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ANNUAL MANAGEMENT REPORT
UPPER COOK INLET

1986

Submitted By

Paul H. Ruesch
Area Management Biologist
Alaska Department of Fish and Game
Division of Commercial Fisheries
P.O. Box 3150
Soldotna, Alaska 99669

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PERSONNEL

Name	Job Class	Activity
Permanent Staff		
Paul Ruesch	FB III	Area Management Biologist
James Browning	FB II	Asst. Management Biologist
Ken Tarbox	FB III	Research Project Leader
Dave Waltemyer	FB II	Research Biologist
Bruce King	FB II	Research Biologist
Sandra Seagren	CT III	Clerk - Typist
Seasonal Staff		
Randall Davis	FB I	Kenai Sonar
Dennis Gretsch	FB I	Kenai Sonar
Wilma Mercer	FT II	Kenai Sonar
Frederick Kraus	FT II	Kasilof Sonar
Charlene Murray	FT II	Kasilof Sonar
Tom Withrow	FB I	Crescent Sonar
Mark Vania	FT II	Crescent Sonar
Morris Lambdin	FT III	Yentna Sonar
Craig Richards	FT III	Yentna Sonar
Virginia Petanovich	FB I	Yentna Sonar
Ron Aldridge	FT II	Offshore Testfish
Linda Soquet	FB I	Scale Reader
Sandra Kyle	FB I	Scale Reader
Kim Rudge	FT II	Catch Sampler
Judy Brandt	FT II	Catch Sampler
Greg Owens	FT II	Catch Sampler
Jerry Strait	FT II	Catch Sampler
Ryan Miller	FT II	Catch Sampler
Trish McNeil	FT II	Catch Sampler
Sherry Caswell	FT I	Catch Sampler
Dora Sigurdson	FT III	Catch Sampler
Rosemary Carroll	FT II	Catch Sampler, Kasilof Personal Use Monitor

INTRODUCTION

The Upper Cook Inlet management area consists of that portion of Cook Inlet north of the latitude of Anchor Point and is divided into the Central and Northern Districts (Figure 1). The Central District is approximately 75 mi long, averages 32 mi in width, and is further subdivided into six subdistricts. The Northern District is 50 mi long, averages 20 mi in width and is divided into two subdistricts. At present, all five species of Pacific salmon (Oncorhyncus sp.), razor clams (Siliqua patula) and Pacific herring (Clupea harengus pallasi) are subject to commercial harvest in Upper Cook Inlet.

Salmon

Since the inception of a commercial fishery in 1882, many gear types, including fish traps, gill nets, and seines have been employed with varying degrees of success to harvest salmon in Upper Cook Inlet. Currently, set (fixed) gill nets are the only gear permitted in the Northern District, while both set and drift gill nets are used in the Central District. The use of seine gear is restricted to the Chinitna Bay Subdistrict where they are employed only sporadically. Drift gill nets have accounted for 60% of the average annual salmon harvest since 1966 with set gill nets harvesting virtually all of the remainder (Appendix Tables 1-6).

Commercial salmon harvest statistics specific to gear type and area are available only back to 1954 (Appendix Table 7). Run-timing and migration routes utilized by all species overlap to such a degree that the commercial fishery is largely mixed-stock and mixed-species in nature. Typically, the Upper Cook Inlet harvest represents approximately 5% of the statewide catch.

In terms of their economic value, sockeye salmon (O. nerka) are by far the most important component of the catch followed in order by chum (O. keta), coho (O. kisutch), pink (O. gorbuscha) and chinook salmon (O. tshawytscha) (Appendix Table 8, Figure 2).

Herring

Commercial herring fishing began in Upper Cook Inlet in 1973 with a modest harvest of bait-quality fish along the east side of the Central District and has expanded in recent years to include small-scale sac roe fisheries in Chinitna and Tuxedni Bays (Appendix Table 9). The total herring harvest has averaged less than 400 tons having an exvessel value below $200,000, one of the smallest herring fisheries in the state.

Because the glacial waters of Upper Cook Inlet preclude the use of aerial surveys to estimate biomass of herring stocks, the management approach utilized has necessarily departed from the standard techniques of the more traditional herring fisheries. Present management policy allows for modest increases in harvest levels on a yearly basis, monitoring catches for shifts in age

composition, and establishing harvest levels that appear to be sustainable. Gill nets are the only legal gear for herring in Upper Cook Inlet with set gill nets being used almost exclusively. Harvests are generally concentrated in the Clam Gulch area (bait herring) and in the Snug Harbor and Magnetic Island areas of Tuxedni Bay and near Clam Cove and Camp Point in Chinitna Bay (roe herring).

Razor Clams

The commercial harvest of razor clams from Upper Cook Inlet beaches dates back to 1919. Harvest levels have fluctuated from no fishery for as many as eight consecutive years to production in excess of half a million pounds (live weight) in 1922 (Appendix Table 10). The sporadic nature of the fishery has been a function of limited market opportunities rather than limited availability of the resource.

Razor clams are present in many areas of Cook Inlet with particularly dense concentrations occurring near Polly Creek on the western shore and from Clam Gulch to Ninilchik on the eastern shore. The eastern shoreline has been set aside for sport harvest only since 1959 and all commercial harvests since that time have come from the west shore, principally from the Polly Creek area. A large portion of the the Polly Creek beach is approved for the harvest of clams for the human food market. Bait clams may be taken only outside of this approved area. No size restrictions or overall harvest limits are in place for any area. Virtually all of the commercial harvest has come by hand-digging. Current regulations allow the use of mechanical harvesters (dredges) south of Spring Point or within a one mile section of the Polly Creek beach. Numerous attempts to develop feasible dredging operations have been largely unsuccessful due to excessive breakage or limited resources in the area open to this gear.

1986 COMMERCIAL SALMON FISHERY

The 1986 commercial harvest of 7.9 million salmon in Upper Cook Inlet is the highest ever recorded for this fishery. Although no single species was taken in record numbers, excellent contributions from all species combined to produce an estimated exvessel value of $44.9 million, also a record. The Commercial Fisheries Entry Commission issued 614 drift gill net permits (71% Alaska residents) and 758 set gill net permits (90% Alaska residents), a slight increase over 1985 (Appendix Table 11).

Two significant regulatory changes were enacted by the Board of Fisheries prior to the 1986 season. The first directed chinook salmon commercial fishery since 1972 took place in the Northern District with an early season opening on 2 June. Fishing was permitted for six hours on each of three Mondays. The Board also acted to create a special commercial harvest area at the mouth of the Kasilof River in anticipation of a large surplus of sockeye

salmon returning to that system. Although the return materialized at forecast levels, the traditional fisheries prove adequate for controlling escapement and no opening of the terminal harvest area occurred.

Prior to every salmon season, the staff issues a combination of forecasts and projections of expected salmon returns and harve to assist the industry in planning for the year. The sockeye salmon forecast return for 1986 was 5.2 million and the expecte harvest was 4.2 million (Table 1). Harvest projections for t remaining salmon species ranged from average to above-average levels.

Sockeye Salmon

The 1986 sockeye salmon harvest of 4.7 million was second only the record catch of 5.0 million in 1983 and was relatively cl to the forecast catch of 4.2 million. The exvessel value of sockeye salmon catch was estimated at $37.2 million or 83% of t total dollar value of the salmon fishery.

Management of the Upper Cook Inlet sockeye salmon fishery integrates information received from a variety of programs whic together provide an in-season model of the actual return. Th programs include offshore test fishing, stock separation, in-district test fishing, escapement enumeration by sonar and comparative analysis of historic commercial harvest and effor levels.

The offshore test fishing program employs a chartered gill net vessel fishing in a standardized manner along a transect cros Cook Inlet from Anchor Point to the Red River delta. The pur is to provide an in-season estimation of sockeye salmon run-strength by determining fish passage rates (computed by correlating the vessel's daily catch with subsequent commerci harvests and escapement) and fitting these rates to the appropriate run-timing profile. In 1986, the charter was award to the F/V Corrina Kay.

Use of scale pattern analysis to apportion commercial sockeye salmon catches to river-of-origin was first employed in Upper Cook Inlet in 1977 and has since become an integral part of t salmon management regime. Although this program is most effective in the post-season allocation of total return by rive system, in-season use is possible subject to several limitati Due to the sharp and late entry pattern of sockeye salmon entering the Susitna River, adequate escapement samples (i.e. scales from fish of known origin) used in constructing a stoc separation model are frequently unavailable. This occurred a in 1986 with insufficient Susitna River escapement samples available during a portion of the critical management period in mid-July. However, using the hypothesis that growth characteristics within a river system are to a certain extent consistent within a brood year, a model was devised based on four-year-old fish that returned the previous year (1985). T

model was then utilized to apportion in-season catches. Shortly after mid-July, it was possible to construct a model using current-year samples (Table 2).

An in-district test fishing program utilizes six to eight commercial drift gill net vessels to locate concentrations of sockeye salmon within the Central District during the interval separating commercial fishing periods. Because sockeye salmon migrate through the district in a fairly predictable pattern, knowledge of the locations of large concentrations of fish is important in assessing the progress of the fish toward their home rivers. Because this effort represents a fairly small sampling power, no estimates of abundance are generated. The program was not utilized in 1986 as fish abundance permitted a commercial fishing period frequency sufficient to monitor the progress of the sockeye salmon migration.

Use of hydroacoustic devices to quantify salmon escapement into glacial rivers was 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 except the Susitna River in 1986 with no significant problems observed (Table 3). The Susitna River was monitored by sonar in the Yentna River only due to budgetary restrictions and past problems with obtaining satisfactory estimates within the mainstem of the Susitna. An escapement goal of 100,000 to 150,000 sockeye salmon was established for the Yentna based on the historical proportion of the total Susitna escapement utilizing this tributary (King and Tarbox, 1987)

Upper Cook Inlet commercial catch statistics refined to gear type, area and date are available back to 1966. Recent computerization of these statistics make them extremely valuable for use in evaluating in-season fishery performance. The 1986 commercial catch by gear type and area can be found in Table 4 while catches by period and area are contained in Tables 5 through 13. A summary of emergency orders can be found in Table 14 and a summary of fishing periods by gear type and area in Table 15. Effort levels and trends are confirmed in-season by aerial survey (Table 16).

Sockeye salmon returning to the Crescent River on the west side of Cook Inlet are harvested primarily by the set net fishery in the surrounding Western Subdistrict. Early catches in this fishery and initial escapement counts were strongly indicative of a weak return and the fishing pattern was maintained at the base time of two periods per week. Unfortunately, mid-season budget reductions forced cessation of the Crescent River counting program on 15 July. Shortly thereafter, catches increased substantially but, with no way to determine escapement, fishing time was increased only marginally. The Western Subdistrict harvest of 75,000 sockeye salmon was nearly 50% above the long-term average but less than half of the record catch that occurred the previous year. Based on past observations of exploitation

rates for this fishery, escapement into the Crescent River was probably within the goal range of 50,000-100,000.

Initial commercial catches in the remainder of the Inlet were typically light in late June. The Kasilof River escapement rate rose slightly above average by 30 June and the regulatory provision for an earlier starting date for the set nets south of mid-Kalifonsky Beach (hereafter, the Blanchard Line) was invoked when the cumulative escapement reached the required 50,000 on 3 July. The southern nets therefore fished a twelve hour period on 3 July and then joined the rest of the east side nets in the regular season opening period on 4 July.

Fishing time in both the drift and set net fisheries was held at the base level (two 12-hour weekly periods) until 13 July. Catches had been building considerably along the lower east side beach and the Kasilof River escapement counts sharply increased on 10 July. The east side set nets south of the Blanchard Line were opened at 4:00 p.m. Sunday, 13 July and remained open through Tuesday evening, 15 July. To aid in the harvest, the area south of the Blanchard Line and within 3 miles of shore was opened to drift gill netting for 12 hours on 15 July. The drift catch was substantial (80,000) but line violations were common and the catch consisted of less than 50% fish bound for the Kasilof. The southern set nets were opened frequently through 20 July. Drift periods and all other set net areas were held to the base level during this time period. Additional limited drift openings (similar to those on 15 July) were allowed on 19 and 20 July.

The status of the overall sockeye salmon return by 20 July remained unresolved. Test fishing and drift catches strongly indicated a return near forecast strength and in-season stock contribution data, although far from definitive, indicated good returns to both the Kenai and Susitna Rivers. Adequate escapement had already been observed in the Kasilof to alleviate any concern for that system. No appreciable escapement had yet occurred in the Kenai and no significant numbers of fish had moved into the Northern District. Fishing periods were maintained at base levels except for the southern east side set nets which remained open but only within 1/2 mile of shore to minimize any significant interception of Kenai River stocks. Fish began moving into the Kenai on 21 July and good catches also occurred in the Northern District during that day's fishing period. No fishing was permitted 23 and 24 July and, with the Kenai escapement well below desired levels, the regular period scheduled for 25 July was closed for drift gill netting and the east side set nets. The Kenai River escapement improved sufficiently to allow fishing to resume on 26 July. The southern east side set nets were extended through 28 July to continue taking Kasilof River stocks. An additional period was opened throughout most of the inlet on 30 July as all monitored stocks appeared to be progressing satisfactorily toward desired escapement levels. Set netting along the east side of the Central District was permitted continuously from 30 July through

3 August and the drift fleet allowed additional time along the east side beach on 31 July, 2 August and 3 August. Management emphasis shifted to other species beginning 4 August.

With few exceptions, escapement goals were met or exceeded in all monitored systems (Appendix Table 12, Figures 3-8). The Kasilof River escapement totaled 276,000, slightly above the 150,000-250,000 goal. The Kenai River escapement goal of 350,000-500,000 was exceeded by a slight margin with a final estimated count of 501,000. Both fiscal and physical problems precluded sonar operations on the mainstem Susitna River but the count of 92,000 on the Yentna River (an important tributary) was close to the established goal of 100,000-150,000. The 30,000 fish counted in Fish Creek (Knik Arm) was well short of the 50,000 fish goal.

Chum Salmon

The 1986 harvest of 1.1 million chum salmon was the fourth best on record and nearly double the long-term average. The chum salmon catch was valued at $3.2 million or 7% of the total value of the salmon fishery. Approximately 89% of the catch occurred in the drift gill net fishery.

The major chum salmon stock harvested in Upper Cook Inlet originates from the Susitna River and the return overlaps to a great degree both in time and area with the return of the major sockeye salmon stocks. Management strategy is predicated on determination of relative run strength as indicated by catch-per-unit-effort (CPUE) data generated in the drift fishery. Immediately following the departure of the bulk of the sockeye salmon from the fishing grounds, drift fishing time is adjusted based on apparent run strength, harvest to date and the recent pattern of fishing permitted for the harvest of sockeye salmon.

By early August, sockeye salmon catches in the offshore areas of the Central District had tapered off and primary management emphasis was shifted to chum salmon. CPUE information accumulated by that time indicated an above-average return of chum salmon and an additional period was opened for drift gill netting on 6 August to increase the overall chum salmon harvest as well as finishing the harvest of any remaining surplus sockeye salmon. Chum salmon catches fell rapidly following this period and no further fishing adjustments were implemented directed at Susitna-bound stocks.

The chum salmon return to Chinitna Bay streams was managed similarly to past years. In accordance with Board policy, the bay was opened for all gear types by emergency order from the beginning of the season until mid-July. Only set net gear was allowed to fish for the remainder of July and catches indicated a fair return of chum salmon was occurring. Aerial surveys were conducted in the area in early August and escapement into Clearwater Creek reached satisfactory levels on 20 August. The bay was then opened to all gear types on each regular period for the remainder of the season. The Chinitna Bay chum salmon

harvest of 18,000 was below the long-term average for the area, indicating this run has not yet recovered fully from over-harvest in past years. Approximately 90% of the 1986 harvest was taken by set gill nets.

Coho Salmon

The 1986 harvest of 744,446 coho salmon is the second highest catch on record for Upper Cook Inlet, exceeded only by the 790,000 taken in 1982, and was better than double the long-term average. The coho salmon catch was valued at approximately $2.9 million and comprised 6.5% of the total value of the salmon fishery.

Initial catches of coho salmon in the drift gill net fishery in early July were substantially higher than any observed in the past. Abundance remained high with record catches taken on 11 July and again on 18 July. With the bulk of these fish presumably bound for the Susitna River and other Northern District drainages, it was unfortunate that the coho salmon did not move through the Central District at a normal rate. The first significant movement of fish out of the Central District did not occur until 20 July. The extended residence time allowed for higher than normal exploitation in the drift fishery and an extremely strong return was reduced to only average abundance by the time the return had moved north. Northern District catches were about equal to the long-term average and escapement into fresh water also appeared average.

The harvest of nearly 70,000 coho salmon in the east side set net fishery was well above the long-term average of 44,000, in part due to additional fishing time directed at sockeye and pink salmon harvest, although daily harvest levels were also indicative of a strong return. Although escapement in the Kenai River is not presently measureable, sport harvest figures indicate a good, though not exceptional, spawning population.

Coho salmon returns to the remaining areas of Cook Inlet were uniformly average and no manipulation of fishing times or areas was directed at altering harvest levels.

Pink Salmon

With a harvest of 1.3 million fish, the 1986 pink salmon return was substantially better than recent even-year runs, and slightl better than the long-term average of 1.25 million. Valued at $0.7 million, the pink salmon catch comprised only 1.6% of the overall value of the commercial catch.

In-season drift gill net CPUE figures were consistently unimpressive, due in large part to the relatively poor price being offered for pink salmon ($.10-$.15 per pound) and subsequent avoidance of pink salmon concentrations by fishermen seeking more valuable species. Although

escapement in the Susitna River is not directly measured, freshwater abundance appeared extremely good.

The pink salmon return to the Kenai River was of average strength and the catch, primarily in the east side set net fishery, was slightly above average. As in the Susitna River, Kenai River pink salmon escapement is not directly measured but appeared to be excellent.

Chinook Salmon

The harvest of 40,009 chinook salmon in 1986 was the highest observed in many years. The catch was valued at just under $1 million and represented 2% of the total value of the salmon fishery.

A major reason for the relatively large harvest was the return of a directed commercial fishery on Susitna River chinook salmon in the Northern District. Three weekly six-hour periods occurred on 2, 9 and 16 June. The total catch of 13,500 slightly exceeded the quota of 12,500 established for this fishery. Interest in the fishery was quite high with nearly all areas open being fully occupied with gear. Only one 35-fathom net having a maximum mesh size of 6 inches was allowed per permit and a minimum of 1,200 feet was required between nets. No net could be fished offshore of any other net. Almost 90% of the catch came from the west side of the district. Several buyers commented on the excellent quality of the fish harvested. Approximately 1,500 sockeye salmon were also harvested with about 60% taken on the east side.

The harvest of 20,762 chinook salmon in the Upper Subdistrict set gill net fishery is the highest recorded under the present season structure. The large catch appeared to be primarily the result of an extremely strong return of late-run Kenai River chinook salmon although steadily increasing amounts of gear (approximately 20% increase in 1986) likely also contributed to the larger catch. Appendix Table 13 documents the growth in gear levels in the Upper Subdistrict over the last twenty years.

Management Review and Recommendations

The return of a commercial fishery targeted on Susitna River chinook salmon, coupled with a 12,500 fish quota, certainly represents no biological threat to this stock but does pose problems for management in achieving this small quota with any degree of precision. As was the case this past season, the manager is faced with predicting catch levels with only two weekly fishing periods to gain an impression of run-timing inseason. Historical run-timing data is scarce, consisting only of weekly harvest results from the 1971-72 commercial catches and a limited amount of data gathered in past years from the Tyonek subsistence fishery. Highly variable weather conditions and the dramatic impact of tidal stage on the brief 6-hour periods combine to reduce management decisions to the level of modestly informed guesses. No solution is offered here, only the

observation that future harvest levels will be difficult to precisely control and significant deviations from the target level are likely to occur.

The relatively high (nearly half a million) catch of coho salmon by the drift fleet in 1986 generated a substantial amount of discord among sport anglers utilizing Northern District stocks primarily those bound for the Susitna River. Despite the high catch, escapement levels were fairly good as compared to the depressed levels of the early 1970's. Reduction of the drift catch without having a dramatic impact on the sockeye salmon harvest would have been impossible. Run-timing was virtually identical with major movements of both species through the Central District occurring at precisely the same times. No spatial separation was apparent with drifters targeting as much as possible on the considerably more valuable sockeye salmon concentrations. Again, no solutions or options are presented here, only the conclusion that this problem will recur with some frequency. A review of Northern District set net catches reveal that sockeye and coho salmon have peaked in abundance on identical dates in 13 of the last 21 years, testimony to the similarity in run-timing of these two species.

A rigorous analysis of the relationship between the numbers of spawners and resulting return of adults in Upper Cook Inlet's major sockeye salmon drainages indicated escapement goals appeared reasonable in all systems except for the Kenai River (Tarbox and Waltemyer, 1986). Utilizing a Ricker curve fit to known returns from known escapements yielded an empirical point goal of approximately 1,000,000 fish. Because many of the data points that drive the curve have been obtained in recent years and because juvenile survival currently appears to be above the level that is likely to be sustainable in the long term, raising the goal to 1,000,000 at this point in time would not be prudent. A change from the present goal of 350,000 - 500,000 to 400,000 - 700,000 will be in effect beginning with the 1987 season. With very large returns expected for the Kenai system in 1987 and 1988, this change should have a minimal effect on the overall commercial harvest. The modest change in the lower end of the goal range should help the commercial fishery weather an expected weak Kenai River return in 1989.

Minor System Escapement

A number of smaller systems or tributaries are monitored for escapement for a variety of purposes and this information has proven helpful in confirming general impressions of run-timing as well as tracking escapement trends in these significant streams. The Fisheries Rehabilitation, Enhancement and Developement (FRED) Division of the Department of Fish and Game, as an aid in evaluating the Big Lake Hatchery sockeye salmon program, operated a counting weir on Fish Creek from 14 July to 26 August. A total of 29,800 sockeye salmon were enumerated, with the peak daily count of 4,482 coming on 30 July and the midpoint of the escapement on 1 August. A total of 816 coho salmon passed

through the weir with an additional 1,350 counted downstream of the weir at the time of removal for a total escapement estimate of 2,166 (Table 17).

The Cook Inlet Aquaculture Association (CIAA) placed a weir across Packers Creek on Kalgin Island as part of an ongoing lake fertilization evaluation of Packers Lake. With the weir in place from 25 May through 5 September, a total of 29,604 sockeye salmon were counted with the highest daily count of 1,432 occurring on 8 August and the midpoint on 14 August (Table 18).

CIAA also placed a counting weir on Larson Creek in the Susitna River watershed to assist in a Larson Lake fertilization feasibility project. With the weir in place from 21 July to 26 August, 32,322 sockeye salmon were counted with both the highest daily count of 4,028 and the midpoint of the escapement occurring on 1 August (Table 19).

Prices, Average Weights and Quality

Average prices paid per pound for salmon in 1986 changed substantially from 1985. Most significant was the large increase in the price paid for sockeye salmon, which at $1.41 per pound, was up $.21 from the previous year. Chinook salmon sold for $.90 per pound (down $.30 from 1985) while coho, pink and chum salmon sold for $.60 (down $.10), $.15 (down $.05) and $.38 (down $.07) per pound, respectively (Appendix Table 14).

Average weights of the various species, calculated from fish ticket data, were not notably divergent from the long-term averages with the exception of chinook and sockeye salmon. The chinook salmon average of 25.84 pounds was 3.58 pounds below the long-term average, most likely due to the inception of the Northern District fishery for Susitna River fish. The sockeye salmon average of 5.78 pounds was 0.80 pounds below average and likely reflects the increasing importance of the smaller-sized Kasilof River stocks. A slight decrease in the size of Kenai River sockeye salmon was also noted in escapement samples. Coho, pink and chum salmon averaged 6.42, 3.71 and 7.47 pounds, respectively (Appendix Table 15).

Despite the record harvest of salmon, no undue delays were noted in the timely processing of fish. Some brief "logjams" occurred following peak fishing periods but none appeared substantial enough to affect quality. Ice-making capabilities of local processors has increased to the point that short-term holding of fish no longer presents a serious problem. A total of 33 firms purchased Upper Cook Inlet fishery products in 1986 (Table 20).

Outlook for 1987

The formal forecast of the the Upper Cook Inlet sockeye salmon return for 1987 indicates a total return estimate of 5.8 million fish which, after subtracting 1 million for escapement, leaves 4.8 million fish for harvest. The forecast returns by river

system are: Kenai River - 3.5 million, Kasilof River - 1.2 million, Susitna River - 960,000, and the Crescent River - 127,000. Recent experiences with very high marine survivals for Kasilof River sockeye salmon smolt indicate a good possibility of a return to that system approaching 2.5 million.

Based solely on impressions of parent-year run strength, the expected harvest levels for chum, coho, pink and chinook salmon are 1 million, 400,000, 150,000 and 35,000, respectively. Harvest predictions for these species are based on relatively scarce data and are subject to large error.

COMMERCIAL HERRING FISHERY

The 1986 fishery began by regulation on 15 April. The roe herring fishery in Tuxedni Bay had the first significant catches on 30 April and continued with low but increasing roe maturity through 8 May when the bay was closed by emergency order. The harvest was approximately 160 tons with mature roe averaging 10% with some immature fish being turned away during the first few days of the fishery. Samples taken from the catch indicate a harvest comprised primarily of Age V and VI fish (58.7%) and a sex ratio of 1.12:1 female to male (Table 21).

Effort shifted south to Chinitna Bay where herring had been present in modest abundance for at least a week. Roe percentages were below 8% during the first few days of the fishery and reached 9-10% by 12 May. High winds hampered fishing efforts for several days. After eight days of fishing, only 35 tons had been harvested with roe percentages being very spotty rather than steadily increasing as had been observed in the past. On 18 May, herring abundance increased substantially and 80 tons of 10% mature roe content herring were harvested in 24 hours. Chinitna Bay was closed at 2:00 p.m. 19 May with the total harvest reaching 111 tons. Sampling indicated the catch was comprised primarily of Age IV, V annd VI fish (83.3%) and a male to female ratio of 1.12:1 (Table 22).

Tuxedni Bay was reopened on 17 May to allow additional harvest of later-entering fish. The fishery was closed for the final time on 20 May after the harvest of an additional 32 tons bringing the total harvest for Tuxedni Bay to 192 tons. The latter segment of the harvest consisted of a higher proportion of younger fish (19.3% Age IV) having a male to female ratio of 1.15:1 (Table 23).

The bait herring fishery produced only light catches on the southern beaches through April but catches picked up in early May and peaked at mid-month. Rapidly declining effort and catch with increasing salmon interception led to a closure of the fishery on 31 May after the harvest of 184 tons. No samples were taken from this catch.

Generally high prices were reported for both roe and bait herring with 10% roe herring bringing as much as $1,100 per ton while

limited bait markets were paying up to $600 per ton. The exvessel value of the herring fishery was estimated to be approximately $400,000.

COMMERCIAL RAZOR CLAM FISHERY

The 1986 harvest of 258,632 pounds of razor clams was taken almost entirely from the Crescent River bar area with a small amount harvested by mechanical dredge near Polly Creek. Over 90% of the harvest was directed into the human consumption market with the remainder, mostly broken clams, sold for bait. The dredge harvest came during January with the remainder being hand-dug during June, July and August. Approximately 30 diggers participated in the fishery. Lack of funding prevented the acquisition of any biological information from the harvest. Clam abundance in the harvest area appears to have declined slightly, according to reports from diggers familiar with the area. The 1986 harvest level was approximately equal to the annual harvest observed for the past few years.

SUBSISTENCE AND PERSONAL USE FISHEERIES

The passage of a bill adding new wording to the subsistence priority law by the Alaska Legislature removed the liberal construction applied to subsistence fisheries in 1985 and restored the validity of the pre-Madison regulations. As a result, Cook Inlet subsistence and personal use fisheries for 1986 were similar to those in effect for 1984 and harvest levels were generally similar to those observed in 1984 (Appendix Table 16).

Tyonek Subsistence Fishery

Budget reductions precluded on-site monitoring of this fishery by Commercial Fisheries Division personnel as had been customary in the past. Harvest information provided by the Subsistence Division indicates a catch of 1,674 chinook, 198 sockeye, 210 coho, 45 pink and 44 chum salmon (Foster, 1987). A total of 101 permits were issued.

Kasilof Personal Use Gill Net Fishery

This was the fifth year for this popular fishery located in the marine waters adjacent to the Kasilof River terminus. The area open to fishing was congested, particularly during the first days of the fishery, which began 21 June. Both catch and effort were highest on the first day of the fishery (Table 24). After being open for 6 days, the fishery was closed the evening of 26 June. An estimated 9,609 sockeye and 168 chinook salmon were taken. Harvest estimates were generated by counting all nets fishing and calculating an average catch per net from interviews of fishermen departing the beach. This fishery continues to generate friction among participants due to congestion but more people are opting

to deploy their nets from small skiffs and avoid the competition for beach sites.

Fall Coho Salmon Fishery

The fishery took place over the last three weekends in September along the eastern shoreline of Cook Inlet from the Kasilof River north to Point Possession. Fishing was permitted from noon Saturday to noon Sunday each weekend. A total of 892 permits were issued, nearly a three-fold increase over 1985. The fishery remained open for all three weekends with the final estimated catch of 2,422 coho salmon falling just short of the 2,500 quota established by the Board (Table 25). Negligible numbers of other species were taken. The most popular areas for fishing were on Kalifonsky and lower Salamatof Beaches with virtually no effort observed north of Boulder Point.

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Table 1. Commercial salmon harvest projections and subsequent harvest by species, Upper Cook Inlet, 1986.

Species	Harvest Projection	Actual Harvest
Chinook	30,000 - 35,000	40,009
Sockeye	4,200,000	4,739,724
Coho	400,000 - 500,000	744,446
Pink	1,000,000 - 1,500,000	1,301,913
Chum	800,000 - 1,000,000	1,116,759

Table 2. 1986 in-season sockeye salmon age 1.3 run composition estimates.

Model: 1985 Age 1.2 Susitna 1985 Age 1.2 Kenai
1985 Age 1.2 Kasilof

Fishery	Date	% Susitna	% Kenai	% Kasilof
Drift	6/27	22.9	0	77.1
	6/30	24.4	0	75.6
	7/04	8.2	17.2	74.6
	7/07	27.4	19.0	53.6
	7/11	12.0	26.3	61.7
	7/14	67.3	21.2	11.5
	7/15	0.9	53.2	45.9
	7/18	38.7	25.1	36.2
Coho/Ninilchik	7/21		35.3	64.7
	7/22		73.5	26.5

Data Source: Waltemyer, pers. comm.

Table 3. Daily sockeye salmon escapement for selected Upper Cook Inlet streams.

	Kasilof River		Kenai River		Yentna River		Crescent River	
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
prior to 6/13	10,244	10,244		0		0		0
06/13	1,127	11,371		0	0	0	0	0
06/14	1,128	12,499		0	0	0	0	0
06/15	787	13,286		0	0	0	0	0
06/16	1,307	14,593		0	0	0	0	0
06/17	1,577	16,170		0	0	0	0	0
06/18	916	17,086		0	0	0	0	0
06/19	1,087	18,173		0	0	0	0	0
06/20	701	18,874		0	0	0	0	0
06/21	672	19,546		0	0	0	0	0
06/22	620	20,166	259	259	0	0	0	0
06/23	322	20,488	607	866	0	0	0	0
06/24	293	20,781	478	1,344	0	0	2	2
06/25	466	21,247	395	1,739	0	0	0	2
06/26	622	21,869	196	1,935	0	0	6	8
06/27	742	22,611	313	2,248	0	0	72	80
06/28	862	23,473	552	2,800	0	0	362	442
06/29	2,639	26,112	358	3,158	98	98	346	788
06/30	7,164	33,276	257	3,415	61	159	850	1,638
07/01	8,918	42,194	512	3,927	51	210	1,300	2,938
07/02	7,417	49,611	440	4,367	50	260	2,192	5,130
07/03	5,077	54,688	570	4,937	49	309	2,264	7,394
07/04	4,754	59,442	507	5,444	59	368	663	8,057
07/05	3,612	63,054	386	5,830	48	416	947	9,004
07/06	4,478	67,532	629	6,459	57	473	1,542	10,546
07/07	3,377	70,909	587	7,046	61	534	1,478	12,024
07/08	1,078	71,987	212	7,258	62	596	746	12,770
07/09	2,335	74,322	132	7,390	52	648	1,002	13,772
07/10	5,317	79,639	92	7,482	63	711	982	14,754
07/11	9,583	89,222	281	7,763	87	798	1,064	15,818
07/12	3,652	92,874	434	8,197	93	891	1,751	17,569
07/13	25,845	118,719	975	9,172	79	970	1,303	18,872
07/14	19,587	138,306	10,462	19,634	67	1,037	620	19,492
07/15	3,155	141,461	6,138	25,772	223	1,260	893	20,385
07/16	4,232	145,693	4,781	30,553	806	2,066		
07/17	4,357	150,050	5,788	36,341	426	2,492		
07/18	4,951	155,001	6,535	42,876	777	3,269		
07/19	3,709	158,710	8,156	51,032	481	3,750		
07/20	3,135	161,845	5,513	56,545	145	3,895		
07/21	3,999	165,844	30,804	87,349	99	3,994		
07/22	2,707	168,551	47,390	134,739	836	4,830		
07/23	2,082	170,633	26,606	161,345	10049	14,879		
07/24	2,515	173,148	30,222	191,567	2876	17,755		
07/25	24,774	197,922	44,552	236,119	5549	23,304		
07/26	21,440	219,362	73,598	309,717	10882	34,186		
07/27	3,025	222,387	55,980	365,697	11017	45,203		
07/28	1,709	224,096	26,790	392,487	10626	55,829		
07/29	4,677	228,773	16,559	409,046	13417	69,246		
07/30	16,410	245,183	22,961	432,007	7304	76,550		
07/31	7,797	252,980	17,317	449,324	2686	79,236		
08/01					1966	81,202		
08/02					2394	83,596		
08/03					812	84,408		
08/04					655	85,063		
08/05					1022	86,085		
08/06					430	86,515		
08/07								
		275,963		501,157		92,077		20,385

Note: Estimated escapement after cessation of operations added as follows:
Kasilof - 22,983
Kenai - 51,833
Yentna - 5,562

Crescent operations suspended for lack of funding and total shown not meant to reflect total escapement.

Table 4. Commercial salmon catch by area and gear type, Upper Cook Inlet, 1986.[1]

Area/Gear	Chinook	Sockeye	Coho	Pink	Chum	Total
DRIFT	1,852	2,771,750	498,927	613,439	977,687	4,883,655
CENTRAL SET						
Upper	20,762	1,676,787	77,922	526,167	6,674	2,308,312
Kalgin Island	572	60,943	39,543	10,744	2,227	114,029
Kustatan	292	13,307	13,062	11,980	1,088	39,729
Western	1,244	74,836	25,126	3,906	19,879	124,991
Chinitna Bay	15	5,029	6,557	418	16,329	28,348
Subtotal	22,885	1,830,902	162,210	553,215	46,197	2,615,409
NORTHERN SET						
Eastern	2,013	44,384	19,238	19,387	8,964	93,986
General	13,259	92,688	64,071	115,872	63,911	349,801
Subtotal	15,272	137,072	83,309	135,259	72,875	443,787
SEINE	0	0	0	0	0	0
GRAND TOTAL	40,009	4,739,724	744,446	1,301,913	1,116,759	7,942,851

[1] Preliminary in-season catches.

Table 5. Catch by period and species for drift gillnets in the Central District, 1986.

Date	Chinook	Sockeye	Coho	Pink	Chum
627	117	23564	1803	72	1536
630	111	41079	9117	79	7461
704	175	142915	39286	247	25129
707	72	216191	44347	1446	20821
711	267	369198	94673	22290	70691
714	159	378712	63705	47711	137911
715	55	79633	3154	2807	4239
718	52	500882	112275	189845	301188
719	91	103452	1799	3923	2459
720	44	25247	689	1233	1047
721	250	329923	29532	56278	114572
726	160	187992	15549	38227	99604
728	20	166327	22990	44053	75114
730	90	91558	9465	37908	32437
731	25	10541	899	8193	1199
801	68	26200	5568	19896	12713
802	46	8524	1256	6684	3160
803	12	7506	1316	7619	2381
804	9	32082	12604	49670	39166
806	14	21793	9873	31468	20862
808	0	448	272	1361	517
809	2	2131	770	7978	1884
810	1	1074	761	7229	3393
811	9	4106	8130	26163	14982
815	1	419	1041	857	893
818	1	133	2071	145	364
822	0	104	4085	42	1477
825	0	3	909	12	211
829	0	9	658	2	224
901	1	3	325	1	51
908	0	1	5	0	1
Total	1852	2771750	498927	613439	997687

Table 6. Catch by period and species for set gill nets in the Upper Subdistrict, 1986.

Date	Chinook	Sockeye	Coho	Pink	Chum
703	1186	23712	149	8	2
704	689	14109	165	12	6
707	1007	23383	73	101	2
711	1691	31513	252	970	83
713	1257	90084	638	467	12
714	2039	150204	2045	3535	191
715	1139	32137	539	994	90
717	1399	75785	713	2450	21
718	916	100610	936	3135	27
719	1260	129685	1034	3225	23
720	503	87025	872	2258	31
721	658	216914	2645	9768	236
722	364	58985	1641	7208	103
725	46	42909	410	1036	35
726	1279	239101	3927	16915	1028
727	843	48417	2044	9719	382
728	718	31822	2150	11684	1638
730	480	60151	3860	11168	112
731	466	42469	3918	15265	83
801	366	44323	5186	28584	164
802	396	25607	4128	39222	199
803	393	17626	4394	38173	308
804	487	23389	7994	54661	264
806	273	25754	8548	79240	838
808	179	10825	3429	36419	144
809	266	10767	4007	50478	179
810	147	8059	4326	41726	270
811	192	6913	5089	46745	127
815	123	4509	2810	11001	76
Total	20762	1676787	77922	526167	6674

Table 7. Catch by period and species for set gill nets in the Kalgin Island Subdistrict, 1986.

Date	Chinook	Sockeye	Coho	Pink	Chum
616	27	29	0	0	0
627	81	4027	213	0	2
630	121	3956	471	4	23
704	52	1119	962	1	6
707	97	780	3200	16	0
711	48	453	818	136	6
714	29	1399	3219	292	38
718	41	6108	7068	3308	20
721	18	4994	3519	400	108
725	3	5004	1430	370	365
726	5	2471	983	325	144
728	6	3786	604	1527	205
730	1	3095	371	117	97
801	1	3093	432	207	31
802	0	97	65	20	2
803	0	417	344	74	6
804	10	5744	2707	982	487
806	14	3328	1876	726	73
808	1	1419	236	26	12
811	15	3132	5149	1954	319
815	1	2726	507	145	51
818	0	1490	788	55	33
822	1	1063	1018	39	63
825	0	603	708	11	36
829	0	369	1381	7	20
901	0	130	733	1	59
905	0	91	565	0	20
908	0	20	176	1	1
Total	572	60943	39543	10744	2227

Table 8. Catch by period and species for set gill nets in the Kustatan Subdistrict, 1986.

Date	Chinook	Sockeye	Coho	Pink	Chum
627	110	232	64	0	0
630	98	428	67	0	1
704	36	279	280	1	0
707	10	495	229	5	43
711	13	3153	960	302	580
714	4	477	1421	280	0
718	3	112	322	33	0
721	1	1241	2082	306	0
725	1	2180	1010	282	51
726	1	1695	1644	446	74
728	5	1005	1233	265	4
730	0	329	692	17	3
801	0	340	847	27	19
804	1	191	97	70	20
806	2	606	892	9602	69
808	1	154	101	5	32
811	3	248	563	275	83
815	1	104	334	55	38
818	2	18	139	9	48
822	0	16	61	0	13
825	0	3	15	0	9
829	0	1	9	0	1
Total	292	13307	13062	11980	1088

Table 9. Catch by period and species for set gill nets in the Western Subdistrict, 1986.

Date	Chinook	Sockeye	Coho	Pink	Chum
616	520	440	1	0	2
620	74	413	6	3	2
623	26	871	7	0	5
627	154	2755	151	1	15
630	205	2972	389	6	65
704	78	3850	274	3	130
707	40	2401	498	7	120
711	52	2156	527	9	132
714	31	6096	1362	33	135
718	16	6359	1897	349	778
721	8	9607	2762	42	697
723	8	5406	834	32	387
725	3	8596	2379	59	1055
728	3	7048	1269	215	2941
730	7	4244	931	70	2758
801	4	2928	1382	189	2330
804	4	3643	2166	811	2653
806	5	2782	1940	324	2966
808	0	325	199	15	140
811	3	1050	1828	1592	982
815	2	452	800	70	657
818	0	167	790	31	248
822	0	172	1117	25	354
825	1	62	426	6	178
829	0	22	536	5	78
901	0	19	304	9	69
905	0	0	223	0	2
908	0	0	128	0	0
Total	1244	74836	25126	3906	19879

Table 10. Catch by period and species for set gill nets in the Chinitna Bay Subdistrict, 1986.

Date	Chinook	Sockeye	Coho	Pink	Chum
627	3	691	8	0	7
630	7	347	7	5	28
704	0	353	9	3	168
707	0	1104	14	2	114
711	0	665	18	25	302
714	2	1051	45	48	705
718	0	103	45	45	528
721	0	203	172	32	1327
725	0	25	52	23	796
728	0	41	69	51	1905
801	0	31	110	35	1170
804	0	13	520	41	1276
808	0	4	334	10	1591
811	0	1	624	23	3358
815	0	11	354	38	904
818	0	348	830	21	994
822	3	27	1056	2	710
825	0	6	833	6	187
829	0	2	848	8	58
901	0	1	506	0	153
905	0	2	103	0	48
Total	15	5029	6557	418	16329

Table 11. Catch by period and species for set gill nets in the Eastern Subdistrict (Northern District), 1986.

Date	Chinook	Sockeye	Coho	Pink	Chum
602	292	60	0	0	0
609	1147	454	0	0	0
616	341	363	0	0	1
627	132	308	13	0	1
630	49	262	21	0	0
704	15	662	164	1	2
707	6	306	98	2	1
711	8	530	34	155	2
714	4	8182	2687	3315	737
718	1	520	62	113	3
721	0	8677	1128	3191	597
725	4	12617	2154	4702	1268
728	1	2815	1050	3121	1843
730	3	4160	1478	1945	1166
801	1	1829	1996	1766	2450
804	2	219	153	183	110
806	1	890	666	362	202
808	0	163	64	23	25
811	1	155	130	61	53
815	1	346	2032	234	183
818	1	489	1845	147	91
822	0	242	1421	51	45
825	3	59	360	12	35
829	0	51	573	2	78
901	0	18	561	1	28
905	0	7	470	0	22
908	0	0	78	0	21
Total	2013	44384	19238	19387	8964

Table 12. Catch by period and species for set gill nets in the General Subdistrict (Northern District), 1986.

Date	Chinook	Sockeye	Coho	Pink	Chum
602	3474	50	0	0	0
609	3975	289	0	0	0
616	4314	306	0	0	0
627	745	168	109	2	39
630	332	68	61	0	1
704	178	307	632	3	33
707	38	69	334	4	3
711	40	99	337	118	13
714	40	5492	14886	8165	3967
718	14	617	416	326	60
721	27	18233	12177	27697	6599
725	29	34253	12508	29843	17312
728	17	10636	3013	25554	10314
730	13	12137	8991	12814	16761
801	4	6750	6156	8085	4676
804	4	944	637	1560	856
806	5	1296	994	1209	1328
808	4	255	232	105	212
811	0	268	364	160	279
815	4	294	1000	171	444
818	1	105	271	34	536
822	0	28	249	13	180
825	1	7	200	5	98
829	0	13	147	4	111
901	0	3	158	0	75
905	0	1	199	0	14
Total	13259	92688	64071	115872	63911

Table 13. Catch by period and species for all gear types in Upper Cook Inlet, 1986.

Date	Chinook	Sockeye	Coho	Pink	Chum
602	3766	110	0	0	0
609	5122	743	0	0	0
616	5202	1138	1	0	3
620	74	413	6	3	2
623	26	871	7	0	5
627	1342	31745	2361	75	1600
630	923	49112	10133	94	7579
703	1186	23712	149	8	2
704	1223	163594	41772	271	25474
707	1270	244729	48793	1583	21104
711	2119	407767	97619	24005	71809
713	1257	90084	638	467	12
714	2308	551613	89370	63379	143684
715	1194	111770	3693	3801	4329
717	1399	75785	713	2450	21
718	1043	615311	123021	197154	302604
719	1351	233137	2833	7148	2482
720	547	112272	1561	3491	1078
721	962	589792	54017	97714	124136
722	364	58985	1641	7208	103
723	8	5406	834	32	387
725	86	105584	19943	36315	20882
726	1445	431259	22103	55913	100850
727	843	48417	2044	9719	382
728	770	223480	32378	86470	93964
730	594	175674	25788	64039	53334
731	491	53010	4817	23458	1282
801	444	85494	21677	58789	23553
802	442	34228	5449	45926	3361
803	405	25549	6054	45866	2695
804	517	66225	26878	107978	44832
806	314	56449	24789	122931	26338
808	185	13593	4867	37964	2673
809	268	12898	4777	58456	2063
810	148	9133	5087	48955	3663
811	223	15873	21877	76973	20183
815	133	8861	8878	12571	3246
818	5	2750	6734	442	2314
822	4	1652	9007	172	2842
825	5	743	3451	52	754
829	0	467	4152	28	570
901	1	174	2587	12	435
905	0	101	1560	0	106
908	0	21	387	1	23
Total	40009	4739724	744446	1301913	1116759

Table 14. Emergency order summary, Upper Cook Inlet commercial salmon fishery, 1986.

E.O. Number	Effective Date	Description	Reason
2S-06-86	6/25	Opened the Chinitna Bay Subdistrict to drift gillnetting and seining through July 14.	Board of Fisheries policy allowing the use of all gear types prior to the arrival of local chum stocks.
2S-07-86	7/03	Opened set gillnetting in the Upper Subdistrict south of mid-Kalifonsky Beach and within 1 1/2 miles of the Kenai Peninsula shoreline from 7:00 A.M. to 7:00 P.M.	Regulation defining opening dates for fisheries based on escapement levels.
2S-08-86	7/13	Opened same area as described for 2S-07-86 from 4:00 P.M. 7/13 until 7:00 A.M. 7/14.	Reduce the escapement rate of sockeye salmon in the Kasilof River.
2S-09-86	7/14	Opened area described in 2S-07-86 from 7:00 P.M. 7/14 until 7:00 P.M. 7/15 and drift gillnetting along the same length of beach within 3 miles of the shoreline from 7:00 A.M. to 7:00 P.M. 7/15.	Same as above.
2S-10-86	7/16	Opened set gillnetting in the area described in 2S-07-86 from 7:00 P.M. 7/16 until 7:00 A.M. 7/18.	Same as above.
2S-11-86	7/18	Opened set gillnetting in the area described in 2S-07-86 from 7:00 P.M. 7/18 until 9:00 P.M. 7/19 and drift gillnetting as described in 2S-09-86 from 12:00 Noon to 9:00 P.M. 7/19.	Same as above
2S-12/86	7/19	Opened set gillnetting in the area described in 2S-07-86 from 9:00 P.M. 7/19 until 7:00 A.M. 7/21 and drift gillnetting as described in 2S-09-86 from 7:00 A.M. to 7:00 P.M. 7/20.	Same as above.
2S-13-86	7/21	Opened set gillnetting in the Upper Subdistrict south of mid-Kalifonsky Beach and within 1/2 mile of shore from 7:00 P.M. 7/21 until 7:00 P.M. 7/22.	Same as above, seaward reduction to reduce Kenai River sockeye catch.

- Continued -

Table 14, continued. Emergency order summary, Upper Cook Inlet commercial salmon fishery, 1986.

E.O. Number	Effective Date	Description	Reason
25-14-86	7/23	Opened set gillnetting in the Western Subdistrict within 5 miles of the western shoreline from 7:00 A.M. to 7:00 P.M. 7/23.	Strong catches indicated a harvestable surplus of Crescent River sockeye salmon.
25-15-86	7/25	Closed set gillnetting in the Upper Subdistrict and drift gillnetting throughout the Central District on 7/25 from 7:00 A.M. to 7:00 P.M.	Lagging escapement of sockeye salmon into the Kenai River.
25-16-86	7/25	Opened set gillnetting in the area described in 25-13-86 from 7:00 P.M. 7/25 until 7:00 A.M. 7/26 and opened drift and set gillnetting in all areas of the Central District except the Chinitna Bay Subdistrict from 7:00 A.M. to 7:00 P.M. 7/26.	Improved escapement rates in the Kasilof and Kenai Rivers.
25-17-86	7/25	Amended the closed waters area at the mouth of the Kenai River to run from northern setnet marker to river entrance buoy to southern setnet markers.	To ensure adequate sockeye salmon escapement and to minimize interception of chinook and coho salmon.
25-18-86	7/26	Opened set gillnetting in the Upper Subdistrict south of Mid-Kalifonsky Beach and within 1 1/2 miles of the shoreline from 7:00 P.M. 7/26 to 7:00 A.M. 7/27 and continued with the seaward limit reduced to 1/2 mile from 7:00 A.M. 7/27 until 7:00 A.M. 7/28.	To reduce the escapement rate of sockeye salmon in the Kasilof River.
25-19-86	7/30	Opened set and drift gillnetting throughout Upper Cook Inlet except the Chinitna Bay Subdistrict from 7:00 A.M. to 7:00 P.M. 7/30.	To reduce escapement rates of sockeye salmon in all monitored systems.
25-20-86	7/30	Opened set gillnetting in the Upper Subdistrict within 1 1/2 miles of the shoreline from 7:00 P.M. 7/30 until 7:00 A.M. 8/01 and drift gillnetting east of a line from the East Foreland to Cape Ninilchik from 7:00 A.M. to 7:00 P.M. 7/31.	To reduce escapement rates of sockeye salmon into the Kenai and Kasilof Rivers.

- Continued -

Table 14, continued. Emergency order summary, Upper Cook Inlet commercial salmon fishery, 1986.

E.O. Number	Effective Date	Description	Reason
2S-21-86	8/01	Opened set gillnetting in the Upper Subdistrict from 7:00 P.M. 8/01 until 7:00 A.M. 8/04 and drift gillnetting east of a line from the East Foreland to Cape Ninilchik from 7:00 A.M. to 7:00 P.M. on 8/02 and 8/03.	To reduce escapement rate of sockeye salmon into the Kenai and Kasilof Rivers.
2S-22-86	8/06	Opened set and drift gillnetting throughout Upper Cook Inlet except the Chinitna Bay Subdistrict from 7:00 A.M. to 7:00 P.M. 8/06.	To harvest surplus sockeye, pink and chum salmon in all monitored streams except Chinitna Bay.
2S-23-86	8/08	Opened set gillnetting in the Upper Subdistrict within 1 1/2 miles of the shoreline from 7:00 P.M. 8/08 until 7:00 A.M. 8/11 and drift gillnetting east of a line from the East Foreland to Cape Ninilchik from 7:00 A.M. to 7:00 P.M. on 8/09 and 8/10.	To harvest surplus Kenai River pink salmon as well as remaining Kenai and Kasilof River sockeye salmon.
2S-24-86	8/22	Opened drift gillnetting and seining in the Chinitna Bay Subdistrict on all remaining regular periods.	Chum salmon escapement goals in Chinitna Bay streams were achieved.

Table 15. Commercial salmon fishing periods, Upper Cook Inlet, 1986.

Date	Day	Time	Set	Drift
6/02	Mon.	0700-1300	Northern District	
6/09	Mon.	0700-1300	Northern District	
6/16	Mon.	0700-1300	Northern District, Western	
		1300-1900	Western	
6/20	Fri.	0700-1900	Western	
6/23	Mon.	0700-1900	Western	
6/27	Fri.	0700-1900	All except Upper	All
6/30	Mon.	0700-1900	All except Upper	All
7/03	Thur.	0700-1900	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
7/04	Fri.	0700-1900	All	All
7/07	Mon.	0700-1900	All	All
7/11	Fri.	0700-1900	All	All
7/13	Sun.	1600-2400	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
7/14	Mon.	0000-0700	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
		0700-1900	All	All
		1900-2400	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
7/15	Tues.	0000-0700	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
		0700-1900	Upper south of mid K-Beach within 1 1/2 miles of shoreline	South of mid K-Beach within 3 miles
7/16	Wed.	1900-2400	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
7/17	Thur.	0000-2400	Upper south of mid K-Beach within 1 1/2 miles of shoreline	

- Continued -

Table 15, continued. Commercial salmon fishing periods, Upper Cook Inlet, 1986.

Date	Day	Time	Set	Drift
7/18	Fri.	0000-0700	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
		0700-1900	All	All except Chinitna Bay
		1900-2400	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
7/19	Sat.	0000-1200	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
		1200-2100	Upper south of mid K-Beach within 1 1/2 miles of shoreline	South of mid K-Beach within 3 miles
		2100-2400	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
7/20	Sun.	0000-0700	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
		0700-1900	Upper south of mid K-Beach within 1 1/2 miles of shoreline	South of mid K-Beach within 3 miles
		1900-2400	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
7/21	Mon.	0000-0700	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
		0700-1900	All	All except Chinitna Bay
		1900-2400	Upper south of mid K-Beach within 1/2 mile of shoreline	
7/22	Tues.	0000-1900	Upper south of mid K-Beach within 1/2 miles of shoreline	
7/23	Wed.	0700-1900	Western	
7/25	Fri.	0700-1900	All except Upper	Closed
		1900-2400	Upper south of mid K-Beach within 1/2 mile of shoreline	

- Continued -

Table 15, continued. Commercial salmon fishing periods, Upper Cook Inlet, 1986.

Date	Day	Time	Set	Drift
7/26	Sat.	0000-0700	Upper south of mid K-Beach within 1/2 mile of shoreline	
		0700-1900	All Central except Western, Chinitna	All except Western, Chinitna Bay
		1900-2400	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
7/27	Sun.	0000-0700	Upper south of mid K-Beach within 1 1/2 miles of shoreline	
		0700-2400	Upper south of mid K-Beach within 1/2 mile of shoreline	
7/28	Mon.	0000-0700	Upper south of mid K-Beach within 1/2 mile of shoreline	
		0700-1900	All	All except Chinitna Bay
7/30	Wed.	0700-1900	All except Chinitna Bay	All except Chinitna Bay
		1900-2400	Upper within 1 1/2 miles of shoreline	
7/31	Thur.	0000-0700	Upper within 1 1/2 miles of shoreline	
		0700-1900	Upper within 1 1/2 miles of shoreline	East of E. Foreland to Cape Ninilchik
		1900-2400	Upper within 1 1/2 miles of shoreline	
8/01	Fri.	0000-0700	Upper within 1 1/2 miles of shoreline	
		0700-1900	All	All except Chinitna Bay
		1900-2400	Upper	
8/02	Sat.	0000-0700	Upper	
		0700-1900	Upper	East of E. Forland to Ninilchik
		1900-2400	Upper	
8/03	Sun.	0000-0700	Upper	
		0700-1900	Upper	East of E. Foreland to Ninilchik
		1900-2400	Upper	

- Continued -

Table 15, continued. Commercial salmon fishing periods, Upper Cook Inlet, 1986.

Date	Day	Time	Set	Drift
8/04	Mon.	0000-0700	Upper	
		0700-1900	All	All except Chinitna Bay
8/06	Wed.	0700-1900	All except Chinitna Bay	
8/08	Fri.	0700-1900	All	All except Chinitna Bay
		1900-2400	Upper within 1 1/2 miles of shoreline	
8/09	Sat.	0000-0700	Upper within 1 1/2 miles of shoreline	
		0700-1900	Upper within 1 1/2 miles of shoreline	East of E. Foreland to Cape Nimilchik
		1900-2400	Upper within 1 1/2 miles of shoreline	
8/10	Sun.	0000-0700	Upper within 1 1/2 miles of shoreline	
		0700-1900	Upper within 1 1/2 miles of shoreline	East of E. Foreland to Cape Nimilchik
		1900-2400	Upper within 1 1/2 miles of shoreline	
8/11	Mon.	0000-0700	Upper within 1 1/2 miles of shoreline	
		0700-1900	All	All except Chinitna Bay
8/15	Fri.	0700-1900	All	
8/18	Mon.	0700-1900	All except Upper	All except Chinitna or within 5 miles of eastside shoreline
8/22*	Fri.	0700-1900	All except Upper	All except within 5 miles of eastside shoreline

* Fishing continued as described for 8/22 each Monday and Friday for the remainder of the season.

Table 16. Aerial survey set gill net counts by subdistrict, Upper Cook Inlet, 1986.

	Central District					Northern District	
Date	Upper	Kalgin	Kustatan	Western	Chinitna	General	Eastern
6/02						71	41
6/09						101	46
6/16				171		84	58
7/07		134					
7/14	956						
7/25						269	150

Table 17. Daily sockeye and coho salmon weir counts, Fish Creek, 1986.

Date	Sockeye		Coho	
	Daily	Accum	Daily	Accum
07/14	14	14	1	1
07/15	0	14	0	1
07/16	22	36	2	3
07/17	86	122	7	10
07/18	17	139	10	20
07/19	133	272	11	31
07/20	219	491	24	55
07/21	504	995	22	77
07/22	252	1,247	8	85
07/23	1,072	2,319	42	127
07/24	822	3,141	31	158
07/25	927	4,068	37	195
07/26	764	4,832	45	240
07/27	88	4,920	3	243
07/28	924	5,844	15	258
07/29	920	6,764	22	280
07/30	4,482	11,246	17	297
07/31	3,385	14,631	16	313
08/01	1,831	16,462	27	340
08/02	1,564	18,026	10	350
08/03	958	18,984	23	373
08/04	2,936	21,920	20	393
08/05	1,406	23,326	17	410
08/06	1,163	24,489	7	417
08/07	1,532	26,021	16	433
08/08	1,272	27,293	12	445
08/09	586	27,879	3	448
08/10	43	27,922	1	449
08/11	699	28,621	100	549
08/12	123	28,744	23	572
08/13	321	29,065	94	666
08/14	51	29,116	22	688
08/15	66	29,182	5	693
08/16	105	29,287	13	706
08/17	70	29,357	1	707
08/18	114	29,471	3	710
08/19	89	29,560	3	713
08/20	98	29,658	20	733
08/21	22	29,680	4	737
08/22	53	29,733	9	746
08/23	18	29,751	6	752
08/24	20	29,771	59	811
08/25	24	29,795	2	813
08/26	5	29,800	3	816
Total		29,800		2,166

Coho total includes 1350 fish downstream of weir.

Table 18. Daily sockeye salmon weir counts, Packers Creek, 1986.

Date	Daily	Accum	Date	Daily	Accum
05/25	0	0	07/16	171	6,723
05/26	3	3	07/17	89	6,812
05/27	5	8	07/18	170	6,982
05/28	1	9	07/19	234	7,216
05/29	0	9	07/20	183	7,399
05/30	1	10	07/21	71	7,470
05/31	0	10	07/22	473	7,943
06/01	0	10	07/23	623	8,566
06/02	0	10	07/24	290	8,856
06/03	0	10	07/25	282	9,138
06/04	1	11	07/26	501	9,639
06/05	0	11	07/27	341	9,980
06/06	0	11	07/28	142	10,122
06/07	5	16	07/29	45	10,167
06/08	1	17	07/30	4	10,171
06/09	8	25	07/31	3	10,174
06/10	145	170	08/01	20	10,194
06/11	5	175	08/02	42	10,236
06/12	46	221	08/03	83	10,319
06/13	22	243	08/04	856	11,175
06/14	1	244	08/05	1370	12,545
06/15	1	245	08/06	631	13,176
06/16	1	246	08/07	476	13,652
06/17	264	510	08/08	1432	15,084
06/18	272	782	08/09	1224	16,308
06/19	468	1,250	08/10	793	17,101
06/20	506	1,756	08/11	779	17,880
06/21	216	1,972	08/12	991	18,871
06/22	362	2,334	08/13	407	19,278
06/23	24	2,358	08/14	451	19,729
06/24	222	2,580	08/15	733	20,462
06/25	2	2,582	08/16	957	21,419
06/26	352	2,934	08/17	458	21,877
06/27	2	2,936	08/18	658	22,535
06/28	150	3,086	08/19	1033	23,568
06/29	232	3,318	08/20	660	24,228
06/30	216	3,534	08/21	1124	25,352
07/01	24	3,558	08/22	423	25,775
07/02	266	3,824	08/23	560	26,335
07/03	111	3,935	08/24	231	26,566
07/04	19	3,954	08/25	299	26,865
07/05	152	4,106	08/26	624	27,489
07/06	566	4,672	08/27	638	28,127
07/07	148	4,820	08/28	170	28,297
07/08	731	5,551	08/29	287	28,584
07/09	440	5,991	08/30	180	28,764
07/10	167	6,158	08/31	324	29,088
07/11	101	6,259	09/01	226	29,314
07/12	69	6,328	09/02	76	29,390
07/13	3	6,331	09/03	115	29,505
07/14	87	6,418	09/04	96	29,601
07/15	134	6,552	09/05	3	29,604

Source: Marcuson, 1986a

Table 19. Daily sockeye salmon weir counts, Larson Lake, 1986.

Date	Daily	Accum
07/21	0	0
07/22	39	39
07/23	0	39
07/24	1	40
07/25	56	96
07/26	58	154
07/27	102	256
07/28	2,907	3,163
07/29	3,187	6,350
07/30	3,924	10,274
07/31	3,731	14,005
08/01	4,028	18,033
08/02	2,500	20,533
08/03	2,930	23,463
08/04	2,055	25,518
08/05	1,230	26,748
08/06	1,503	28,251
08/07	1,150	29,401
08/08	914	30,315
08/09	588	30,903
08/10	303	31,206
08/11	217	31,423
08/12	179	31,602
08/13	102	31,704
08/14	116	31,820
08/15	108	31,928
08/16	87	32,015
08/17	63	32,078
08/18	57	32,135
08/19	47	32,182
08/20	43	32,225
08/21	18	32,243
08/22	43	32,286
08/23	19	32,305
08/24	12	32,317
08/25	5	32,322
08/26	0	32,322

Source: Marcuson, 1986b

Table 20. Buyers and processors of Upper Cook Inlet fishery products, 1986.

Buyer/Processor	Plant Site	Contact	Address	Product Type[1]
Alaska Freight & Salvage	"Grizzly"	Ronald Warren	1205 McTaggert Edison, WA	S
Alaska Gourmet, Inc.	Anchorage	Paul Schilling	P.O. Box 190733 Anchorage, AK	S
Alaska Ocean Products	Kasilof	Fran Osmar	Box 288 Clam Gulch, AK	S, H
Alaska Razor Clam Harvesters	Arch I	Carl DeBoard	328 Boniface, #2087 Anchorage, AK	C
All Alaskan Seafoods	Kodiak	Martin Morin	2009 Minor Avenue East Seattle, WA	C
American Salmon Company	Seldovia	Royal Devaney	Drawer E Seldovia, AK	S, H
Anpac, Inc.	Anchorage	Sarah Gadwill	Box 92520 Anchorage, AK	S
Chrissy's Alaskan Fish Co.	Anchorage	Joseph D. Owens	1714 Eastridge Drive Anchorage, AK	S
Chugach Alaska Fisheries	Port Graham	G.R. Anderson	4241 21st Ave. West #204 Seattle, WA	S
Columbia Wards Fisheries	Kenai	James Peterson	Box C-5030 University Station Seattle, WA	S
Cook Inlet Processing	Kenai	Paul Dale	1035 W. Northern Lights Anchorage, AK	S, H
Dahmen Seafoods	Kenai	Jerry Cartee	Box 7498 Nikiski, AK	S, C
Dragnet Fisheries	Kenai	Jay Cherrier	Box 3992 Kenai, AK	S
Earsley, T. Scott	Kasilof	Scott Earsley	Box 94 Hydaburg, AK	S
Ed's Kasilof Seafoods	Kasilof	James Trujillo	Box 18 Kasilof, AK	S
Fisherman's Packing Inc.	Kenai	Lottie Edelman	Drawer 2601 Kenai, AK	S, H

- Continued -

Table 20, continued. Buyers and processors of Upper Cook Inlet fishery products, 1986.

Buyer/Processor	Plant Site	Contact	Address	Product Type[1]
Icicle Seafoods	Homer	Rob Rogers	4019 21st Avenue West Seattle, WA	S, C
Katch Canning Co.	Homer	Velma Ellyson	Box 851 Homer, AK	S
Keener Packing	Soldotna	Michael Sawinski	SR 2, Box 738 Soldotna, AK	S
Kenai Packers	Kenai	Clyde Sterling	Box 31179 Seattle, WA	S
Little Fisherman	Anchorage	Tom Reaves	555 W. Northern Lights Anchorage, AK	S
Lobo's Local Seafood	Homer	John Wolfe	Box 2170 Homer, AK	S
Pacific Princess Seafoods	Kenai	Joe Nord	Box 4080 Kenai, AK	S
R & J Enterprises	Kasilof	Juanita Meier	4821 E. 101 St. Anchorage, AK	S
Royal Pacific Fisheries	Kenai	Marvin Dragseth	Box 4100 Kenai, AK	S, H
Salamatof Seafoods	Kenai	Wylie Reed	Box 5070 Kenai, AK	S, H
Schenk, Terrell	Kasilof	Terrell Schenk	Rt. 2, Box 720 Kasilof, AK	S
Sea-Nik Foods	Ninilchik	James Garroute	Box 73 Ninilchik, AK	S
Seafoods from Alaska	Sterling	Roland Schwanke	Box 307 Sterling, AK	S
Seasonal Seafoods	Kasilof	Bailey Wharton	2815 N.W. 59th Seattle, WA	S
Silvertip Fish	Kasilof	Darrel Renner	Box 122 Kasilof, AK	S
Tenth and M Seafoods	Anchorage	Bill Nix	1020 M Street Anchorage, AK	S
Whitney Fidalgo Seafoods	Anchorage	Malcolm Wyer	Box C-99308 Seattle, WA	S

[1] S - salmon, H - herring, C - clams.

Table 21. Age, weight, length and sex composition of commercially harvested herring, Tuxedni Bay, first period (5/9/86).

Sample Period	Age (years)	Sex			Total	Percent of Total	Weight			Std. Length		
		Male	Female	Unknown			Mean (gm)	Std. Dev.	Number Weighed	Mean (mm)	Std. Dev.	Number Measured
	1	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-
	3	-	1	-	1	.4	-	-	-	213	-	1
	4	7	16	-	23	8.3	154	22.4	6	242	9.9	23
5/ 9	5	28	37	-	65	23.6	157	9.7	8	246	9.6	65
	6	53	44	-	97	35.1	169	13.4	13	250	10.4	97
	7	18	25	-	43	15.6	179	25.2	9	255	10.2	43
	8	15	13	-	28	10.1	260	8.5	2	260	9.8	28
	9+	9	10	-	19	6.9	289	-	1	263	13.6	19
Period total		130	146	-	276	100.0	174	34.0	39	251	12.0	276

Table 22. Age, weight, length and sex composition of commercially harvested herring, Chinitna Bay (5/19/86).

Sample Period	Age (years)	Sex			Total	Percent of Total	Weight			Std. Length		
		Male	Female	Unknown			Mean (gm)	Std. Dev.	Number Weighed	Mean (mm)	Std. Dev.	Number Measured
5/16- 5/19	1	-	-	-	-	-	-	-	-	-	-	-
	2	1	2	-	3	1.1	-	-	-	209	10.8	3
	3	-	1	-	1	.4	-	-	-	221	-	1
	4	28	28	-	57	20.6	-	-	-	240	10.6	57
	5	48	48	-	96	34.7	-	-	-	248	9.0	96
	6	38	24	-	62	22.4	-	-	-	253	9.7	62
	7	18	11	-	29	10.5	-	-	-	261	11.2	29
	8	9	8	-	17	6.1	-	-	-	264	11.9	17
	9+	4	8	-	12	4.3	-	-	-	269	11.5	12
Period total		146	130	-	277	100.0	-	-	-	250	13.5	277

Table 23. Age, weight, length and sex composition of commercially harvested herring, Tuxedni Bay, second period (5/22/86).

Sample Period	Age (years)	Sex			Total	Percent of Total	Weight			Std. Length		
		Male	Female	Unknown			Mean (gm)	Std. Dev.	Number Weighed	Mean (mm)	Std. Dev.	Number Measured
	1	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-
	3	-	2	-	2	1.8	-	-	-	218	12.0	2
	4	9	13	-	22	19.3	-	-	-	229	10.5	22
5/22	5	28	24	-	52	45.6	-	-	-	238	12.1	52
	6	14	7	-	21	18.4	-	-	-	245	9.2	21
	7	5	4	-	9	7.9	-	-	-	253	12.7	9
	8	1	1	-	2	1.8	-	-	-	256	13.4	2
	9+	4	2	-	6	5.3	-	-	-	262	15.1	6
Period total		61	53	-	114	100.0	-	-	-	240	14.3	114

Table 24. Kasilof River personal use gillnet fishery salmon harvest by period, 21 June-26 June 1986.

Period Date	Total Nets	Sockeye Salmon		Chinook Salmon	
		Period	Accum	Period	Accum
6/21	143	2,543	2,543	31	31
6/22	142	1,178	3,721	33	64
6/23	120	1,614	5,362	20	84
6/24	99	1,387	6,749	36	120
6/25	86	1,447	8,196	25	145
6/26	73	1,413	9,609	23	168

Table 25. Upper Subdistrict personal use salmon harvest by period and species, 1986.

Date	Number of Nets	Coho Salmon
Sept. 13-14	220	1,298
Sept. 20-21	112	304
Sept. 27-28	120	820
Total		2,422

Table 26. Seldovia District tide tables, April-September 1986.

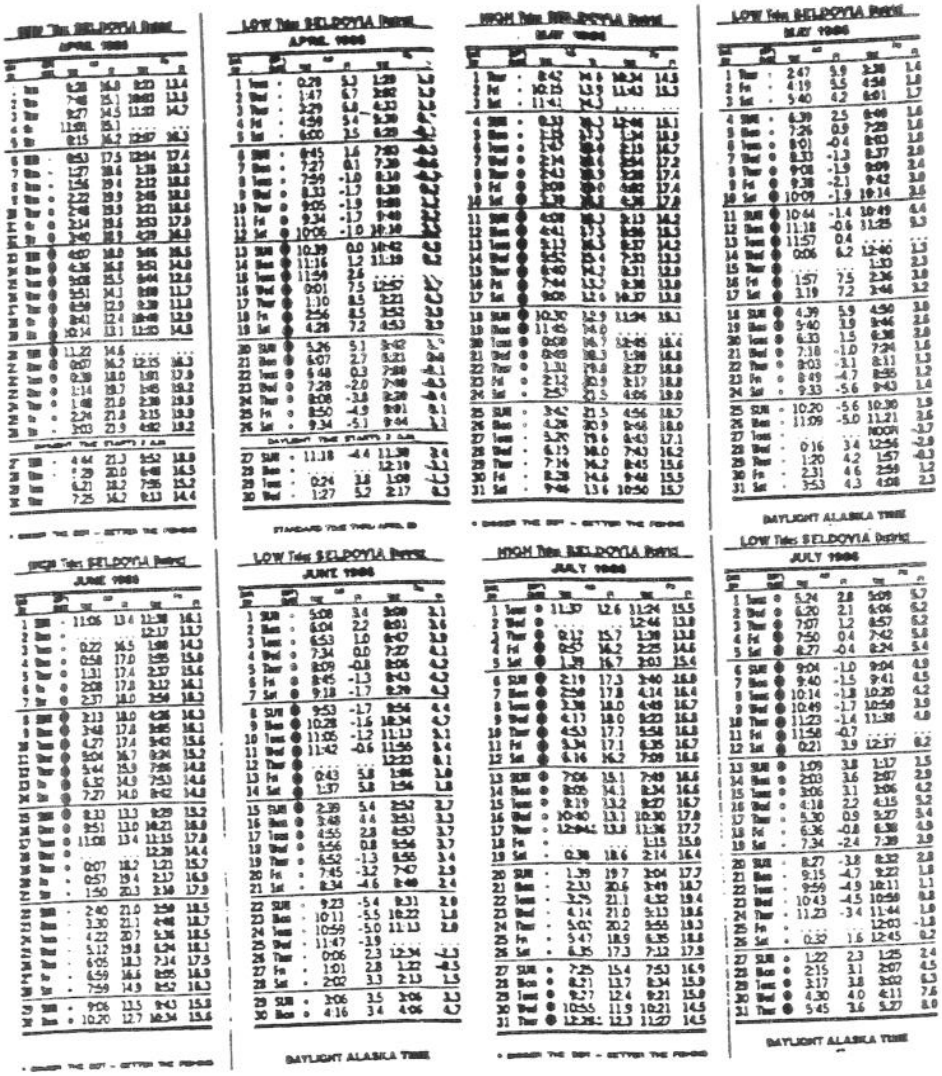
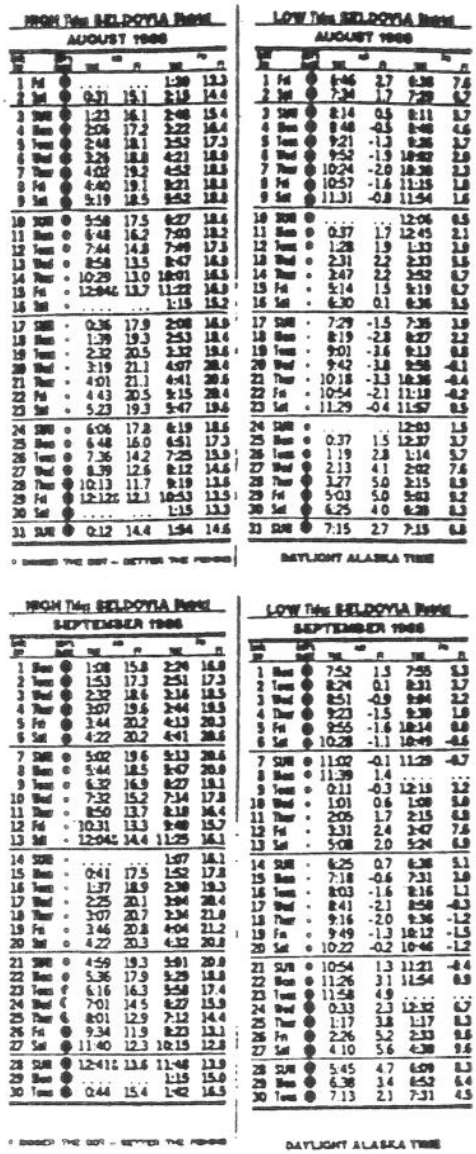


Table 26, continued. Seldovia District tide tables, April-September 1986.



HIGH Tides SELDOVIA Point

AUGUST 1986

Day	Date	Time	ft	Time	ft
1	Fri	....	....	1:39	13.3
2	Sat	0:31	15.1	2:15	14.4
3	Sun	1:23	16.1	2:48	15.4
4	Mon	2:16	17.2	3:22	16.4
5	Tue	2:48	18.1	3:52	17.3
6	Wed	3:26	18.8	4:21	18.0
7	Thu	4:02	19.2	4:52	18.5
8	Fri	4:40	19.1	5:21	18.5
9	Sat	5:19	18.5	5:52	18.0
10	Sun	5:58	17.5	6:27	16.6
11	Mon	6:48	16.2	7:03	15.2
12	Tue	7:44	14.8	7:48	13.8
13	Wed	8:58	13.5	8:47	12.8
14	Thu	10:29	13.0	10:01	12.5
15	Fri	12:04&	13.7	11:22	14.0
16	Sat	....	....	1:15	15.2
17	Sun	0:36	17.9	2:08	16.9
18	Mon	1:39	19.3	2:53	18.4
19	Tue	2:32	20.5	3:32	19.6
20	Wed	3:19	21.1	4:07	20.4
21	Thu	4:01	21.1	4:41	20.6
22	Fri	4:43	20.5	5:15	20.4
23	Sat	5:23	19.3	5:47	19.6
24	Sun	6:06	17.8	6:19	18.6
25	Mon	6:48	16.0	6:51	17.3
26	Tue	7:36	14.2	7:25	15.9
27	Wed	8:39	12.6	8:12	14.6
28	Thu	10:13	11.7	9:19	13.8
29	Fri	12:12&	12.1	10:53	13.5
30	Sat	....	....	1:15	13.3
31	Sun	0:12	14.4	1:54	14.6

* DENOTES THE DAY - BETTER THE FISHING

LOW Tides SELDOVIA Point

AUGUST 1986

Day	Date	Time	ft	Time	ft
1	Fri	6:46	2.7	6:38	7.6
2	Sat	7:24	1.7	7:20	6.7
3	Sun	8:14	0.5	8:11	5.7
4	Mon	9:48	-0.5	9:48	4.6
5	Tue	9:21	-1.3	9:36	3.7
6	Wed	9:52	-1.9	10:02	2.9
7	Thu	10:24	-2.0	10:30	2.3
8	Fri	10:57	-1.6	11:15	1.8
9	Sat	11:31	-0.8	11:54	1.6
10	Sun	....	....	12:06	0.5
11	Mon	0:37	1.7	12:45	2.1
12	Tue	1:28	1.9	1:33	1.9
13	Wed	2:31	2.2	2:33	1.6
14	Thu	3:47	2.2	3:52	0.7
15	Fri	5:14	1.5	5:19	0.7
16	Sat	6:30	0.1	6:36	0.5
17	Sun	7:29	-1.5	7:36	1.9
18	Mon	8:19	-2.8	8:27	2.2
19	Tue	9:01	-3.6	9:13	0.8
20	Wed	9:42	-3.8	9:58	-0.1
21	Thu	10:18	-3.3	10:36	-0.4
22	Fri	10:54	-2.1	11:13	-0.2
23	Sat	11:29	-0.4	11:57	0.5
24	Sun	....	....	12:03	1.5
25	Mon	0:37	1.5	12:37	2.7
26	Tue	1:19	2.8	1:14	3.7
27	Wed	2:13	4.1	2:02	4.6
28	Thu	3:27	5.0	3:15	5.0
29	Fri	5:03	5.0	5:03	5.2
30	Sat	6:25	4.0	6:28	4.3
31	Sun	7:15	2.7	7:15	3.1

DAYLIGHT ALASKA TIME

HIGH Tides SELDOVIA Point

SEPTEMBER 1986

Day	Date	Time	ft	Time	ft
1	Mon	1:08	15.8	2:29	16.8
2	Tue	1:53	17.3	2:51	17.3
3	Wed	2:32	18.6	3:16	18.5
4	Thu	3:07	19.6	3:44	19.5
5	Fri	3:44	20.2	4:13	20.3
6	Sat	4:22	20.2	4:41	20.6
7	Sun	5:02	19.6	5:13	20.6
8	Mon	5:44	18.5	5:47	20.0
9	Tue	6:32	16.9	6:27	19.1
10	Wed	7:32	15.2	7:14	17.8
11	Thu	8:50	13.7	8:18	16.4
12	Fri	10:31	13.3	9:48	15.7
13	Sat	12:04&	14.4	11:25	16.1
14	Sun	....	....	1:07	16.1
15	Mon	0:41	17.5	1:52	17.8
16	Tue	1:37	18.9	2:38	19.3
17	Wed	2:25	20.1	3:24	20.4
18	Thu	3:07	20.7	3:54	21.0
19	Fri	3:46	20.8	4:04	21.2
20	Sat	4:22	20.3	4:32	20.8
21	Sun	4:59	19.3	5:01	20.0
22	Mon	5:36	17.9	5:29	18.8
23	Tue	6:16	16.3	5:58	17.4
24	Wed	7:01	14.5	6:37	15.9
25	Thu	8:01	12.9	7:12	14.4
26	Fri	9:34	11.9	8:23	13.1
27	Sat	11:40	12.3	10:15	12.8
28	Sun	12:41&	13.6	11:46	13.9
29	Mon	....	....	1:15	15.0
30	Tue	0:44	15.4	1:42	16.5

* DENOTES THE DAY - BETTER THE FISHING

LOW Tides SELDOVIA Point

SEPTEMBER 1986

Day	Date	Time	ft	Time	ft
1	Mon	7:52	1.3	7:55	0.3
2	Tue	8:24	0.1	8:31	0.7
3	Wed	8:51	-0.9	9:04	0.2
4	Thu	9:23	-1.5	9:38	0.8
5	Fri	9:55	-1.6	10:14	0.8
6	Sat	10:28	-1.1	10:49	-0.6
7	Sun	11:02	-0.1	11:29	-0.7
8	Mon	11:38	1.4	....	....
9	Tue	0:11	-0.3	12:19	2.2
10	Wed	1:01	0.6	1:08	0.6
11	Thu	2:05	1.7	2:15	0.8
12	Fri	3:31	2.4	3:47	0.6
13	Sat	5:08	2.0	5:24	0.9
14	Sun	6:25	0.7	6:38	0.1
15	Mon	7:18	-0.6	7:31	0.0
16	Tue	8:03	-1.6	8:16	0.1
17	Wed	8:41	-2.1	8:58	-0.3
18	Thu	9:16	-2.0	9:36	-1.2
19	Fri	9:49	-1.3	10:12	-1.5
20	Sat	10:22	-0.2	10:46	-1.2
21	Sun	10:54	1.3	11:21	-0.4
22	Mon	11:26	3.1	11:54	0.9
23	Tue	11:58	4.9	....	....
24	Wed	0:33	2.3	12:32	6.7
25	Thu	1:17	3.8	1:17	8.3
26	Fri	2:26	5.2	2:33	9.6
27	Sat	4:10	5.6	4:38	9.6
28	Sun	5:45	4.7	6:09	8.3
29	Mon	6:38	3.4	6:52	6.4
30	Tue	7:13	2.1	7:31	4.5

DAYLIGHT ALASKA TIME

Figure 1. UPPER COOK INLET SALMON DISTRICTS

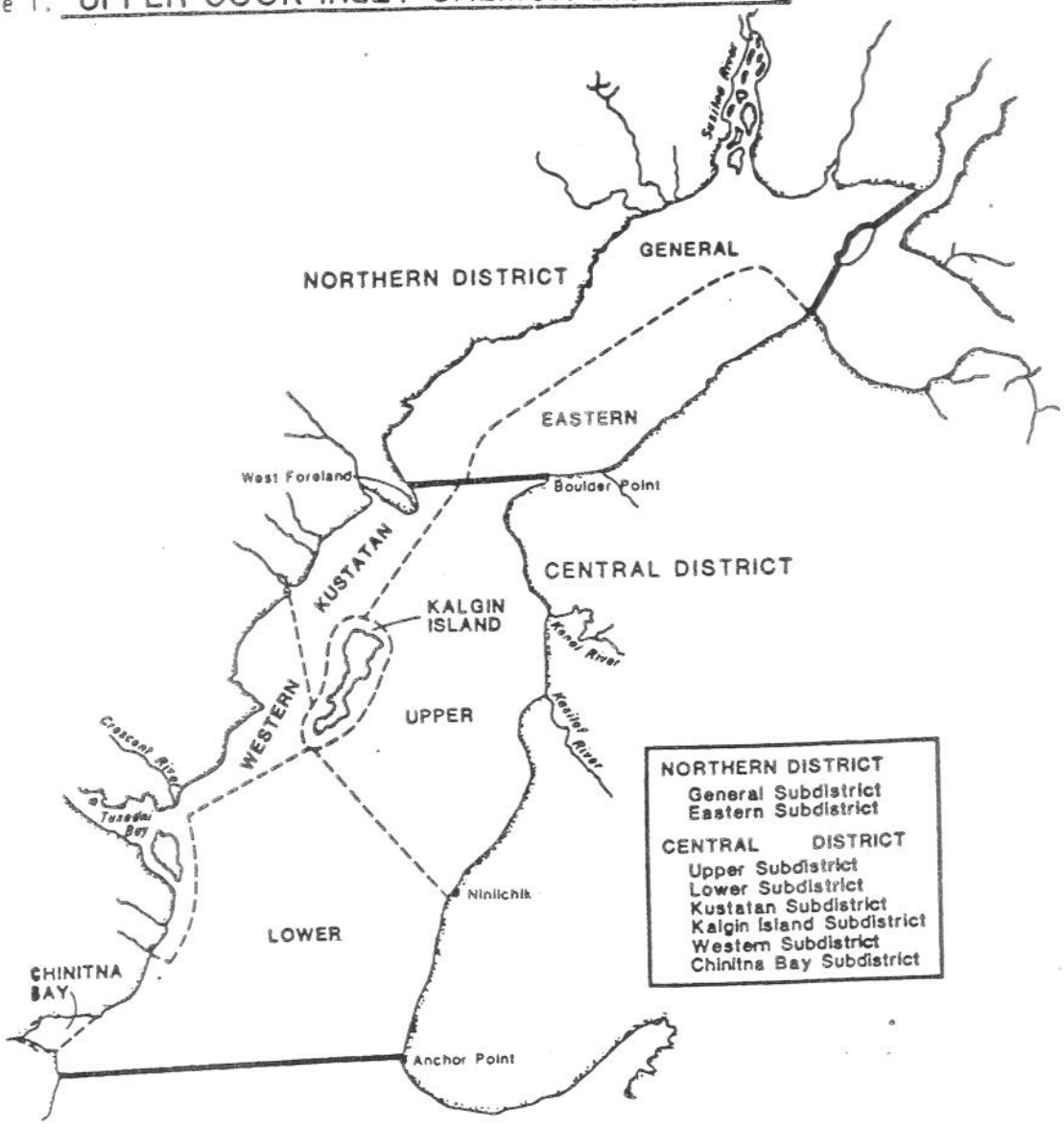


Figure 2. COMMERCIAL SALMON HARVEST VALUE

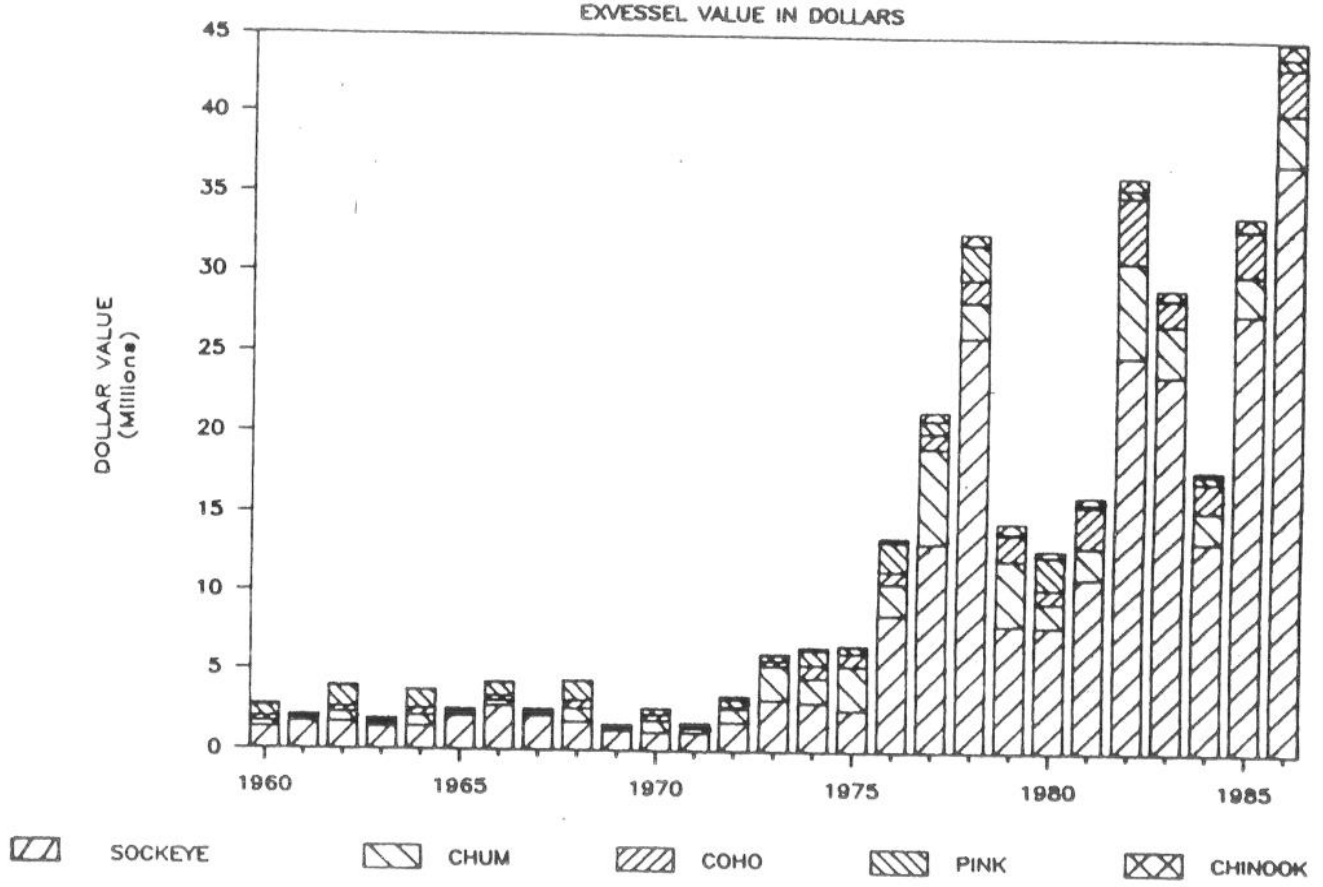


Figure 3. KENAI RIVER SOCKEYE SALMON

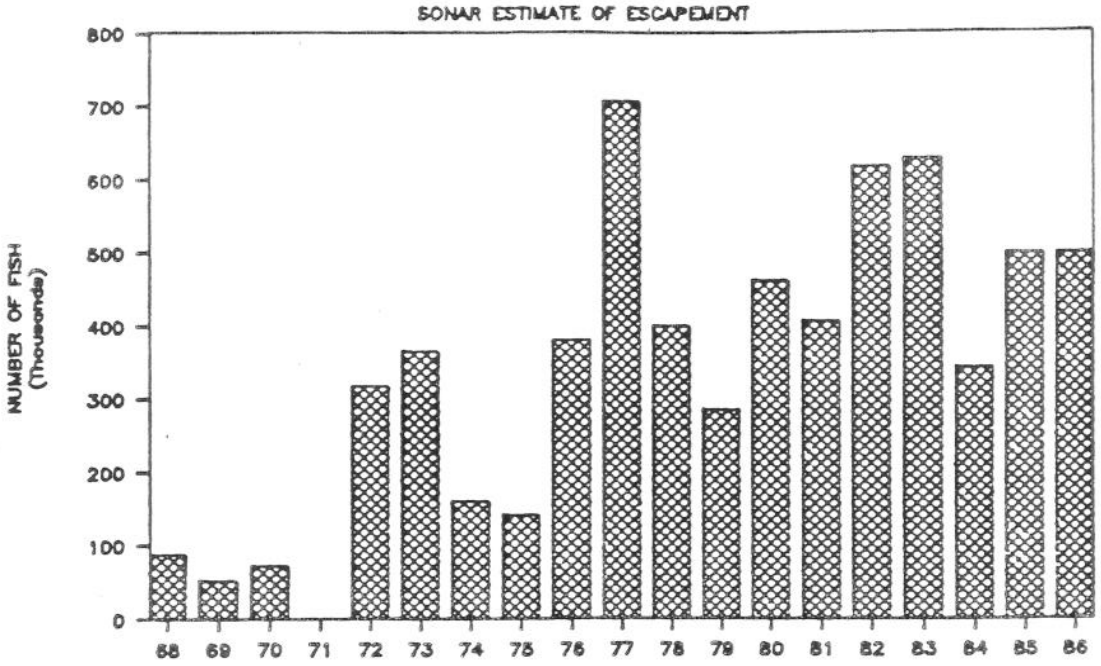


Figure 4. KASILOF RIVER SOCKEYE SALMON

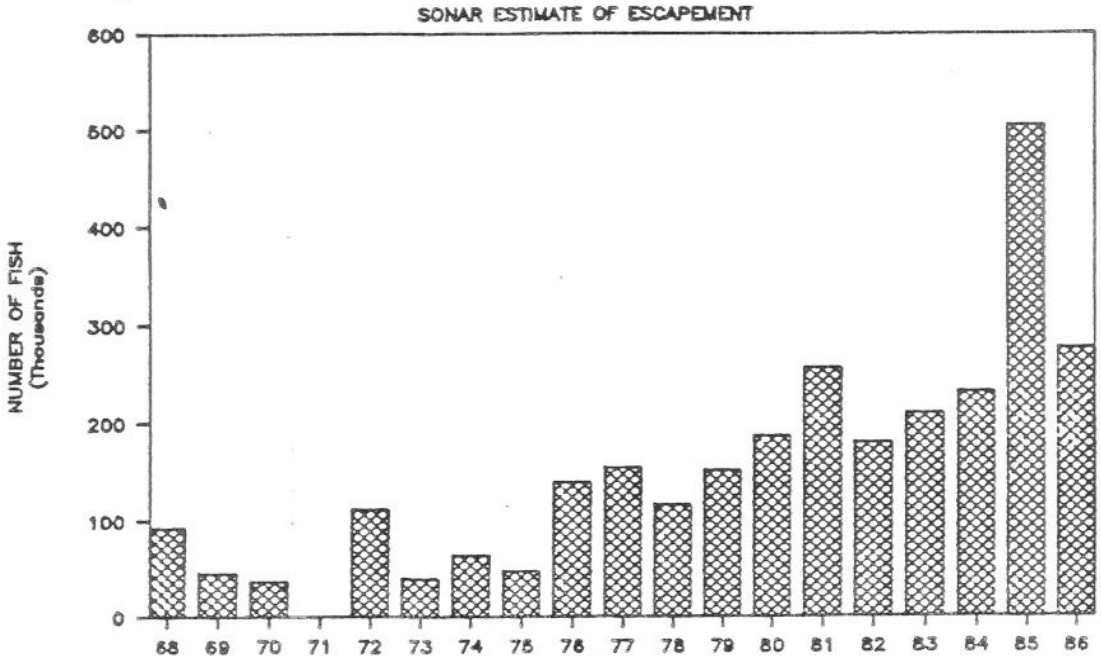


Figure 5. SUSITNA RIVER SOCKEYE SALMON

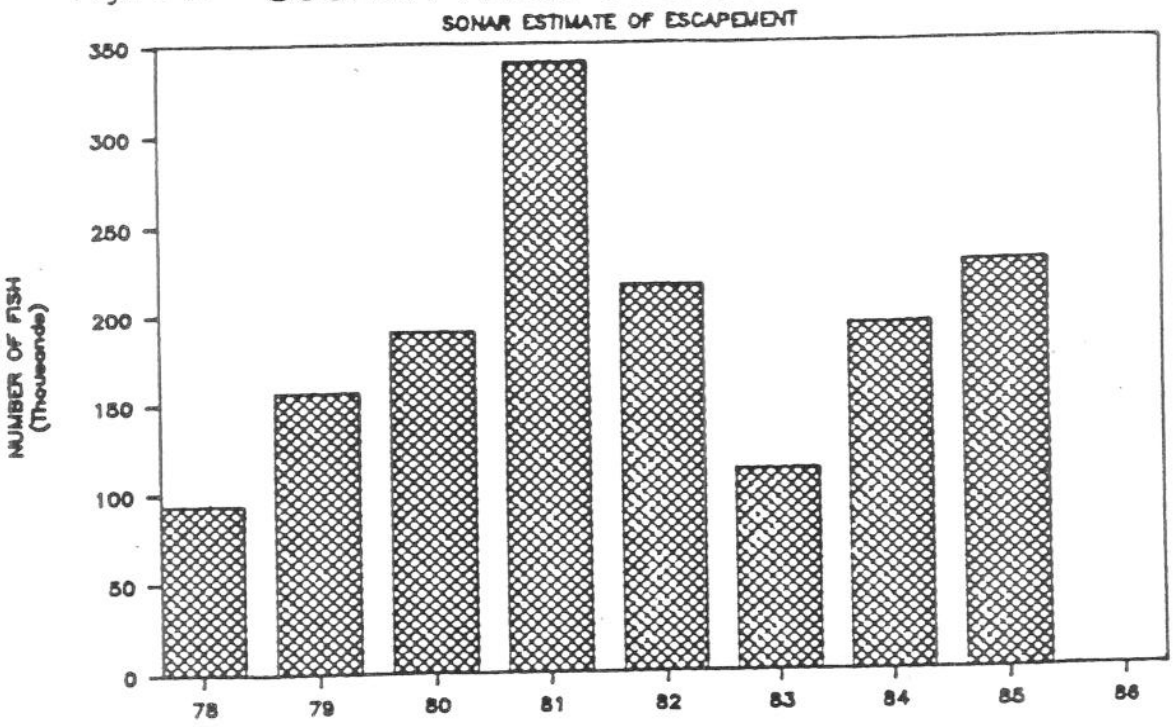


Figure 6. CRESCENT RIVER SOCKEYE SALMON

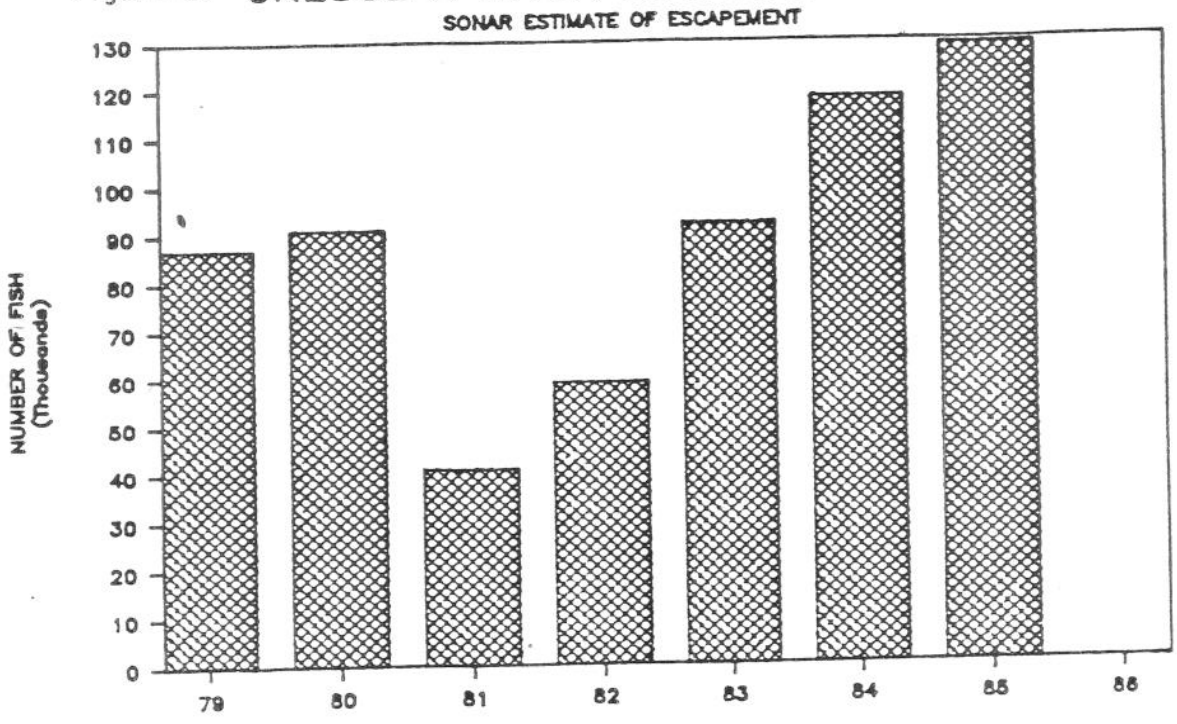


Figure 7. FISH CREEK SOCKEYE SALMON

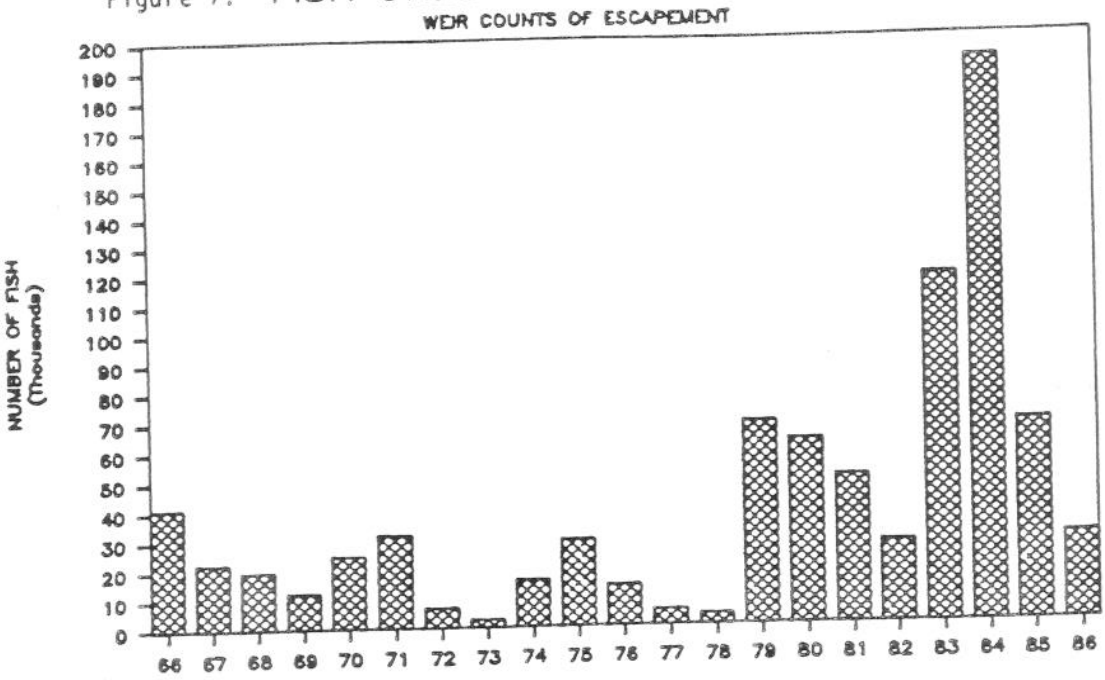
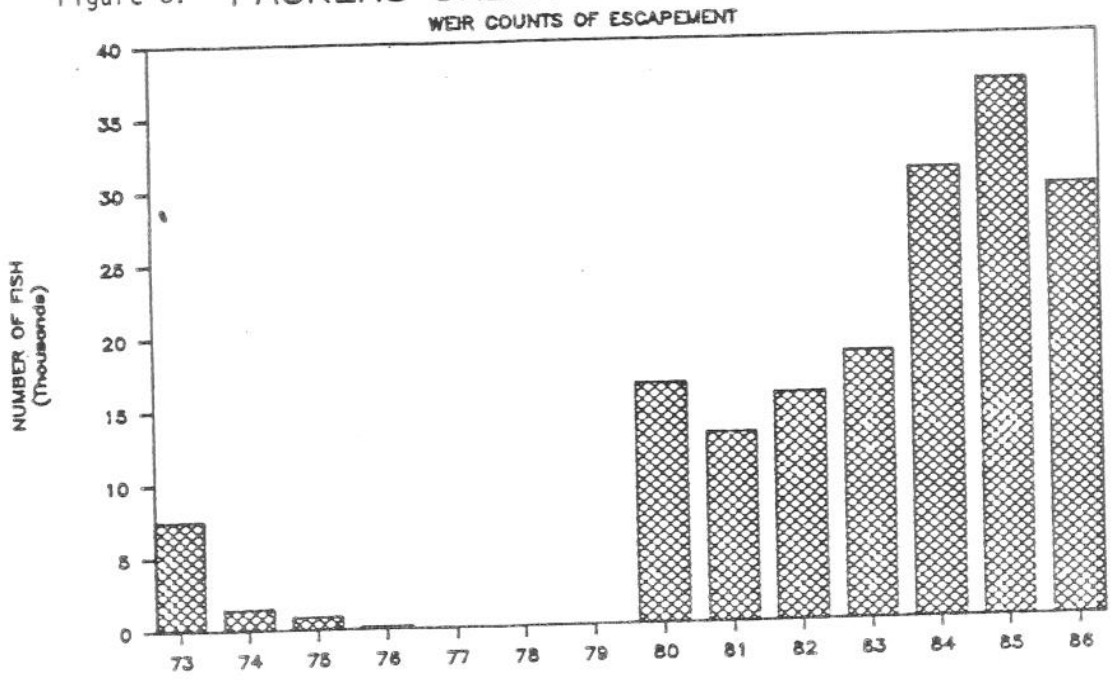


Figure 8. PACKERS CREEK SOCKEYE SALMON



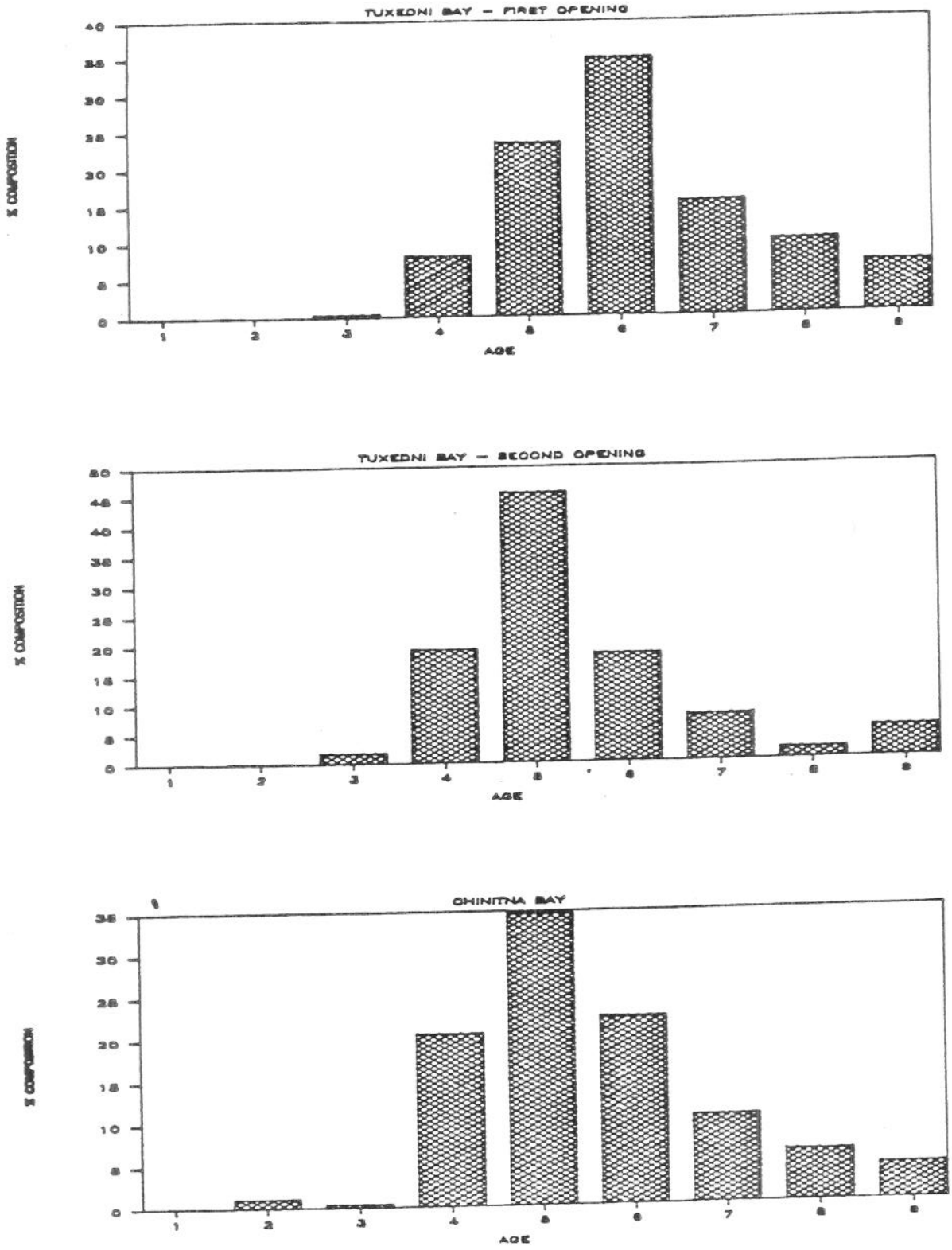


Figure 9. Commercial herring catch age composition for Tuxedni and Chinitna Bays, 1986.

Figure 10. [illegible] River Escapement

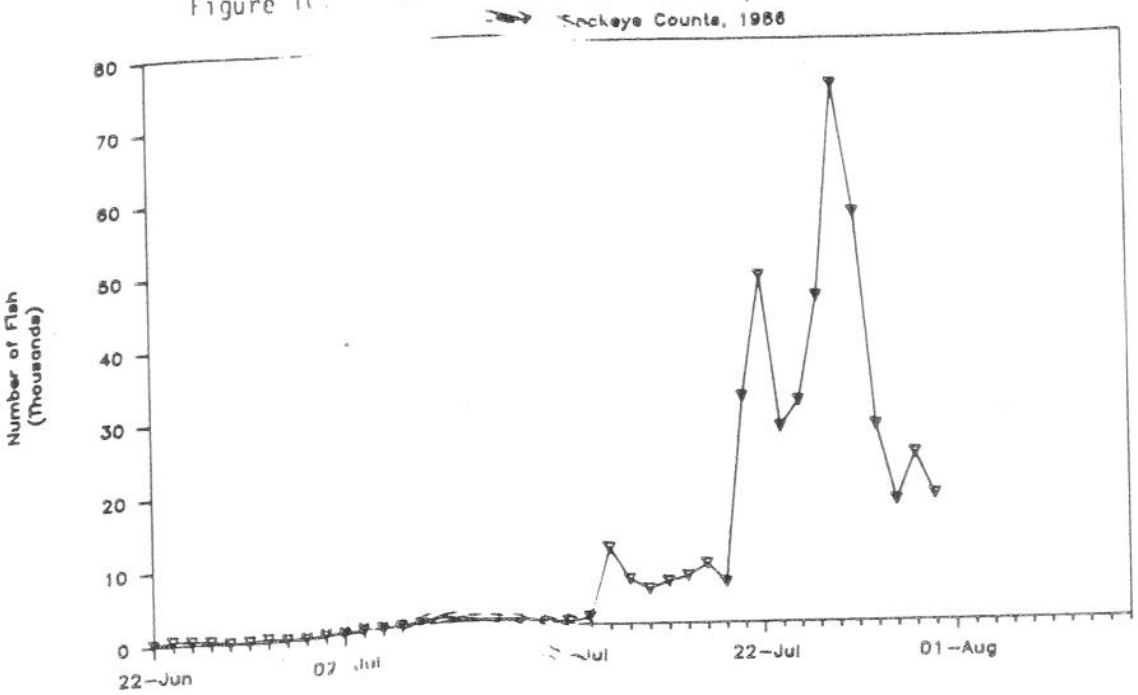


Figure 11. [illegible] River Escapement

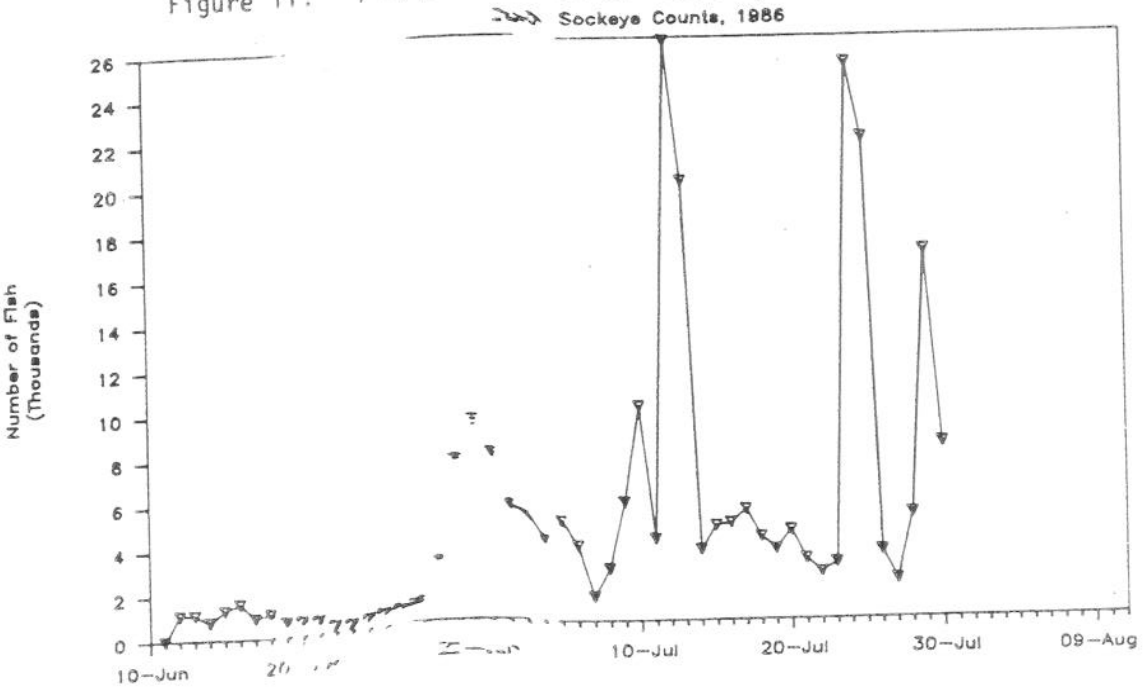


Figure 12. Yentna River Escapement

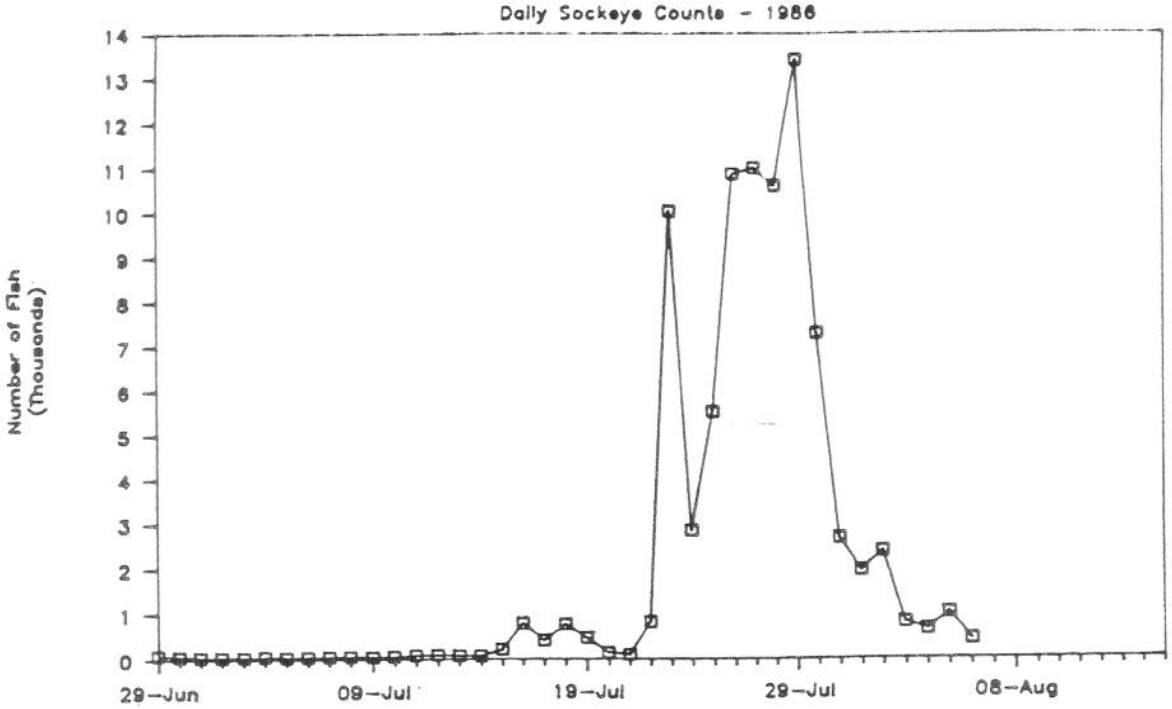
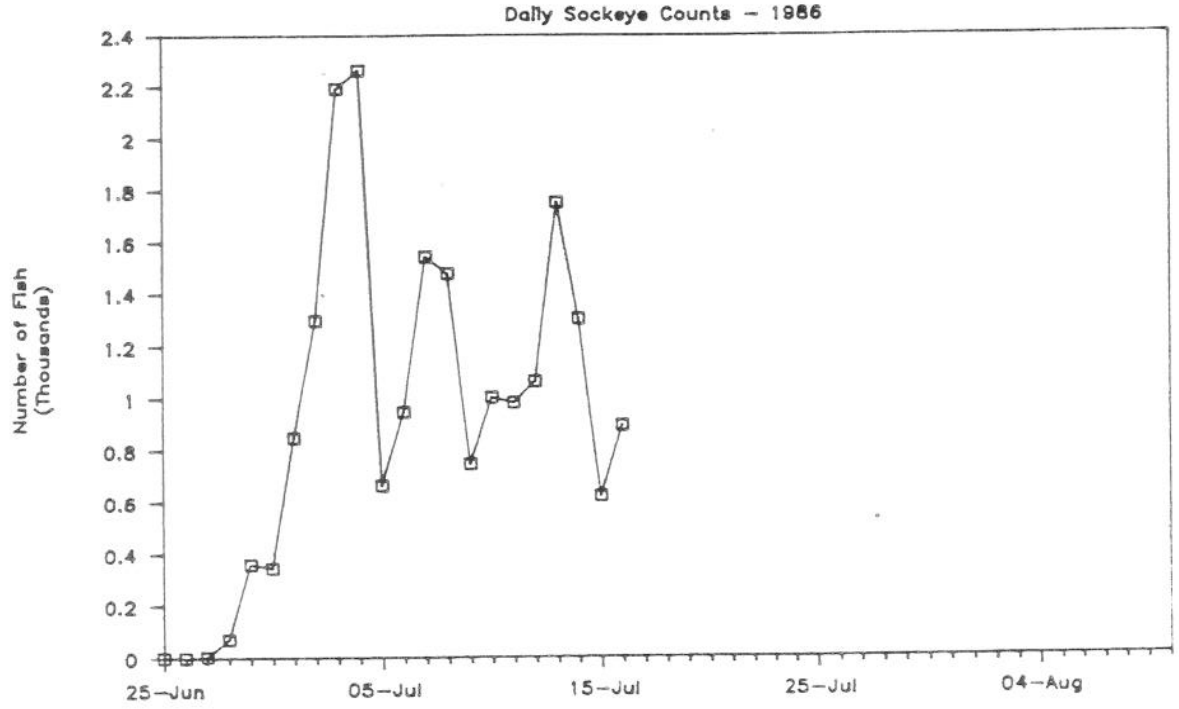


Figure 13. Crescent River Escapement



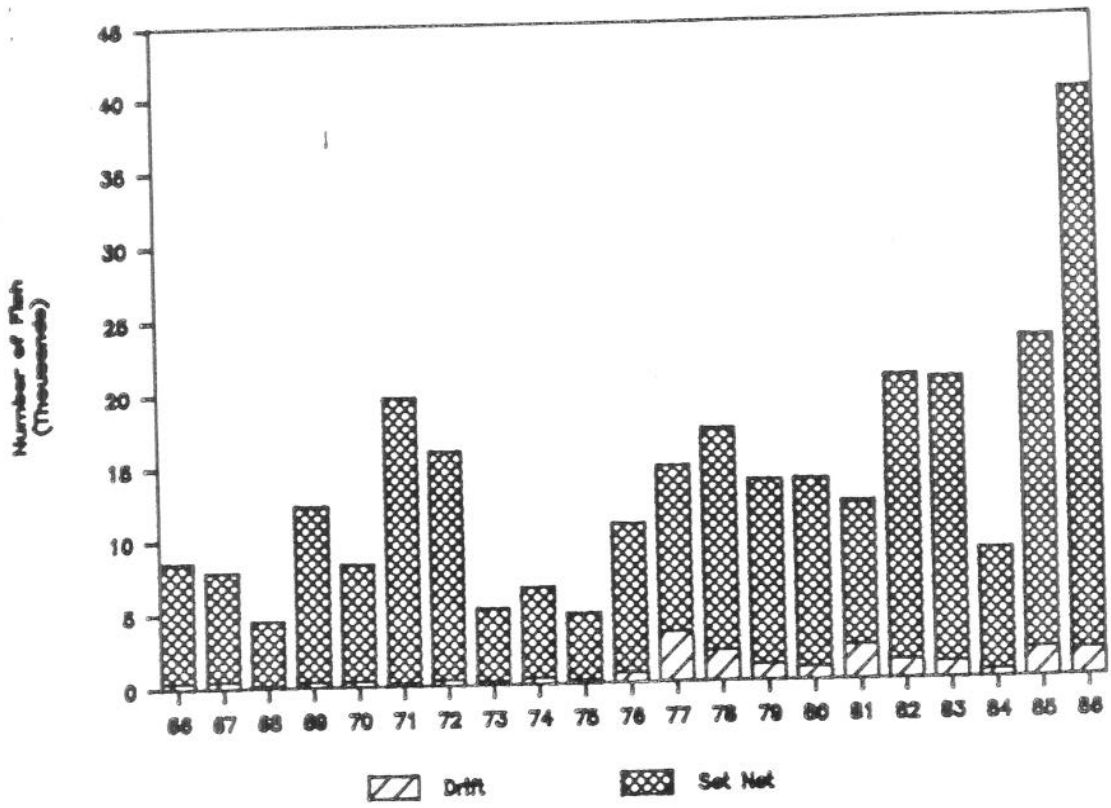


Figure 14. Chinook salmon catch by gear type, 1966-1986.

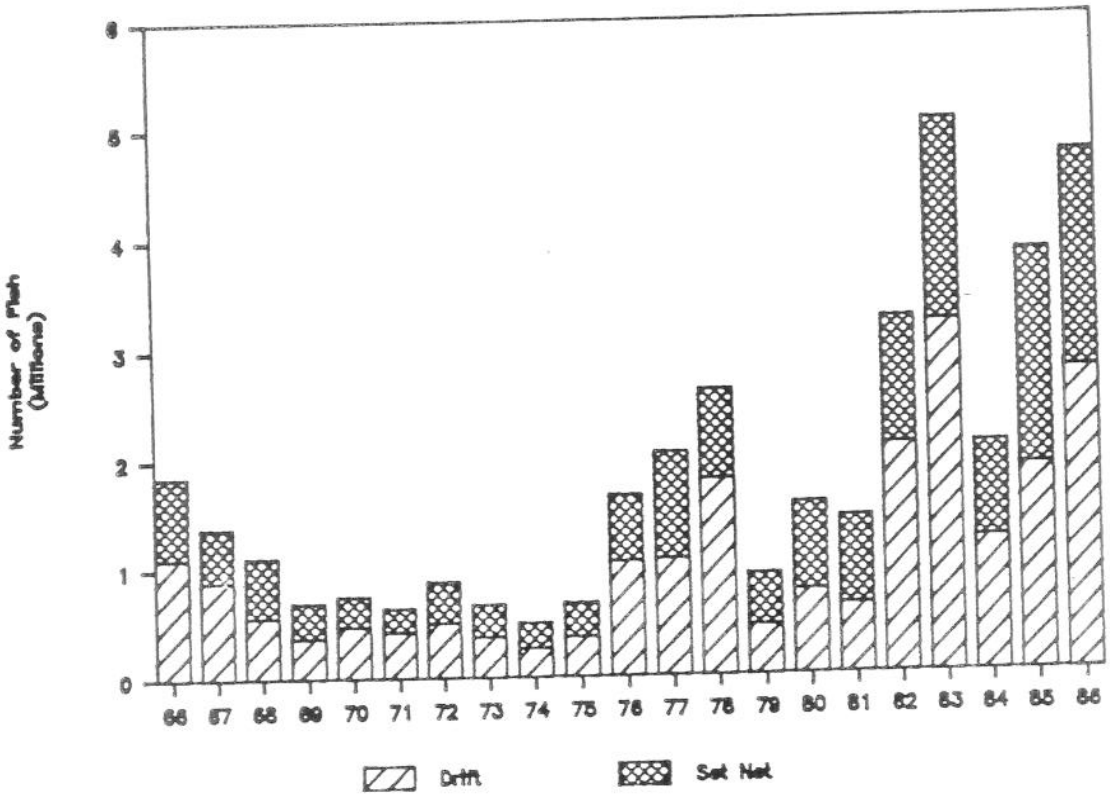


Figure 15. Sockeye salmon catch by gear type, 1966-1986.

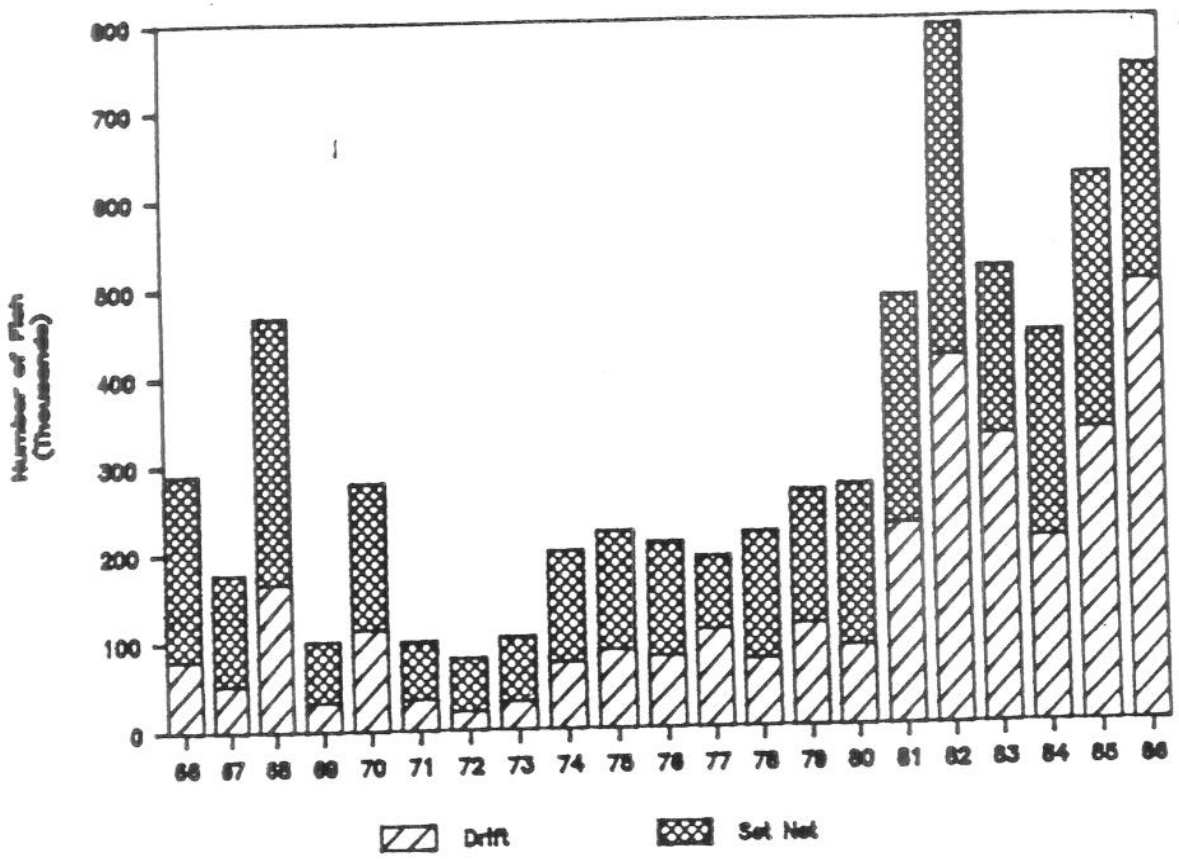


Figure 16. Coho salmon catch by gear type, 1966-1986.

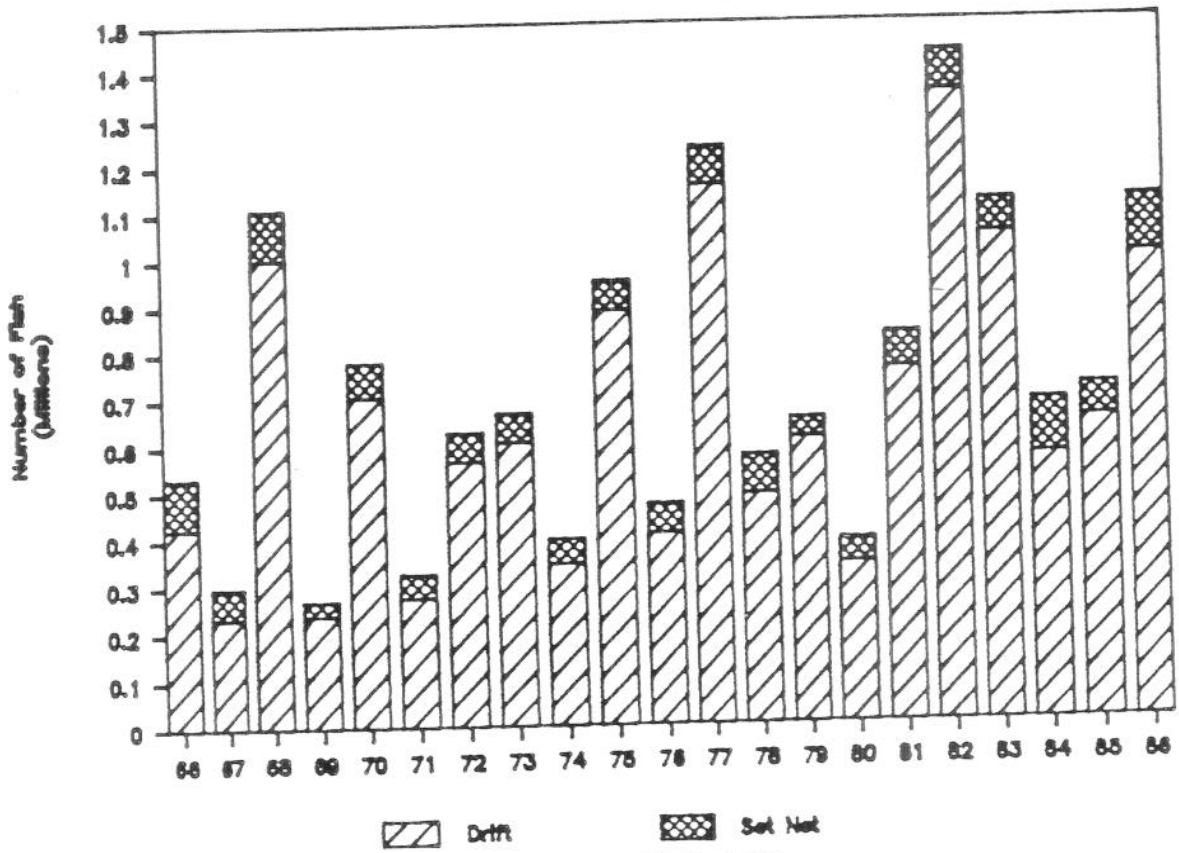


Figure 17. Chum salmon catch by gear type, 1966-1986.

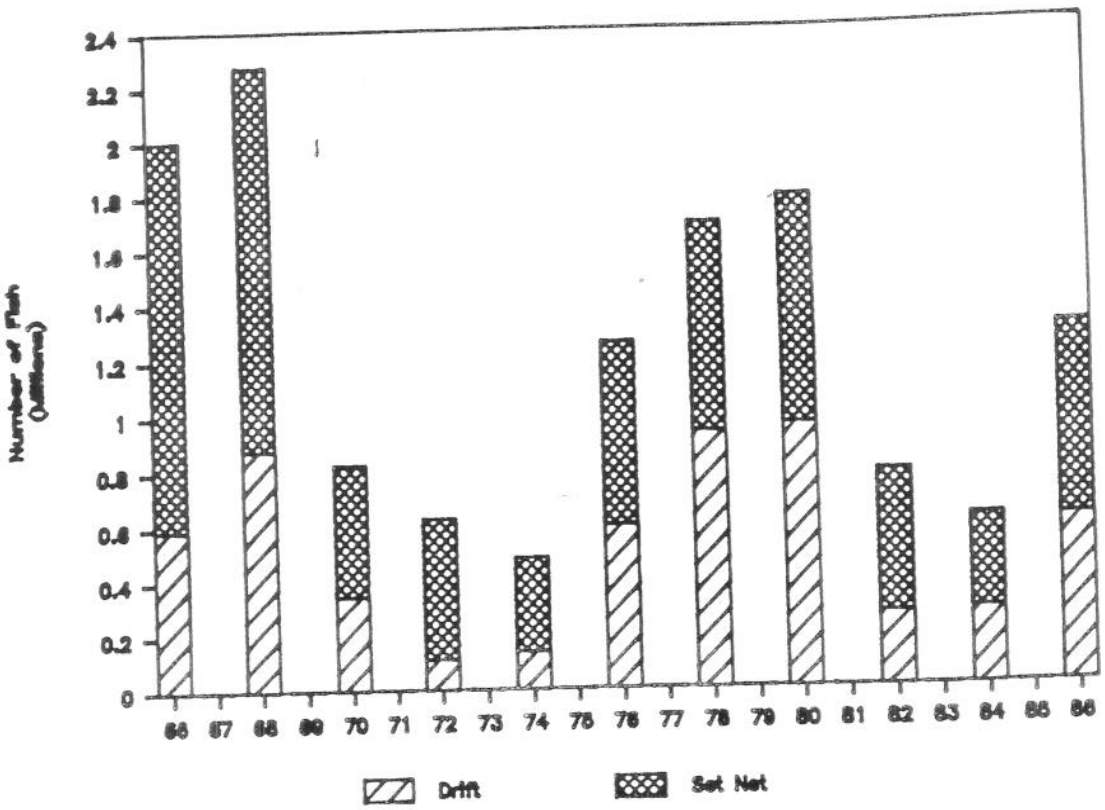


Figure 18. Even-year pink salmon catch by gear type, 1966-1986.

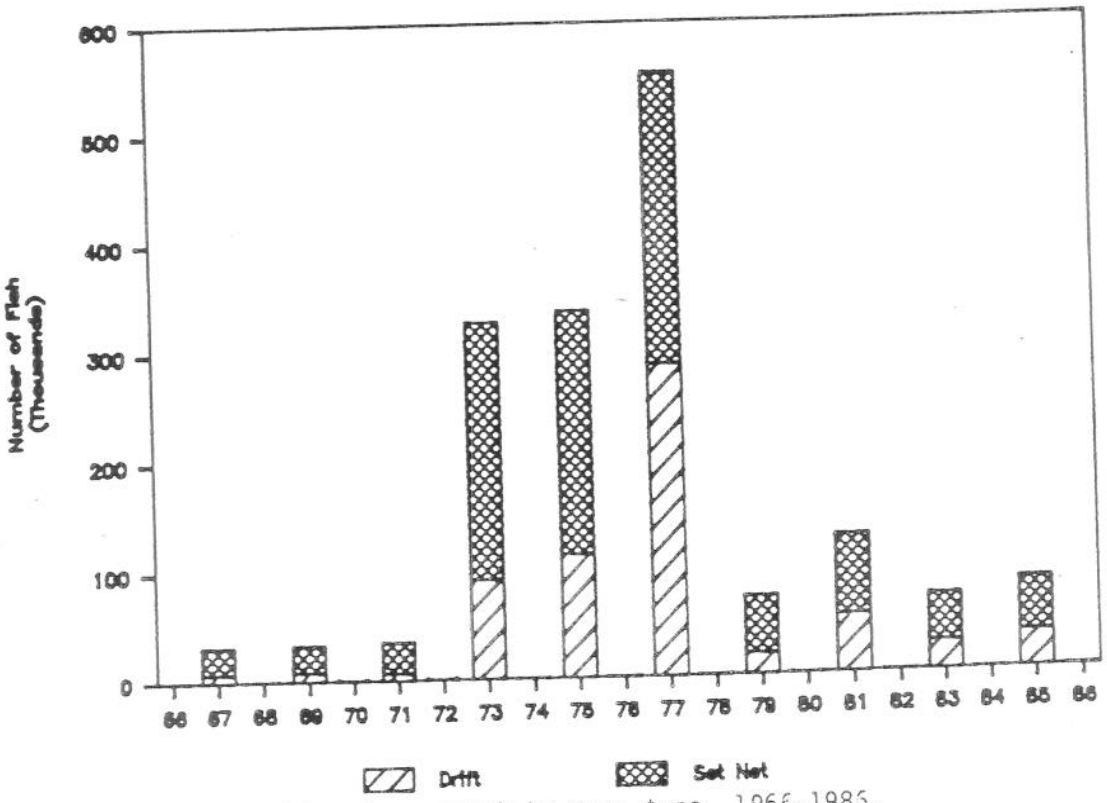


Figure 19. Odd-year pink salmon catch by gear type, 1966-1985.

Appendix Table 1. Upper Cook Inlet commercial chinook salmon harvest by gear type and area, 1966-1986.

Year	Central District Drift Gillnet		Central District Set Gillnet				Northern District Set Gillnet	
			Eastside		Kalgin/Westside			
	Number	%	Number	%	Number	%	Number	%
1966	392	5	7,329	86	401	4	422	5
1967	489	6	6,686	84	500	7	184	2
1968	182	4	3,304	73	579	13	471	10
1969	363	3	5,834	47	3,295	27	2,904	23
1970	367	4	5,366	64	1,165	14	1,460	17
1971	237	1	7,055	36	2,875	14	9,598	49
1972	375	1	8,600	53	2,199	14	4,912	31
1973	244	5	4,411	85	369	7	170	3
1974	422	6	5,570	85	425	6	169	3
1975	250	5	3,678	77	716	15	129	3
1976	692	6	8,249	76	1,469	13	457	5
1977	3,411	23	9,732	66	1,084	7	565	4
1978	2,072	12	12,468	72	2,093	12	669	4
1979	1,089	8	8,671	63	2,264	17	1,714	12
1980	889	6	9,643	70	2,273	16	990	7
1981	2,319	19	8,359	68	837	7	725	6
1982	1,293	6	13,658	65	3,203	15	2,716	13
1983	1,124	5	15,043	73	3,534	17	933	5
1984[1]	509	6	5,805	66	1,620	18	885	10
1985[1]	1,962	8	16,985	73	2,330	10	1,863	8
1986[1]	1,852	5	20,762	52	2,123	5	15,272	38
Ave.	978	7	8,915	68	1,691	12	2,248	13

[1] Preliminary data.

Data Source: Soldotna ADF&G computer files.

Appendix Table 2. Upper Cook Inlet commercial sockeye salmon harvest by gear type and area, 1966-1986.

	Central District Drift Gillnet		Central District Set Gillnet				Northern District Set Gillnet	
			Eastside		Kalgin/Westside			
Year	Number	%	Number	%	Number	%	Number	%
1966	1,103,261	60	485,330	26	132,443	7	131,080	7
1967	890,152	65	305,431	22	66,414	5	118,065	8
1968	561,737	51	317,535	29	85,049	7	140,575	13
1969	371,751	54	210,877	31	71,191	10	38,065	5
1970	474,718	64	142,701	19	62,724	9	66,458	9
1971	423,107	66	111,505	17	61,639	10	40,533	6
1972	505,935	57	204,617	23	83,422	10	85,737	10
1973	375,695	56	188,743	28	59,973	9	45,614	7
1974	265,751	53	136,889	27	52,957	11	41,563	8
1975	368,116	54	177,336	26	67,758	10	65,526	10
1976	1,055,767	63	476,376	28	62,338	4	69,649	5
1977	1,073,098	52	751,368	37	104,265	5	123,780	6
1978	1,803,358	69	660,918	25	105,767	4	51,624	2
1979	454,707	49	248,828	27	108,422	12	112,449	12
1980	770,247	49	559,812	35	137,922	9	105,647	7
1981	633,145	44	496,193	35	60,220	4	249,662	17
1982	2,103,429	65	971,423	30	66,952	2	118,060	4
1983	3,222,007	64	1,508,963	30	134,544	3	184,219	4
1984[1]	1,228,600	58	495,788	24	167,432	8	210,947	10
1985[1]	1,891,485	49	1,513,262	39	275,204	7	163,012	4
1986[1]	2,771,750	58	1,676,787	35	154,115	3	137,072	3
Ave.	1,064,182	57	554,318	28	101,425	7	109,492	8

[1] Preliminary data.
Data Source: Soldotna ADF&G computer files.

Appendix Table 3. Upper Cook Inlet commercial coho salmon harvest by gear type and area, 1966-1986.

Year	Central District Drift Gillnet		Central District Set Gillnet				Northern District Set Gillnet	
			Eastside		Kalgin/Westside			
	Number	%	Number	%	Number	%	Number	%
1966	80,901	28	68,877	24	59,509	20	80,550	28
1967	53,071	30	40,738	23	40,066	22	43,854	25
1968	167,383	36	80,828	17	63,301	14	156,648	33
1969	33,064	33	18,988	19	28,392	28	20,425	20
1970	114,392	41	30,318	10	52,363	19	82,722	30
1971	35,491	35	16,589	17	26,188	26	22,094	22
1972	21,578	27	24,673	30	15,319	19	19,346	24
1973	31,784	30	23,901	23	24,744	24	23,944	23
1974	75,640	38	36,837	19	40,610	20	47,038	23
1975	88,569	40	46,209	21	53,910	24	33,051	15
1976	80,731	39	47,873	23	42,224	20	37,850	18
1977	110,184	57	23,693	12	38,093	20	20,623	11
1978	76,252	35	34,141	16	61,711	28	47,256	21
1979	114,496	43	29,727	11	68,306	26	52,635	20
1980	89,510	33	40,281	15	51,487	19	90,098	33
1981	226,257	47	36,031	8	88,492	18	134,362	28
1982	416,274	53	108,393	14	182,205	23	85,352	11
1983	326,962	64	37,666	8	97,827	18	53,867	10
1984[1]	208,450	47	36,530	8	87,421	20	110,218	25
1985[1]	330,804	54	69,735	11	130,676	21	79,245	13
1986[1]	498,927	67	77,922	10	84,288	11	83,309	11
Ave.	151,462	40	44,283	17	64,124	22	63,071	21

[1] Preliminary data.

Data Source: Soldotna ADF&G computer files.

Appendix Table 4. Upper Cook Inlet commercial pink salmon harvest by gear type and area, 1966-1986.

Year	Central District Drift Gillnet		Central District Set Gillnet				Northern District Set Gillnet	
			Eastside		Kalgin/Westside			
	Number	%	Number	%	Number	%	Number	%
1966	593,654	30	969,624	48	70,507	4	371,960	18
1967	7,475	23	13,038	40	3,256	10	8,460	27
1968	880,512	39	785,887	35	75,755	3	534,839	23
1969	8,336	25	11,416	35	5,714	17	7,680	23
1970	346,485	42	281,067	34	24,763	3	174,193	21
1971	6,433	18	18,097	51	2,637	7	8,423	24
1972	115,096	18	403,706	64	18,936	3	90,830	15
1973	91,901	28	80,596	25	16,437	5	137,249	42
1974	140,734	29	291,408	60	9,014	2	42,879	9
1975	113,868	34	112,423	34	18,385	5	90,953	27
1976	599,600	48	479,009	38	30,044	2	148,090	12
1977	286,308	52	125,817	23	25,212	4	116,518	21
1978	934,178	55	372,865	22	54,785	3	327,270	20
1979	19,554	27	20,033	27	7,061	10	26,332	36
1980	964,526	54	299,444	17	47,963	2	474,488	27
1981	53,888	42	15,659	12	4,276	4	53,325	42
1982	270,380	35	432,715	55	14,242	2	73,307	8
1983	26,628	40	18,310	25	3,785	5	21,604	30
1984[1]	279,820	45	222,026	36	16,723	3	103,941	17
1985[1]	34,074	41	17,409	21	4,930	6	26,511	32
1986[1]	613,439	47	526,167	40	27,048	2	135,259	10
Even Year	521,675	41	460,356	37	35,435	3	225,187	19
Odd Year	64,846	39	43,280	26	9,231	5	49,705	30

[1] Preliminary data.
Data Source: Soldotna ADF&G computer files.

Appendix Table 5. Upper Cook Inlet commercial chum salmon harvest by gear type and area, 1966-1986.

Year	Central District Drift Gillnet		Central District Set Gillnet				Northern District Set Gillnet	
			Eastside		Kalgin/Westside			
	Number	%	Number	%	Number	%	Number	%
1966	424,972	80	7,461	1	64,725	12	35,598	7
1967	233,041	79	399	0	25,013	8	38,384	13
1968	1,022,900	91	1,563	0	44,986	4	58,454	5
1969	238,497	89	399	0	16,949	6	11,836	5
1970	705,467	90	1,228	0	48,783	6	24,507	3
1971	274,567	85	128	0	32,647	10	16,603	5
1972	564,253	90	1,727	0	40,567	7	19,780	3
1973	605,730	90	1,965	0	29,019	5	30,847	5
1974	344,594	87	506	0	15,346	4	36,492	9
1975	886,474	93	979	0	32,741	4	30,787	3
1976	405,773	86	1,484	0	47,877	11	14,050	3
1977	1,153,454	93	1,413	0	54,708	5	23,861	2
1978	489,065	86	4,617	1	40,946	7	37,331	6
1979	609,239	94	907	0	30,342	5	9,270	1
1980	339,970	88	2,147	0	30,105	8	16,728	4
1981	756,848	91	2,415	0	26,513	3	46,208	6
1982	1,348,510	94	4,777	0	36,647	3	43,006	3
1983	1,044,644	94	2,764	0	38,129	3	29,321	3
1984[1]	567,452	83	4,219	1	36,607	5	75,846	11
1985[1]	645,384	90	6,058	1	31,192	4	31,203	4
1986[1]	997,687	89	6,674	1	39,523	4	72,875	7
Ave.	649,453	89	2,563	0	36,365	6	33,476	5

[1] Preliminary data.
Data Source: Soldotna ADF&G computer files.

Appendix Table 6. Upper Cook Inlet commercial salmon harvest by gear type and area, 1966-1986.

Year	Central District Drift Gillnet		Central District Set Gillnet: Eastside		Central District Set Gillnet: Kalgin/Westside		Northern District Set Gillnet	
	Number	%	Number	%	Number	%	Number	%
1966	2,203,180	47	1,538,621	33	327,585	7	619,610	13
1967	1,184,228	63	366,292	19	135,249	7	208,947	11
1968	2,612,714	53	1,189,117	24	269,670	5	890,987	18
1969	652,011	59	247,514	23	125,541	11	80,910	7
1970	1,641,429	62	460,680	18	189,798	7	349,340	13
1971	739,835	66	153,374	14	125,986	11	97,251	9
1972	1,207,217	54	643,323	29	160,443	7	220,605	10
1973	1,105,354	62	299,616	17	130,542	7	237,824	14
1974	827,141	52	471,210	30	118,352	7	168,141	11
1975	1,457,277	66	340,625	15	173,510	8	220,446	11
1976	2,142,563	59	1,012,991	28	183,952	5	270,096	8
1977	2,626,455	65	912,023	22	223,362	6	285,347	7
1978	3,304,925	65	1,085,009	21	265,302	5	464,150	9
1979	1,199,085	62	308,166	16	216,395	11	202,400	11
1980	2,165,142	54	911,327	23	269,750	6	687,951	17
1981	1,672,457	58	558,657	19	180,338	6	484,282	17
1982	4,139,886	66	1,530,966	25	303,249	4	322,441	5
1983	4,621,365	70	1,582,746	24	277,819	4	289,944	4
1984[1]	2,284,831	59	764,638	20	309,803	8	501,837	13
1985[1]	2,903,709	55	1,623,449	31	444,332	8	301,834	6
1986[1]	4,883,655	61	2,308,312	29	307,097	4	443,787	6
Ave.	2,170,212	60	871,828	23	226,561	7	349,911	10

[1] Preliminary data.
Data Source: Soldotna ADF&G computer files.

Appendix Table 7. Commercial catch of Upper Cook Inlet salmon in numbers of fish by species, 1954-1986.

Year	King	Sockeye	Coho	Pink	Chum	Total
1954	63,780	1,207,046	321,525	2,189,307	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	9,541	1,851,990	289,690	2,006,580	531,825	4,689,626
1967	7,859	1,380,062	177,729	32,229	269,037	1,894,716
1968	4,536	1,104,904	470,450	2,278,197	1,119,114	4,977,201
1969	12,398	692,254	100,952	33,422	269,855	1,108,881
1970	8,348	731,214	275,296	813,895	775,167	2,603,920
1971	19,765	636,303	100,636	35,624	327,029	1,119,357
1972	16,086	879,824	80,933	628,580	630,148	2,235,571
1973	5,194	670,025	104,420	326,184	667,573	1,773,396
1974	6,596	497,185	200,125	483,730	396,840	1,584,476
1975	4,790	684,818	227,372	336,359	951,796	2,205,135
1976	10,867	1,664,150	208,710	1,256,744	469,807	3,610,278
1977	14,792	2,054,020	192,975	554,184	1,233,733	4,049,704
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	13,798	1,573,597	271,418	1,786,430	389,113	4,034,356
1981	12,240	1,439,235	485,148	127,169	833,549	2,897,341
1982	20,870	3,259,864	793,937	790,864	1,433,562	6,298,917
1983	20,634	5,049,733	516,332	70,327	1,114,858	6,771,874
1984[1]	8,819	2,102,767	442,619	622,510	684,124	3,860,889
1985[1]	23,297	3,852,141	619,924	83,548	714,130	5,293,040
1986[1]	40,009	4,739,724	744,446	1,301,913	1,116,759	7,942,851
Average	20,173	1,519,665	289,003	Even- 1,555,707 Odd- 118,694	673,543	3,339,584

[1] Preliminary data.

Appendix Table 8. Approximate exvessel value of the Upper Cook Inlet commercial salmon catch, 1960-1986.[1]

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1960	140	1,334	307	663	343	2,787
1961	100	1,687	118	16	204	2,125
1962	100	1,683	342	1,274	582	3,981
1963	89	1,388	193	13	236	1,919
1964	20	1,430	451	1,131	646	3,678
1965	50	2,099	109	70	230	2,558
1966	50	2,727	295	823	338	4,233
1967	49	2,135	187	13	202	2,586
1968	30	1,758	515	1,209	843	4,355
1969	70	1,231	109	23	204	1,637
1970	49	1,135	354	387	745	2,670
1971	189	1,102	143	22	316	1,772
1972	217	1,795	135	473	834	3,454
1973	122	3,214	320	363	2,134	6,153
1974	210	3,058	843	946	1,521	6,578
1975	65	2,596	821	423	2,753	6,658
1976	276	8,626	818	1,879	2,040	13,639
1977	525	13,274	933	772	5,991	21,495
1978	667	26,128	1,388	2,154	2,217	32,554
1979	625	8,094	1,658	89	4,201	14,667
1980	417	7,932	902	2,114	1,516	12,881
1981	422	11,071	2,638	179	2,005	16,315
1982	753	25,029	4,139	515	5,851	36,287
1983[2]	585	23,841	1,603	38	3,195	29,362
1984[2]	281	13,458	1,813	471	1,974	17,997
1985[2]	824	27,735	2,790	62	2,404	33,815
1986[2]	972	37,159	2,903	684	3,183	44,901

[1] Expressed in thousands of dollars.
[2] Preliminary data.

Data Source: 1960-1971 - Unpublished ADF&G files.
1972-1986 - Average weight x average price per pound x catch (all from CFEC and ADF&G computer files).

Appendix Table 9. Commercial herring catch, Upper Cook Inlet, 1973-1986.

Year	Harvest (Pounds) Eastside	Chinitna Bay	Tuxedni Bay	Total
1973	27,704	0	0	27,704
1974	73,386	0	0	73,386
1975	12,483	0	0	12,483
1976	11,625	0	0	11,625
1977	34,618	0	0	34,618
1978	16,548	110,693	0	127,241
1979	134,625	192,350	49,679	376,654
1980	74,766	40,012	172,994	287,772
1981	172,408	100,989	169,905	443,302
1982	120,378	183,616	100,426	404,420
1983	330,563	98,356	476,364	905,283
1984[1]	235,108	181,260	318,027	734,395
1985[1]	243,460	94,720	440,920	779,100
1986[1]	368,894	222,118	383,765	974,777

[1] Preliminary data.

Appendix Table 10. Commercial harvest of razor clams in Cook Inlet, 1919-1986.

Year	Pounds	Year	Pounds
1919	76,963	1953	0
1920	11,952	1954	0
1921	72,000	1955	0
1922	510,432	1956	0
1923	470,280	1957	0
1924	156,768	1958	0
1925	0	1959	0
1926	0	1960	372,872
1927	25,248	1961	277,830
1928	0	1962	195,650
1929	0	1963	0
1930	0	1964	0
1931	No Record	1965	0
1932	93,840	1966	0
1933	No Record	1967	0
1934	No Record	1968	0
1935	No Record	1969	0
1936	No Record	1970	0
1937	8,328	1971	14,755
1938	No Record	1972	31,360
1939	No Record	1973	34,415
1940	No Record	1974	0
1941	0	1975	10,020
1942	0	1976	0
1943	0	1977	1,762
1944	0	1978	45,931
1945	15,000	1979	144,358
1946	11,424	1980	140,420
1947	11,976	1981	441,949
1948	2,160	1982	460,639
1949	9,672	1983	269,618
1950	304,073	1984	261,742
1951	112,320	1985	319,034
1952	0	1986	258,632

Data from 1919-68 from Nickerson (1975).
Remaining years from ADF&G computer summaries.

Appendix Table 11. Registered units of gillnet fishing effort by gear type in Cook Inlet, 1960-1986.[1]

	Drift			Set			
Year	Resident	Non-Resident	Sub-total	Resident	Non-Resident	Sub-total	Total
1960	221	67	288	511	59	570	858
1961	279	93	372	564	22	586	958
1962	260	112	372	589	28	617	989
1963	333	139	472	626	34	660	1,132
1964	323	145	468	596	35	631	1,099
1965	329	145	474	556	34	590	1,064
1966	328	176	504	580	48	628	1,132
1967	350	186	536	554	50	604	1,140
1968	407	204	611	638	43	681	1,292
1969	497	208	687	686	42	728	1,415
1970	537	220	757	707	65	772	1,529
1971	519	191	710	693	38	731	1,441
1972	419	152	571	672	35	701	1,272
1973	516	146	662	632	43	775	1,437
1974	458	150	608	764	39	803	1,411
1975	291	162	453	613	44	657	1,110
1976	343	171	514	669	42	711	1,225
1977	360	179	539	690	41	731	1,270
1978	366	183	549	698	44	742	1,291
1979	372	182	554	700	44	744	1,298
1980	373	179	554	697	47	744	1,298
1981	414	185	599	688	59	747	1,346
1982	416	175	591	697	51	748	1,339
1983	417	170	587	685	60	745	1,332
1984	426	162	588	672	72	744	1,332
1985	420	170	590	666	65	731	1,321
1986	436	178	614	682	76	758	1,372

[1] Data Source: 1960-1974 ADF&G unpublished reports.
1975-1986 Commercial Fisheries Entry Commission.

Appendix Table 12. Escapement goals and counts of sockeye salmon in selected streams of Upper Cook Inlet, 1968-1986.

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

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	N/A	0	29,604

[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.

Appendix Table 13. Aerial surveys of set gill net effort, Upper Subdistrict, 1966-1986.

	Highest Observed Count				% of Total		
Year	244-20	244-30	244-40	Total	244-20	244-30	244-40
1966	346	94	127	567	61.0	16.6	22.4
1967	223	63	48	334	66.8	18.9	14.4
1968	280	76		356	78.7	21.3	0.0
1969	288			288	100.0	0.0	0.0
1970	299	83	103	485	61.6	17.1	21.2
1971	290	46	99	435	66.7	10.6	22.8
1972	381	84	124	589	64.7	14.3	21.1
1973	332	99	133	564	58.9	17.6	23.6
1974	305	92	104	501	60.9	18.4	20.8
1975	179	90	109	378	47.4	23.8	28.8
1976				0			
1977				0			
1978	376	108	132	616	61.0	17.5	21.4
1979	440	137	154	731	60.2	18.7	21.1
1980	434	134	136	704	61.6	19.0	19.3
1981	364	165	144	673	54.1	24.5	21.4
1982	371	126	183	680	54.6	18.5	26.9
1983	434	142	137	713	60.9	19.9	19.2
1984	406	118	121	645	62.9	18.3	18.8
1985	478	156	152	786	60.8	19.8	19.3
1986	533	261	162	956	55.8	27.3	16.9
78-86 Ave.	426	150	147	723	59.1	20.4	20.5

Appendix Table 14. Average price paid for[1] commercially harvested salmon, Upper Cook Inlet, 1969-1986.

Year	Chinook	Sockeye	Coho	Pink	Chum
1969	0.38	0.28	0.19	0.14	0.12
1970	0.40	0.28	0.25	0.14	0.14
1971	0.37	0.30	0.21	0.15	0.15
1972	0.47	0.34	0.27	0.19	0.20
1973	0.62	0.65	0.50	0.30	0.42
1974	0.88	0.91	0.66	0.46	0.53
1975	0.54	0.63	0.54	0.35	0.41
1976	0.92	0.76	0.61	0.37	0.54
1977	1.26	0.86	0.72	0.38	0.61
1978	1.16	1.32	0.99	0.34	0.51
1979	1.63	1.41	0.98	0.34	0.88
1980	1.15	0.85	0.57	0.34	0.53
1981	1.46	1.20	0.83	0.38	0.65
1982	1.27	1.10	0.72	0.18	0.49
1983	0.97	0.74	0.45	0.18	0.36
1984	1.08	1.00	0.64	0.21	0.39
1985	1.20	1.20	0.70	0.20	0.45
1986	0.90	1.40	0.60	0.15	0.38

[1] Expressed as dollars paid per pound.
Data Source: 1969-1983 - Commercial Fisheries Entry Commission.
1984-1986 - Preliminary fish ticket averages.

Appendix Table 15. Average weights of commercially harvested salmon, Upper Cook Inlet, 1972-1986.[1]

Year	Average Weight (lbs)				
	Chinook	Sockeye	Coho	Pink	Chum
1972	28.76	6.00	6.18	3.96	6.62
1973	37.85	7.38	6.13	3.71	7.61
1974	36.20	6.76	6.39	4.25	7.21
1975	25.14	6.07	6.86	3.60	7.06
1976	27.63	6.82	6.43	4.04	8.04
1977	28.19	7.52	6.73	3.67	7.96
1978	33.24	7.55	6.39	3.75	7.60
1979	27.93	6.21	6.38	3.58	7.34
1980	26.29	5.93	5.83	3.48	7.32
1981	23.64	6.41	6.55	3.70	7.66
1982	28.42	6.98	7.24	3.62	8.33
1983	29.24	6.38	6.90	3.04	7.96
1984	N/A	N/A	N/A	N/A	N/A
1985	N/A	N/A	N/A	N/A	N/A
1986	25.84	5.78	6.40	3.71	7.41
Average	29.42	6.58	6.42	3.71	7.47

[1] Data Source: Final IBM stat runs of fish ticket data, ADF&G, Juneau. 1984 and 1985 data not available as of this writing.

Appendix Table 16. Subsistence and personal use salmon harvest, Upper Cook Inlet, 1980-1986.

Fishery	No. of Permits	Chinook	Sockeye	Coho	Pink	Chum
Tyonek Subsistence						
1980	67	1,927	261	0	0	0
1981	70	2,002	269	62	32	13
1982	69	1,574	274	113	15	4
1983	73	2,755	251	78	0	6
1984	70	2,364	310	66	3	23
1985	176	1,967	163	91	0	10
1986	101	1,674	198	210	45	44
Non-Commercial Gillnet						
1981	1,108	68	466	12,713	149	305
Kasilof Personal Use						
1982	649	372	7,543	24	17	0
1983	684	307	8,846	0	0	0
1984	698	165	12,926	0	0	0
1985	692	203	10,746	0	0	0
1986	N/A	168	9,609	0	0	0
Fall Coho Personal Use/Subsistence						
1983	295	0	0	712	0	0
1984	309	1	2	2,261	10	7
1985	998	50	805	11,265	108	53
1986	892	0	0	2,422	0	0
Northern/Central Districts Subsistence						
1985	638	117	2,218	1,427	90	121
Knik Arm Subsistence						
1985	405	4	1,649	2,055	48	212