years, during the allocation periods, it has been 4% (Table 11). The Nushagak section setnet percent of the harvests have averaged 19% of the harvest. The Naknek section setnet average percent of the catch, during the allocation period, has been 7% when the section was fished, while Kvichak section setnetters have averaged 5% (Table 13). Egegik setnetters average percent of the harvest has been 16% over the last six years (Table 4), and Ugashik setnetters averaged 14% (Table 5).

Comparisons of the average harvests per gear type in numbers of sockeye salmon per permit are listed in Table 8 with pre- and post-year allocation plan averages calculated. The data indicates that the average sockeye salmon harvests are down for both gear groups, but since the allocation plan was put into place in 1998, the total harvest has been down by approximately 36% from the 1978 to 1997 average of 25 million. However, catch has dropped proportionally more for drift gillnet fishers. The average sockeye catch per drift permit has decreased by approximately 35% from a 1978-1997 average of 12,124 to a 1998-2003 average of 7,869 sockeye salmon per permit. For set gillnet fishers the average sockeye salmon catch per permit has actually increased approximately 5% from a 1978-1997 average of 3,599 to a 1998-2003 average of 3,764. Set gillnet harvests per permit have increased from approximately one third to almost half the average drift gillnet harvest.

Average sockeye salmon catches per permit holder by gear type, and by district, from 1984 to 2003, are listed in Table 9. These data indicate that the Egegik District drift gillnet fishers have achieved the largest 20-year average sockeye salmon harvest per permit holder of any district's fishers with 8,254 fish per permit. The largest, single season, individual drift delivery average of 15,120 sockeye per permit holder was recorded in the Naknek/Kvichak District and occurred in 1995. Egegik District setnet fishers have the highest 20-year average catch among Bristol Bay setnetters with 4,013 sockeye salmon per permit holder and Ugashik setnetters are second with a 20-year average of 3,679 sockeye salmon. Egegik District fishers posted the largest single season individual setnet average in the last 20 years with 6,885 sockeye salmon per permit in 1993. Togiak District fishers have had the lowest average annual catches for both gear groups in the last 20 years with drift gillnet fishers averaging 2,163 sockeye salmon per permit holder, and set gillnetters averaging 1,916 fish. However, during the super exclusive periods in 1996-2003, the average in the Togiak District was 3,339 for drift gillnet fishers and 2,340 for set gillnet fishers.

LITERATURE CITED

Weiland, Keith. 2000. Summary of Bristol Bay Sockeye Salmon Catches by Gear Type, 1965-2000. Alaska Department of Fish and Game, Division of Commercial Fisheries, Bristol Bay RIR Report No. 2A00-35.

Table 1. Drift and set gill net effort by year and district, 1975-2003

Year	Units of Effort (one or more sockeye salmon deliveries during season)											
	Naknek-Kvichak		Egegik		Ugashik		Nushagak		Togiak		Bristol Bay Total	
	Drift	Set	Drift	Set	Drift	Set	Drift	Set	Drift	Set	Drift	Set
1975	705	147	235	88	34	8	421	141	92	24	1,235	445
1976	664	182	256	96	75	18	422	178	86	31	1,353	501
1977	621	179	324	94	47	7	476	166	130	31	1,359	498
1978	798	280	386	130	48	4	641	216	151	38	1,575	656
1979	1,060	298	332	159	103	23	656	236	162	57	1,714	770
1980	1,011	347	283	179	187	29	666	241	181	47	1,764	807
1981	993	348	345	167	270	33	658	260	178	54	1,785	841
1982	801	332	420	168	253	49	980	252	202	56	1,792	859
1983	1,064	361	483	171	346	47	792	260	251	58	1,797	865
1984	1,091	338	573	180	313	53	575	260	225	63	1,804	869
1985	1,165	351	936	181	740	59	406	251	117	54	1,815	872
1986	722	298	833	279	844	136	750	340	141	110	1,823	869
1987	1,062	318	929	206	633	78	626	284	146	67	1,824	899
1988	1,015	354	1,010	193	578	70	534	282	321	123	1,837	922
1989	1,213	363	986	213	555	68	375	288	149	97	1,855	971
1990	1,387	441	969	214	420	64	446	342	127	77	1,878	971
1991	1,089	359	667	211	416	62	467	312	207	106	1,887	950
1992	976	349	947	203	501	67	478	298	278	116	1,889	968
1993	834	335	1,189	227	608	70	490	296	154	107	1,881	965
1994	1,139	326	1,087	228	477	67	455	295	171	115	1,882	939
1995	1,187	348	945	207	743	67	398	312	176	110	1,921	967
1996	761	348	933	203	626	53	570	278	140 ^a	111 ^b	1,884	941
1997	550	301	950	243	473	58	577	284	65 ^a	85 ^b	1,875	921
1998	1,053	297	947	209	393	51	648	277	62 ^a	82 ^b	1,858	901
1999	1,092	309	788	204	453	50	520	295	121 ^a	77 ^b	1,847	925
2000	797	325	817	204	520	54	668	298	187 ^a	87 ^b	1,823	921
2001	553	250	643	193	283	51	795	277	164 ^a	83 ^b	1,566	834
2002	338	230	423	147	378	35	490	215	94 ^a	59 ^b	1,183	680
2003	508	248	567	182	437	52	616	222	159	76	1,424	761
1975-2003 Avg	905	309	697	185	405	51	572	264	160	76	1,729	838
1984-1993 Avg	1,055	351	904	211	561	73	515	295	187	92	1,849	926
1994-2003 Avg	798	298	810	202	478	54	574	275	134	89	1,726	879
1999-2003 Avg	658	272	648	186	414	48	618	261	145	76	1,569	824

^a Drift effort before July 24 is as follows: 1996-37, 1997-40, 1998-33, 1999-44, 2002-80, 2003-118, and before July 21, 2000-40, 2001-81.

^b Setnet effort before July 24 1996-79, 1997-83, 1998-76, 1999-68, 2002-59, 2003-72 and before July 21, 2000-66, 2001-73.

Table 2. Bristol Bay sockeye salmon catch in percent and numbers by gear type, 1965-2003.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	92	8	22,315	1,940	24,255
1966	89	11	8,289	1,025	9,314
1967	89	11	3,855	476	4,331
1968	90	10	2,514	279	2,793
1969	88	12	5,827	795	6,622
1970	93	7	19,271	1,450	20,721
1971	90	10	8,626	958	9,584
1972	93	7	2,247	169	2,416
1973	92	8	700	61	761
1974	79	21	1,076	286	1,362
1975	91	9	4,458	441	4,899
1976	90	10	5,057	562	5,619
1977	89	11	4,341	537	4,878
1978	88	12	8,737	1,191	9,928
1979	88	12	18,858	2,571	21,429
1980	86	14	20,435	3,327	23,762
1981	86	14	22,019	3,584	25,603
1982	87	13	13,318	1,942	15,260
1983	90	10	33,448	3,924	37,372
1984	90	10	22,219	2,486	24,705
1985	90	10	21,352	2,344	23,696
1986	85	15	13,356	2,420	15,776
1987	87	13	13,911	2,158	16,069
1988	86	14	12,038	1,952	13,990
1989	86	14	24,642	4,093	28,735
1990 ^a	87	13	29,067	4,377	33,444
1991 ^a	86	14	22,241	3,580	25,821
1992 ^a	87	13	27,877	3,985	31,862
1993 ^a	87	13	35,306	5,156	40,462
1994 ^a	88	12	31,121	4,098	35,219
1995 ^a	87	13	38,516	5,649	44,165
1996 ^a	86	14	25,510	4,079	29,589
1997 ^a	82	18	9,944	2,127	12,071
1998 ^a	80	20	7,941	1,987	9,928
1999 ^a	81	19	20,859	4,738	25,597
2000 ^a	81	19	16,458	3,894	20,352
2001 ^a	79	21	11,090	2,989	14,079
2002 ^a	79	21	8,351	2,175	10,526
2003 ^{ab}	79	21	12,046	3,231	15,277
1965-2003 Avg.	87	13	15,621	2,386	18,007
20-year Avg.	85	15	20,192	3,376	23,568
10-year Avg.	82	18	18,184	3,497	21,680
1978-1997 Avg.	87	13	22,196	3,252	25,448
1998-2003 Avg.	80	20	12,791	3,169	15,960

^a Catch numbers exclude personal use and test fisheries harvests.

^b Preliminary catch figures.

Table 3. Naknek-Kvichak District sockeye salmon catch in percent and number by gear type, 1965-2003

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Season Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	95	5	18,206	964	19,170
1966	93	7	5,040	358	5,398
1967	90	10	2,115	223	2,338
1968	89	11	1,085	132	1,217
1969	91	9	4,250	405	4,655
1970	96	4	16,757	724	17,481
1971	93	7	5,426	431	5,857
1972	96	4	1,062	40	1,102
1973	88	12	149	20	169
1974	82	18	439	99	538
1975	94	6	2,888	198	3,086
1976	93	7	2,363	184	2,547
1977	90	10	1,956	211	2,167
1978	91	9	4,651	473	5,124
1979	90	10	13,548	1,443	14,991
1980	88	12	12,330	1,666	13,996
1981	89	11	9,732	1,261	10,993
1982	87	13	4,509	659	5,168
1983	92	8	19,774	1,785	21,559
1984	90	10	13,102	1,444	14,546
1985	87	13	7,154	1,025	8,179
1986	70	30	2,014	878	2,892
1987	86	14	4,272	714	4,986
1988	86	14	3,011	470	3,481
1989	89	11	12,265	1,545	13,810
1990	88	12	15,189	2,083	17,272
1991	89	11	9,322	1,154	10,476
1992	89	11	8,347	1,030	9,377
1993	84	16	7,460	1,447	8,907
1994	89	11	14,582	1,799	16,381
1995	89	11	17,947	2,306	20,253
1996	83	17	6,804	1,411	8,215
1997	73	27	420	157	577
1998 ^b	85	15	1,878 ^b	327 ^b	2,539
1999 ^b	84	16	7,091 ^b	1,310 ^b	9,407
2000 ^{bc}	82	18	3,747 ^b	829 ^b	4,689
2001 ^{bc}	77	23	4,051 ^b	1,180 ^b	5,243
2002 ^{bc}	65	35	889 ^b	487 ^b	1,384
2003 ^{ab}	66	34	2,152 ^b	1,110 ^b	3,320
1965-2003 Avg.	87	13	6,871	871	7,782
20-year Avg.	83	17	7,085	1,135	8,297
10-year Avg.	79	21	5,956	1,092	7,201
1998-2003 Avg.	77	23	3,301	874	4,430
1978-1997 Avg.	86	14	9,322	1,238	10,559
Allocation	84	16			

^a Catches are preliminary.

^b Allocation accounting period: June 1 to July 17, test fishery and personal use fish are excluded.

^c When the Naknek River Special Harvest Area (NRSHA) is in effect, fishing periods are alternated between gear groups.

Table 4. Egegik District sockeye salmon catch in percent and numbers by gear type, 1965-2003.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Season Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	83	17	2,655	525	3,180
1966	88	12	1,849	252	2,101
1967	90	10	959	112	1,071
1968	93	7	627	44	671
1969	80	20	713	176	889
1970	85	15	1,196	208	1,404
1971	87	13	1,137	170	1,307
1972	91	9	761	79	840
1973	90	10	199	22	221
1974	78	22	134	38	172
1975	90	10	867	97	964
1976	91	9	1,204	126	1,330
1977	88	12	1,564	217	1,781
1978	84	16	1,009	199	1,208
1979	78	22	1,756	501	2,257
1980	71	29	1,875	748	2,623
1981	77	23	3,349	1,012	4,361
1982	83	17	2,023	425	2,448
1983	86	14	5,805	953	6,758
1984	92	8	4,752	435	5,187
1985	93	7	6,999	539	7,538
1986	89	11	4,336	516	4,852
1987	91	9	4,859	498	5,357
1988	90	10	5,841	616	6,457
1989	90	10	7,968	934	8,902
1990	91	9	9,486	886	10,372
1991	91	9	6,164	633	6,797
1992	91	9	14,259	1,376	15,635
1993	93	7	20,034	1,563	21,597
1994	92	8	9,917	830	10,747
1995	90	10	12,988	1,396	14,384
1996	90	10	9,722	1,087	10,809
1997	87	13	6,494	968	7,462
1998	86	14	2,911 ^b	462 ^b	3,503
1999	85	15	6,031 ^b	1,097 ^b	7,384
2000	84	16	5,834 ^b	1,095 ^b	6,996
2001	85	15	2,391 ^b	409 ^b	2,837
2002	85	15	3,812 ^b	696 ^b	4,525
2003 ^a	80	20	1,789 ^b	440 ^b	2,284
1965-2003 Avg.	87	13	4,520	574	5,108
20-year Avg.	89	11	7,329	824	8,181
10-year Avg.	86	14	6,189	848	7,093
1998-2003 Avg.	84	16	3,795	700	4,588
1978-1997 Avg.	87	13	6,982	806	7,788
Allocation	86	14			

^a Catches are preliminary.

^b Allocation accounting period: June 1 to July 17, test fishery and personal use fish are excluded.

Table 5. Ugashik District sockeye salmon catch in percent and numbers by gear type, 1965-2003.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Season Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	82	18	760	166	926
1966	83	17	370	75	445
1967	81	19	133	31	164
1968	80	20	66	16	82
1969	84	16	142	28	170
1970	77	23	132	40	172
1971	89	11	848	106	954
1972	28	72	5	13	18
1973	75	25	3	1	4
1974	50	50	1	1	2
1975	80	20	12	3	15
1976	90	10	158	17	175
1977	90	10	84	9	93
1978	87	13	7	1	8
1979	84	16	328	62	390
1980	88	12	778	108	886
1981	89	11	1,884	232	2,116
1982	87	13	988	151	1,139
1983	93	7	3,116	233	3,349
1984	92	8	2,456	202	2,658
1985	96	4	6,212	251	6,463
1986	95	5	4,765	238	5,003
1987	94	6	2,001	128	2,129
1988	91	9	1,383	140	1,523
1989	87	13	2,752	394	3,146
1990	91	9	1,960	189	2,149
1991	89	11	2,617	328	2,945
1992	90	10	2,984	332	3,316
1993	90	10	3,763	414	4,177
1994	93	7	4,047	303	4,350
1995	95	5	4,254	222	4,476
1996	95	5	4,191	220	4,411
1997	88	12	1,227	166	1,393
1998	85	15	442 ^b	78 ^b	716
1999	89	11	1,654 ^b	197 ^b	2,255
2000	87	13	1,326 ^b	190 ^b	1,517
2001	80	20	357 ^b	90 ^b	475
2002	88	12	1,341 ^b	181 ^b	1,570
2003 ^a	88	12	1,534 ^b	204 ^b	1,768
1965-2003 Avg.	85	15	1,566	148	1,732
20-year Avg.	90	10	2,563	223	2,822
10-year Avg.	89	11	2,037	185	2,293
1998-2003 Avg.	86	14	1,109	157	1,384
1978-1997 Avg.	91	9	2,586	216	2,801
Allocation	90	10			

^a Catches are preliminary.

^b Allocation accounting period: 1998 - June 1 to July 26; 1999 - June 1 to July 19; 2000 - June 1 to July 31; 2001 and 2002 June 1 to July 17; test fishery and personal use fish are excluded.

Table 6. Nushagak District sockeye salmon catch in percent and numbers by gear type, 1965-2003.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Season Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	72	28	693	263	956
1966	72	28	840	331	1,171
1967	86	14	569	89	658
1968	90	10	674	75	749
1969	81	19	607	142	749
1970	67	33	791	397	1,188
1971	77	23	969	288	1,257
1972	92	8	352	30	382
1973	93	7	252	20	272
1974	73	27	371	139	510
1975	80	20	518	128	646
1976	85	15	1,071	195	1,266
1977	86	15	529	90	619
1978	85	15	2,666	471	3,137
1979	82	18	2,713	614	3,327
1980	85	15	3,802	696	4,498
1981	81	19	6,100	1,393	7,493
1982	90	10	5,299	611	5,910
1983	84	16	4,287	833	5,120
1984	83	17	1,660	332	1,992
1985	64	36	830	477	1,307
1986	75	25	2,032	687	2,719
1987	78	22	2,551	703	3,254
1988	75	25	1,274	433	1,707
1989	58	42	1,609	1,179	2,788
1990	67	33	2,384	1,149	3,533
1991	76	24	3,816	1,238	5,054
1992	65	35	1,820	970	2,790
1993	72	28	3,755	1,482	5,237
1994	71	29	2,418	975	3,393
1995	68	32	3,009	1,437	4,446
1996	81	19	4,589	1,076	5,665
1997	70	30	1,760	747	2,507
1998	72	28	2,148 ^b	830 ^b	2,978
1999	72	28	4,464 ^b	1,702 ^b	6,166
2000	78	22	4,934 ^b	1,364 ^b	6,355
2001	79	21	3,708 ^b	979 ^b	4,712
2002	75	25	2,117 ^b	692 ^b	2,814
2003 ^a	84	16	6,039 ^b	1,135 ^b	7,186
1965-2003 Avg.	78	22	2,308	677	2,987
20-year Avg.	73	27	2,846	979	3,830
10-year Avg.	75	25	3,519	1,094	4,622
1998-2003 Avg.	77	23	3,902	1,117	5,035
1978-1997 Avg.	75	25	2,919	875	3,794
Allocation	74	26			

^a Catches are preliminary.

^b Allocation accounting period: 1998- June 1 -Sept 30; 1999- June 1 to Sept. 30; 2000 to 2003 - June 1 to July 17; test fishery and personal use fish are excluded. Totals contains WRSWA catches.

Table 7. Togiak District sockeye salmon catch in percent and numbers by gear type, 1965-2003.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Season Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	100	0	261	0	261
1966	98	3	195	5	200
1967	95	5	95	5	100
1968	99	1	72	1	73
1969	99	1	133	2	135
1970	99	1	153	1	154
1971	100	0	208	1	209
1972	100	0	75	0	75
1973	99	1	95	1	96
1974	91	9	127	12	139
1975	92	8	174	15	189
1976	92	8	277	25	302
1977	89	11	196	23	219
1978	84	16	378	74	452
1979	82	18	376	85	461
1980	83	17	528	107	635
1981	79	21	503	136	639
1982	84	16	500	96	596
1983	80	20	468	120	588
1984	77	23	249	73	322
1985	75	25	157	52	209
1986	68	32	210	99	309
1987	66	34	228	115	343
1988	64	36	529	293	822
1989	55	45	49	40	89
1990	64	36	126	71	197
1991	59	41	322	227	549
1992	62	38	450	276	726
1993	54	46	290	250	540
1994	52	48	209	191	400
1995	52	48	317	288	605
1996	45	55	207	255	462
1997	37	63	52	90	142
1998	43	57	82	108	190
1999	53	47	203	182	385
2000	58	42	458	337	795
2001	66	34	533	277	810
2002	61	39	142	92	234
2003 ^a	63	37	450	269	719
1965-2003 Avg.	75	25	258	110	368
20-year Avg.	59	41	263	179	442
10-year Avg.	53	47	265	209	474

^a Catches are preliminary.

Table 8. Bristol Bay average catch in numbers of sockeye salmon by gear type and year, 1965-2003.

Year	Estimated Permits		Average Seasonal Catch of Sockeye (No. of Fish) by Permit Type		Drift Gillnet % of Total Catch	Set Gillnet % of Total Catch
	Actually Fished		Drift	Set		
	Drift	Set				
1965	1,395	582	15,996	3,333	92	8
1966	1,715	549	4,833	1,867	89	11
1967	1,555	439	2,479	1,084	89	11
1968	1,237	493	2,032	566	90	10
1969	1,633	511	3,568	1,556	88	12
1970	1,674	623	11,512	2,327	93	7
1971	1,710	421	5,044	2,276	90	10
1972	1,467	490	1,532	345	93	7
1973	953	542	735	113	92	8
1974	659	214	1,633	1,336	79	21
1975	1,235	445	3,610	991	91	9
1976	1,353	501	3,738	1,122	90	10
1977	1,359	498	3,194	1,078	89	11
1978	1,575	656	5,547	1,816	88	12
1979	1,714	770	11,002	3,339	88	12
1980	1,764	807	11,584	4,123	86	14
1981	1,785	841	12,336	4,262	86	14
1982	1,792	859	7,432	2,261	87	13
1983	1,797	865	18,613	4,536	90	10
1984	1,804	869	12,317	2,861	90	10
1985	1,815	872	11,764	2,688	90	10
1986	1,823	869	7,326	2,785	85	15
1987	1,824	899	7,627	2,400	87	13
1988	1,837	922	6,553	2,117	86	14
1989	1,855	971	13,284	4,215	86	14
1990	1,869	971	15,552	4,508	87	13
1991	1,873	950	11,875	3,768	86	14
1992	1,879	968	14,836	4,116	88	13
1993	1,875	965	18,830	5,343	87	13
1994	1,865	939	16,687	4,364	88	12
1995	1,882	967	20,465	5,841	87	13
1996	1,884	941	13,541	4,334	86	14
1997	1,875	921	5,303	2,310	82	18
1998	1,850	901	4,293	2,206	80	20
1999	1,847	925	11,294	5,122	81	19
2000	1,823	921	9,028	4,228	81	19
2001	1,566	834	7,082	3,584	79	21
2002	1,183	680	7,060	3,199	79	21
2003 ^a	1,424	761	8,459	4,246	79	21
1965-2003 Avg.	1,642	747	8,964	2,886	87	13
1978-1997 Avg.	1,819	891	12,124	3,599	87	13
1998-2003 Avg.	1,616	837	7,869	3,764	80	20

^a Preliminary data.

Table 9. Average catch in numbers of sockeye by gear type and district, 1984-2003.^a

Year	Average Catch in Numbers of Sockeye Salmon (Per Permit)									
	Naknek-Kvichak		Egegik		Ugashik		Nushagak		Togiak	
	Drift	Set	Drift	Set	Drift	Set	Drift	Set	Drift	Set
1984	12,009	4,272	8,293	2,417	7,847	3,811	2,887	1,277	1,107	1,159
1985	6,141	2,920	7,478	2,978	8,395	4,254	2,044	1,900	1,342	963
1986	2,789	2,946	5,205	1,849	5,646	1,750	2,709	2,021	1,489	900
1987	4,023	2,245	5,230	2,417	3,161	1,641	4,075	2,475	1,562	1,716
1988	2,967	1,328	5,783	3,192	2,393	2,000	2,386	1,535	1,648	2,382
1989	10,111	4,256	8,081	4,385	4,959	5,794	4,291	4,094	329	412
1990	10,951	4,723	9,789	4,140	4,595	2,953	6,137	3,360	992	922
1991	8,560	3,214	9,241	3,000	6,291	5,290	8,171	3,968	1,556	2,142
1992	8,552	2,951	15,057	6,778	5,956	4,955	3,808	3,255	1,619	2,379
1993	8,945	4,319	16,850	6,885	6,189	5,914	7,663	5,007	1,883	2,336
1994	12,755	5,518	9,123	3,640	8,484	4,522	5,312	3,305	1,222	1,661
1995	15,120	6,626	13,744	6,744	5,725	3,313	7,555	4,606	1,801	2,618
1996	8,941	4,055	10,420	5,355	6,695	4,151	8,046	3,971	4,216 ^c	2,633
1997	764	522	6,836	3,984	2,594	2,862	3,033	2,630	1,250 ^c	1,024
1998 ^b	2,035	1,128	3,140	2,287	1,373	1,696	3,315	2,996	2,333 ^c	1,342
1999 ^b	7,273	4,267	7,712	5,431	3,785	4,104	8,585	5,750	3,386 ^c	2,191
2000 ^b	4,996	2,567	7,202	5,394	2,550	3,393	7,498	4,624	6,850 ^c	4,379
2001 ^b	7,406	4,758	3,730	2,141	1,261	2,000	4,694	3,534	4,815 ^c	3,000
2002 ^b	2,686	2,155	9,012	4,767	3,548	5,171	4,320	3,249	1,025 ^c	1,000
2003 ^{bd}	4,598	4,549	3,161	2,472	3,518	3,998	9,804	5,113	2,839 ^c	3,153
1984-1997 Av	8,045	3,564	9,367	4,126	5,638	3,801	4,865	3,100	1,379 ^e	1,633
1984-2003 Av	7,081	3,466	8,254	4,013	4,748	3,679	5,317	3,434	2,163	1,916
1998-2003 Av	4,832	3,237	5,660	3,749	2,673	3,394	6,369	4,211	3,339 ^f	2,340

^a Averages prior to 1998 are computed using the total effort listed in Table 1.

^b Data from 1998 to 2003, for Naknek/Kvichak, Egegik, Ugashik, and Nushagak Districts are for the allocation periods only.

^c Averages for the superexclusive periods only: 1996-1999, 2002-03 from June 1 through July 23; 2000-01 from June 1 through July 20.

^d Preliminary data.

^e 1984 to 1995 average.

^f 1996 to 2003 average.

Table 10. Nushagak District sockeye catch by gear type, in numbers of fish and percent of total catch, 1978-2003.

Year	Set Net				Combined Sections	Drift Net		Total	
	Igushik Section	Nushagak Section							
1978	83,414	3%	387,730	12%	471,144	15%	2,666,022	85%	3,137,166
1979	106,010	3%	508,219	15%	614,229	18%	2,712,883	82%	3,327,112
1980	113,149	3%	582,873	13%	696,022	15%	3,801,765	85%	4,497,787
1981	236,129	3%	1,157,209	15%	1,393,338	19%	6,099,755	81%	7,493,093
1982	131,468	2%	479,496	8%	610,964	10%	5,298,763	90%	5,909,727
1983	145,225	3%	687,885	13%	833,110	16%	4,286,634	84%	5,119,744
1984	46,485	2%	285,712	14%	332,197	17%	1,660,484	83%	1,992,681
1985	99,944	8%	377,108	29%	477,052	36%	830,209	64%	1,307,261
1986	154,013	6%	533,479	20%	687,492	25%	2,031,821	75%	2,719,313
1987	138,889	4%	564,346	17%	703,235	22%	2,551,485	78%	3,254,720
1988	56,557	3%	376,479	22%	433,036	25%	1,273,680	75%	1,706,716
1989	238,887	9%	940,396	34%	1,179,283	42%	1,608,911	58%	2,788,194
1990	312,455	9%	836,091	24%	1,148,546	33%	2,383,997	67%	3,532,543
1991	399,745	8%	837,990	17%	1,237,735	24%	3,816,110	76%	5,053,845
1992	130,827	5%	839,067	30%	969,894	35%	1,819,947	65%	2,789,841
1993	308,822	6%	1,173,070	22%	1,481,892	28%	3,754,665	72%	5,236,557
1994	242,273	7%	732,943	22%	975,216	29%	2,417,927	71%	3,393,143
1995	492,937	11%	944,230	21%	1,437,167	32%	3,008,733	68%	4,445,900
1996	243,006	4%	795,250	14%	1,076,320 ^a	19%	4,588,549	81%	5,664,869
1997	28,887	1%	491,076	20%	746,985 ^a	30%	1,759,833	70%	2,506,818
1998	116,398	4%	676,264	23%	830,453 ^a	28%	2,148,148	72%	2,978,601
1999	247,509	4%	1,053,905	17%	1,701,963 ^a	28%	4,464,182	72%	6,166,145
2000	247,744	4%	769,242	12%	1,395,083 ^a	22%	4,960,106	78%	6,355,189
2001	198,699	4%	794,860	17%	993,559	21%	3,717,640	79%	4,711,199
2002	22,786	1%	483,566	17%	694,317 ^a	25%	2,119,672	75%	2,813,989
2003 ^b	141,602	2%	1,004,892	14%	1,146,494	16%	6,039,487	84%	7,185,981
1978-1997 Avg.	185,456	5%	676,532	19%	875,243	25%	2,918,609	75%	3,793,852
20-year Avg.	193,423	5%	725,498	20%	982,396	27%	2,847,779	73%	3,830,175
10-year Avg.	198,184	4%	774,623	18%	1,099,756	25%	3,522,428	75%	4,622,183
1998-2003 Avg.	162,456	3%	797,122	17%	1,126,978	23%	3,908,206	77%	5,035,184

^a Combined Sections catches include Wood River Special Harvest Area catches.

^b Preliminary data.

Table 11. Nushagak District sockeye salmon catch by gear type, in numbers of fish and percent of the total catch through the allocation period, 1998-2003.

Year	Drift Nushagak District	Set Net		Set Net		Set Net		Wood River Special Harvest		Nushagak District Total			
		Nushagak Section	Igushik Section	Combined Section	Drift Net	Set Net							
1998 ^a	2,007,865	72%	676,264	24%	116,398	4%	792,662	28%	140,283	79%	37,791	21%	2,978,601
1999 ^a	2,929,091	69%	1,053,905	25%	247,509	6%	1,301,414	31%	1,535,091	79%	400,549	21%	6,166,145
2000 ^b	4,077,020	80%	747,120	15%	242,527	5%	989,647	20%	857,423	70%	374,371	30%	6,298,461
2001 ^b	3,707,549	79%	780,934	17%	198,319	4%	979,253	21%					4,686,802
2002 ^b	1,749,893	78%	483,566	21%	22,786	1%	506,352	22%	366,742	66%	185,526	34%	2,808,513
2003 ^{bc}	6,038,584	84%	995,014	14%	139,549	2%	1,134,563	16%					7,173,147
6-year avg. Allocation	3,418,334	77% 74%	789,467	19% 20%	161,181	4% 6%	950,649	23% 26%	724,885	74% 74%	249,559	26% 26%	5,018,612

^a Allocation Period June 1 to September 30.

^b Allocation Period June 1 to July 17.

^c Data is preliminary.

Table 12. Naknek-Kvichak District sockeye catch by gear type, in numbers of fish and percent of total catch, 1985-2003.

Year	Set Net						Drift Net	Total	
	Naknek Section		Kvichak Section		Combined	Section:			
1985	556,969	7%	84,078	1%	641,047	8%	7,144,809	92%	7,785,856
1986	557,705	36%	19,992	1%	577,697	37%	971,066	63%	1,548,763
1987	312,400	6%	296,197	6%	608,597	12%	4,272,334	88%	4,880,931
1988	214,059	6%	255,936	7%	469,995	14%	3,010,841	86%	3,480,836
1989	663,558	5%	881,849	6%	1,545,407	11%	12,264,549	89%	13,809,956
1990	1,045,752	6%	1,034,462	6%	2,080,214	12%	15,189,248	88%	17,269,462
1991	655,722	6%	496,732	5%	1,152,454	11%	9,321,417	89%	10,473,871
1992	779,371	8%	262,147	3%	1,041,518	11%	8,441,331	89%	9,482,849
1993	825,331	9%	569,432	6%	1,394,763	16%	7,513,113	84%	8,907,876
1994	556,696	3%	1,261,049	8%	1,817,745	11%	14,529,192	89%	16,346,937
1995	992,429	5%	1,313,263	6%	2,305,692	11%	17,973,847	89%	20,279,539
1996	824,221	10%	249,069	3%	1,073,290	14%	6,800,835	86%	7,874,125
1997	127,203	22%	29,752	5%	156,955	27%	432,356	73%	589,311
1998	210,998	8%	219,055	9%	430,053	17%	2,109,144	83%	2,539,197
1999	782,727	8%	625,526	7%	1,408,253	15%	7,972,244 ^b	85%	9,380,497
2000	447,011	10%	204,730	4%	854,855 ^a	18%	3,833,644 ^b	82%	4,688,499
2001	368,665	7%	50,428	1%	1,189,144 ^a	23%	4,056,909 ^b	77%	5,246,053
2002					491,302 ^a	36%	892,578 ^b	64%	1,383,880
2003 ^b	21,567	1%			1,130,951 ^a	34%	2,188,968 ^b	66%	3,319,919
1985-1997 Avg.	623,955	10%	519,535	5%	1,143,490	15%	8,297,303	85%	9,440,793
1998-2003 Avg.	366,194	7%	274,935	5%	917,426	24%	3,508,915	76%	4,426,341
Allocation		8%		8%		16%		84%	

^a Includes Naknek inriver harvest.

^b Preliminary data.

Table 13. Naknek/Kvichak District sockeye salmon catch by gear type, in numbers of fish and percent of total catch through the allocation period, 1998-2003.

Year	Drift Naknek/Kvichak District ^a		Set Net		Set Net		Combined Section ^b		Naknek River Special Harvest				District Total
			Naknek Section	Kvichak Section					Drift Net		Set Net		
1998 ^c	1,877,531	85%	158,226	7%	168,311	8%	326,537	15%					2,204,068
1999 ^c	7,090,670	84%	726,640	9%	583,129	7%	1,309,769	16%	132,864	2%			8,400,439
2000 ^c	3,746,989	82%	443,043	10%	192,483	4%	828,933	18%	744,185	16%	193,407	4%	4,575,922
2001 ^c	4,050,707	77%	365,935	7%	50,428	1%	1,179,555	23%	2,144,345	41%	763,192	15%	5,230,262
2002 ^{cd}	888,978	65%					487,445	35%	888,978	65%	487,445	35%	1,376,423
2003 ^e	2,152,266	66%	21,567	1%			1,109,593	34%	1,963,632	60%	1,088,026	33%	3,261,859
6-year avg.	3,301,190	77%	343,082	7%	248,588	5%	873,639	23%	1,174,801	37%	633,018	22%	4,174,829
Allocation		84%		8%				16%					

^a Includes all drift catches, district and inriver.

^b Includes all set net catches, district and inriver.

^c Allocation Period June 1 to July 17.

^d Entire season was fished in the NRSHA.

^e Data is preliminary.

Table 14. Bristol Bay interim use and permanent entry permits, and permits actually fished, 1980-2003.

Year	Number of Permits Issued			Permits Fished	
	Interim Use	Permanent	Total	Number	Percent
DRIFT GILL NET:					
1980	110	1,717	1,827	1,764	97
1981	107	1,720	1,827	1,785	98
1982	100	1,724	1,824	1,792	98
1983	94	1,727	1,821	1,797	99
1984	89	1,729	1,818	1,804	99
1985	96	1,738	1,834	1,815	99
1986	95	1,743	1,838	1,823	99
1987	91	1,746	1,837	1,824	99
1988	90	1,749	1,839	1,837	100
1989	91	1,776	1,867	1,855	99
1990	93	1,785	1,878	1,869	100
1991	88	1,793	1,881	1,873	100
1992	86	1,797	1,883	1,879	100
1993	81	1,805	1,886	1,875	99
1994	77	1,810	1,887	1,865	99
1995	75	1,813	1,888	1,882	100
1996	70	1,821	1,891	1,884	100
1997	67	1,832	1,899	1,875	99
1998	55	1,844	1,899	1,858	98
1999	52	1,846	1,898	1,847	97
2000	38	1,852	1,890	1,823	96
2001	0	1,883	1,883	1,566	83
2002	0	1,878	1,878	1,183	63
2003 ^a	0	1,867	1,867	1,424	76
Average	73	1,791	1,864	1,783	96
SET GILL NET:					
1980	34	913	947	807	85
1981	42	914	956	841	88
1982	41	916	957	859	90
1983	31	929	960	865	90
1984	31	931	962	869	90
1985	28	931	959	872	91
1986	22	940	962	869	90
1987	18	942	960	899	94
1988	17	941	958	922	96
1989	18	1007	1025	971	95
1990	15	1011	1026	971	95
1991	12	1012	1024	950	93
1992	8	1017	1025	968	94
1993	8	1014	1022	965	94
1994	7	1012	1019	939	92
1995	8	1011	1019	967	95
1996	6	1011	1017	941	93
1997	7	1012	1019	921	90
1998	6	1009	1015	901	89
1999	6	1008	1014	925	91
2000	6	1007	1013	921	91
2001	0	1010	1010	834	83
2002	0	1006	1006	680	68
2003 ^a	0	1001	1001	761	76
Average	15	979	995	892	90

^a Preliminary data.

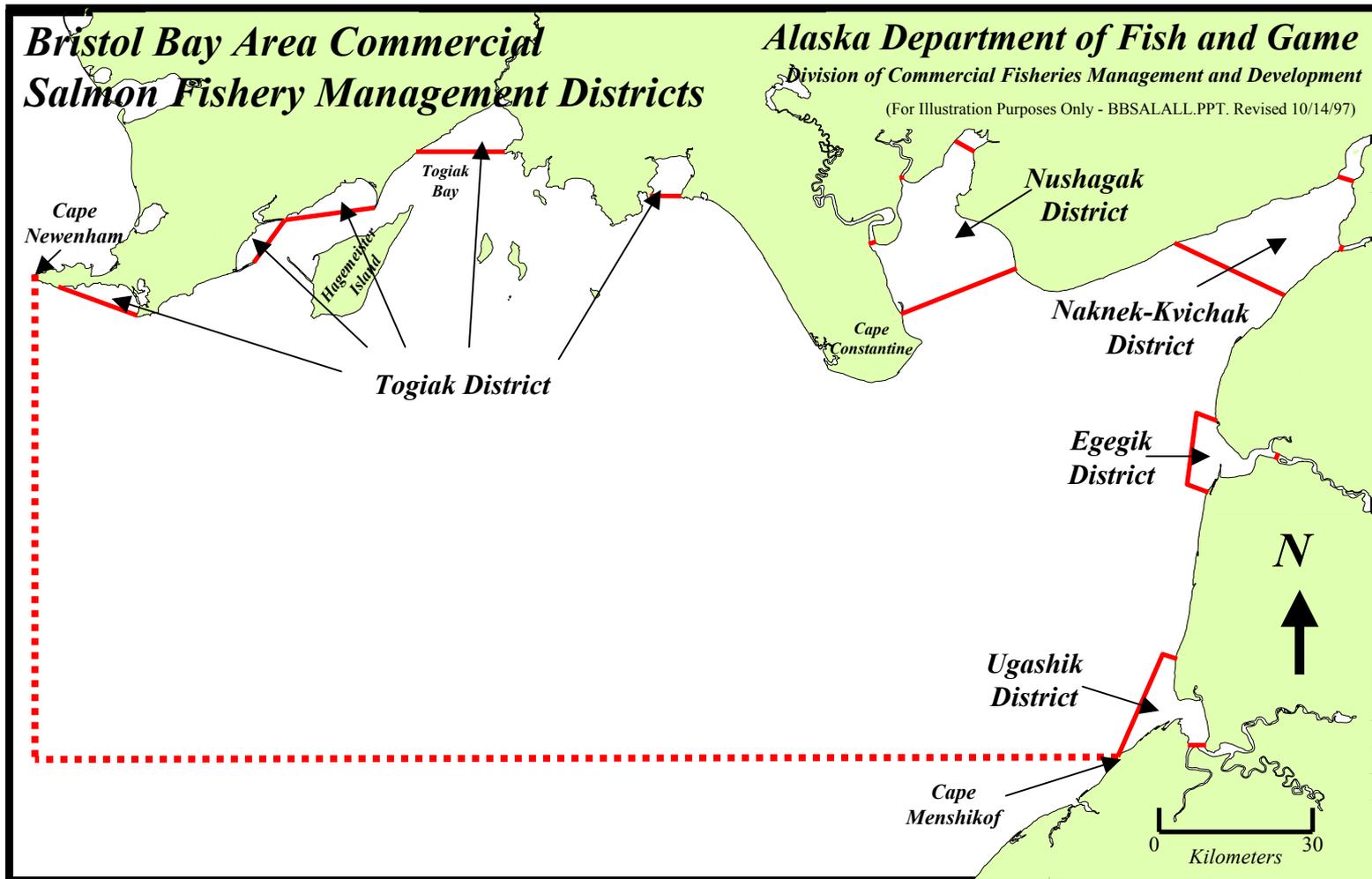


Figure 1. Bristol Bay commercial salmon fishing districts.

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