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SOUTH UNIMAK - SHUMAGIN ISLANDS
JUNE SALMON FISHERY

Report to the Alaska Board of Fisheries

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By

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INTRODUCTION

Figures 1, 2, and 3 indicate the location of the South Unimak and Shumagin Islands commercial salmon fisheries. The Shumagin Islands fishery takes place primarily along Popof, Unga, and Korovin Islands in the northern Shumagin Islands Section. Popof Head on Popof Island is usually the center of activity. The South Unimak (also called False Pass) fishery occurs in two major locations along the south side of Unimak Island. One area is from Ikatan Bay to Cape Lazaref on the southeast end of Unimak Island while the other is the vicinity of Cape Lutke on the southwest end. Table 1 lists the Shumagin Islands and South Unimak sockeye and chum salmon catches from 1960 - 1995. Table 2 lists sockeye salmon harvests prior to 1960. Unfortunately chum salmon harvest data for June prior to 1960 is not separated from the total season harvest figures. Appendix A.1-A.3 list the catch of all species of salmon in the South Unimak and Shumagin Islands June fisheries during 1970-95.

SOUTH UNIMAK HISTORY

The South Unimak June fishery dates back to at least 1911 (Table 2), though records prior to Statehood are sporadic.

Traps were operated in Ikatan and Morzhovoi Bays with 36 reported in 1919. The number of traps gradually decreased through the 1920's and 1930's and settled at 5-6 through the 1940's and 1950's.

Records first reflect seine gear catches in 1935 (19 vessels), and indicate a little over a dozen seine vessels seasonally through 1940. Records reflect only half-a-dozen seiners from the mid 1940's through the 1950's, although it is believed effort increased to around 50 vessels in the early 1950's. The total units of gear operated in the South Unimak and Shumagin Islands for the years 1976-95 are listed in Table 3. From 1960 through 1975 seine effort at South Unimak ranged from 5 to 26 vessels. Since 1975 effort has risen until a total of 111 vessels fished in 1992. Seiners move between the South Unimak and Shumagin Islands fisheries. When the Shumagins are closed, nearly the entire Area M purse seine fleet will be at South Unimak. In 1995, 69 seiners fished at South Unimak. In 1995 purse seine vessels harvested 42.1 percent of the sockeye and 47.1 percent of the chum salmon caught at South Unimak (Table 3).

Records of gillnet catches prior to 1960 are not reliable, gillnet gear was used in this fishery (drift nets beginning in the 1950's). Gillnet effort (almost entirely drift nets) generally ranged between 20 and 45 vessels in 1960-1965. Drift gillnet effort increased to 120-155 vessels in 1970-1973, dropped to 80 in 1975 and increased to 101-120 during 1976-1978. During 1979-1995 drift gillnet gear has ranged from 129 to 157, similar to the 1970-1973 level. In 1995, 151 drift gillnet permit holders participated in the South Unimak June fishery. In 1995, drift gillnet gear harvested 54.6 percent of the sockeye and 50.5 percent of the chum salmon harvest at South Unimak.

Set gillnet gear accounts for a small portion of the South Unimak catch. The set net harvest averaged 3.3 percent of the sockeye and 1.3 percent of the chum salmon harvested at South Unimak during

1990-1995 (Table 3). Set gillnet gear has increased from 0 to 2 in 1970-1975 to 13-25 during 1989-1995. In 1995, set gillnetters totaled 21 in the South Unimak fishery.

SHUMAGIN ISLANDS HISTORY

The Shumagin Islands June fishery dates back to at least 1911 (Table 2). However this fishery seems to not have developed significantly until 1922 when 550,000 sockeye were harvested. As with the case at South Unimak, information prior to Statehood is sporadic.

Fish traps were first recorded in the Shumagin Islands in 1919 and generally totaled 3-6 units with a peak at 8 in 1937. Seine catches have been recorded since 1911 and over 30 seiners fished the islands in 1943 and 1944. From 1962 through 1975, the seine effort usually totaled 15-25 vessels. During 1984-1995, purse seine vessels numbered in the 45 to 102 range in the Shumagin Islands June fishery.

During June 1995, 52 individual purse seine limited entry permit holders made at least one delivery in the Shumagin Islands Section. Some vessels move to South Unimak during mid and late June because of crowded conditions in the Shumagin Islands and the anticipation of better fishing at Unimak by some fishermen. In 1995, purse seiners harvested 81.5 percent of the sockeye and 93.7 percent of the chum salmon caught in the Shumagin Islands (Table 3).

During 1970-1983 the number of set gillnet fishermen fishing the Shumagin Islands during June ranged from 5 to 22. This increased to 30-40 during periods when the Southeastern District Mainland fishery was closed in 1985 and 1986. From 1987 through 1995 the number of set gillnetters operating during June ranged from 44 to 53. In 1995, 50 set gillnet permit holders participated in the Shumagin Islands June fishery. During 1995 set gillnetters harvested 18.5 percent of the sockeye and 6.5 percent of the chum salmon caught in the Shumagin Islands June fishery. Drift gillnet gear is not allowed in the Shumagin Islands. Table 4 lists the units of gear fished in South Peninsula waters in June during 1970-95.

REGULATIONS GOVERNING SOUTH UNIMAK AND SHUMAGIN ISLANDS FISHERIES

During the late 1960's and early 1970's, controversy arose between Peninsula-Aleutians and Bristol Bay fishermen in regard to the South Unimak and Shumagin Islands June fisheries.

Beginning in 1975, the Alaska Board of Fish and Game established guideline harvest levels (GHL's) based on average historic catch levels. The GHL for the Shumagin Islands is 1.5% of the latest inshore Bristol Bay projected sockeye salmon harvest, while the South Unimak fishery was allocated 6.8% of the Bristol Bay inshore projected sockeye salmon harvest. The guideline harvest levels were further broken down into four time period harvest levels so that the catches would be spread throughout the month of June.

Although chum salmon have always been harvested during the June fisheries, the unusually large catch of chum salmon in 1982 and 1983 caused concern by fishermen in the Arctic-Yukon-Kuskokwim Region. Beginning with the 1984 season, the Alaska Board of Fisheries placed a limit on fishing time; not to exceed 96 hours per week and not more than 72 consecutive hours in order to allow "escapement windows". The purpose of the "windows" was to limit the chum harvest. Due to the high sockeye catch rate (and low chum to sockeye ratios) during 1984 and 1985, these restrictions did not come into use.

In 1986, the Alaska Board of Fisheries placed a 400,000 chum salmon catch ceiling on both fisheries combined, eliminated fishing during the first 10 days of June, and eliminated fishing during the last quota period, June 26-30 (along with the sockeye quota for that period). These restrictions were for 1986 only. The additional restrictions during 1986 were the primary reasons for less than half of the combined South Unimak-Shumagin sockeye allocation being harvested.

In 1987, no restrictions were placed on the fishery that were additional to 1985 regulations. However, during 1988 and 1989 an annual 500,000 chum salmon catch ceiling was placed on both fisheries combined, by the Alaska Board of Fisheries.

In 1988, the abundance of chum salmon were comparable to sockeye at South Unimak. This resulted in less than 40% of the South Unimak sockeye allocation being harvested before the chum salmon ceiling was reached. The sockeye abundance seemed higher in the Shumagin Islands and that fishery was able to harvest its allocation.

In 1989, the sockeye abundance was very high and the sockeye allocations were exceeded with very limited fishing time. The Shumagin Islands Section sockeye catch was 396,958 with an allocation of 264,000, while 1,347,547 sockeye were harvested at South Unimak with an allocation of 1,199,000. A total of only 72 hours fishing time was allowed in the Shumagin Islands Section during 4 days. At South Unimak, 84 hours of fishing time was allowed with openings occurring during 5 separate days.

The 1989 chum catch was 47,528 in the Shumagin Islands Section and 407,635 at South Unimak for a total of 455,163. The ratio of chum to sockeye was high during the early part of the fishery and became unusually low towards the end.

After the 1989 season, the Board of Fisheries made the following changes to the South Unimak and Shumagin Islands June fisheries:

- (1) The starting date of the fishery was delayed until June 13 as the chum percentage is normally higher during early June.
- (2) The chum salmon ceiling for both fisheries combined was raised from 500,000 to 600,000.
- (3) The "window regulations" were eliminated as there did not seem to be a need for both a chum ceiling and windows.
- (4) The sockeye allocation periods and allocations were changed. The percent of the total allocation by period being the same for each fishery.

June 13-18	35%
June 19-25	45%
June 26-30	<u>20%</u>
TOTAL	100%

If catches in either fishery fall below the guidelines in the June 13-18 period, those unharvested sockeye, up to a maximum of five percent of the total allocation for that fishery, may be harvested during the June 19-25 period. The June 26-30 period cannot be used to make up for underharvests during the first two periods. Available information suggested that the sockeye stock composition between the first two periods was very similar, however the June 26-30 stock composition at South Unimak-Shumagins may be dominated by fewer and later stocks.

- (5) Unlimited seine leads were eliminated at South Unimak and leads of 50 to 150 fathoms are the only legal lengths for the entire Alaska Peninsula.
- (6) For the first time, maximum depth restrictions were placed on seine and gillnet gear. For the entire Alaska Peninsula Area seine depth may not exceed 375 meshes in depth. Seine mesh may not exceed 3-1/2 inches except the first 25 meshes above the lead line may not be more than 7 inches. No gillnet gear used along the South Peninsula may exceed 90 meshes in depth.
- (7) The area comprising the South Unimak fishery was extended to include the following portions of the Southwestern District located outside the Ikatan Bay Section:
 - (a) all waters north and west of a line from Cape Pankof Light to Thin Point.
 - (b) all waters enclosed by a line from Thin Point to Stag Point on Deer Island to Dolgoi Cape and from Bluff Point on Dolgoi Island to Arch Point.

In 1990, sockeye were not available in large numbers at either the Shumagin Islands Section or South Unimak despite the fact that Bristol Bay experienced one of its largest runs on record. Windy weather plagued fishing operations but fish abundance also seemed low, especially in view of the huge run that arrived in Bristol Bay. The Shumagin Islands sockeye harvest was 255,585 compared to a guideline harvest level of 240,000. The Shumagin Islands Section was open to fishing for a total of 184 hours during 9 days. At South Unimak, the harvest was 1,090,710 (1,087,000 allocation). The South Unimak fishery was open to fishing for 269 hours during 13 days.

A total of 63,501 chum salmon were caught in the Shumagin Islands Section and 455,238 were caught at South Unimak for a combined total of 518,739.

In 1991, the fisheries were delayed until June 15 in an attempt to minimize the chum harvest. The percentage of chum salmon is normally high during early June and is lower when sockeye are peaking during mid June. Test fish results during 1991 confirmed this. The Shumagin Islands fishery harvested 333,272 of its 347,000 sockeye allocation and harvested 102,602 chum salmon.

At South Unimak, in 1991, a total of 1,215,658 sockeye (357,000 below the allocation) and 670,103 chum salmon were caught. The total South Unimak-Shumagin Islands chum catch of 772,705 exceeded the cap by 172,705. The reason for the cap being exceeded was an unexpected large number of small chums appearing at Cape Lutke and Sanak Island on June 24-25. Average weight of seine caught chum salmon dropped from 6.3 pounds on June 23 to 5.7 pounds of June 24-25. Some of the seine caught chum salmon on June 24-25 were said to be "skinny snakelike fish with no roe". During July, there are sometimes large numbers of chum salmon as described above in the vicinities of Sanak Island, Cape Lutke, Cape Lazaref, and in the eastern portion of the Aleutian Islands Area. These fish are of little or no value and of such numbers that the Department has had to close these areas. Past closures include: Cape Lutke in 1983, so many small chum salmon were caught in such a short time that the Department has not reopened this location in early or mid July during subsequent years. Akutan District in 1985, the only time that commercial salmon effort was reported in this district during July. The Otter Cove and Sanak Islands Sections were closed to seining during July in 1989 and 1990.

Since 1991, the Alaska Department of Fish and Game has been very cautious when establishing fishing periods. The Department has also closed the waters around Sanak Island to commercial salmon fishing during June. Those waters are not a major sockeye harvest location and was only fished sporadically. However Sanak Island waters, at least during some years, contain large numbers of chum salmon.

The potential impact of the chum cap on the ability of the South Unimak and Shumagin Islands June fisheries to harvest their sockeye allocations is greater than the record indicates. In 1989 and 1990, the South Peninsula fisheries would have lost large numbers of sockeye due to the chum cap if the Bristol Bay sockeye run had been forecasted perfectly, resulting in much larger South Peninsula sockeye allocations (Figure 4).

It was evident that harvesting sockeye allocations with a chum salmon cap is very difficult and sometimes impossible, especially if the sockeye allocation is large. At its fall 1991 meeting, the Board of Fisheries changed the chum salmon cap to 40% of the combined South Unimak-Shumagin Islands sockeye allocation not to exceed 900,000 fish. However, this change generated much controversy from fishermen in the Arctic-Yukon-Kuskokwim (AYK) Region as the chum cap would be 900,000 in 1992 and likely that amount for the next two or three years. The Board of Fisheries decided to take the chum cap issue up again at it's spring 1992 meeting and the cap was again changed to a 700,000 chum salmon, regardless of the sockeye allocation.

In 1992, the sockeye allocations were 1,959,000 and 432,000 fish for the South Unimak and Shumagin Islands fisheries respectively. The fishery was delayed until June 15 due to the high percentage of chums in the Shumagin Islands test fishing. As of June 15 until the end of the fishery on June 26, sockeye to chum ratios were very good. A total of 2,046,022 sockeye were harvested at South Unimak while the Shumagin Islands harvest was 411,834. The combined chum salmon harvest from both fisheries combined was 426,283.

In 1993, the South Unimak and Shumagin Islands sockeye salmon allocations were 2,375,000 and 524,000 fish respectively. Test fishing in the Shumagin Islands during June 7-11 indicated acceptable sockeye to chum salmon ratios. Consequently, fishing began on June 13, the earliest date allowed by the management plan. Sockeye to chum ratios remained high in both fisheries until the last week of June. The Shumagin Islands sockeye to chum ratio was 1.8 to 1 on June 26 as compared to 9.0 to 1 during the previous fishing day of June 21. The South Unimak sockeye to chum ratio was 1.3 to 1 on

June 29, well down from the June 27 ratio of 8.8 to 1. The total 1993 sockeye harvest was 2,366,573 fish at South Unimak and 607,171 in the Shumagin Islands. The combined chum catch from both fisheries was 532,247.

Many fishermen began pooling chum during 1993 to reduce the incentive for targeting chums. Instead of being paid for the chum salmon caught, the fisherman was paid an average amount.

In 1993, AYK chum stocks were at low levels and very little commercial fishing was allowed on chum salmon. Subsistence fishing for chum salmon was not allowed in certain locations. Consequently, even though 1993-94 was not scheduled to be Board of Fisheries meeting year for the Alaska Peninsula Area, two meetings were devoted to the South Unimak-Shumagin Islands June fishery. The first meeting was non regulatory but resulted in the second meeting.

Changes made by the Alaska Board of Fisheries during the spring meeting of 1994 allowed ADF&G to open the season earlier than June 13 if sockeye to chum ratios were favorable, and to completely eliminate the time period allocations. Elimination of time period allocations would have resulted in a substantially lower number of chums being harvested in 1993.

The sockeye allocations for 1994 were a record high, totaling 2,938,000 fish at South Unimak and 648,000 in the Shumagins. Test fishing in the Shumagin Islands indicated that sockeye to chum ratios were poor and no fishing was allowed in the Shumagins until June 18. Test fishing initiated at South Unimak on June 15-16 had somewhat better results than in the Shumagins. Commercial fishing started at South Unimak on June 17.

The 1994 fishery was characterized by low catch rates of sockeye and chum salmon but record June pink salmon catches. Sockeye to chum ratios were mediocre during most of the fishery and deteriorated towards the end of June.

The total sockeye harvest was very disappointing to fishermen and processors in the Alaska Peninsula Area. At South Unimak, 1,001,250 sockeye (34% of allocation) were harvested. In the Shumagins 460,013 sockeye (71% of allocation) were harvested. The combined chum salmon catch was 582,165 fish.

The Bristol Bay sockeye run was below forecast level but was still a very strong run which produced a Bristol Bay inshore harvest of over 35 million fish.. The sockeye simply were not available in large numbers to the South Unimak and Shumagin Islands fisheries during 1994. Fishermen reported a drastic change in currents and colder inshore water temperatures.

During the winter of 1994-95, the Alaska Board of Fisheries implemented the following changes:

1. June fishery cannot begin prior to June 11.
2. After June 24, in either the South Unimak or Shumagin Islands fishery, if the sockeye salmon guideline harvest level and the maximum allowable harvest of chum salmon have not been attained, and if the ratio of sockeye salmon to chum salmon is two to one or less on any day, the next daily fishing period for seine and drift gillnet gear shall be of six hour duration in that fishery. After June

24, the South Unimak or Shumagin Islands fishery shall close for all gear types if the ratio of sockeye salmon to chum salmon is two to one or less for any three aggregate days.

3. The Board stated it's intent that the maximum or less harvest of 700,000 chum salmon supersedes attempts to reach the sockeye salmon guideline harvest levels.

The Board eliminated the provision for the fisheries to continue into early July if weather prevented fishing at the end of June.

4. Removed mesh size requirements for gillnets.

A summary of the 1962-95 South Unimak Shumagin Islands June regulatory history is in Table 5. Appendix A.4 lists the amount of fishing time allowed from 1976-95. Appendix A.5 lists sockeye per chum ratios by gear 1986-95.

1995 SEASON SUMMARY

The 1995 sockeye salmon allocations were at another record high, slightly higher than the 1994 allocations. The allocations were 2,987,000 and 659,000 for the South Unimak and Shumagin Islands fisheries respectively.

Test fishing in the Shumagin Islands and at South Unimak indicated that the sockeye to chum salmon ratios were somewhat better than in 1994. Consequently, the fisheries were opened on June 13, considerable earlier than in 1994. However, as the case in 1994, the sockeye salmon harvest rates were low. Almost continuous fishing time was allowed in both fisheries until the end of June at South Unimak and into June 29 in the Shumagins where the allocation was harvested. The South Unimak harvest was 1,451,490 (49% of allocation) sockeye salmon while the Shumagin sockeye catch was 653,831. The combined chum salmon harvest was 537,433 fish (Table 6). The Bristol Bay sockeye salmon run produced a record harvest of over 44 million fish within Bristol Bay. The fish simply were not available to the South Unimak and Shumagin Islands June fisheries.

Figures 5 and 6 depict the daily sockeye per chum ratios by day during 1995.

1996 SOCKEYE ALLOCATION

Based on a preliminary ADF&G Bristol Bay sockeye forecast released during the fall of 1995, the 1996 June sockeye allocations will be as follows:

South Unimak	2,564,000
Shumagin Islands	566,000
Total	3,130,000

Table 1. South Unimak and Shumagin Islands June sockeye and chum salmon harvest^a, all gear combined, in number of fish, 1960-1995.

Year	Sockeye			Chum		
	South Unimak	Shumagin Islands	Total	South Unimak	Shumagin Islands	Total
1960	137,000	19,000	156,000	84,000	11,000	95,000
1961	199,000	55,000	254,000	157,000	36,000	193,000
1962	272,000	54,000	326,000	209,000	61,000	270,000
1963	116,000	33,000	116,000	36,000	36,000	117,000
1964	159,000	85,000	244,000	161,000	67,000	228,000
1965	568,000	207,000	775,000	121,000	45,000	166,000
1966	528,000	54,000	582,000	215,000	17,000	232,000
1967	186,000	69,000	255,000	73,000	51,000	124,000
1968	342,000	233,000	575,000	115,000	51,000	166,000
1969	781,000	76,000	857,000	254,000	13,000	267,000
1970	1,510,399	139,735	1,650,134	397,003	44,909	441,912
1971	422,760	39,341	462,101	405,311	103,886	509,197
1972	426,799	74,398	501,197	411,019	107,810	518,829
1973	222,586	22,964	245,550	177,720	22,910	200,630
1974	0	0	0	0	0	0
1975	190,774	49,325	240,099	65,279	35,543	100,822
1976	233,211	72,016	305,227	336,238	74,109	410,347
1977	195,680	45,912	241,592	94,215	21,899	116,114
1978	418,959	67,876	486,835	103,429	18,479	121,908
1979	672,293	179,139	851,432	63,153	40,953	104,106
1980	2,731,148	475,127	3,206,275	458,499	50,366	508,865
1981	1,470,563	350,572	1,821,135	509,911	54,071	563,982
1982	1,668,153	450,548	2,118,701	933,728	161,316	1,095,044
1983	1,547,369	416,494	1,963,863	616,390	169,277	785,667
1984	1,131,365	256,838	1,388,203	227,913	109,207	337,120
1985	1,454,969	336,431	1,791,400	324,825	109,004	433,829
1986	315,370	156,027	471,397	252,721	99,048	351,769
1987	653,536	140,567	794,103	406,077	37,064	443,141
1988	474,457	282,230	756,687	464,765	61,946	526,711
1989	1,347,547	396,958	1,744,505	407,635	47,528	455,163
1990	1,090,710	255,585	1,346,295	455,238	63,501	518,739
1991	1,215,658	333,272	1,548,930	670,103	102,602	772,705
1992	2,046,022	411,834	2,457,856	323,891	102,312	426,203
1993	2,366,573	607,171	2,973,744	381,941	150,306	532,247
1994	1,001,250	460,013	1,461,263	374,409	207,756	582,165
1995	1,451,490	653,831	2,105,321	342,307	195,126	537,433

^a Numbers of salmon do not include test fish catches.

Table 2. South Unimak and Shumagin Islands June sockeye and chum salmon harvest, all gear combined, in number of fish, 1911-95.^a

Year	Sockeye			Chum		
	South Unimak	Shumagin Islands	Total	South Unimak	Shumagin Islands	Total
1911	58,000	3,000	61,000			
1912	144,000	31,000	175,000			
1913	415,000	0	415,000			
1914	610,000	0	610,000			
1915	251,000	0	251,000			
1916	539,000	0	539,000			
1917	1,322,000	34,000	1,356,000			
1918	733,000	44,000	777,000			
1919	545,000	32,000	577,000			
1920	954,000	60,000	1,014,000			
1921	831,000	0	831,000			
1922	2,775,000	550,000	3,325,000			
1923	1,340,000	343,000	1,683,000			
1924	971,000	237,000	1,208,000			
1925	357,000	374,000	731,000			
1926	1,898,000	491,000	2,389,000			
1927	455,000	185,000	640,000			
		1928 - 1933 Unavailable				
1934	516,000	1,019,000	1,535,000			
1935	210,000	549,000	759,000			
1936	1,531,000	1,490,000	3,021,000			
1937	803,000	498,000	1,301,000			
1938	164,000	454,000	618,000			
1939	474,000	707,000	1,181,000			
1940	479,000	713,000	1,192,000			
1941	206,000	294,000	496,000			
1942	152,000	412,000	546,000			
1943	428,000	1,356,000	1,784,000			
1944	188,000	264,000	452,000			
1945	218,000	375,000	593,000			
1946	342,000	257,000	599,000			
1947	782,000	229,000	1,011,000			
1948	276,000	126,000	402,000			
1949	84,000	167,000	251,000			
1950	292,000	134,000	426,000			
1951	82,000	35,000	117,000			
1952	191,000	121,000	312,000			
1953	191,000	105,000	296,000			
1954	325,000	49,000	374,000			
1955	315,000	52,000	367,000			

-Continued-

Table 2. (Page 2 of 2)

Year	Sockeye			Chum		
	South Unimak	Shumagin Islands	Total	South Unimak	Shumagin Islands	Total
1956	290,000	47,000	337,000			
1957	50,000	44,000	94,000			
1958	104,000	28,000	132,000			
1959	58,000	78,000	136,000			
1960	137,000	19,000	156,000	84,000	11,000	95,000
1961	199,000	55,000	254,000	157,000	36,000	193,000
1962	272,000	54,000	326,000	209,000	61,000	270,000
1963	116,000	33,000	116,000	36,000	36,000	117,000
1964	159,000	85,000	244,000	161,000	67,000	228,000
1965	568,000	207,000	775,000	121,000	45,000	166,000
1966	528,000	54,000	582,000	215,000	17,000	232,000
1967	186,000	69,000	255,000	73,000	51,000	124,000
1968	342,000	233,000	575,000	115,000	51,000	166,000
1969	781,000	76,000	857,000	254,000	13,000	267,000
1970	1,510,399	139,735	1,650,134	397,003	44,909	441,912
1971	422,760	39,341	462,101	405,311	103,886	509,197
1972	426,799	74,398	501,197	411,019	107,810	518,829
1973	222,586	22,964	245,550	177,720	22,910	200,630
1974	0	0	0	0	0	0
1975	190,774	49,325	240,099	65,279	35,543	100,822
1976	233,211	72,016	305,227	336,238	74,109	410,347
1977	195,680	45,912	241,592	94,215	21,899	116,114
1978	418,959	67,876	486,835	103,429	18,479	121,908
1979	672,293	179,139	851,432	63,153	40,953	104,106
1980	2,731,148	475,127	3,206,275	458,499	50,366	508,865
1981	1,470,563	350,572	1,821,135	509,911	54,071	563,982
1982	1,668,153	450,548	2,118,701	933,728	161,316	1,095,044
1983	1,547,369	416,494	1,963,863	616,390	169,277	785,667
1984	1,131,365	256,838	1,388,203	227,913	109,207	337,120
1985	1,454,969	336,431	1,791,400	324,825	109,004	433,829
1986	315,370	156,027	471,397	252,721	99,048	351,769
1987	653,536	140,567	794,103	406,077	37,064	443,141
1988	474,457	282,230	756,687	464,765	61,946	526,711
1989	1,347,547	396,958	1,744,505	407,635	47,528	455,163
1990	1,090,710	255,585	1,346,295	455,238	63,501	518,739
1991	1,215,658	333,272	1,548,930	670,103	102,602	772,705
1992	2,046,022	411,834	2,457,856	323,891	102,312	426,203
1993	2,366,573	607,171	2,973,744	381,941	150,306	532,247
1994	1,001,250	460,013	1,461,263	374,409	207,756	582,165
1995	1,451,490	653,831	2,105,321	342,307	195,126	537,433
1976-85 Average						
	1,152,371	265,095	1,417,466	366,830	80,868	447,698
1986-95 Average						
	1,196,261	369,749	1,566,010	407,909	106,719	514,628

^a Numbers of salmon do not include test fish harvests.

Table 3. South Unimak and Shumagin Islands June fisheries, composition of sockeye and chum salmon harvests in percent by gear type, 1970-95.

Year	South Unimak						Shumagin Islands			
	Sockeye			Chum			Sockeye		Chum	
	Purse Seine	Drift Gillnet	Set Gillnet	Purse Seine	Drift Gillnet	Set Gillnet	Purse Seine	Set Gillnet	Purse Seine	Set Gillnet
1970	47.5	52.0	0.5	31.8	68.0	0.2	92.0	8.0	94.1	5.9
1971	25.3	74.7	0.0	19.5	80.5	0.0	89.4	10.6	96.8	3.2
1972	12.5	87.5	0.0	9.3	90.7	0.0	96.9	3.1	98.5	1.5
1973	9.6	90.0	0.4	6.6	93.3	0.1	87.3	12.7	94.3	5.7
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	22.9	77.0	0.1	28.9	71.1	0.0	97.5	2.5	97.4	2.6
1976	17.3	81.6	1.1	14.2	85.7	0.1	95.5	4.5	97.1	2.9
1977	15.2	83.9	0.9	10.5	89.2	0.3	94.9	5.1	99.0	1.0
1978	18.4	81.0	0.6	9.9	90.0	0.1	97.0	3.0	96.3	3.7
1979	70.6	29.2	0.2	30.1	69.8	0.2	92.4	7.6	95.7	4.3
1980	76.4	23.1	0.5	79.2	20.7	0.1	96.4	3.6	97.3	2.7
1981	50.7	47.1	2.2	63.5	36.2	0.3	94.8	5.2	98.7	1.3
1982	54.1	44.7	1.2	46.1	53.7	0.2	97.3	2.7	98.9	1.1
1983	60.4	38.7	0.9	65.8	34.0	0.1	97.4	2.6	99.6	0.4
1984	63.3	35.7	1.0	60.2	39.7	0.1	94.7	5.3	99.3	0.7
1985	61.3	38.0	0.7	38.7	61.1	0.2	94.8	5.2	96.0	4.0
1986	46.7	51.7	1.6	43.8	55.9	0.3	85.0	15.0	95.0	5.0
1987	36.5	61.4	2.2	38.3	61.1	0.7	76.0	24.0	93.4	6.6
1988	29.8	67.0	3.2	33.5	65.8	0.6	72.1	27.9	82.6	17.4
1989	59.4	38.0	2.5	52.1	47.3	0.7	90.9	9.1	93.6	6.4
1990 ^a	56.8	41.5	1.7	57.9	41.7	0.4	85.3	14.7	93.1	6.9
1991 ^a	53.5	44.4	2.1	61.2	38.2	0.6	80.6	19.4	93.3	6.7
1992 ^a	58.3	37.4	4.3	63.2	35.6	1.2	90.9	9.1	96.3	3.7
1993 ^a	59.1	38.1	2.8	66.2	31.6	2.2	87.5	12.5	97.9	2.1
1994 ^a	57.3	37.1	5.7	63.9	34.6	1.5	75.4	24.6	96.5	3.5
1995 ^a	42.1	54.6	3.3	47.1	50.5	2.4	81.5	18.5	93.7	6.3
1970-79 Average	26.6	73.0	0.4	17.6	82.0	0.1	93.7	6.3	96.6	3.4
1980-89 Average	53.9	44.5	1.6	52.1	47.6	0.3	89.9	10.1	95.4	4.6
1990-95 Average	54.5	42.2	3.3	60.0	38.7	1.3	83.5	16.5	95.1	4.9

^aGear depth limitations in effect.

Table 4. Salmon gear in South Peninsula waters during June, 1970-95^a.

Year	Gear			Total
	Purse Seine	Drift Gillnet	Set Gillnet	
1970	39	156	16	202
1971	37	122	8	166
1972	32	150	7	185
1973	16	121	7	142
1974	0	0	0	0
1975	20	81	8	108
1976	25	108	16	147
1977	17	101	13	131
1978	23	120	16	159
1979	40	132	26	196
1980	68	129	29	225
1981	83	135	25	243
1982	90	138	23	251
1983	100	146	35	282
1984	101	147	32	280
1985	107	150	48	305
1986	99	156	43	298
1987	86	144	60	290
1988	90	148	63	301
1989	99	145	61	305
1990	109	153	59	322
1991	112	157	65	335
1992	112	141	68	322
1993	116	140	72	328
1994	114	145	65	324
1995	112	151	68	331
1986-95 Average	104.9	148	62.4	315.6

^a During the peak of the South Peninsula June fishery, (June 12-26), approximately 40-50 purse seine permit holders fish the Shumagin Islands Section fishery. During the few occasions when the South Unimak fishery is open and the Shumagin Islands fishery is closed, nearly the entire purse seine fleet fishes at South Unimak. Drift gillnet effort declines after June 20 as the fleet begins moving to the Port Moller fishery.

Table 5. South Unimak and Shumagin Islands June fisheries regulation history, 1962-1995.

Year	South Unimak	Shumagin Islands
1962-66	5 days per week	5 days per week
1967-70	7 days per week	7 days per week
1971-72	6:00 A.M. Monday - 6:00 A.M. Saturday	7 days per week
1973	*Four 13 hour fishing periods per week	*Four 13 hour fishing periods per week.
	* Both fisheries were closed by emergency order during June 25-28 due to indications of the Bristol Bay run being below escapement requirements.	
1974	No fishery	No fishery
1975-83	**6.8% of predicted Bristol Bay catch	1.5% of predicted Bristol Bay catch
1984-89	No more than 96 hours per 7 day period and no more than 72 hours of consecutive fishing time in each fishery (windows).	
1986	**6.8% allocation minus June 26-30 segment Windows No fishing before June 11	1.5% allocation minus June 26-30 segment Windows No fishing before June 11
	A 400,000 chum salmon ceiling placed on both fisheries combined.	
1987	**Same as during 1984-85 for both fisheries.	
1988-89	**6.8 of predicted Bristol Bay catch Windows	1.5% of predicted Bristol Bay catch Windows
	A 500,000 chum salmon ceiling placed on both fisheries combined.	
	**Each sockeye allocation is broken down into time period guideline harvest levels.	

-Continued-

Table 5. (page 2 of 3)

Dates	South Unimak	Shumagin Islands						
June 1 - 11	5%	9%						
June 12 - 18	29%	28%						
June 19 - 25	51%	41%						
June 26 - 30	<u>15%</u>	<u>22%</u>						
	100%	100%						
1990-91	<p>The chum ceiling was increased from 500,000 to 600,000.</p> <p>The "Window Regulations" implemented in 1984 to limit the amount of fishing time that could be allowed were deleted.</p> <p>The season was delayed until June 13 and the time period sockeye allocations for both fisheries were changed as follow:</p> <table data-bbox="396 1029 743 1144"> <tr> <td>June 13-18</td> <td>35%</td> </tr> <tr> <td>June 19-25</td> <td>45%</td> </tr> <tr> <td>June 26-30</td> <td>20%</td> </tr> </table> <p>The gear depth for seines was limited to 375 meshes of which mesh size may not exceed 3-1/2 inches except for the first 25 meshes above the lead line which may not exceed 7 inches.</p> <p>The gear depth on gillnets along the South Peninsula was limited to no more than 90 meshes.</p> <p>Seine leads may not exceed 150 fathoms for the entire Alaska Peninsula.</p>		June 13-18	35%	June 19-25	45%	June 26-30	20%
June 13-18	35%							
June 19-25	45%							
June 26-30	20%							
1992-93	<p>The chum ceiling was increased from 600,000 to 700,000 fish. The other regulations were the same as in effect for 1990 and 1991.</p>							
1994	<p>Sockeye time period allocations eliminated. ADF&G given flexibility to open fishery prior to June 13 if sockeye to chum ratios are favorable.</p>							

-Continued-

Table 5. (page 3 of 3)

Dates	South Unimak	Shumagin Islands
1995	<p data-bbox="315 476 1468 551">The amount fishing time allowed for seine and drift gillnet gear after June 24 is limited if the sockeye to chum salmon ratio is two to one or less.</p> <p data-bbox="315 591 1468 666">The Board of Fisheries stated it's intent that the maximum harvest or less of 700,000 chum salmon supersedes attempts to reach the sockeye guideline harvest levels.</p> <p data-bbox="315 706 1468 738">The fisheries could not be extended into July regardless of weather during late June.</p> <p data-bbox="315 778 816 810">Fishery cannot begin prior to June 11.</p> <p data-bbox="315 851 915 883">Removed mesh size requirements for gillnets.</p>	

Table 6. South Unimak and Shumagin Islands sockeye and chum salmon daily catches, all gear combined, June 1995^a.

	South Unimak		Shumagin Islands		Combined	
	Sockeye	Chum	Sockeye	Chum	Sockeye	Chum
June 1-12	Closed to Commercial Salmon Fishing					
13	131,407	43,419	30,451	9,994	161,858	53,413
14	22,891	5,169	61,324	30,728	84,215	35,897
15	194,844	32,783	62,700	22,839	257,544	55,622
16	74,891	14,103	51,613	12,988	126,504	27,091
17	47,703	10,562	50,372	13,050	98,075	23,612
18	8,304	2,665	17,096	3,811	25,400	6,476
19	13,934	2,453	13,827	1,281	27,761	3,734
20	100,356	14,961	38,201	8,318	138,557	23,279
21	144,550	28,746	54,190	12,997	198,740	41,743
22	157,982	44,482	37,368	7,891	195,350	52,373
23	158,823	37,005	41,590	7,281	200,413	44,286
24	126,418	33,890	41,279	8,042	167,697	41,932
25	84,466	18,374	60,530	11,569	144,996	29,943
26	73,182	20,526	49,323	21,745	122,505	42,271
27	39,826	13,499	13,341	4,947	53,167	18,446
28	27,724	8,001	4,151	2,133	31,875	10,134
29	23,449	6,417	26,475	15,512	49,924	21,929
30	20,740	5,252	-- CLOSED --		20,740	5,252
TOTAL	1,451,490	342,307	653,831	195,126	2,105,321	537,433

^a Numbers of salmon do not include test fish harvests.

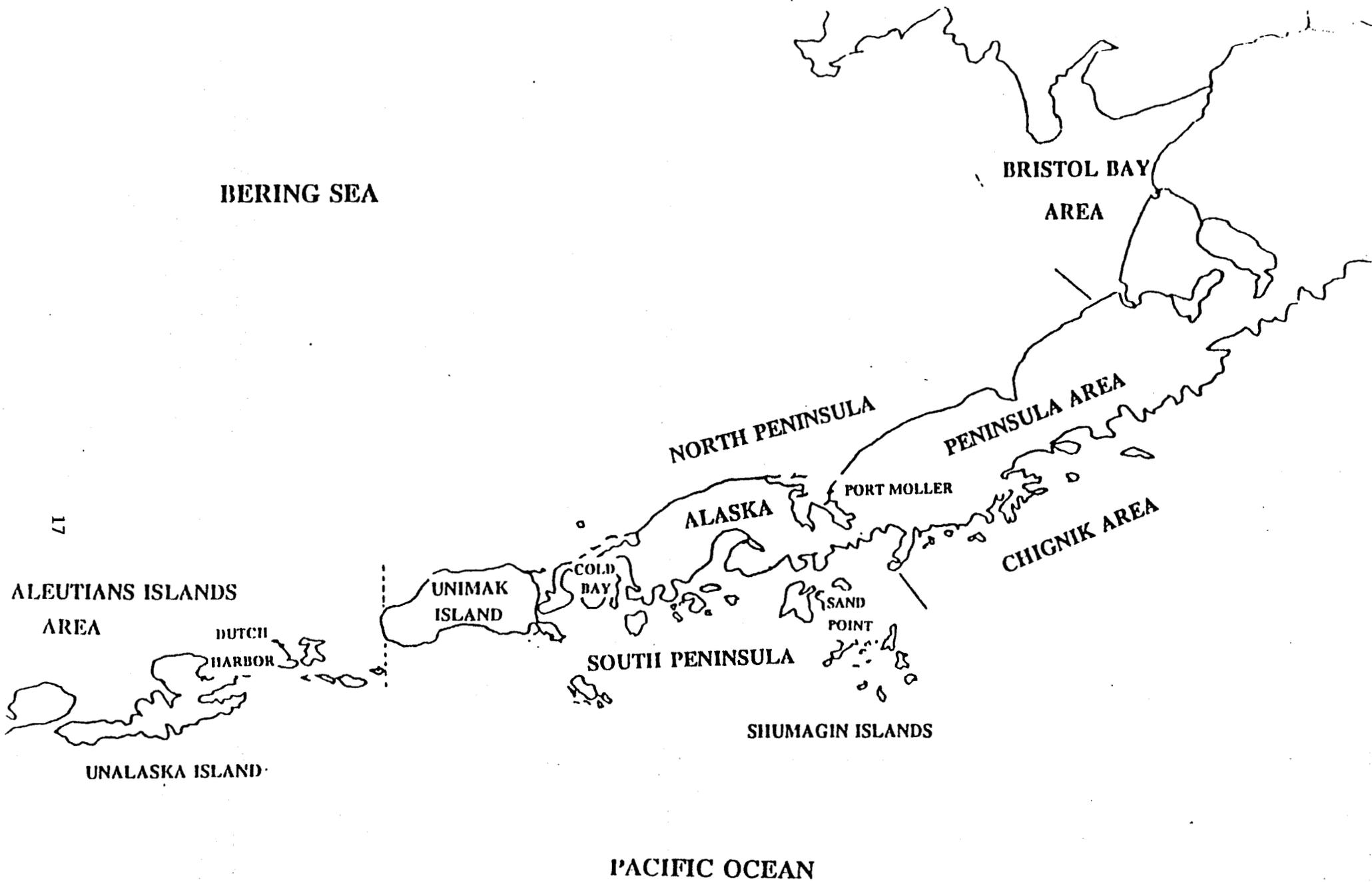


Figure 1. Map of the Alaska Peninsula Area.

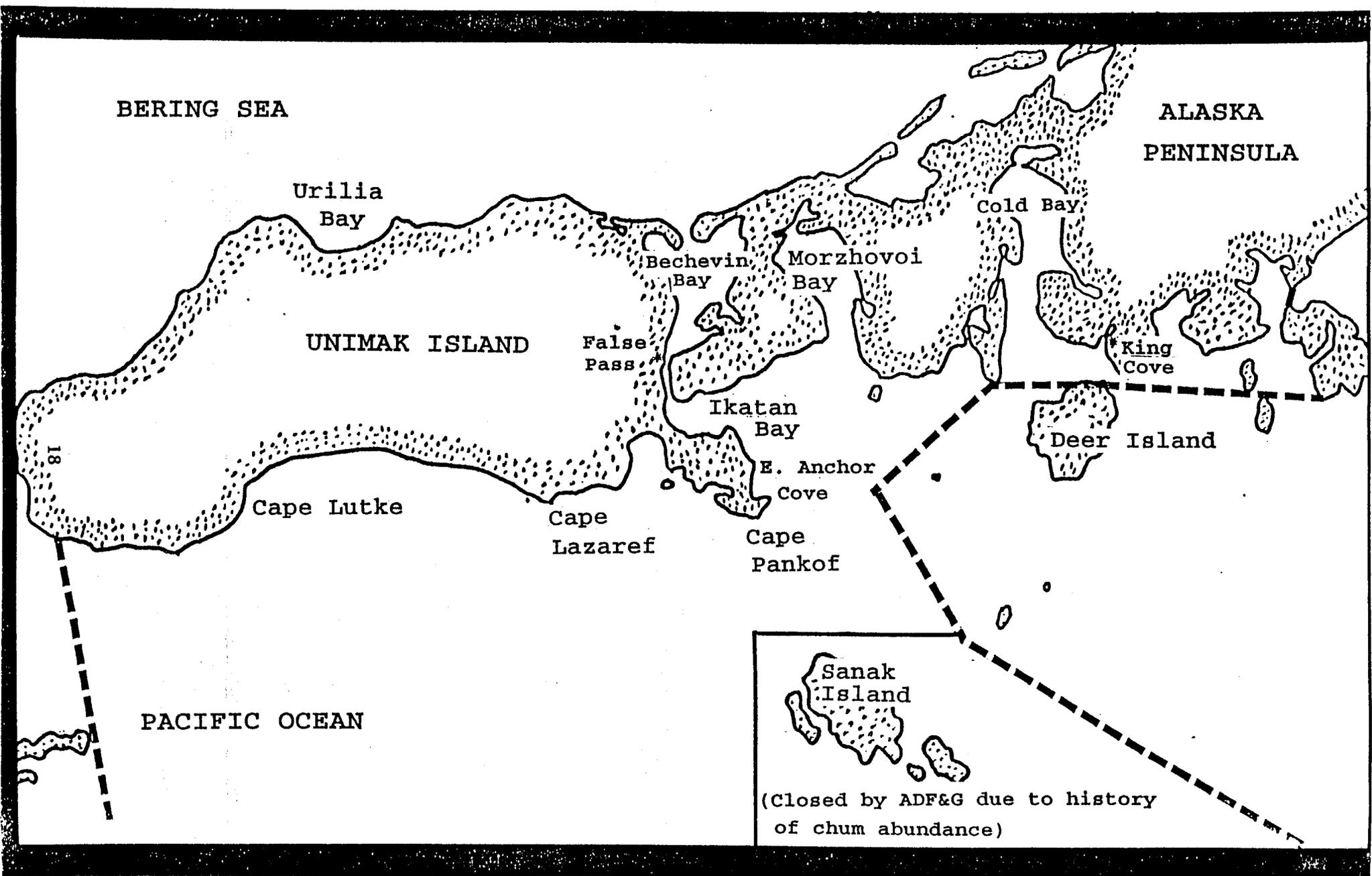


Figure 2. Map of the South Unimak June Fishery.

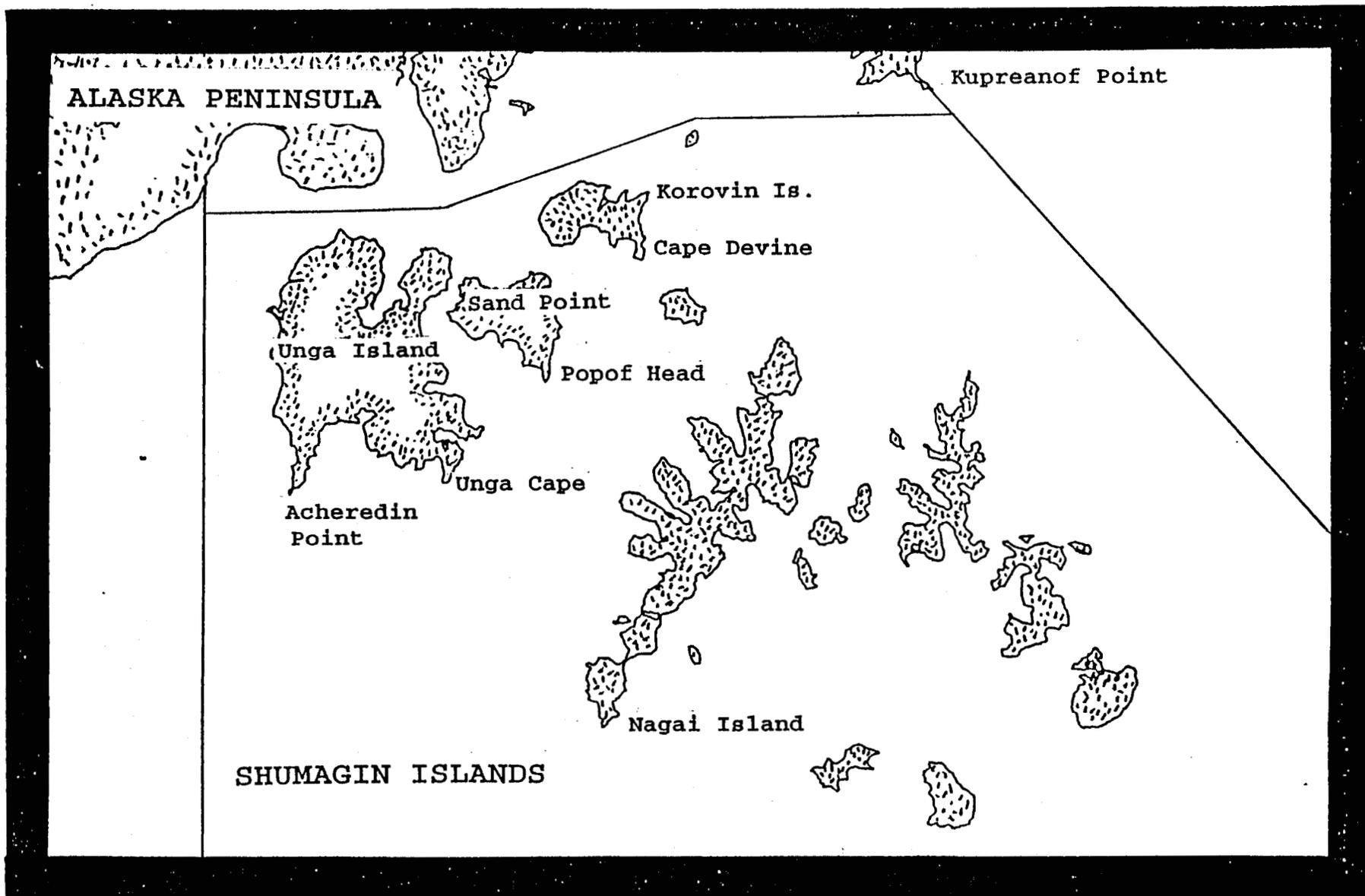
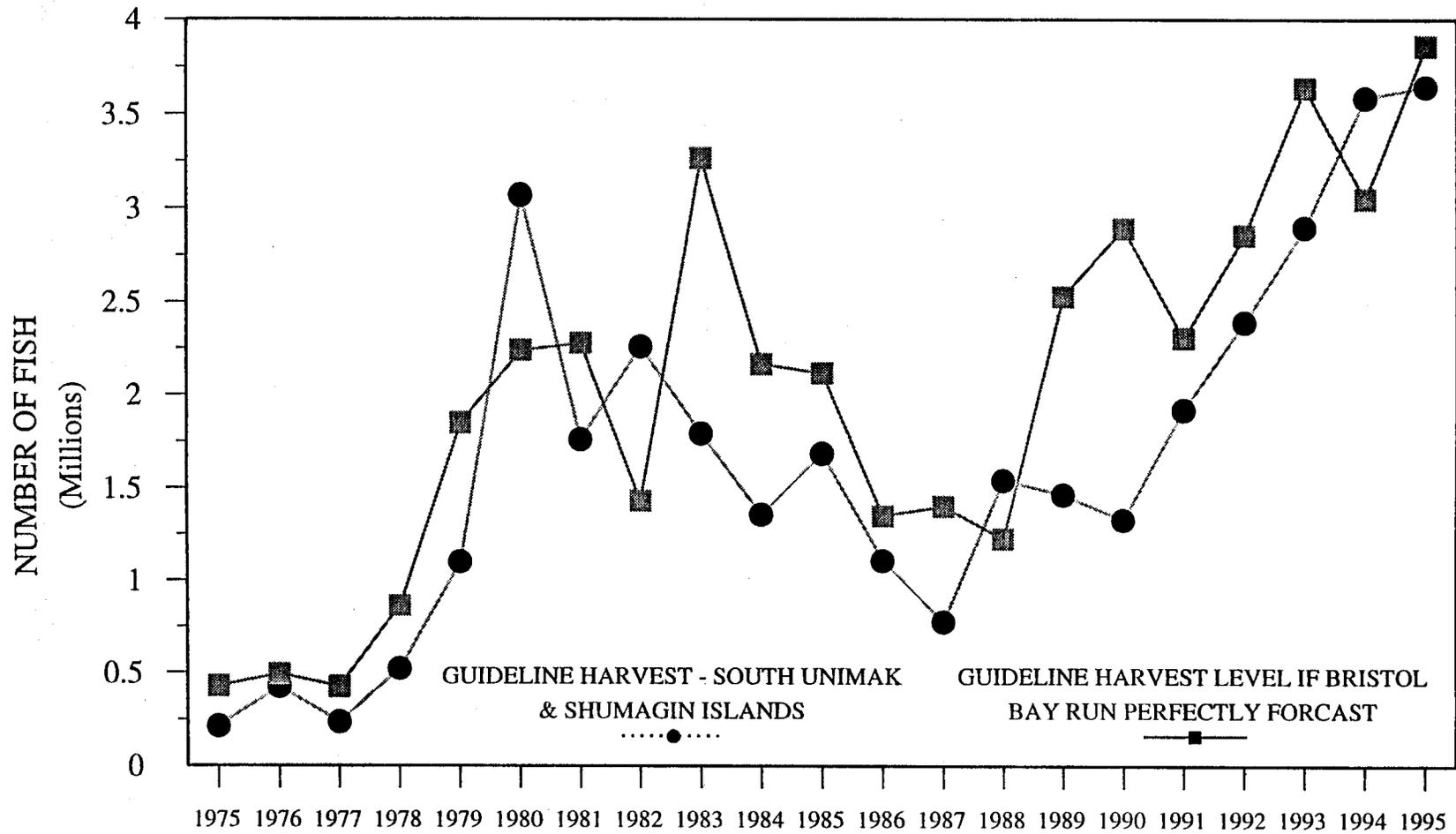


Figure 3. Map of the Shumagin Islands Section.



* BRISTOL BAY HARVEST WOULD HAVE BEEN MUCH LARGER IN 1980 HAD IT NOT BEEN FOR A LENGTHY STRIKE.

Figure 4. South Unimak - Shumagin Islands June salmon guideline harvest levels vs. hindcasted guideline harvest levels, 1975-95.

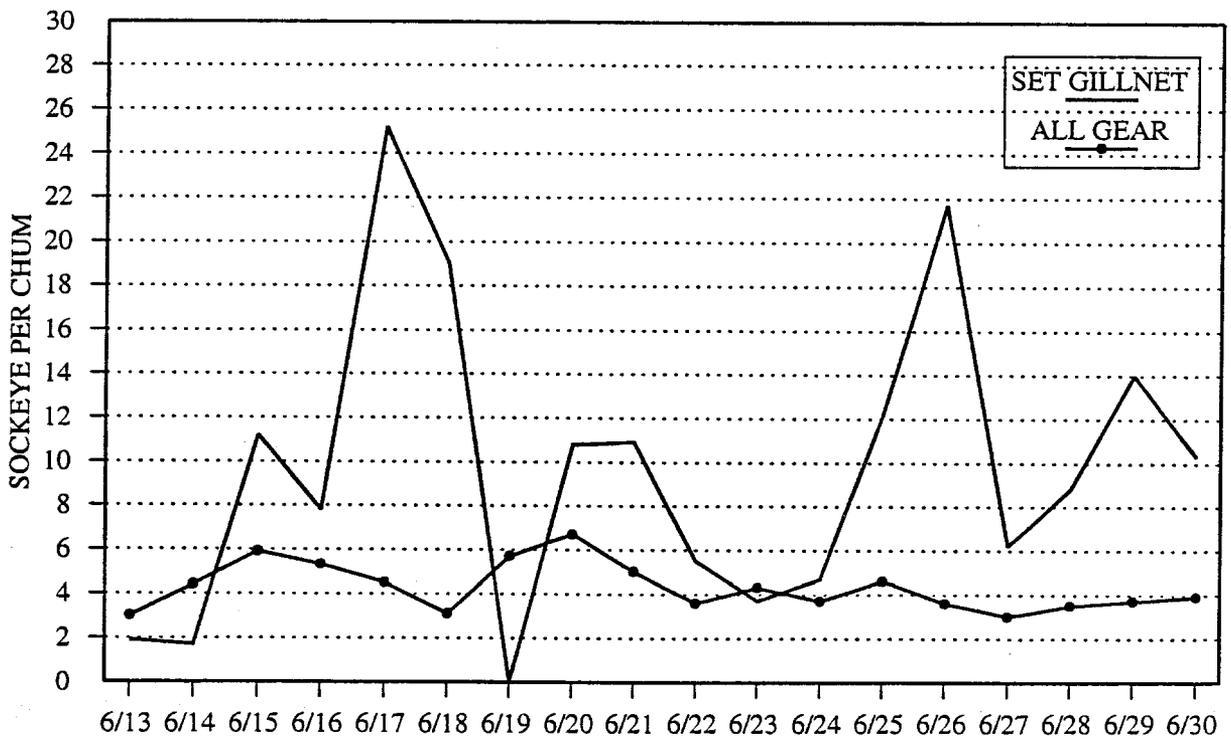
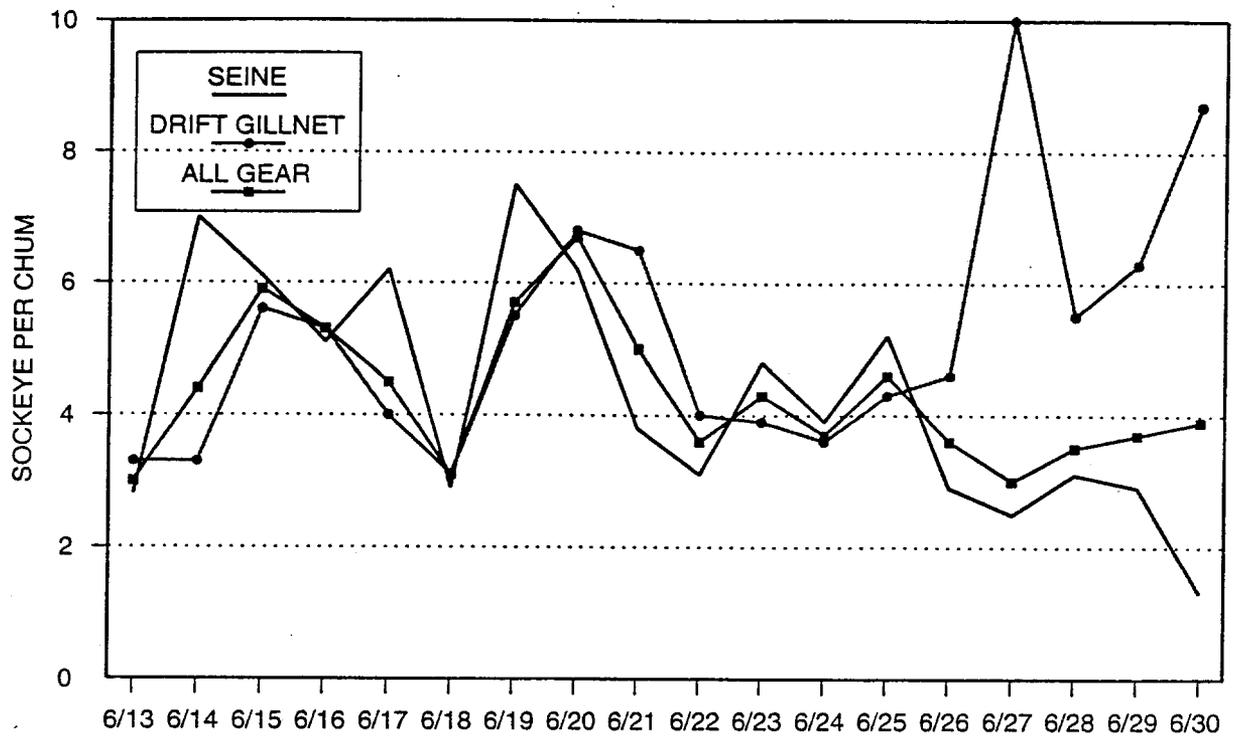


Figure 5. South Unimak June sockeye to chum ratio by gear by day, 1995.

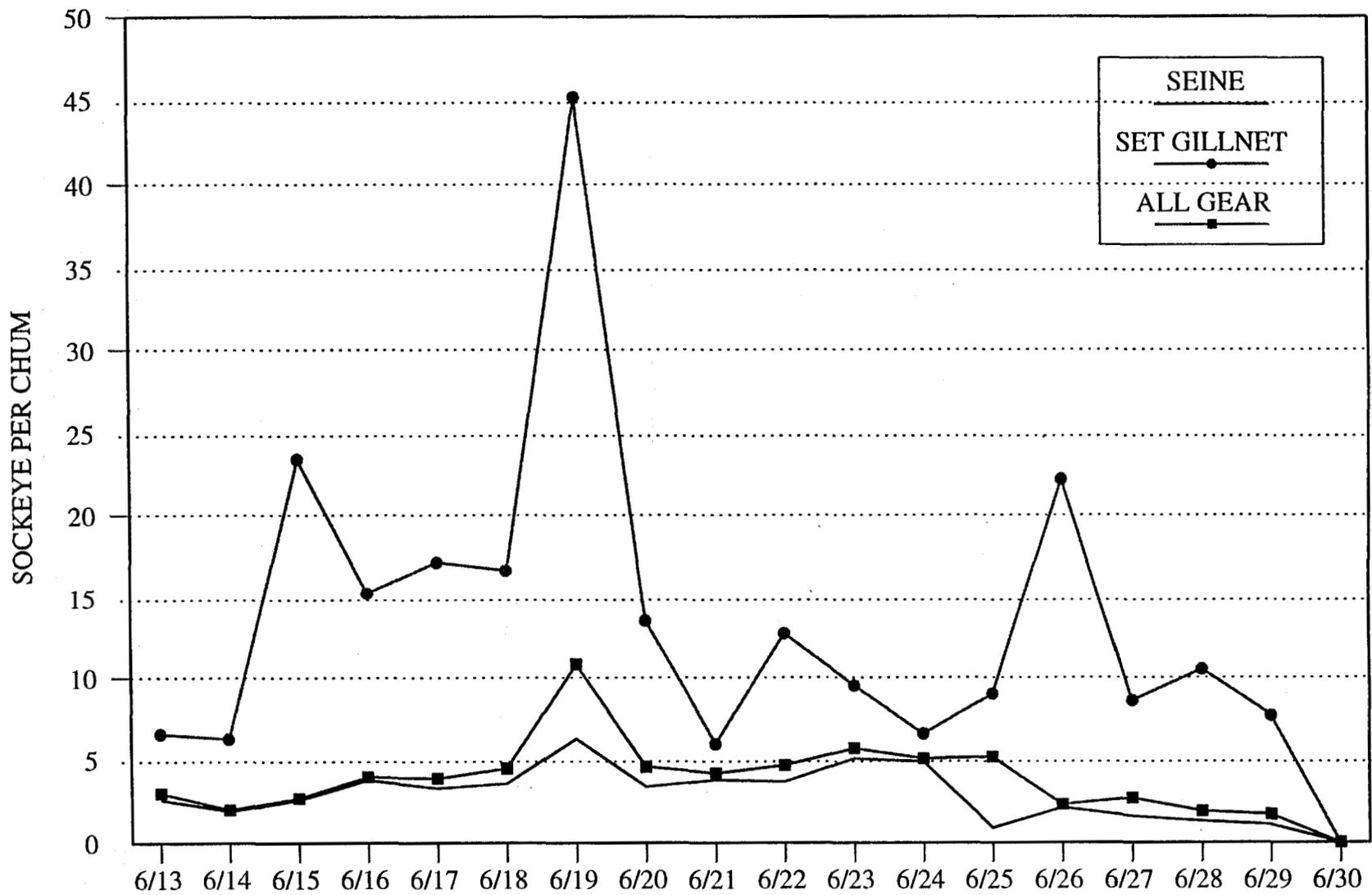


Figure 6. Shumagin Islands June sockeye to chum ratio by gear by day, 1995.

APPENDIX

Appendix A.1. South Unimak and Shumagin Islands June salmon harvest^a, in number of fish, by species, 1970-95.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	1,016	1,650,134	48	107,445	441,912	2,200,555
1971	828	462,101	1	19,240	509,197	991,367
1972	642	501,197	20	17,924	518,829	1,038,612
1973	247	245,550	28	19,430	200,630	465,885
1974	0	0	0	0	0	0
1975	117	240,099	1	5,247	100,822	346,286
1976	2,134	305,227	3	23,902	410,347	741,613
1977	521	241,592	0	5,398	116,114	363,625
1978	536	486,835	3	89,942	121,908	699,224
1979	1,053	851,432	290	154,813	104,106	1,111,694
1980	3,193	3,206,275	853	1,526,306	508,865	5,245,492
1981	5,672	1,821,135	320	451,252	563,982	2,842,361
1982	7,131	2,118,701	1,241	1,718,825	1,095,044	4,940,942
1983	13,463	1,963,863	496	55,875	785,667	2,819,364
1984	3,854	1,388,203	14	919,876	337,120	2,649,067
1985	5,777	1,791,400	2,468	106,615	433,829	2,340,089
1986	1,895	471,397	2	291,989	351,769	1,117,052
1987	5,163	794,103	380	16,982	443,141	1,259,769
1988	4,064	756,687	255	180,224	526,711	1,467,941
1989	2,758	1,744,505	0	199,235	455,163	2,401,661
1990	10,335	1,346,359	1	515,297	518,755	2,390,747
1991	4,567	1,553,150	12	620,108	776,120	2,953,957
1992	3,760	2,462,675	4	643,348	428,136	3,537,923
1993	9,552	2,978,453	1,233	81,176	533,270	3,603,684
1994	7,590	1,461,263	1,579	2,492,514	582,165	4,545,111
1995	14,747	2,105,321	6,042	178,635	537,433	2,842,178

^a Numbers of salmon do not include test fish catches.

Appendix A.2. South Unimak June salmon harvest^a, in number of fish, by species, 1970-95.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	868	1,510,399	46	87,717	397,003	1,996,033
1971	549	422,760	0	11,608	405,311	840,228
1972	400	426,799	4	11,906	411,019	850,128
1973	145	222,586	11	11,152	177,720	411,614
1974	0	0	0	0	0	0
1975	101	190,774	1	3,205	65,279	259,360
1976	1,829	233,211	3	18,259	336,238	589,540
1977	393	195,680	0	3,397	94,215	293,685
1978	269	418,959	3	47,380	103,429	570,040
1979	578	672,293	38	49,000	63,153	785,062
1980	2,927	2,731,148	853	1,140,611	458,499	4,334,038
1981	4,455	1,470,563	83	325,004	509,911	2,310,016
1982	5,577	1,668,153	1,241	1,032,154	933,728	3,640,853
1983	8,186	1,547,369	493	40,441	616,390	2,212,879
1984	2,024	1,131,365	0	470,688	227,913	1,831,990
1985	4,101	1,454,969	2	69,811	324,825	1,853,708
1986	1,363	315,370	1	150,674	252,721	720,129
1987	4,017	653,536	380	11,342	406,077	1,075,352
1988	2,125	474,457	11	86,678	464,765	1,028,036
1989	2,263	1,347,547	0	154,168	407,635	1,911,613
1990	8,465	1,090,710	1	444,442	455,238	1,998,856
1991	3,066	1,216,035	5	500,922	670,409	2,390,437
1992	2,373	2,046,022	3	501,127	323,891	2,873,416
1993	4,587	2,366,573	506	37,735	381,941	2,791,342
1994	4,468	1,001,250	1,271	1,731,741	374,409	3,113,139
1995	7,850	1,451,490	5,102	119,094	342,307	1,925,843

^a Numbers of salmon do not include test fish catches.

Appendix A.3. Shumagin Islands June salmon harvest^a, in number of fish, by species, 1970-95.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	148	139,735	2	19,728	44,909	204,522
1971	279	39,341	1	7,632	103,886	151,139
1972	242	74,398	16	6,018	107,810	188,484
1973	102	22,964	17	8,278	22,910	54,271
1974	0	0	0	0	0	0
1975	16	49,325	0	2,042	35,543	86,926
1976	305	72,016	0	5,643	74,109	152,073
1977	128	45,912	0	2,001	21,899	69,940
1978	267	67,876	0	42,562	18,479	129,184
1979	475	179,139	252	105,813	40,953	326,632
1980	266	475,127	0	385,695	50,366	911,454
1981	1,217	350,572	237	126,248	54,071	532,345
1982	1,554	450,548	0	686,671	161,316	1,300,089
1983	5,277	416,494	3	15,434	169,277	606,485
1984	1,830	256,838	14	449,188	109,207	817,077
1985	1,676	336,431	2,466	36,804	109,004	486,381
1986	532	156,027	1	141,315	99,048	396,923
1987	1,146	140,567	0	5,640	37,064	184,417
1988	1,939	282,230	244	93,546	61,946	439,905
1989	495	396,958	0	45,067	47,528	490,048
1990	1,868	255,585	0	70,798	63,501	391,752
1991	1,407	333,272	7	118,215	102,602	555,503
1992	1,387	411,834	1	140,963	102,312	656,497
1993	4,879	607,171	727	43,401	150,306	806,484
1994	3,122	460,013	308	760,773	207,756	1,431,972
1995	6,897	653,831	940	59,541	195,126	916,335

^a Numbers of salmon do not include test fish catches.

Appendix A.4. South Unimak and Shumagin Islands June fisheries, number of fishing days and hours allowed by year, 1976-95.

Year	South Unimak		Shumagin Islands	
	Days	Hours	Days	Hours
1976	21	504	15	360
1977	11	264	21	504
1978	23	552	23	552
1979	33	792	28	672
1980	26	624	26	624
1981	24	576	20	480
1982	30	720	22	528
1983	11	264	10	228
1984	5	98	6	122
1985	9	144	9	142
1986	8	148	8	148
1987	12	226	5	76
1988	8	110	9	151
1989	5	84	4	72
1990	13	267	9	198
1991	8	158	5	88
1992	8	139	5	42.5
1993	10	176	8	140
1994	14	262	13	249
1995	18	362	17	355
Average 1986-95	10.4	193.2	8.3	152.0

Appendix A.5. South Unimak and Shumagin Islands June fisheries, sockeye per chum salmon ratio by gear type, 1986-95.

Year	South Unimak				Shumagin Islands		
	Purse Seine	Drift Gillnet	Set Gillnet	Total	Purse Seine	Set Gillnet	Total
1986	1.3	1.2	6.7	1.2	1.4	4.7	1.6
1987	1.5	1.6	5.2	1.6	3.1	13.8	3.8
1988	0.9	1	5.2	1	4	7.3	4.6
1989	3.8	2.7	12.7	3.3	8.1	11.9	8.4
1990 ^a	2.4	2.4	11.3	3.5	3.7	8.6	4
1991 ^a	1.6	2.1	6.5	1.8	2.8	9.5	3.2
1992 ^a	5.8	6.6	23.3	6.3	3.8	9.9	4
1993 ^a	5.5	7.5	8	6.2	3.6	24.1	4
1994 ^a	2.4	2.9	10.2	2.7	1.7	15.8	2.2
1995 ^a	3.8	4.6	5.6	4.2	2.9	9.9	3.4
1986-95 Average	2.9	3.26	9.47	3.18	3.51	11.55	3.92

^a Gear depth limitations in effect.

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