

ALASKA DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

1990 UPPER COOK INLET

COMMERCIAL SALMON FISHERY MANAGEMENT REPORT

to the

Alaska Board of Fisheries

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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
INTRODUCTION	1
REVIEW OF THE 1990 SALMON FISHERY	1
Sockeye Salmon	2
Chum Salmon	4
Pink Salmon	5
Coho Salmon	5
Chinook Salmon	6
Stock Status and Outlook	7
TABLES AND FIGURES	9

INTRODUCTION

The Upper Cook Inlet fisheries management area consists of that portion of Cook Inlet north of the latitude of Anchor Point. The area currently supports commercial fisheries for salmon, herring and razor clams. The salmon fishery targets primarily on sockeye salmon and produces approximately five percent of the statewide salmon harvest. A minor herring fishery for both sac roe and bait contributes less than one percent to the total Alaska harvest while the razor clam harvest annually comprises about sixty percent of the state's production.

Upper Cook Inlet is divided into two districts (Central and Northern) which are further divided into numerous subdistricts primarily to aid in standardizing fishery openings or closures on discrete salmon stocks (Figure 1). All five species of Pacific salmon are harvested in significant numbers in Upper Cook Inlet as they migrate to their streams of origin. The river systems responsible for the majority of salmon production include the Kenai River, the Kasilof River, the Susitna River and the Crescent River. Run timing characteristics and migration routes utilized by various species and stocks are such that the commercial harvest is largely mixed-stock and mixed-species in nature.

With one minor exception, gill nets are the only legal gear for harvesting salmon in Upper Cook Inlet. Set gill nets (approximately 750 permits) are employed around virtually the entire perimeter of the inlet while drift gill nets (approximately 600 permits) are used principally in the offshore areas of the Central District. Seine gear is permitted in the Chinitna Bay Subdistrict only by emergency order. Base fishing time for all gear types and areas is two twelve-hour periods (Mondays and Fridays, 7:00 a.m. to 7:00 p.m.) weekly.

Commercial harvest records exist for Cook Inlet back to 1893, although separate catch records for Upper and Lower Cook Inlet are available only back to 1954 (Table 1). Historically, set gill nets and traps were the only gear employed in the Upper Cook Inlet fishery. The use of drift gill nets did not become widespread until the early 50's. Since then their use has expanded steadily and this gear type now accounts for about 60 percent of the annual salmon harvest (Appendix A.1-6). Traps were outlawed at statehood.

In terms of economic value, sockeye salmon are by far the most important species, generally representing over 70 percent of the exvessel value of the annual salmon catch. The economic significance of the remaining species varies with their respective abundance.

1990 COMMERCIAL SALMON FISHERY

The 1990 commercial harvest of just under 5 million salmon in Upper Cook Inlet is the eleventh highest catch recorded for this fishery and approximately 1 million fish

above the long-term average. The harvest was valued at approximately \$41 million, the fifth highest value on record but the lowest in 4 years (Table 2). The Upper Cook Inlet harvest accounted for 7.4% of the statewide salmon harvest value.

Sockeye Salmon

The 1990 sockeye salmon harvest of 3.6 million was the seventh highest catch on record but the lowest harvest since 1984. Valued at \$35.8 million, the sockeye salmon harvest comprised 88% of the value of the total commercial salmon fishery. The distribution of the catch between drift gear (64%) and set net gear (36%) differed slightly from the long-term average (59% drift).

Management of the Upper Cook Inlet sockeye salmon fishery integrates information received from a variety of programs which together provide an in-season model of the actual return. These programs include offshore test fishing, escapement enumeration by sonar and weir, comparative analysis of historic commercial harvest and effort levels, and age composition studies.

The offshore test fishing program employs a chartered gill net vessel fishing standardized stations along a transect crossing Cook Inlet from Anchor Point to the Red River delta. The program provides an in-season estimation of sockeye salmon run-strength by determining fish passage rates (computed by correlating the vessel's daily catch with subsequent commercial harvests and escapement) and fitting these rates to the appropriate historic run-timing profile.

Hydroacoustic devices to quantify salmon escapement into glacial rivers were first employed in Upper Cook Inlet in the Kenai and Kasilof Rivers in 1968 and expanded to the Susitna River in 1978 and the Crescent River in 1979. Operations followed standard procedures in all systems in 1990 and no unusual problems were observed. As in the past five years, the Susitna River escapement was monitored by sonar in the Yentna River tributary only due to technical problems with obtaining satisfactory estimates within the mainstem of the Susitna. The Yentna River escapement goal of 100,000 to 150,000 sockeye salmon was established based on the historical proportion of the total Susitna River escapement utilizing this tributary. Weirs placed on Fish Creek and Packers Creek provided daily escapement counts for those systems.

Upper Cook Inlet commercial catch statistics refined to gear type, area and date are available back to 1966. Availability of these statistics in a computerized database format make them extremely valuable for evaluating in-season fishery performance.

Inseason determination of the age composition of sockeye salmon entering the principle rivers frequently provides information helpful in estimating the stock contributions in various fisheries. During the 1990 fishery approximately 30,000 sockeye salmon were examined from catch and escapement samples.

The 1990 season began with the May 25 opening of the sockeye salmon fishery near Big River in the Kustatan Subdistrict. A management plan adopted by the Board of Fisheries first opened this fishery in 1989. Difficulties in enforcing closed waters areas during 1989 resulted in a new definition of these areas by emergency order for the 1990 season and also reduced fishing time from three weekly periods to two to compensate for the expected increased effectiveness of the fishery. By the regulatory close of this fishery on June 24, 6,684 sockeye salmon were harvested and

the chinook salmon quota of 1,000 fish nearly attained, duplicating the results of the 1989 fishery. In the short history of this fishery the sockeye salmon harvest has been well below that envisioned by the Board, the staff and the participating fishermen.

The sockeye salmon return to the Crescent River on the west side of the Central District is sufficiently segregated from the other July sockeye salmon runs to allow management measures to be taken solely within the Western Subdistrict set gill net fishery. The 1990 return was very poor, requiring closure of one regular fishing period (7/16) to ensure that the minimum escapement goal would be met. The resulting Western Subdistrict catch of 21,727 sockeye salmon was the lowest since 1974 and less than half the long-term average. The Crescent River escapement totaled 52,238 sockeye salmon, slightly above the 50,000 fish minimum goal (Table 3).

The remaining principle stocks of sockeye salmon (Kenai, Kasilof and Susitna rivers) were expected to provide the bulk of the forecast harvest of 4.3 million fish. Fishermen were informed prior to the season that returns to the Susitna and Kasilof rivers were expected to be comparatively weak and that unless early season catches indicated otherwise, the regular period scheduled for July 13 would likely be closed to drift gillnetting in the offshore areas of the Central District. This date was chosen because it appeared most likely to afford substantial benefit to Susitna-bound fish and assist in lowering the exploitation rate on Kasilof-bound fish.

The harvest of these stocks began with normal season-opening dates (June 25 in the drift and most set net fisheries and July 2 in the Upper Subdistrict or "east side" set net fishery). Early season catches in all fisheries were consistent with expected returns. By July 12 the returns had developed sufficiently to identify initial management measures that needed to be implemented; salmon were entering the Kasilof River at a rate much slower than needed to ultimately achieve the desired range; and drift catches to date provided no indication that Susitna River run strength was dramatically higher than anticipated. Accordingly, drift gillnetting was closed throughout the Central District and set gillnetting was closed in the Upper Subdistrict for the regular period scheduled for July 13 (Table 4). The next scheduled period (July 16) was closed in the Upper Subdistrict set net fishery south of mid Kalifonsky Beach (the "Blanchard Line"). Drift gillnetting was prohibited within five miles of this same stretch of beach to continue efforts to provide substantial protection of Kasilof River sockeye salmon while not further disrupting the harvest of sockeye salmon surpluses bound for other systems, primarily the Kenai River.

The drift sockeye salmon harvest for July 16 (584,000 or 982 fish per landing) was the highest of the season and served to confirm the offshore test fishing projection of a total return at or slightly below the forecast level. Catches on upper Kalifonsky and Salamatof beaches (the beaches adjacent to the Kenai River) were also fairly strong (143,000), signaling the first major movement of fish into the Kenai River.

As the escapement level increased rapidly in the Kenai River (Table 5), an additional fishing period (July 17) was permitted for the east side set nets north of the Blanchard Line and for drift gear within 3 miles of the Kenai Peninsula shoreline from Colliers Dock just north of the Kenai River south to the Blanchard Line. The Kasilof River escapement had improved substantially (21,000 on July 18 for a total

of 71,000) and the Kenai River escapement was increasing rapidly (92,000 on July 18 for a total of 183,000) prompting additional fishing time for both set and drift gill nets along the east side beach on July 18. The regular period on Friday, July 20 proceeded without restriction. Although initial escapement levels in the Yentna River (the principle monitored tributary of the Susitna River) were satisfactory, the daily rate began declining on July 21 with the total escapement still well below desired levels. To further augment the Susitna River escapement, the Northern District set net fishery was closed for the regular period on Monday, August 23 and the drift fleet was prohibited from fishing in the offshore areas of the northern Central District. No further restrictions of regular fishing periods were imposed on any area for the balance of the sockeye salmon return. Additional fishing time was permitted along the east side of the Central District for both set and drift gill nets to harvest surplus sockeye salmon bound for the Kenai River. Many of the additional periods included that portion of the fishery south of the Blanchard Line although this area was precluded from several periods to maintain adequate escapement in the Kasilof River.

In accordance with the Fish Creek Sockeye Salmon Management Plan, a portion of the Knik Arm shoreline was opened for set gillnetting at 10:00 P.M. July 26 and remained open through July 29. This fishery harvested 23,450 sockeye salmon (24% of the Northern District harvest), 5,700 coho salmon and 5,300 chum salmon.

Overall, the management measures employed during the 1990 sockeye salmon season were very successful in achieving the best possible yield while ensuring adequate escapement levels in monitored systems. The Kenai River escapement of 660,000 was slightly below the maximum desired level of 700,000 while the Kasilof River escapement of 144,000 was slightly below the minimum goal of 150,000. The Yentna River escapement of 140,000 nearly equaled the maximum goal of 150,000, an encouraging result after several years of comparatively poor escapements.

Chum Salmon

Chum salmon returning to Upper Cook Inlet are bound principally for the Susitna River with much smaller returns bound for several streams along the west side of the Central District. The harvest occurs primarily in the drift fishery (87%), the Northern District set net fishery (6%) and the Central District west side set net fishery (6%). The timing of the Susitna River return significantly overlaps the timing of the sockeye salmon returns and as a result, management measures directed at sockeye salmon often influence the chum salmon harvest. The Susitna River chum salmon escapement is not measured and no escapement objectives are defined.

The 1990 harvest of 351,000 chum salmon was slightly more than half the long-term average and accounted for 4% of the exvessel value of the salmon fishery. The chum return had been projected to be poor due to severe flooding that occurred in many chum-producing drainages during the autumn of 1986. The drift fishery restrictions (the July 13 closure and the July 23 southerly restriction) contributed to reducing the exploitation of the return and the resulting escapement was subjectively judged to be average to good.

Chum salmon returns to Central District west side streams were also relatively poor and harvests from these areas were well below average. Escapement in the few streams monitored was generally below average.

Pink Salmon

Returns to the Susitna and Kenai rivers combine to account for the majority of the pink salmon production in Upper Cook Inlet. Both rivers have abundant returns only in even-numbered years. Susitna pink salmon return first, passing through the Central District during the latter half of July while Kenai-bound pink salmon are most abundant in the Central District in early August. The harvest occurs principally in the drift fishery (38%), the Central District east side set net fishery (36%) and the Northern District set net fishery (22%).

As with the Susitna chum salmon return, the Susitna pink salmon return overlaps the sockeye salmon return to such a large degree that harvest levels are often influenced by management measures directed at sockeye salmon. Specific fishery alterations directed at Susitna River pink salmon are uncommon. Kenai River pink salmon are harvested most heavily in the Central District east side set fishery in early August. Fishing time in this area after August 5 is typically controlled by the relative strength of the pink salmon return. Estimating the escapement of pink salmon has not proven practical in either system and specific escapement objectives do not exist.

The 1990 pink salmon return produced a harvest of 604,000 fish, well below average for an even-numbered year, and accounted for only 1% of the value of the salmon fishery. The Susitna River return was impacted by the 1986 flooding and the 1990 return, although poor, was considerably improved over 1988. Lack of directed effort to harvest Susitna-bound pink salmon obviated any need for fishery restrictions. The escapement was subjectively judged to be fair to poor.

The Kenai River pink salmon return was above average in strength and one additional fishing period was permitted in the east side set net fishery and in the drift fishery along the east side beach on August 15. The escapement level appeared to be very good.

Coho Salmon

For discussion purposes, it is useful to divide Upper Cook Inlet's diverse coho salmon stocks impacted by the commercial fishery into three broad categories. The first category contains those stocks bound for the Susitna River and other Northern District streams. These migrate through the Central District during the last three weeks of July. The Cook Inlet Salmon Management Plan identifies Susitna River coho salmon as a stock which should experience a minimized commercial interception, to the extent consistent with other goals established within the Plan. While simple in concept, this directive is much more difficult to implement in practice. The management plan identifies a higher priority for the sustained commercial harvest of sockeye, chum and pink salmon stocks, many of which are bound for the same streams at similar times and along similar pathways utilized by Susitna River coho salmon stocks. Consequently, these stocks are normally exploited at fairly significant

levels in the commercial drift and the Northern District set net fisheries. It is occasionally possible to time fishery closures aimed principally at stock conservation of sockeye salmon to take advantage of peaks in abundance of coho salmon but such opportunities arise too infrequently to consistently meet the Plan objectives.

The second category of interest is the early return of coho salmon to the Kenai River which peaks in abundance in early August and is intercepted in both the drift and east side set net fisheries. The allocation status is the same as for Susitna coho salmon. Due to the overlap with the Kenai River sockeye salmon return, it is difficult to avoid a substantial interception of this stock in the commercial fishery.

The third stock grouping consists of a diverse collection of coho salmon returns to the numerous streams along the west side of Cook Inlet. Under the management plan, these stocks are managed primarily for commercial uses. Fishing time in the west side set net fisheries during August is based primarily on the strength of these returns.

The 1990 coho salmon harvest of 500,000 was somewhat above average and accounted for 5% of the exvessel value of the salmon fishery. Commercial interception of Sustina River coho salmon was measurably reduced by the July 23 restriction of the drift fishery and the simultaneous closure of the Northern District set net fishery. Inriver abundance was not directly measured but appeared to be good to excellent.

The Kenai River early return exhibited good run strength as judged by daily catches in the east side set net fishery. Commercial interception of this stock was reduced because of a late return. Additional fishing periods opened to harvest surplus sockeye salmon had ceased by August 1, while coho catches did not peak until nearly mid August. Although the single additional period opened on August 15 to harvest surplus pink salmon increased the coho catch by nearly 6,000, the east side set net coho salmon harvest of 40,000 was the lowest since 1985.

The west side coho salmon returns were above average and fishing in this area was opened for an additional day each week beginning in early August and in the Northern District beginning in mid August. The harvest in these areas was generally above average.

Chinook Salmon

The principle stocks of chinook salmon harvested in the commercial fishery are the return to the Susitna River and the late run to the Kenai River. Created by the Board four years ago and conducted under the direction of the Susitna River Chinook Salmon Management Plan, a minor fishery occurs each June for set gill nets in the Northern District. Each participant is allowed one 35-fathom net and a minimum distance of 1200 feet must be maintained between nets (twice the normal distance). Fishing is permitted for 6 hours each Monday in June until the quota of 12,500 chinook has been harvested or the regular season opens on June 25. Harvest levels have approached or reached the quota in most years but early closures have generally not been required.

The 1990 Northern District chinook salmon fishery harvested 8,072 chinook salmon, the lowest catch since the inception of the fishery. The reasons for the smaller catch are varied - a somewhat smaller return of salmon, frequent poor weather during fishing periods, and poor tides for fishing during the brief 6-hour periods. One-hundred-thirty-one permit holders made landings during the fishery.

The other major stock of chinook salmon harvested in the commercial fishery, the late run to the Kenai River, generates the greatest controversy in Upper Cook Inlet, pitting Kenai River recreational anglers against Upper Subdistrict ("east side") set netters. An average of over 13,000 chinook salmon were taken annually during the 1980's in the commercial set net fishery, frequently exceeding the sport fish harvest. Much smaller numbers are taken in the drift gill net fishery.

The 1990 east side set net fish ticket total of 4,319 chinook salmon represents the smallest catch since 1976 (an additional 86 chinook salmon were reported as retained for personal use). The probable reasons for this reduced harvest are numerous and difficult to evaluate individually. The 1990 return was one of the smallest since escapement enumeration of chinook salmon was first attempted. Many east side set netters voluntarily released live king salmon found in their nets. Salmon of all species appeared to exhibit a more westerly, offshore migratory pattern in 1990, likely resulting in fewer chinook salmon available to the set net fishery. The relatively modest sockeye salmon return resulted in less fishing time than has been common in many years during the 1980's. Although no evidence, other than the precipitous drop in catch, exists within the Departments of Fish & Game or Public Safety to support such claims, many members of the recreational community believe set netters are avoiding the reporting system.

The chinook salmon controversy reached it's zenith following restriction of the in-river fishery on July 28, allowing only catch-and-release angling for chinook for the final four days of the fishery. This action was taken to insure that the optimum escapement goal, as defined in the Kenai River Chinook Salmon Management Plan, of 22,300 would be attained. Concurrently additional fishing time was permitted in all or part of the east side set net fishery on July 27 (10 hrs), July 29 (18 hrs), July 30 (12 hrs) and July 31 (22 hrs) to harvest surplus Kenai River sockeye salmon. The east side set net harvest during this five day interval (which included two regularly scheduled periods) was 326,151 sockeye salmon and 758 chinook salmon.

Stock Status and Outlook

In general, Upper Cook Inlet's salmon stocks are in excellent condition with several species (sockeye, chum and coho) setting record harvests during the 1980's. While it is difficult to evaluate all of the possible reasons for the generally high production experienced during the last decade, favorable environmental variables undoubtedly played a large part and, unfortunately, are unlikely to be sustained for long.

Recent sockeye salmon production has been particularly vigorous with the eight highest years of production all having occurred in the last nine years. Production peaked in 1987 with a catch of 9.5 million and appears to be trending slowly downward. Despite escapement levels in excess of 1 million in three of the last four years, smolt and fry surveys indicate that Kenai River returns will remain well below

recent levels for at least the next four years. Kasilof River returns, very strong through the early and mid 1980's, declined substantially the last few years and should exhibit a generally improving trend over the next several years. Susitna River escapements in several of the recent parent years were significantly below desired levels and returns to this system for the next few years will likely be diminished. Despite very high parent-year escapements, recent production from Crescent River has been poor. The near-term outlook for this system is difficult to project although all recent escapements were in excess of the minimum goal. In summary, Upper Cook Inlet sockeye salmon harvests through the 1990's will likely average less than three million, a significant decline from the 1980's but substantially above the long-term average.

Chum salmon production has been highly variable in recent years, in part due to the 1986 flooding of the Susitna Basin. Lacking quantitative escapement information, it is more difficult to speculate on near-term returns but it is likely that chum salmon returns will be fair to good over the next four years.

Susitna River pink salmon have recovered substantially from the 1986 flood and this recovery is expected to continue in 1992 and 1994. Kenai River pink salmon were relatively undamaged in 1986 and this stock is currently healthy and increasing in strength.

Upper Cook Inlet's coho salmon stocks generally produced very strong returns throughout most of the 1980's and no downturn in this trend has been observed. Susitna River escapements have been excellent for the last several years and the outlook for this return is very good. Early-run Kenai River coho salmon returns have ranged from average to good in recent years but harvests have been very high in both the commercial fishery and in the rapidly growing sport fishery. The condition of this stock will need to be carefully monitored in the coming years.

An evaluation of chinook salmon stock status and the outlook for future returns will be provided to the Board by Sport Fish Division staff.

Table 1. Upper Cook Inlet commercial salmon harvest by species, 1954-1990.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1954	63,780	1,207,046	321,525	2,189,207	510,068	4,291,726
1955	45,926	1,027,528	170,777	101,680	248,343	1,594,254
1956	64,977	1,258,789	198,189	1,595,375	782,051	3,899,381
1957	42,158	643,712	125,434	21,228	1,001,470	1,834,002
1958	22,727	477,392	239,765	1,648,548	471,697	2,860,129
1959	32,651	612,676	106,312	12,527	300,319	1,064,485
1960	27,512	923,314	311,461	1,411,605	659,997	3,333,889
1961	19,737	1,162,303	117,778	34,017	349,628	1,683,463
1962	20,210	1,147,573	350,324	2,711,689	970,582	5,200,378
1963	17,536	942,980	197,140	30,436	387,027	1,575,119
1964	4,531	970,055	452,654	3,231,961	1,079,084	5,738,285
1965	9,741	1,412,350	153,619	23,963	316,444	1,916,117
1966	8,544	1,852,114	289,837	2,005,745	532,756	4,688,996
1967	7,859	1,380,062	177,729	32,229	296,837	1,894,716
1968	4,536	1,104,904	469,850	2,278,197	1,119,114	4,976,601
1969	12,407	692,244	100,962	34,030	269,842	1,109,485
1970	8,358	746,634	279,989	826,639	800,829	2,662,449
1971	19,765	636,798	100,636	35,624	327,029	1,119,852
1972	16,086	879,724	80,933	628,576	630,016	2,235,335
1973	5,194	670,025	104,373	326,183	667,561	1,773,336
1974	6,586	497,160	200,125	484,035	396,938	1,584,844
1975	4,773	678,736	221,739	335,629	950,981	2,191,858
1976	10,867	1,664,131	208,710	1,256,743	469,806	3,610,257
1977	14,792	2,052,511	192,599	553,855	1,233,722	4,047,479
1978	17,302	2,621,667	219,360	1,689,098	571,959	5,119,386
1979	13,738	924,415	265,166	72,982	650,357	1,926,658
1980	13,795	1,573,637	271,378	1,786,430	390,810	4,036,050
1981	12,240	1,439,235	485,148	127,169	833,549	2,897,341
1982	20,870	3,259,864	793,937	790,648	1,433,866	6,299,185
1983	20,634	5,049,733	516,322	70,327	1,114,858	6,771,874
1984	10,041	2,105,860	449,903	617,298	680,089	3,860,839
1985	24,086	4,060,260	667,213	87,828	772,829	5,612,216
1986	39,240	4,787,982	756,830	1,299,360	1,134,173	8,017,585
1987	39,661	9,500,186	451,404	109,801	349,132	10,450,184
1988	29,060	6,834,342	560,022	469,972	708,573	8,601,969
1989	26,742	5,010,698	339,201	67,430	122,027	5,566,098
1990	16,105	3,604,064	500,026	603,630	351,197	4,986,100
Average	20,940	2,038,181	309,415	800,046	645,556	3,811,674

Table 2. Approximate exvessel value of the Upper Cook Inlet commercial salmon harvest by species, 1960-1990.

Year	Chinook	%	Sockeye	%	Coho	%	Pink	%	Chum	%	Total
1960	\$140,000	5.0	\$1,334,000	47.9	\$307,000	11.0	\$663,000	23.8	\$343,000	12.3	\$2,787,000
1961	\$100,000	4.7	\$1,687,000	79.4	\$118,000	5.6	\$16,000	0.8	\$204,000	9.6	\$2,125,000
1962	\$100,000	2.5	\$1,683,000	42.3	\$342,000	8.6	\$1,274,000	32.0	\$582,000	14.6	\$3,981,000
1963	\$89,000	4.6	\$1,388,000	72.3	\$193,000	10.1	\$13,000	0.7	\$236,000	12.3	\$1,919,000
1964	\$20,000	0.5	\$1,430,000	38.9	\$451,000	12.3	\$1,131,000	30.8	\$646,000	17.6	\$3,678,000
1965	\$50,000	2.0	\$2,099,000	82.1	\$109,000	4.3	\$70,000	2.7	\$230,000	9.0	\$2,558,000
1966	\$50,000	1.2	\$2,727,000	64.4	\$295,000	7.0	\$823,000	19.4	\$338,000	8.0	\$4,233,000
1967	\$49,000	1.9	\$2,135,000	82.6	\$187,000	7.2	\$13,000	0.5	\$202,000	7.8	\$2,586,000
1968	\$30,000	0.7	\$1,758,000	40.4	\$515,000	11.8	\$1,209,000	27.8	\$843,000	19.4	\$4,355,000
1969	\$70,000	4.3	\$1,231,000	75.2	\$109,000	6.7	\$23,000	1.4	\$204,000	12.5	\$1,637,000
1970	\$49,000	1.8	\$1,135,000	42.5	\$354,000	13.3	\$387,000	14.5	\$745,000	27.9	\$2,670,000
1971	\$189,000	10.7	\$1,102,000	62.2	\$143,000	8.1	\$22,000	1.2	\$316,000	17.8	\$1,772,000
1972	\$217,000	6.3	\$1,795,000	52.0	\$135,000	3.9	\$473,000	13.7	\$834,000	24.1	\$3,454,000
1973	\$122,000	2.0	\$3,214,000	52.2	\$320,000	5.2	\$363,000	5.9	\$2,134,000	34.7	\$6,153,000
1974	\$210,000	3.2	\$3,058,000	46.5	\$843,000	12.8	\$946,000	14.4	\$1,521,000	23.1	\$6,578,000
1975	\$65,000	1.0	\$2,596,000	39.0	\$821,000	12.3	\$423,000	6.4	\$2,753,000	41.3	\$6,658,000
1976	\$276,000	2.0	\$8,626,000	63.2	\$818,000	6.0	\$1,879,000	13.8	\$2,040,000	15.0	\$13,639,000
1977	\$525,000	2.4	\$13,274,000	61.8	\$933,000	4.3	\$772,000	3.6	\$5,991,000	27.9	\$21,495,000
1978	\$667,000	2.0	\$26,128,000	80.3	\$1,388,000	4.3	\$2,154,000	6.6	\$2,217,000	6.8	\$32,554,000
1979	\$625,000	4.3	\$8,094,000	55.2	\$1,658,000	11.3	\$89,000	0.6	\$4,201,000	28.6	\$14,667,000
1980	\$417,000	3.2	\$7,932,000	61.6	\$902,000	7.0	\$2,114,000	16.4	\$1,516,000	11.8	\$12,881,000
1981	\$422,000	2.6	\$11,071,000	67.9	\$2,638,000	16.2	\$179,000	1.1	\$2,005,000	12.3	\$16,315,000
1982	\$753,000	2.1	\$25,029,000	69.0	\$4,139,000	11.4	\$515,000	1.4	\$5,851,000	16.1	\$36,287,000
1983	\$585,000	2.0	\$23,841,000	81.5	\$1,603,000	5.5	\$38,000	0.1	\$3,195,000	10.9	\$29,262,000
1984	\$311,990	1.8	\$12,445,633	71.8	\$2,041,480	11.8	\$522,419	3.0	\$2,007,827	11.6	\$17,329,349
1985	\$799,173	2.3	\$27,479,840	80.0	\$3,358,083	9.8	\$57,440	0.2	\$2,646,553	7.7	\$34,341,089
1986	\$881,356	1.9	\$37,665,832	83.3	\$2,838,881	6.3	\$698,527	1.5	\$3,123,485	6.9	\$45,208,081
1987	\$1,609,681	1.6	\$96,331,886	94.9	\$2,368,968	2.3	\$84,547	0.1	\$1,115,477	1.1	\$101,510,559
1988	\$1,204,321	1.0	\$111,102,230	91.2	\$4,731,340	3.9	\$650,309	0.5	\$4,113,356	3.4	\$121,801,556
1989	\$803,494	1.4	\$56,194,753	95.0	\$1,674,393	2.8	\$86,012	0.1	\$415,535	0.7	\$59,174,187
1990	\$436,822	1.1	\$35,804,485	88.0	\$2,419,202	5.3	\$512,590	1.3	\$1,495,827	3.7	\$40,668,906

Table 3. Escapement goals and counts of sockeye salmon in selected streams of Upper Cook Inlet, 1968-1990.

Year	Kenai River		Kasilof River		Fish Creek	
	Escapement Goal	Escapement Estimate ¹	Escapement Goal	Escapement Estimate ¹	Escapement Goal	Escapement Estimate ²
1968	0	88,000	0	93,000	0	19,616
1969	150,000	53,000	75,000	46,000	0	12,456
1970	150,000	73,000	75,000	37,000	0	25,000
1971	150,000	--	75,000	--	0	31,900
1972	150,000-250,000	318,000	75,000-150,000	112,000	0	6,981
1973	150,000-250,000	367,000	75,000-150,000	40,000	0	2,705
1974	150,000-250,000	161,000	75,000-150,000	64,000	0	16,225
1975	150,000-250,000	142,000	75,000-150,000	48,000	0	29,882
1976	150,000-250,000	380,000	75,000-150,000	140,000	0	14,032
1977	150,000-250,000	708,000	75,000-150,000	155,000	0	5,183
1978	350,000-500,000	399,000	75,000-150,000	117,000	0	3,555
1979	350,000-500,000	285,000	75,000-150,000	152,000	0	68,739
1980	350,000-500,000	464,000	75,000-150,000	187,000	0	62,828
1981	350,000-500,000	408,000	75,000-150,000	257,000	0	50,479
1982	350,000-500,000	620,000	75,000-150,000	180,000	50,000	28,164
1983	350,000-500,000	630,000	75,000-150,000	210,000	50,000	118,797
1984	350,000-500,000	345,000	75,000-150,000	232,000	50,000	192,352
1985	350,000-500,000	501,000	75,000-150,000	503,000	50,000	68,577
1986	350,000-500,000	501,000	150,000-250,000	276,000	50,000	29,800
1987	400,000-700,000	1,597,000	150,000-250,000	249,000	50,000	91,215
1988	400,000-700,000	1,021,500	150,000-250,000	202,000	50,000	71,603
1989	400,000-700,000	1,599,959	150,000-250,000	158,206	50,000	67,224
1990	400,000-700,000	659,520	150,000-250,000	144,136	50,000	48,717

Year	Susitna River		Crescent River		Packers Creek	
	Escapement Goal	Escapement Estimate ¹	Escapement Goal	Escapement Estimate ¹	Escapement Goal	Escapement Estimate ²
1978	200,000	94,000	0	N/C	0	N/C
1979	200,000	157,000	50,000	87,000	0	N/C
1980	200,000	191,000	50,000	91,000	0	16,477
1981	200,000	340,000 ³	50,000	41,000	0	13,024
1982	200,000	216,000 ⁴	50,000	59,000	0	15,687
1983	200,000	112,000 ⁵	50,000	92,000	0	18,403
1984	200,000	194,000 ⁵	50,000	118,000	0	30,684
1985	200,000	228,000 ⁵	50,000	129,000	0	36,850
1986	200,000	92,000 ⁶	50,000-100,000	N/A	0	29,604
1987	200,000	66,000 ⁶	50,000-100,000	119,000	0	35,401
1988	100,000-150,000 ⁶	52,347 ⁶	50,000-100,000	57,716	15,000-25,000	18,607
1989	100,000-150,000 ⁶	96,269 ⁶	50,000-100,000	71,064	15,000-25,000	22,304
1990	100,000-150,000 ⁶	140,290 ⁶	50,000-100,000	52,238	15,000-25,000	31,778

¹ Derived from sonar counters unless otherwise noted.

² Weir counts.

³ Poor field conditions make this a minimum estimate; mark/recapture estimate from Su-Hydro studies was 265,000.

⁴ Minimum estimate. Combining Yentna sonar with Sunshine Station mark/recapture estimate yields 176,000.

⁵ Yentna River sonar count combined with Sunshine Station mark/recapture estimate.

⁶ Yentna River only.

Table 4. Commercial salmon fishing periods, Upper Cook Inlet, 1990.

Date	Day	Time	Set Gill Net	Drift Gill Net
May 25	Fri	0700-1900	Big River Area	
May 28	Mon	0700-1900	Big River Area	
June 1	Fri	0700-1900	Big River Area	
June 04	Mon	0700-1300 1300-1900	Northern District, Big River Big River Area	
June 08	Fri	0700-1900	Big River Area	
June 11	Mon	0700-1300 1300-1900	Northern District, Big River Big River Area	
June 15	Fri	0700-1900	Big River Area, Western	
June 18	Mon	0700-1300 1300-1900	Big River, Western, Northern Big River Area, Western	
June 22	Fri	0700-1900	Big River Area, Western	
June 25	Mon	0700-1900	All except Upper Subdistrict	All
June 29	Fri	0700-1900	All except Upper Subdistrict	All
July 2	Mon	0700-1900	All	All
July 6	Fri	0700-1900	All	All
July 9	Mon	0700-1900	All	All
July 13	Fri	0700-1900	All except Upper	Closed
July 16	Mon	0700-1900	All except Western, Upper south of mid-K-Beach	All except within 5 mi. of beach south of mid-K-Beach
July 18	Wed	0900-1200	Upper north of mid K-Beach	Colliers Dock to mid K-Beach within 3 miles of beach
		1200-2200	Upper	Colliers to Minilchik within 3 miles
July 20	Fri	0700-1900	All	All
		1900-2200	Upper	Colliers to Minilchik within 3 miles
		2200-2400	Upper	
July 21	Sat	0000-0500	Upper	
		0500-2200	Upper	Colliers to Minilchik within 3 miles

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Table 4. (Page 2 of 3)

Date	Day	Time	Set Gill Net	Drift Gill Net
July 22	Sun	1800-2200	Upper	Colliers to Ninilchik within 3 miles
		2200-2400	Upper	
July 23	Mon	0000-0500	Upper	
		0500-0700	Upper	Colliers to Ninilchik within 3 miles
		0700-1900	All except Northern District	South of Kalgin Island, south of Colliers within 3 miles
July 25	Wed	1200-2200	Upper north of mid K-Beach	Colliers to mid K-Beach within 3 miles
		2200-2400	Upper north of mid K-Beach	
July 26	Thur	0000-0500	Upper north of mid K-Beach	
		0500-2200	Upper north of mid K-Beach	Colliers to mid K-Beach within 3 miles
		2200-2400	Upper n. of mid K-Beach, Knik Arm	
July 27	Fri	0000-0500	Upper n. of mid K-Beach, Knik Arm	
		0500-0700	Upper n. of mid K-Beach, Knik Arm	Colliers to mid K-Beach within 3 miles
		0700-1900	All plus Knik Arm	All
		1900-2200	Upper, Knik Arm	Colliers to Ninilchik within 3 miles
		2200-2400	Knik Arm	
July 28	Sat	0000-2400	Knik Arm	
July 29	Sun	0600-2200	Upper n. of mid K-Beach, Knik Arm	Colliers to mid K-Beach within 6 miles
		2200-2400	Upper n. of mid K-Beach, Knik Arm	
July 30	Mon	0000-0500	Upper n. of mid K-Beach	
		0500-0700	Upper n. of mid K-Beach	Colliers to mid K-Beach within 6 miles
		0700-1900	All	All
		1900-2200	Upper	Colliers to Ninilchik within 6 miles

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Table 4. (Page 3 of 3)

Date	Day	Time	Set Gill Net	Drift Gill Net
		2200-2400	Upper	
July 31	Tue	0000-0500	Upper	
		0500-2200	Upper	Colliers to Ninilchik within 6 miles
Aug 1	Wed	0700-1900	Kalgin Island	
Aug 3	Fri	0700-1900	All	All
Aug 6	Mon	0700-1900	All	All
Aug 8	Wed	0700-1900	Western, Kustatan, Kalgin	Western, Kustatan, Kalgin
Aug 10	Fri	0700-1900	All	All
Aug 13	Mon	0700-1900	All	All
Aug 15	Wed	0700-1900	All except Chinitna	All
Aug 17	Fri	0700-1900	All except Upper	All except within 5 miles of Kenai Peninsula shore
Aug 20	Mon	0700-1900	All except Upper	All except within 5 miles of Kenai Peninsula shore
Aug 22	Wed	0700-1900	All except Upper, Chinitna	All except Chinitna or within 5 miles of Kenai Peninsula
Aug 24	Fri	0700-1900	All except Upper	All plus Chinitna except within 5 m. of Kenai Pen.
Aug 26	Mon	0700-1900	All except Upper	All plus Chinitna except within 5 m. of Kenai Pen.

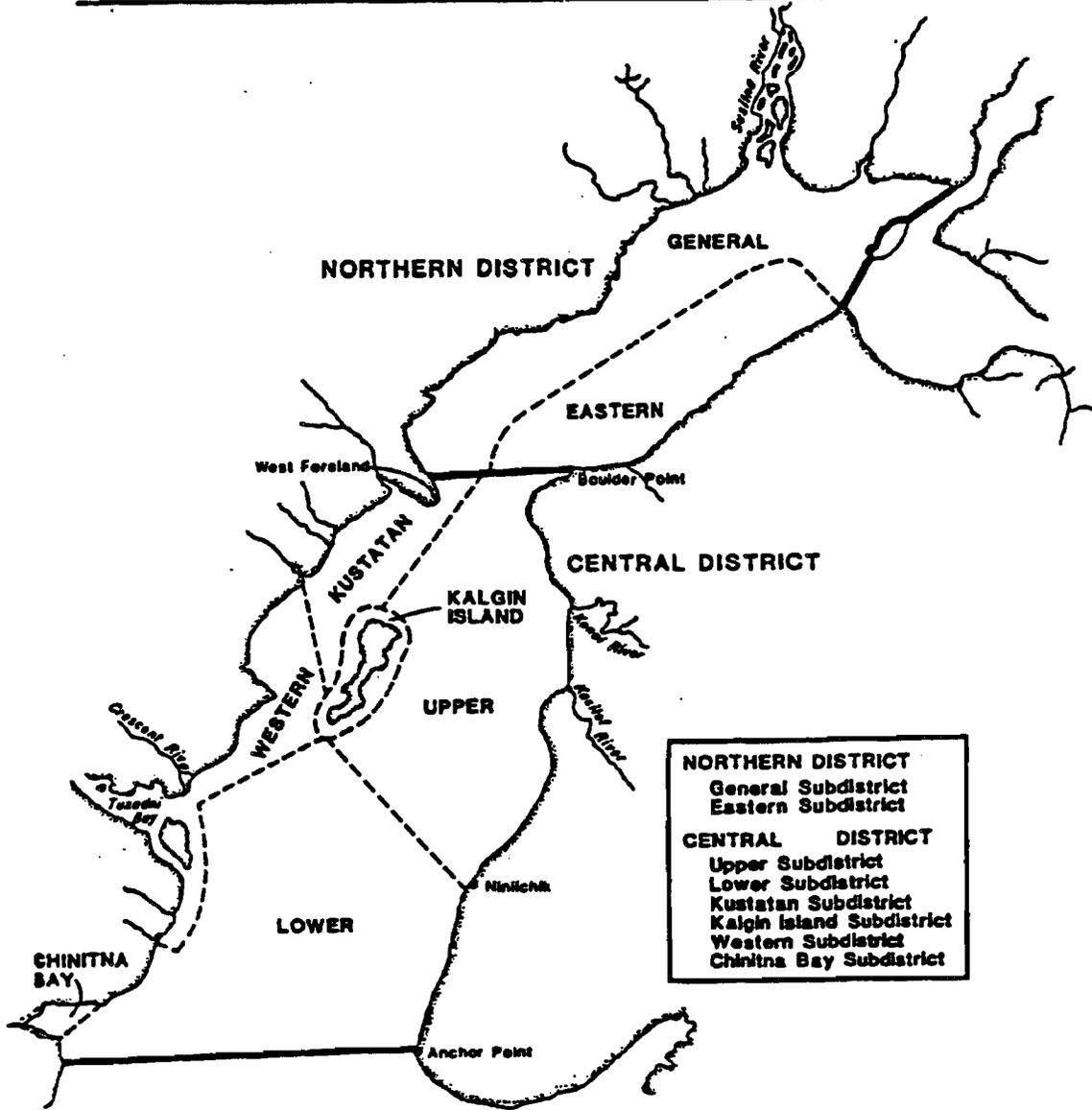
Fishing continued each Monday, Wednesday and Friday as described for 8/22, 8/24 and 8/26 for the remainder of the season.

Table 5. Upper Cook Inlet sockeye salmon escapement by river and date, 1990.

Date	KENAI RIVER		KASILOF RIVER		CRESCENT RIVER		YENTNA RIVER	
	daily cumulative		daily cumulative		daily cumulative		daily cumulative	
6-15 Fri			310	310				
6-16 Sat			255	565				
6-17 Sun			247	812				
6-18 Mon			278	1,090				
6-19 Tue			208	1,298				
6-20 Wed			176	1,474				
6-21 Thu			216	1,690				
6-22 Fri			324	2,014				
6-23 Sat			201	2,215				
6-24 Sun			290	2,505				
6-25 Mon			257	2,762				
6-26 Tue			351	3,113	172	172		
6-27 Wed			518	3,631	185	357		
6-28 Thu			657	4,288	339	696		
6-29 Fri			1,079	5,367	408	1,104		
6-30 Sat			1,979	7,346	205	1,309		
7-01 Sun	420	420	2,019	9,365	477	1,786		
7-02 Mon	567	987	1,616	10,981	1,077	2,863		
7-03 Tue	896	1,883	2,181	13,162	518	3,381		
7-04 Wed	4,455	6,338	4,099	17,261	666	4,047		
7-05 Thu	5,865	12,203	5,505	22,766	1,049	5,096		
7-06 Fri	7,116	19,319	5,093	27,859	1,574	6,670		
7-07 Sat	4,495	23,814	2,327	30,186	692	7,362	300	300
7-08 Sun	4,877	28,691	3,622	33,808	757	8,119	363	663
7-09 Mon	3,370	32,061	2,762	36,570	1,515	9,634	414	1,077
7-10 Tue	1,224	33,285	557	37,127	1,159	10,793	371	1,448
7-11 Wed	960	34,245	1,429	38,556	3,009	13,802	333	1,781
7-12 Thu	1,347	35,592	1,942	40,498	1,115	14,917	244	2,025
7-13 Fri	1,852	37,444	1,833	42,331	710	15,627	196	2,221
7-14 Sat	2,381	39,825	1,391	43,722	1,126	16,753	224	2,445
7-15 Sun	2,119	41,944	1,904	45,626	1,284	18,037	184	2,629
7-16 Mon	3,091	45,035	4,755	50,381	2,495	20,532	221	2,850
7-17 Tue	45,984	91,019	21,340	71,721	4,117	24,649	220	3,070
7-18 Wed	92,672	183,691	15,065	86,786	3,584	28,233	484	3,554
7-19 Thu	42,968	226,659	3,038	89,824	1,743	29,976	11,136	14,690
7-20 Fri	36,999	263,658	5,851	95,675	1,901	31,877	15,811	30,501
7-21 Sat	37,841	301,499	1,782	97,457	2,248	34,125	9,342	39,843
7-22 Sun	10,265	311,764	1,598	99,055	2,686	36,811	6,035	45,878
7-23 Mon	29,547	341,311	2,707	101,762	1,971	38,782	7,794	53,672
7-24 Tue	38,417	379,728	2,480	104,242	1,049	39,831	9,762	63,434
7-25 Wed	65,703	445,431	4,417	108,659	2,016	41,847	7,422	70,856
7-26 Thu	28,975	474,406	3,145	111,804	1,979	43,826	9,547	80,403
7-27 Fri	6,211	480,617	2,026	113,830	1,306	45,132	13,113	93,516
7-28 Sat	9,752	490,369	2,605	116,435	852	45,984	9,500	103,016
7-29 Sun	34,442	524,811	4,094	120,529	815	46,799	4,871	107,887
7-30 Mon	33,183	557,994	2,896	123,425	1,941	48,740	3,807	111,694
7-31 Tue	13,781	571,775	2,220	125,645	1,190	49,930	4,039	115,733
8-01 Wed	7,832	579,607	1,899	127,544	909	50,839	4,846	120,579
8-02 Thu	11,556	591,163	2,382	129,926	649	51,488	6,658	127,237
8-03 Fri	23,330	614,493	2,040	131,966	368	51,856	5,569	132,806
8-04 Sat	20,581	635,074	1,252	133,218	382	52,238	2,194	135,000
8-05 Sun	9,850	644,924	1,236	134,454			1,227	136,227
8-06 Mon	8,896	653,820	1,129	135,583			1,039	137,266
8-07 Tue	5,700	659,520	708	136,291			942	138,208
8-08 Wed			1,101	137,392			660	138,868
8-09 Thu			1,432	138,824			541	139,409
8-10 Fri			1,269	140,093			229	139,638
8-11 Sat			756	140,849			378	140,016
8-12 Sun			936	141,785			274	140,290
8-13 Mon			829	142,614				
8-14 Tue			738	143,352				
8-15 Wed			784	144,136				

Figure 1.

UPPER COOK INLET SALMON DISTRICTS



Appendix A.1. Upper Cook Inlet commercial chinook salmon harvest by gear type and area, 1966-1990.

Year	Central District Set Gill Net								Total
	Central District Drift Gill Net		East Side		Kalgin/West Side		Northern District Set Gill Net		
	Number	%	Number	%	Number	%	Number	%	
1966	392	4.6	7,329	85.8	401	4.7	422	4.9	8,544
1967	489	6.2	6,686	85.1	500	6.4	184	2.3	7,859
1968	182	4.0	3,304	72.8	579	12.8	471	10.4	4,536
1969	363	2.9	5,834	47.0	3,295	26.6	2,904	23.4	12,407
1970	367	4.4	5,366	64.2	1,165	13.9	1,460	17.5	8,358
1971	237	1.2	7,055	35.7	2,875	14.5	9,598	48.6	19,765
1972	375	2.3	8,600	53.5	2,199	13.7	4,912	30.5	16,086
1973	244	4.7	4,411	84.9	369	7.1	170	3.3	5,194
1974	422	6.4	5,570	84.6	425	6.5	169	2.6	6,586
1975	250	5.2	3,678	77.1	716	15.0	129	2.7	4,773
1976	692	6.4	8,249	75.9	1,469	13.5	457	4.2	10,867
1977	3,411	23.1	9,732	65.8	1,084	7.3	565	3.8	14,792
1978	2,072	12.0	12,468	72.1	2,093	12.1	669	3.9	17,302
1979	1,089	7.9	8,671	63.1	2,264	16.5	1,714	12.5	13,738
1980	889	6.4	9,643	69.9	2,273	16.5	990	7.2	13,795
1981	2,319	18.9	8,359	68.3	837	6.8	725	5.9	12,240
1982	1,293	6.2	13,658	65.4	3,203	15.3	2,716	13.0	20,870
1983	1,124	5.4	15,043	72.9	3,534	17.1	933	4.5	20,634
1984	1,377	13.7	6,165	61.4	1,495	14.9	1,004	10.0	10,041
1985	2,046	8.5	17,723	73.6	2,427	10.1	1,890	7.8	24,086
1986	1,834	4.7	19,810	50.5	2,108	5.4	15,488	39.5	39,240
1987	4,552	11.5	21,379	53.9	1,029	2.6	12,701	32.0	39,661
1988	2,217	7.6	12,870	44.3	1,137	3.9	12,836	44.2	29,060
1989	0	0.0	10,919	40.8	3,092	11.6	12,731	47.6	26,742
1990	621	3.9	4,319	25.7	1,763	10.9	9,582	59.5	16,105
Average ¹	1,202	7.4	9,406	64.7	1,635	11.4	3,445	16.4	15,689

¹ 1989 excluded from averages.

Appendix A.2. Upper Cook Inlet commercial sockeye salmon harvest by gear type and area, 1966-1990.

Year	Central District Set Gill Net								
	Central District Drift Gill Net		East Side		Kalgin/West Side		Northern District Set Gill Net		Total
	Number	%	Number	%	Number	%	Number	%	
1966	1,103,261	59.6	485,330	26.2	132,443	7.2	131,080	7.1	1,852,114
1967	890,152	64.5	305,431	22.1	66,414	4.8	118,065	8.6	1,380,062
1968	561,737	50.8	317,535	28.7	85,049	7.7	140,575	12.7	1,104,904
1969	371,751	53.7	210,877	30.5	71,191	10.3	38,065	5.5	692,244
1970	474,718	63.6	142,701	19.1	62,724	8.4	66,458	8.9	746,634
1971	423,107	66.4	111,505	17.5	61,639	9.7	40,533	6.4	636,798
1972	505,935	57.5	204,617	23.3	83,422	9.5	85,737	9.7	879,724
1973	375,695	56.1	188,743	28.2	59,973	9.0	45,614	6.8	670,025
1974	265,751	53.5	136,889	27.5	52,957	10.7	41,563	8.4	497,160
1975	368,116	54.2	177,336	26.1	67,758	10.0	65,526	9.7	678,736
1976	1,055,767	63.4	476,376	28.6	62,338	3.7	69,649	4.2	1,664,131
1977	1,073,098	52.3	751,368	36.6	104,265	5.1	123,780	6.0	2,052,511
1978	1,803,358	68.8	660,918	25.2	105,767	4.0	51,624	2.0	2,621,667
1979	454,707	49.2	248,828	26.9	108,422	11.7	112,449	12.2	924,415
1980	770,247	48.9	559,812	35.6	137,922	8.8	105,647	6.7	1,573,637
1981	633,145	44.0	496,193	34.5	60,220	4.2	249,662	17.3	1,439,235
1982	2,103,429	64.5	971,423	29.8	66,952	2.1	118,060	3.6	3,259,864
1983	3,222,007	63.8	1,508,963	29.9	134,544	2.7	184,219	3.6	5,049,733
1984	1,234,669	58.6	490,273	23.3	161,953	7.7	218,695	10.4	2,105,860
1985	2,032,957	50.1	1,561,031	38.4	285,081	7.0	181,191	4.5	4,060,260
1986	2,834,534	59.2	1,657,904	34.6	153,714	3.2	141,830	3.0	4,787,982
1987	5,631,746	59.3	3,495,802	36.8	208,036	2.2	164,602	1.7	9,500,186
1988	4,129,878	60.4	2,428,597	35.5	146,154	2.1	129,713	1.9	6,834,342
1989	3	0.0	4,543,066	90.7	186,828	3.7	280,801	5.6	5,010,698
1990	2,305,742	64.0	1,116,975	31.0	84,949	2.4	96,398	2.7	3,604,064
Average ¹	1,442,729	57.8	779,393	29.0	106,829	6.4	113,364	6.8	2,442,345

¹ 1989 excluded from average.

Appendix A.3. Upper Cook Inlet commercial coho salmon harvest by gear type and area, 1966-1990.

Year	Central District Set Gill Net								Total
	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		
	Number	%	East Side	Kalgin/West Side		Number	%		
	Number	%	Number	%	Number	%	Number	%	
1966	80,901	27.9	68,877	23.8	59,509	20.5	80,550	27.8	289,837
1967	53,071	29.9	40,738	22.9	40,066	22.5	43,854	24.7	177,729
1968	167,383	35.8	80,828	17.3	63,301	13.5	156,648	33.5	468,160
1969	33,064	32.8	18,988	18.8	28,392	28.1	20,425	20.2	100,869
1970	114,392	40.9	30,318	10.8	52,363	18.7	82,722	29.6	279,795
1971	35,491	35.4	16,589	16.5	26,188	26.1	22,094	22.0	100,362
1972	21,578	26.7	24,673	30.5	15,319	18.9	19,346	23.9	80,916
1973	31,784	30.5	23,901	22.9	24,744	23.7	23,944	22.9	104,373
1974	75,640	37.8	36,837	18.4	40,610	20.3	47,038	23.5	200,125
1975	88,569	39.9	46,209	20.8	53,910	24.3	33,051	14.9	221,739
1976	80,731	38.7	47,873	22.9	42,224	20.2	37,850	18.1	208,678
1977	110,184	57.2	23,693	12.3	38,093	19.8	20,623	10.7	192,593
1978	76,252	34.8	34,141	15.6	61,711	28.1	47,256	21.5	219,360
1979	114,496	43.2	29,727	11.2	68,306	25.8	52,635	19.8	265,164
1980	89,510	33.0	40,281	14.8	51,487	19.0	90,098	33.2	271,376
1981	226,257	46.6	36,031	7.4	88,492	18.2	134,362	27.7	485,142
1982	416,274	52.5	108,393	13.7	182,205	23.0	85,352	10.8	792,224
1983	326,962	63.3	37,666	7.3	97,827	18.9	53,867	10.4	516,322
1984	213,336	47.4	37,166	8.3	84,615	18.8	114,786	25.5	449,903
1985	357,388	53.6	70,657	10.6	147,331	22.1	91,837	13.8	667,213
1986	506,405	66.9	76,385	10.1	85,932	11.4	88,108	11.6	756,830
1987	202,306	44.8	74,977	16.6	74,930	16.6	98,920	21.9	451,404
1988	277,703	49.6	55,419	9.9	77,058	13.8	149,742	26.7	560,022
1989	743	0.2	81,744	24.1	81,004	23.9	175,710	51.8	339,201
1990	246,845	49.4	40,351	8.1	73,429	14.7	139,401	27.9	500,026
Average ¹	164,438	42.4	45,863	15.5	65,752	20.3	72,271	21.8	348,340

¹ 1989 excluded from average.

Appendix A.4. Upper Cook Inlet commercial pink salmon harvest by gear type and area, 1966-1990.

Year	Central District Set Gill Net								Total
	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		
	Number	%	East Side Number	East Side %	Kalgin/West Side Number	Kalgin/West Side %	Number	%	
1966	593,654	29.6	969,624	48.3	70,507	3.5	371,960	18.5	2,005,745
1967	7,475	23.2	13,038	40.5	3,256	10.1	8,460	26.2	32,229
1968	880,512	38.7	785,887	34.5	75,755	3.3	534,839	23.5	2,276,993
1969	8,336	25.1	11,416	34.4	5,714	17.2	7,680	23.2	33,146
1970	346,485	41.9	281,067	34.0	24,763	3.0	174,193	21.1	826,508
1971	6,433	18.1	18,097	50.8	2,637	7.4	8,423	23.7	35,590
1972	115,096	18.3	403,706	64.2	18,936	3.0	90,830	14.5	628,568
1973	91,901	28.2	80,596	24.7	16,437	5.0	137,249	42.1	326,183
1974	140,734	29.1	291,408	60.2	9,014	1.9	42,879	8.9	484,035
1975	113,868	33.9	112,423	33.5	18,385	5.5	90,953	27.1	335,629
1976	599,600	47.7	479,009	38.1	30,044	2.4	148,090	11.8	1,256,743
1977	286,308	51.7	125,817	22.7	25,212	4.6	116,518	21.0	553,855
1978	934,178	55.3	372,865	22.1	54,785	3.2	327,270	19.4	1,689,098
1979	19,554	26.8	20,033	27.4	7,061	9.7	26,332	36.1	72,980
1980	964,526	54.0	299,444	16.8	47,963	2.7	474,488	26.6	1,786,421
1981	53,888	42.4	15,659	12.3	4,276	3.4	53,325	41.9	127,148
1982	270,380	34.2	432,715	54.7	14,242	1.8	73,307	9.3	790,644
1983	26,628	37.9	18,310	26.0	3,785	5.4	21,604	30.7	70,327
1984	273,411	44.3	220,895	35.8	16,708	2.7	106,284	17.2	617,298
1985	34,228	39.0	17,715	20.2	5,653	6.4	30,232	34.4	87,828
1986	614,453	47.3	530,445	40.8	15,460	1.2	139,002	10.7	1,299,360
1987	38,660	35.2	47,707	43.4	5,229	4.8	18,205	16.6	109,801
1988	226,776	48.3	179,092	38.1	9,890	2.1	54,210	11.5	469,972
1989	1	0.0	37,971	56.3	5,580	8.3	23,878	35.4	67,430
1990	323,955	53.7	225,429	37.3	10,302	1.7	43,944	7.3	603,630
Average ¹	290,460	37.7	248,017	35.9	20,667	4.7	129,178	21.8	688,322

¹ 1989 excluded from average.

Appendix A.5. Upper Cook Inlet commercial chum salmon harvest by gear type and area, 1966-1990.

Year	Central District Set Gill Net								Total
	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		
	Number	%	East Side Number	%	Kalgin/West Side Number	%	Number	%	
1966	424,972	79.8	7,461	1.4	64,725	12.1	35,598	6.7	532,756
1967	233,041	78.5	399	0.1	25,013	8.4	38,384	12.9	296,837
1968	1,022,900	90.7	1,563	0.1	44,986	4.0	58,454	5.2	1,127,903
1969	238,497	89.2	399	0.1	16,949	6.3	11,386	4.3	267,231
1970	705,467	90.4	1,228	0.2	48,783	6.3	24,507	3.1	779,985
1971	274,567	84.8	128	0.0	32,647	10.1	16,603	5.1	323,945
1972	564,253	90.1	1,727	0.3	40,567	6.5	19,780	3.2	626,327
1973	605,730	90.7	1,965	0.3	29,019	4.3	30,847	4.6	667,561
1974	344,594	86.8	506	0.1	15,346	3.9	36,492	9.2	396,938
1975	886,474	93.2	979	0.1	32,741	3.4	30,787	3.2	950,981
1976	405,773	86.5	1,484	0.3	47,877	10.2	14,050	3.0	469,184
1977	1,153,454	93.5	1,413	0.1	54,708	4.4	23,861	1.9	1,233,436
1978	489,065	85.5	4,617	0.8	40,946	7.2	37,331	6.5	571,959
1979	609,239	93.8	907	0.1	30,342	4.7	9,270	1.4	649,758
1980	339,970	87.4	2,147	0.6	30,105	7.7	16,728	4.3	388,950
1981	756,848	91.0	2,415	0.3	26,513	3.2	46,208	5.6	831,984
1982	1,348,510	94.1	4,777	0.3	36,647	2.6	43,006	3.0	1,432,940
1983	1,044,644	93.7	2,764	0.2	38,129	3.4	29,321	2.6	1,114,858
1984	567,480	83.4	3,675	0.5	34,207	5.0	74,727	11.0	680,089
1985	700,848	90.7	4,133	0.5	31,746	4.1	36,122	4.7	772,849
1986	1,012,028	89.2	7,027	0.6	39,078	3.4	76,040	6.7	1,134,173
1987	211,573	60.6	16,608	4.8	53,558	15.3	67,180	19.3	348,919
1988	580,650	81.9	11,841	1.7	40,354	5.7	75,728	10.7	708,573
1989	72	0.1	12,302	10.1	27,705	22.7	81,948	67.2	122,027
1990	289,521	82.4	4,611	1.3	21,355	6.1	35,710	10.2	351,197
Average ¹	617,087	87.0	3,532	0.6	36,514	6.2	37,005	6.2	694,139

¹ 1989 excluded from average.