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UPPER COOK INLET COMMERCIAL FISHERIES
ANNUAL MANAGEMENT REPORT, 1998

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ALASKA DEPARTMENT OF FISH AND GAME
COMMERCIAL FISHERIES DIVISION

UPPER COOK INLET COMMERCIAL FISHERIES
ANNUAL MANAGEMENT REPORT, 1998

Regional Information Report¹ 2A99-21

Submitted by:

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and

Jeff Fox

¹ *Contribution 99-21 from the Soldotna area office. The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data; this information may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Commercial Fisheries Division.*

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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 (*Oncorhynchus*), razor clams (*Siliqua patula*), and Pacific herring (*Clupea harengus pallasii*) are subject to commercial harvest in Upper Cook Inlet. Harvest statistics are gathered and reported by five-digit statistical areas and sub-areas (Figure 2).

Salmon

Since the inception of a commercial fishery in 1882, many gear types, including fish traps, gillnets, and seines have been employed with varying degrees of success to harvest salmon in Upper Cook Inlet. Currently, set (fixed) gillnets are the only gear permitted in the Northern District, while both set and drift gillnets 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 gillnets have accounted for 57% of the average annual salmon harvest since 1966 with set gillnets harvesting virtually all of the remainder (Appendix A.1-5).

Commercial salmon harvest statistics specific to gear type and area are available only back to 1954 (Appendix A.6). 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 by coho (*O. kisutch*), chum (*O. keta*), pink (*O. gorbuscha*) and chinook salmon (*O. tshawytscha*) (Appendix A.7).

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 expanded in the late 1970's to include small-scale sac roe fisheries in Chinitna and Tuxedni Bays (Appendix A.8). 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 employed in the more traditional herring fisheries. Gillnets are the only legal gear for herring in Upper Cook Inlet with set gillnets 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).

Beginning in 1988 in Tuxedni Bay, significant decreases in herring abundance and a shift towards older age class herring were observed resulting in the closure of Tuxedni Bay by emergency order prior to the 1992 season. In Chinitna Bay and along the eastside beaches similar declines began to materialize after the 1990 season. As a result of these declines a Department proposal to the Alaska Board of Fisheries to open the Upper Cook Inlet herring fishery by emergency order only, was submitted. This proposal passed and became regulation for the 1993 season, ending a long period with fixed opening dates of April 15 on the east side and April 22 on the west side of the Inlet. This action effectively closed this fishery until the herring stocks recover. The 1997 season was the fifth year of a total closure of the Upper Cook Inlet Area. Beginning in 1998 the Upper Subdistrict was reopened for two days per week from April 15 to May 20 to assess the status of this population. The herring fisheries on the west side of Cook Inlet remained closed until the status of the east side stocks was determined. In addition the department submitted proposals to the Alaska Board of Fisheries to restructure the herring fishery to two 30-hour periods per week, beginning on Mondays and Thursdays. In addition these proposals would require fishermen to register prior to fishing and also to report their harvest within 12 hours of the closure of a fishing period. These proposals were passed in the form of a management plan that will be in effect for the 1999 season.

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 A.9). The sporadic nature of the fishery has been more 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 exclusively 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 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 overall harvest limits are in place for any area. Virtually all of the commercial harvest has come by hand-digging although regulations prior to 1990 allowed 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 were largely unsuccessful due to excessive shell breakage or the limited availability of clams in the area open to this gear. Currently, the use of mechanical harvesters is not permitted in any area of Cook Inlet.

1998 COMMERCIAL SALMON FISHERY

The commercial harvest of just over 2.0 million salmon in Upper Cook Inlet in 1998 was less than half that of the previous year and about half the long-term average. A dramatic drop in the sockeye salmon harvest resulted in a much reduced exvessel value of \$9.5 million, down \$22.9 million from 1997 and the lowest exvessel value since 1975.

The Alaska Board of Fisheries made only one change to the Upper Cook Inlet commercial fishing regulations for the 1998 season that directly affected the commercial fishery. The Kenai River sockeye salmon sonar goal, as defined in 5 AAC 21.360 Kenai River Sockeye Salmon Management Plan, changed from a range of 550,000 to 825,000 to a new range of 550,000 to 850,000 for the 1998 season, the last of three scheduled incremental increases in the upper end of the goal.

Throughout the 1998 season, emergency order announcements and fishery updates were provided to radio stations in Homer and the Kenai-Soldotna area and to processors, fishermen's organizations and other agencies via electronic facsimile or e-mail. Emergency orders and daily escapement and harvest information were also made available through 24-hour recorded message telephone lines.

Sockeye Salmon

The 1998 commercial harvest of just over 1.2 million sockeye salmon represents the poorest catch in nearly 20 years, is approximately a half million fish lower than the long-term average and is only 26% of the average of the preceding ten years. The catch was less than half of the forecast harvest of 2.5 million and was valued at \$8.8 million or 92.6% of the total fishery. As has become commonplace, prices paid for sockeye were very low early in the season (\$0.75 per pound) but eventually equaled the

1997 price of \$1.15 per pound, generally paid retroactively to the beginning of the season. The distribution of the harvest between drift (49.2%) and set net gear (50.8%) was shifted in favor of set nets by 6 percentage points from the long-term average.

Management of the Upper Cook Inlet sockeye salmon fishery integrates information received from a variety of programs which together provide an in-season model of the actual return. These programs include offshore test fishing, escapement enumeration by sonar and weir, comparative analysis of historic commercial harvest and effort levels, and age composition studies. Two additional developing programs (genetic stock identification and in-district sonar enumeration) are currently not funded and further development awaits future funding.

The offshore test fishing program employs a chartered gillnet vessel fishing standardized stations along a transect crossing Cook Inlet from Anchor Point to the Red River delta. The program provides an in-season estimation of sockeye salmon run-strength by determining fish passage rates (computed by correlating the vessel's daily catch with subsequent commercial harvests and escapement) and fitting these rates to the appropriate historic run-timing profile (Table 1). In 1998, the program was again conducted aboard the *F/V Corrina Kay* captained by Roy Self.

Hydroacoustic devices to quantify salmon escapement into glacial rivers were first employed in Upper Cook Inlet in the Kenai and Kasilof Rivers in 1968 and expanded to the Susitna River in 1978 and the Crescent River in 1979 (Appendix A.10). Operations followed standard procedures in all systems in 1998 and no unusual problems were observed (Table 2). Weirs placed on Fish Creek (Knik Arm) and Packers Creek (Kalgin Island) and operated by ADF&G Sport Fish Division and Cook Inlet Aquaculture Association, respectively, provided daily escapement counts for those systems.

Upper Cook Inlet commercial catch statistics refined to gear type, area and date are available back to 1966. Availability of these statistics in a computerized database format make them extremely valuable for evaluating in-season fishery performance. The 1998 commercial catch by gear type, area and date can be found in Tables 3 through 7. Total harvest by statistical area and average catch per permit are contained in Tables 8 and 9. A summary of emergency orders can be found in Table 10 and a summary of fishing periods by gear type and area in Table 11.

Inseason determination of the age composition of sockeye salmon entering the principle rivers frequently provides information helpful in estimating the stock contributions in various fisheries. During the 1998 fishery approximately 26,000 sockeye salmon were examined from catch (13,000)

and escapement (13,000) samples. The age composition of adult sockeye returning to monitored systems is provided in Table 12.

Operating under the Big River Sockeye Salmon Management Plan adopted in 1989, a small set net fishery takes place in June in the northwest corner of the Central District. Between June 1 and June 24, fishing is allowed each Monday, Wednesday and Friday from 7:00 A.M. to 7:00 P.M. Permit holders are limited to a single 35-fathom net and the minimum distance between nets is 1800 feet, three times the normal separation. Targeting an early run of sockeye salmon returning to Big River, this fishery also encounters chinook salmon migrating through the area. In the plan, the bycatch of chinook is limited to 1,000 fish although harvests in recent years have been well below that level. The 1998 fishery produced a catch of 2,600 sockeye, one of the poorer harvests on record for this fishery and less than half the average, and a chinook catch of just 78, the lowest on record. Effort was atypically light with just 7 permits making landings at the peak of the fishery. Past years had seen effort levels peak at about 20 permits.

The next fishery to open was the set gill net fishery in the Western Subdistrict of the Central District. Harvesting primarily sockeye salmon bound for the Crescent River, this fishery opens on the first Monday or Friday following June 15th. The fishery has a regular schedule of two twelve-hour weekly fishing periods throughout the season unless modified by emergency order. Following a period of record returns in the mid-eighties, the Crescent River sockeye return has fallen off sharply in recent years resulting in closures of the local set net fishery and closing the southwest corner of the Central District to drift fishing during most of the last four seasons. Despite the restrictions, success in achieving the Crescent River escapement goal has been spotty. Based largely on the successful attainment of the goal in 1997, the management strategy for 1998 was similar, being pre-emptive in nature with the Western Subdistrict south of Redoubt Point closed to set netting and drift fishing restricted to east of 152 degrees 25 minutes N lat. beginning June 26, just prior to installation of the Crescent River sonar counters. Initial escapement values were mediocre but increased markedly in mid-July and the fishery restrictions were lifted beginning July 20. The Crescent River escapement totaled 62,257, comfortably within the 50,000 – 100,000 fish goal range. The Western Subdistrict sockeye salmon harvest was just under 20,000 fish, less than half the long-term average but nearly double the previous year's harvest in this area. An ongoing program of gathering limnological samples from Crescent Lake throughout the summer continued to profile zooplankton populations that remain severely depressed and the short-term outlook for sockeye salmon production from this system remains poor.

The general fishing season for Upper Cook Inlet except the Central District east side begins the first

Monday or Friday after June 24. The southern portion (Kasilof Section) of the east side set nets opens on the first regular period beginning July 1 while the northern portion (Kenai and East Foreland Sections) begins fishing on the first regular period on or after July 8. A special provision of the regulation calls for opening the Kasilof Section prior to July 1 if the escapement level of sockeye salmon in the Kasilof River exceeds 50,000. At the beginning of the 1998 season, the Kasilof count exceeded the 50,000 mark on June 29 and the Kasilof Section set nets were open for the regular period occurring on that date. The remainder of the east side set net fishery (the Kenai and East Foreland Sections) opened on the regulatory date of July 10 (the first regular period on or after July 8.)

This portion of the season, from July through mid-August, is designated by the Upper Cook Inlet Management Plan as the time period in which salmon stocks are to be managed primarily for commercial purposes and covers the interval during which nearly all of the commercial harvest occurs. Several stocks are identified as non-target stocks for the commercial fishery - late-run Kenai River chinook, Susitna coho and early-run Kenai coho.

Based on past experience and the forecast of expected run-strength of individual stocks, the basic management strategy envisioned for the 1998 season continued to follow the theme developed over the preceding decade. In general it has been found that the sockeye return to the Susitna River would not be capable of maintaining a standard two-period-per-week schedule throughout the fishing season and still meet the escapement objective set for the Yentna River (the principle sockeye-producing tributary of the Susitna). Some reduction of fishing time, particularly in the mixed-stock drift harvest, would be required to adequately protect this stock. In contrast, Kasilof and Kenai River sockeye have generally demonstrated the ability to withstand a full fishing schedule. Reducing the Central District mixed-stock harvest would leave substantial surpluses of Kenai and Kasilof-bound sockeye to be harvested in a more discrete manner, namely in the Central District east side set net fishery and by the drift fleet confined to a 3-mile-wide corridor along the east side. Experience had also shown that the greatest benefit in reducing the drift harvest of Susitna-bound sockeye could be gained from focusing on the period from July 10-15 when north-bound fish appear to be at their greatest abundance. Harvesting the resulting surpluses of Kenai and Kasilof River sockeye along the east side has led to higher harvests of Kenai River chinook and coho salmon.

The strong, early escapement into the Kasilof River that allowed for the early opening of the Kasilof Section of the eastside set nets persisted in staying well ahead of the desired level and additional fishing was opened in the Kasilof Section on July 11 and July 15. Standard practice allows drift gillnetting in the offshore portions of this corridor whenever adjacent sections are open for set netting but not including those hours from 10:00 P.M. to 5:00 A.M. when darkness precludes enforcement of the

offshore boundary. The east side-oriented drift area had for many years been comprised of a corridor along the Kenai Peninsula following the contours of the beach and having an offshore boundary of 3 miles. The three-mile contour boundary required use of a patrol vessel for enforcement, was difficult for fishermen to locate precisely and included some waters thought to be prone to mixed stock catches. Extensive discussions between staff, enforcement officers and fishermen prior to the season resulted in an offshore boundary described by a series of fixed points. While the new line closely resembled the old three-mile boundary, provisions were made to exclude potential mixed stock areas, add waters thought to provide target stock catches, and remain as user-friendly as possible for fishermen attempting to drift within the line while dealing with rapid tidal flow. Use of GPS navigation technology allowed fishermen to determine the location of the line with high precision and allowed enforcement personnel to utilize patrol aircraft to take the place of vessels for much of the time. The new line was adopted by emergency order at the beginning of the season and was utilized whenever east side-limited drift fishing was employed. The results appeared to be very satisfactory for all involved although the weak return of Kenai River sockeye salmon precluded substantial use of the new boundary. The new line definition, perhaps slightly altered based on the experience of 1998, will be considered by the Board of Fisheries for permanent adoption into regulation prior to the 1999 fishing season.

The July 10-15 "window" coinciding with the peak abundance in the Central District of Susitna sockeye encompassed two regular periods in 1998, the ones scheduled for July 10 and July 13. Sockeye salmon entering the Central District during the first half of July are prone to accumulating in rapidly increasing numbers in district before suddenly moving in large numbers to their respective rivers around mid-month. The best results in reducing the Susitna catch can be achieved by restricting the fishing period immediately prior to the movement of fish out of the district. Information gathered prior to July 10 indicated that sockeye returns in general appeared to be on time and the drift period scheduled for July 13 appeared to offer the greatest likelihood of providing the desired protection of north-bound fish. Accordingly, the drift fleet was restricted to fishing only in the east side corridor for the July 13 regular period. The expected rapid increase in escapement began occurring on July 15 with sonar counts escalating in the Kenai and Kasilof Rivers on July 16. With initial escapements proceeding satisfactorily, all areas fished the regular period on Friday, July 17 with the drift fleet having it's best period to date, taking 187,000 sockeye, the east side set nets taking 149,000 and the Northern District catch increasing from 2,000 on July 13 to 20,000 on July 17.

The fishing period results were illuminating. The drift catch was considerably lower than might be expected given the date and the forecast run-strength. It was the first strong indicator that the Kenai River return might be below expectations. The Northern District catch was also disappointing and

indicated that additional management measures might be required to assure adequate Yentna River escapement.

After the initial entry of sockeye into the Kenai (a daily count of 36,000 on July 17), daily counts subsided on following days and, given the poor results of the July 17 fishing period, the period scheduled for Monday, July 20 was closed for the drift fleet, the Northern District set nets and all east side set nets except for those in the Kasilof Section within ½ mile of shore. Although Kenai entry had begun to improve by the end of the week, the cumulative count had only reached 250,000 by July 23 and offshore test fishing daily indices were not indicating a substantial buildup of fish entering the Central District. After three consecutive days of strong counts at the Yentna River counter on July 19-21, counts there also began to tail off. The scheduled fishing period on Friday, July 24 was closed for drifting and the east side set nets and the periods on Monday, July 27 and Friday, July 31 closed to drifting, the east side set nets and the Northern District set nets. It should be noted here that the Board-mandated restriction of the July 27 drift period under the Northern District Coho Salmon Management Plan became moot when the drift fishery for that period was closed in its entirety for sockeye conservation reasons by emergency order. Rapid entry of fish into the Kenai and Kasilof beginning July 31 triggered fishing time for the east side set nets and corridor drifting over the weekend and all areas fished the remaining regular periods as escapement goals in all major systems were attained or exceeded. The Kasilof escapement totaled 273,213, above the desired range of 150,000-250,000. The Kenai sonar count reached 767,558, well within the desired range of 550,000-850,000 and the final Yentna count was 119,623, near the midpoint of the 100,000-150,000 goal.

Under the Fish Creek Sockeye Salmon Management Plan, three fishing periods (July 19, 21 and 26) were scheduled to be open for set gillnetting in Knik Arm near the terminus of Fish Creek. When very poor fishing results from the first period coupled with very poor escapement values in Fish Creek indicated a substandard return, the remaining two periods were closed and personal use dip netting within the creek suspended. The commercial harvest of just 2,600 sockeye was the smallest on record and the catch of 548 coho salmon one of the smallest on record, as might be expected with the severely truncated fishery. The Fish Creek sockeye salmon escapement totaled just 22,853, less than half of the 50,000 fish goal.

Chum Salmon

The 1998 harvest of 95,654 chum salmon was lowest on record, far below the long-term average of just under 600,000 and just slightly below the previous year's harvest. The chum salmon catch, valued

at \$127,000, accounted for just 1.3% of the exvessel value of the salmon fishery. The extraordinarily conservative offshore drift fishery coupled with the mandatory drift restriction on July 27 under the coho management plan led to an extremely low exploitation of the return and the resulting Yentna River apportioned escapement, while poor, was not as bad as the harvest might suggest. Many reports were received from recreational anglers throughout the Susitna River drainage that chum abundance was considerably higher than it had been in many years. The 1998 return was most likely poor to mediocre in strength, as many recent chum salmon returns have been, but was subjected to extremely very light harvest pressure.

Pink Salmon

The 1998 pink salmon return produced a harvest of 551,260 fish, the highest even-year catch since 1992 but only about 40% of the long-term average even-year harvest. Pink salmon accounted for 1.0% of the value of the salmon fishery with an exvessel value of \$96,000. No escapement objectives exist for pink salmon and this species did not play a direct role in any management decision implemented during the 1998 season. Unless pink salmon are unusually abundant, fishermen do not find it profitable to target on this species, actually actively avoiding areas of pink salmon concentrations in order to focus effort on more lucrative species. Given this behavior and the extremely restrictive nature of the 1998 fishery due to poor sockeye returns, the exploitation of the various pink salmon stocks returns is thought to be very modest. Informal observations in both the Susitna and Kenai drainages indicated that spawner abundance was the highest in many years.

Coho Salmon

The 1998 coho salmon harvest of 160,644 was about half of the long-term average. Coho salmon accounted for \$281,000 or 1.3% of the exvessel value of the salmon fishery. In general, coho salmon returns appeared to generally average in run strength. Due to widespread sockeye salmon conservation concerns, district-wide drift and set net fishing periods were too infrequent to define the peak of abundance of Susitna-bound fish but exploitation was undoubtedly unusually light in both the drift and set net fisheries. Word-of-mouth input described instream coho abundance ranging from good to excellent throughout Upper Cook Inlet drainages.

Chinook Salmon

The 1998 commercial harvest of 7,997 chinook salmon was less than half the long-term average and the lowest since 1975. Valued at \$200,000, chinook represented 2.1% of the value of the salmon fishery, roughly equal to pink and chum salmon combined.

Created by the Board in 1986 and conducted under the direction of the Northern District Chinook Salmon Management Plan, a minor fishery occurs each June for set gillnets in the Northern District. Each participant is allowed one 35-fathom net and a minimum distance of 1200 feet must be maintained between nets (twice the normal distance). Fishing is permitted for 6 hours each Monday in June until the quota of 12,500 chinook has been harvested or the regular season opens on June 25. Harvest levels approached or reached the quota in the first years of the fishery, declined substantially in the early to mid '90s, and now appear to be gaining strength again, following trends in Northern District stock abundance.

It has been the policy of the Board to maintain the balance between user groups defined in the management plan when dealing with the rise and fall in abundance of Northern District chinook stocks on an annual basis through Department-generated emergency orders. For 1998, with an outlook of improved general run strength, harvest potential in sport fisheries were slightly liberalized (primarily by the reopening of the Deshka River fishery) and the commercial fishery, which had been limited to a single fishing period during poor runs, was allowed a second period. The harvest of just over 2,000 chinook salmon in the commercial fishery was rather modest as it appeared overall run strength was very good, and escapement objectives were achieved or exceeded in nearly all monitored streams.

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

During the latter part of July, the projected spawning escapement of late-run chinook fell below the target level of 22,300, prompting a no-bait restriction in the recreational fishery on July 23. When projections failed to improve by July 28, the restriction was expanded to catch-and-release. Restriction of the commercial set net fishery was not called for under the management plan, a moot point since extended closures of this fishery were in place to conserve sockeye salmon. Late entry of chinook pushed the final spawning escapement level to more than 28,000, well above the optimum target. The

recreational harvest is estimated to be 5,981 and the eastside set net harvest totaled 5,039.

Price, Average Weight and Participation

In general, prices paid to fishermen for their catch in 1998 were nearly identical to the previous year. The price per pound for sockeye salmon began the season at \$.90 to \$1.00 but rose to \$1.15 by mid-season, paid retroactively to the beginning of the year (Appendix A.11). Chinook, coho, pink and chum salmon were sold for \$1.00, \$0.45, \$0.09 and \$0.19 per pound, respectively. It should be noted that these averages are generated from inseason grounds prices and do not reflect any post-season adjustments.

As determined from fish ticket calculations, the average weight by species generally were similar to the long-term mean. Chinook salmon averaged 22.7 pounds per fish while sockeye, coho, pink and chum salmon averaged 5.5, 6.9, 3.8 and 7.3 pounds, respectively (Table 13., Appendix A.12).

The Commercial Fisheries Entry Commission issued 579 drift gillnet permits (67.9% to Alaska residents) and 745 set gillnet permits (83.2% to Alaska residents) for the Cook Inlet area in 1998 (Appendix A.13). A total of 28 firms purchased Upper Cook Inlet fishery products during 1998 (Table 14).

Salmon Enhancement

Salmon enhancement through hatchery stocking has been a part of Upper Cook Inlet salmon production since the early 1970's. Presently, only a single commercially-oriented hatchery remains operational in Upper Cook Inlet – the Trail Lakes facility located in the upper Kenai River drainage near Moose Pass and operated by the Cook Inlet Aquaculture Association. This hatchery was originally built and operated by the Department's FRED Division but subsequently leased in 1990 to CIAA as the state operating budget declined. This hatchery has functioned to produce primarily sockeye salmon with minor production of coho and chinook salmon. Many of the major projects operate without marking programs, making accurate estimates of contribution to common property harvests difficult. In general, hatchery-produced sockeye salmon have accounted for substantially less than 10 percent of the commercial catch. Upper Cook Inlet projects supported by this facility offer only one opportunity for Association cost recovery – the enhanced return of sockeye salmon to Packers Creek on Kalgin Island. Although stocking has ceased at this site, surplus fish are still

returning from prior years stocking efforts. In 1998, CIAA harvested and sold 868 sockeye salmon averaging 5.08 pounds per fish from Packers Creek

Owned and operated by CIAA, the Eklutna hatchery is located on the lower Knik River at the head of Knik Arm. Originally functioning as a chum salmon facility, this hatchery converted to sockeye salmon culture in 1992. Prior to ceasing operations in 1998, the facility annually produced 1 million sockeye salmon smolts and 50,000 coho salmon smolts for release at the hatchery site and 5 million sockeye salmon fry for release in the Big Lake drainage. Poor project returns and declining Association revenues forced the closure of this facility in August of 1998. A minor hatchery cost-recovery effort continued in the hatchery tailrace with 2,713 sockeye (averaging 3.96 pounds), 106 chum, 4 coho and 4 pink salmon harvested and sold in 1998.

Stock Status and Outlook

In general, Upper Cook Inlet's salmon stocks remain in good condition although several areas merit some discussion. The overall return of sockeye salmon in 1998 was below expectations and the harvest level of only 1.2 million is considered very poor. Generally, it appeared that marine rearing conditions were less than optimal and, should these conditions persist, overall production will remain below recent levels. Monitoring of sockeye salmon fry abundance in the freshwater rearing areas of the Kenai River indicate a more acute problem for that system. Based on the number of fry observed in Kenai and Skilak Lakes in recent years this system will have very poor returns in both 1999 and 2000. A significant upturn should occur in 2001. After experiencing record-level returns through the mid to late '80's, the Crescent River sockeye salmon run declined dramatically and has remained very poor. Limnological assessment work done in the past four years clearly indicates a dramatic drop in available zooplankton in Crescent Lake, which is no doubt responsible for the lack of juvenile fish production. The drop in zooplankton appears to be the result of increased turbidity in the lake, limiting light penetration and primary productivity. The Department is reducing the biological escapement goal (BEG) for this system from a range of 50,000 to 100,000 to a range of 25,000 to 50,000, reflecting the decreased capability of this system to rear juvenile fish. Staff will continue to monitor rearing conditions in Crescent Lake and adjust spawning escapement goals if conditions change. Recent returns of sockeye salmon to Fish Creek in Knik Arm have been relatively poor, particularly the 1998 return which experienced minimal harvest and produced less than 50% of the desired escapement. No causative factors for these poor returns are apparent and the outlook for this system is unknown. For 1999, the expected total return of sockeye salmon is forecast to be 3.5 million and the harvest should equal 2.0 million.

Chum salmon production has been relatively poor in recent years, in part due to after-effects of the 1986 fall flooding of the Susitna Basin, but likely also due to poor general environmental factors. Chum salmon stocks throughout central Alaska have shown a similar drop in productivity. While the Department lacks quantitative escapement information, chum salmon escapement has undoubtedly been augmented by management actions or regulatory changes aimed principally at other species. Significant reductions in offshore drift and Northern District set net fishing time to conserve Yentna River sockeye, the adoption of a Northern District Coho Salmon Management Plan further limiting these two fisheries, lack of a directed chum salmon fishery in Chinitna Bay due to market conditions, and reduced efforts aimed at chum salmon in the drift fishery due to low abundance and value have combined to significantly reduce chum exploitation and despite poor returns, no further conservation measures aimed specifically at chum salmon appear to be required.

Until this past season, the situation with Upper Cook Inlet's pink salmon stocks closely paralleled that of chum salmon. Since the late 80's, pink salmon runs had been greatly reduced in strength and changes in management practices and regulations served to greatly limit harvest. The 1998 returns, however, saw a major increase in pink abundance in both the Susitna and Kenai River drainages. While harvest was severely limited, much improved freshwater abundance was readily apparent. While the 1998 returns cannot be characterized as strong, they did represent a major improvement over recent returns.

Upper Cook Inlet's coho salmon stocks generally produced very strong returns throughout most of the 1980's and early 1990's but the 1997 return appeared to be quite substandard in most drainages. Fortunately, the weak 1997 return appears to have been a singular event with most observed returns in 1998 being much improved. Downturns in Kenai River coho salmon smolt production appear to be reversing but careful monitoring of this stock will continue.

After experiencing a significant downturn in the early to mid '90s, Northern District chinook salmon stocks continue to trend significantly upward and no generalized conservation issues are currently applicable. Late-run Kenai River chinook salmon returns have been relatively stable and escapement objectives have been consistently achieved.

COMMERCIAL HERRING FISHERY

In 1998 the department opened the Eastern Subdistrict of the Northern District and the Upper Subdistrict of the Central District from April 15 to May 20 by emergency order. Fishing time was limited to two 24-hour periods per week, beginning at 7:00 A.M. on Mondays and Thursdays. The 48 hours per week is a fishing intensity thought to be sustainable by this herring stock while allowing a limited harvest and the collection of biological samples necessary to judge the status of this stock. Openings in Chinitna and Tuxedni bays were delayed until more stringent reporting requirements could be instituted in regulation. This also allowed a more thorough monitoring program to be fielded for the east side fishery. In addition the first 300 feet from the mean high tide mark south of the Kenai River was kept closed to reduce the incidental harvest of Dolly Varden char.

The results of the 1998 season were encouraging with a harvest of nearly 19.5 tons. The first harvests were reported on April 23 and the last fishing period was on May 18. A total of 18 permits were used to harvest herring in this fishery, with the entire harvest coming from the Central District. Age composition of the herring samples taken was composed of primarily 5- and 6-year-old fish with very few herring older than 8 years. Department personnel observed many smaller herring, likely those less than 5 years old going through the nets uncaught, providing an anecdotal indication of recruitment in the future. There was no incidental harvest of chinook salmon, sockeye salmon or Dolly Varden char observed.

COMMERCIAL RAZOR CLAM FISHERY

Historically the Cook Inlet Razor clam fishery on the west side of Cook Inlet has been confined to the area between Crescent River and Redoubt Point. All clams harvested in this area are directed by regulation to be sold for human consumption, except for the small percentage (less than 10%) of broken clams, which may be sold for bait. Razor clams are present throughout this area with especially dense concentrations in the Polly Creek and Crescent River areas. Beginning in 1993 the Department of Environmental Conservation certified additional area for human consumption, north of the existing Polly Creek certified beach, to Redoubt Creek. In 1994 this certification was extended north to Harriet Point. In the remainder of the Upper Cook Inlet Management Area there are no restrictions on the amount of clams that can be sold for bait. Currently there is no directed effort to harvest razor clams for the bait market. The minimum legal size for razor clams is four and one-half inches (114mm) in shell length.

The 1998 fishery began on May 22 and the last reported deliveries were made on August 25. The

season's harvest taken primarily from the Polly Creek/Crescent River area was 371,877 pounds (Appendix A.9). A total of 27 diggers made 1,848 landings over the course of the season. Diggers were paid an average of \$.50 per pound for their harvest making the total fishery exvessel value \$186,000. The summer's tide schedule can be found in Table 16.

SUBSISTENCE

There is a long history of Alaskans harvesting fish and game for their personal consumptive needs under sport, subsistence, and commercial fishing regulations in the Cook Inlet area (Braund 1982). Since 1978 when the State of Alaska passed its first subsistence statute (AS 16.05.258) many changes have occurred in the regulations governing the harvest of fish and game for personal consumption in the Cook Inlet Area. Beginning in 1981 a new category of fisheries, personal use was created to provide for the personal consumptive needs of state residents not able to meet their needs under other fisheries. Since their creation numerous changes have occurred in the personal use or subsistence fisheries in Cook Inlet resulting from challenges in the State of Alaska Court System, The Alaska State Legislature or the Board of Fisheries process. The only personal use or subsistence fishery that has occurred consistently in Cook Inlet during this period is the Tyonek Subsistence fishery. A complete review of the various fisheries and changes that have resulted since 1978 is reported in Brannian and Fox, 1996.

Tyonek Subsistence Salmon Fishery

The present subsistence fishery in the Tyonek Subdistrict was created by an Anchorage Superior Court order in May 1980. In March 1981, the Board of Fisheries adopted permanent regulations for this fishery. Originally open only to those individuals living in the village of Tyonek, recent court decisions allow any Alaska resident to participate, although very few non-villagers seek permits. Fishing is allowed only in the Tyonek Subdistrict of the Northern District. Only one permit is allowed per household and each permit holder is allowed a single ten-fathom gillnet having a mesh size no greater than six inches. Fishing is allowed from 4:00 a.m. to 8:00 p.m. each Tuesday, Thursday and Friday from May 15 to June 15 or until 4,200 chinook salmon are taken. Fishing is again allowed from 6:00 a.m. to 6:00 p.m. each Saturday after June 15, though the opening is delayed until July 1 if 4,200 chinook salmon were taken before June 16. The permit allows 25 salmon per permit holder and 10 salmon for each additional member. Chinook salmon harvests have ranged from 797 in 1990 to 2,750 in 1983 (Appendix A.15). The total reported harvest for the 1998 season was 870 chinook, 127 sockeye, 49 coho, 1 pink and 1 chum salmon.

PERSONAL USE SALMON FISHERY

Under the *Upper Cook Inlet Personal Use Salmon Fishery Management Plan*, (5 AAC 77.540) personal use fishing is allowed using gillnets near the Kasilof River in the waters of Upper Cook Inlet normally closed to commercial set gillnet fishing, approximately 1.5 miles on either side of the Kasilof River extending out from shore for 1 mile. In addition, Dip net fishing is allowed in the Kenai and Kasilof rivers as well as in Fish Creek in Knik Arm. The *Upper Cook Inlet Personal Use Salmon Fishery Management Plan* received substantial changes at the BOF meeting in January of 1996. In 1995 the personal use fishery allowed gillnets in most areas of Cook Inlet normally open to commercial set gillnet fishing, for the 1996 season most of this area was closed with dip net fisheries expanded to allow for approximately the same level of harvest that had occurred with gillnets in 1995.

A permit issued by the Department along with a valid resident sport fishing license or an exemption from licensing under AS 16.05.400 is required to participate in this fishery. The annual bag and possession limits are twenty-five salmon per head of household with an additional ten salmon for each household member.

Legal gear under these plans are set gillnets and dip nets. A set gillnet can not exceed 10 fathoms (60 feet), or 45 meshes in depth. Mesh size must be greater than four inches but may not exceed six inches. Gillnets must be set at least 100 feet apart at all times. A legal dip net has been defined in regulation 5 AAC 39.105 (24).

1998 Personal Use Fishery

A total of 15,476 permits were issued to households in the Upper Cook Inlet Personal Use fishery in 1998 harvesting 164,599 salmon (Table 15). A total of 8,808 were used to participate in one or more of the various fisheries. The personal use fishery using gillnets in the mouth of the Kasilof River opened on June 21 and was closed on June 25. A total of 14,173 salmon were harvested by 592 households. By far the most popular fishery was the dip net fishery in the Kenai River harvesting 94,553 salmon with 5,868 households participating. The Fish Creek fishery was utilized by 579 households harvesting 4,436 salmon. The Kasilof River dip net fishery was utilized by 1,952 households harvesting 42,629 salmon. Approximately 2,286 permits were not returned as required. A second fishery with a separate permitting system utilizing fishwheels in the Upper Yentna River was created in 1996. The 1998 harvest from 21 permits was 473 sockeye, 147 coho and 33 pink salmon.

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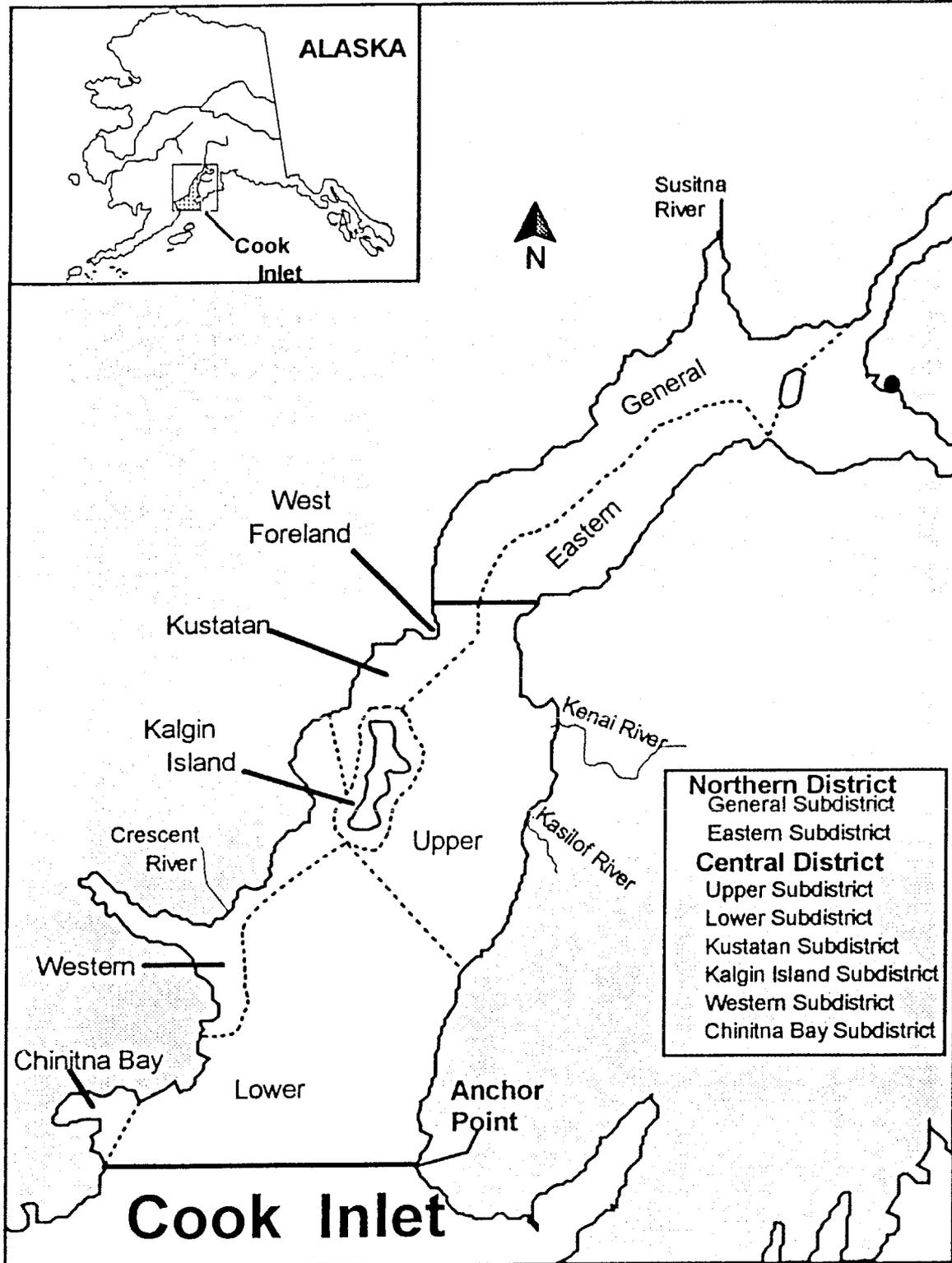


Figure 1. Upper Cook Inlet Salmon Subdistricts

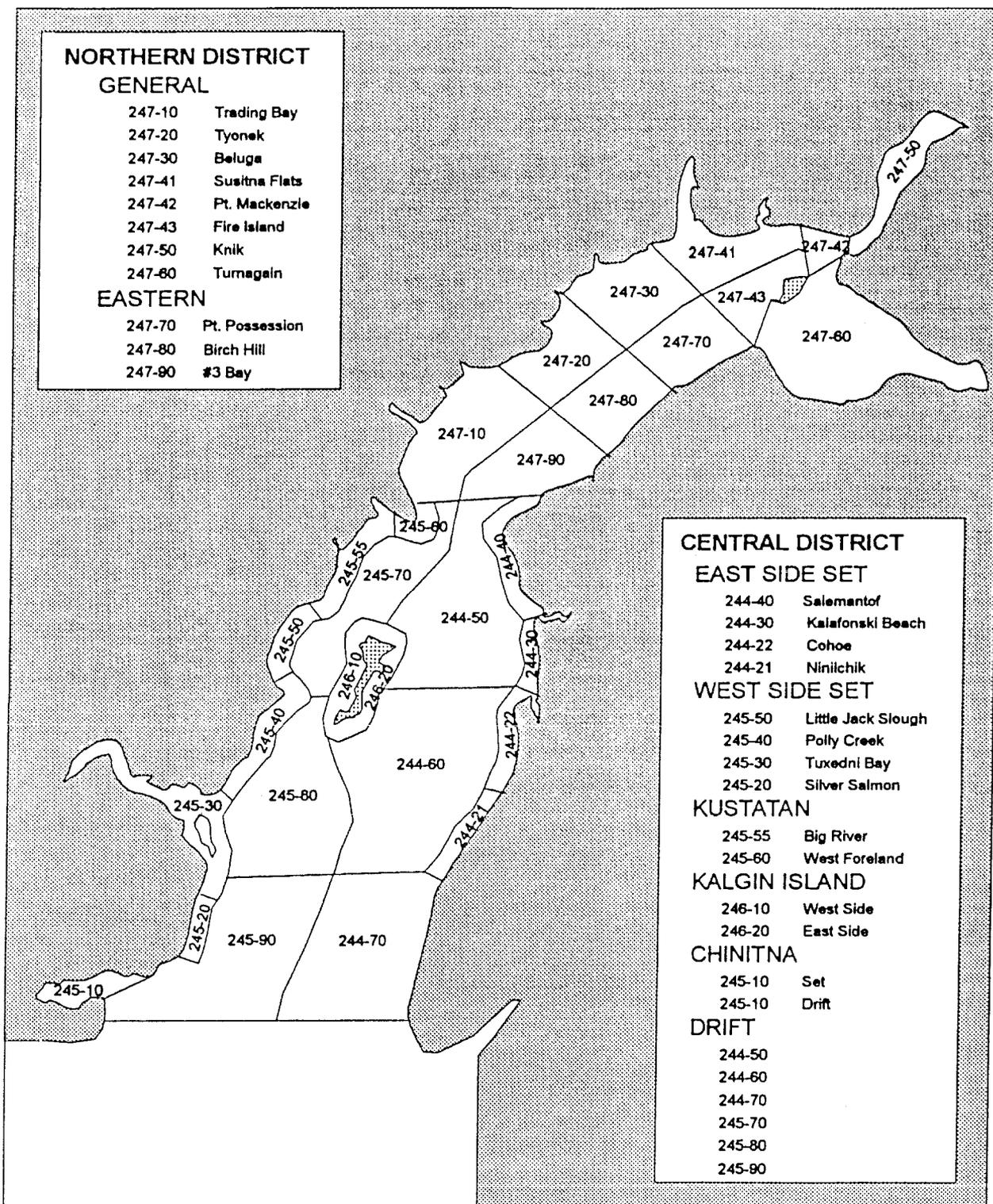


Figure 2. Upper Cook Inlet commercial fisheries statistical areas.

Table 1. Offshore sockeye salmon testfishing results, F/V Corrina Kay, 1998.

DATE	NUMBER OF STATIONS	FISHING TIME (min)	CATCH	CUMULATIVE CATCH	INDEX	CUMULATIVE INDEX	MEAN WATER LENGTH (mm)	WATER TEMP (c)	AIR TEMP (c)	SALINITY (ppm)	Beginning Wind		Ending Wind	
											VEL	DIR	VEL	DIR
1-Jul	6	227	27	27	21.01	21.01	530	9.8	11.3	30	10 SW	8 SW	8 SW	
2-Jul	6	221	26	53	21.07	42.08	533	9.9	11.9	29.4	7 S	10 N	10 N	
3-Jul	6	228.5	87	140	62.30	104.38	538	9.6	11.8	30.1	20 NW	15 NW	15 NW	
4-Jul	6	221.5	18	158	14.50	118.88	534	9.7	11.2	30.3	10 S	15 SW	15 SW	
5-Jul	6	238	114	272	81.70	200.58	531	9.9	12.8	30.2	22 NW	21 S	21 S	
6-Jul	6	220.5	14	286	11.00	211.58	540	10.2	13.1	28.7	15 SW	0	0	
7-Jul	6	229	46	332	34.96	246.54	534	10.9	13.2	28.1	5 S	18 SW	18 SW	
8-Jul	6	220	10	342	8.08	254.62	530	10.2	11.7	29.2	13 SW	9 SE	9 SE	
9-Jul	0	60	33	375	33.00	287.62	0	0.0	0	0	-1	-1	-1	
10-Jul	0	60	33	408	33.00	320.62	0	0.0	0	0	-1	-1	-1	
11-Jul	6	225	44	452	33.55	354.17	533	9.9	12	30.5	8 NW	8 NW	8 NW	
12-Jul	6	229.5	73	525	54.40	408.57	541	9.7	10.9	30.5	20 SW	10 SE	10 SE	
13-Jul	6	215.5	102	627	91.90	500.47	541	10.3	14	30.6	0	5 NW	5 NW	
14-Jul	6	196	17	644	13.20	513.67	539	9.8	13.3	30.8	8 SE	0	0	
15-Jul	6	228	35	679	23.70	537.37	542	10.3	11.7	28.3	12 SW	5 SE	5 SE	
16-Jul	6	220.5	68	747	49.30	586.67	550	10.3	11.7	30	5 NW	0	0	
17-Jul	6	242	71	818	47.70	634.37	542	10.5	12	30	12 S	16 SE	16 SE	
18-Jul	6	216	63	881	43.00	677.37	548	10.6	12.6	29.3	5 SW	9 NE	9 NE	
19-Jul	6	229	46	927	33.21	710.58	545	10.7	14.3	30.3	8 NW	0	0	
20-Jul	6	230.5	65	992	49.60	760.18	540	10.5	11.9	30	16 NW	25 NE	25 NE	
21-Jul	3	292.5	74	1066	53.90	814.08	545	9.9	12.1	31.4	40 NW	-1	-1	
22-Jul	6	223.5	54	1120	39.10	853.18	550	10.2	11.9	30.2	10 SW	12 NW	12 NW	
23-Jul	6	237	77	1197	53.70	906.88	547	10.3	13.8	30.7	0	7 SW	7 SW	
24-Jul	6	227	23	1220	17.70	924.58	540	10.2	12.8	30.4	4 SW	0	0	
25-Jul	6	249.5	142	1362	96.40	1020.98	542	10.5	10.6	30.2	15 SE	5 S	5 S	
26-Jul	6	216.5	2	1364	1.70	1022.68	510	10.3	10.6	30.6	4 N	0	0	
27-Jul	6	216.5	33	1397	22.90	1045.58	543	11.1	14.7	29.6	8 S	10 SE	10 SE	
28-Jul	6	230	35	1432	25.00	1070.58	525	10.6	12.8	30.4	5 SW	12 SE	12 SE	
29-Jul	6	267	134	1566	79.90	1150.48	545	11.3	17.5	29.7	10 SE	5 SW	5 SW	
30-Jul	6	220.5	10	1576	7.90	1158.381	532	10.7	12.4	30.6	0	0	0	

Table 2. Sockeye salmon enumeration by river and date, 1998.

Date	KENAI RIVER		KASILOF RIVER		CRESCENT RIVER		YENTNA RIVER		FISH CREEK		PACKERS CREEK	
	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum
27-Jun			7,776	41,587	579	579					0	1
28-Jun			7,752	49,339	414	993					0	1
29-Jun			8,700	58,039	370	1,363					0	1
30-Jun			3,238	61,277	553	1,916					0	1
1-Jul	1,774	1,774	7,528	68,805	220	2,136					0	1
2-Jul	3,218	4,992	6,551	75,356	241	2,377					0	1
3-Jul	2,682	7,674	3,749	79,105	127	2,504					9	10
4-Jul	2,534	10,208	2,043	81,148	157	2,661					2	12
5-Jul	3,060	13,268	6,683	87,831	78	2,739					18	30
6-Jul	5,862	19,130	8,482	96,313	55	2,794					80	110
7-Jul	6,211	25,341	3,369	99,682	685	3,479	353	353	0	0	19	129
8-Jul	6,010	31,351	5,539	105,221	1,742	5,221	354	707	0	0	85	214
9-Jul	8,522	39,873	7,165	112,386	3,634	8,855	438	1,145	0	0	18	232
10-Jul	10,043	49,916	7,302	119,688	3,366	12,221	892	2,037	0	0	9	241
11-Jul	4,486	54,402	2,059	121,747	2,530	14,751	1515	3,552	0	0	10	251
12-Jul	2,860	57,262	1,742	123,489	2,193	16,944	1631	5,183	0	0	102	353
13-Jul	2,957	60,219	3,650	127,139	1,333	18,277	881	6,064	256	256	7	360
14-Jul	3,218	63,437	2,492	129,631	1,617	19,894	616	6,680	321	577	1	361
15-Jul	4,486	67,923	5,828	135,459	1,754	21,648	402	7,082	73	650	255	616
16-Jul	10,526	78,449	7,252	142,711	2,588	24,236	589	7,671	0	650	85	701
17-Jul	36,451	114,900	13,973	156,684	2,810	27,046	915	8,586	11	661	279	980
18-Jul	25,763	140,663	8,165	164,849	3,279	30,325	2,639	11,225	40	701	627	1,607
19-Jul	19,585	160,248	10,574	175,423	3,651	33,976	7,843	19,068	2	703	326	1,933
20-Jul	17,387	177,635	7,931	183,354	2781	36,757	9,536	28,604	35	738	173	2,106
21-Jul	11,534	189,169	4,460	187,814	995	37,752	7,788	36,392	64	802	260	2,366
22-Jul	19,659	208,828	6,871	194,685	993	38,745	2,739	39,131	34	836	92	2,458
23-Jul	46,831	255,659	7,422	202,107	3,583	42,328	1,377	40,508	116	952	363	2,821
24-Jul	45,226	300,885	9,095	211,202	2,115	44,443	2,166	42,674	418	1,370	719	3,540
25-Jul	31,950	332,835	7,123	218,325	763	45,206	2,554	45,228	1,146	2,516	232	3,772
26-Jul	20,069	352,904	5,671	223,996	1,003	46,209	3,053	48,281	1,274	3,790	12	3,784
27-Jul	22,954	375,858	5,252	229,248	1,679	47,888	2,738	51,019	775	4,565	385	4,169
28-Jul	41,313	417,171	8,528	237,776	987	48,875	3,305	54,324	1,541	6,106	143	4,312
29-Jul	44,618	461,789	6,137	243,913	2,094	50,969	4,619	58,943	1,383	7,489	199	4,511
30-Jul	32,295	494,084	5,615	249,528	2,121	53,090	8,011	66,954	720	8,209	138	4,649
31-Jul	38,698	532,782	6,677	256,205	2,311	55,401	7,442	74,396	927	9,136	307	4,956
1-Aug	55400	588182	6029	262234	1794	57195	7419	81815	4551	13687	1234	6190
2-Aug	67820	656002	2369	264603	942	58137	9307	91122	1829	15516	775	6965
3-Aug	12762	668764	1448	266051	926	59063	8159	99281	440	15956	859	7824
4-Aug	8463	677227	1596	267647	828	59891	5530	104811	1332	17288	675	8499
5-Aug	8,612	685,839	2,165	269,812	909	60,800	3,690	108,501	1,811	19,099	778	9,277
6-Aug	15,442	701,281	1,300	271,112	852	61,652	2,369	110,870	1,122	20,221	1048	10,325
7-Aug	11,783	713,064	1,248	272,360	605	62,257	1,286	112,156	1,474	21,695	1012	11,337
8-Aug	10,597	723,661	853	273,213			1,181	113,337	268	21,963	751	12,088
9-Aug	7,481	731,142					608	113,945	79	22,042	453	12,541
10-Aug	7,293	738,435					811	114,756	83	22,125	482	13,023

Table 2. (page 2 of 2)

Date	KENAI RIVER		KASILOF RIVER		CRESCENT RIVER		YENTNA RIVER		FISH CREEK		PACKERS CREEK	
	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum
11-Aug	9,404	747,839					805	115,561	75	22,200	417	13,440
12-Aug	8,607	756,446					852	116,413	48	22,248	413	13,853
13-Aug	11,112	767,558					701	117,114	110	22,358	391	14,244
14-Aug							554	117,668	124	22,482	285	14,529
15-Aug							324	117,992	31	22,513	192	14,721
16-Aug							233	118,225	75	22,588	137	14,858
17-Aug							311	118536	4	22,592	182	15,040
18-Aug							242	118778	0	22,592	163	15,203
19-Aug							317	119095	18	22,610	395	15,598
20-Aug							231	119326	35	22,645	208	15,806
21-Aug							297	119623	2	22,647	162	15,968
22-Aug									38	22,685	318	16,286
23-Aug									39	22,724	178	16,464
24-Aug									9	22,733	224	16,688
25-Aug									13	22,746	172	16,860
26-Aug									1	22,747	326	17,186
27-Aug									64	22,811	122	17,308
28-Aug									19	22,830	65	17,373
29-Aug									12	22,842	113	17,486
30-Aug									6	22,848	170	17,656
31-Aug									0	22848	76	17732
1-Sep									0	22848		
2-Sep									0	22848		
3-Sep									1	22849		
4-Sep									2	22851		
5-Sep									0	22851		
6-Sep									0	22851		
7-Sep									2	22853		
8-Sep									0	22853		

Table 3. Commercial chinook salmon catch by area and date, Upper Cook Inlet, 1998.

Date	East Side Setnet										Northern District										
	Drift		Salamatof		K-Beach		Cohoe/Ninilchik		Total		West Side		Kustatan		Kalgin		West Side		East Side		
	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	
1-Jun													12	12			935	935	348	348	
3-Jun													42	54				935		348	
5-Jun													19	73				935		348	
8-Jun													2	75			562	1497	319	667	
10-Jun														75				1497		667	
12-Jun														75				1497		667	
15-Jun													1	76				1497		667	
17-Jun													2	78				1497		667	
19-Jun														78				1497		667	
22-Jun												17	17					1497		667	
26-Jun	36	36											17	1	79	5	5	73	1570	15	682
29-Jun	68	104			75	75	151	151	226	226			17	1	80	14	19	79	1649	12	694
3-Jul	38	142			82	157	276	427	358	584			17	1	81	5	24	28	1677	7	701
6-Jul	39	181			145	302	173	600	318	902			17		81		24	18	1695	5	706
10-Jul	30	211	163	163	308	610	247	847	718	1,620			17		81	9	33	21	1716		706
11-Jul	12	223			111	721	301	1,148	412	2,032			17		81		33		1716		706
13-Jul	45	268	214	377	266	987	173	1,321	653	2,685			17	2	83	4	37	12	1728	1	707
15-Jul	11	279			194	1181	258	1,579	452	3,137			17		83		37		1728		707
17-Jul	31	310	221	598	289	1,470	209	1,788	719	3,856			17		83		37	8	1736	5	712
19-Jul		310				1,470		1,788		3,856			17		83		37		1736		712
20-Jul		310			86	1,556	214	2,002	300	4,156	4	21			83		37		1736		712
24-Jul		310				1,556		2,002		4,156		21			83	3	40	2	1738	7	719
27-Jul		310				1,556		2,002		4,156	2	23			83	1	41		1738		719
31-Jul		310				1,556		2,002		4,156	1	24			83	3	44		1738		719
1-Aug	8	318	23	621	77	1,633	57	2,059	157	4,313		24			83		44		1738		719
2-Aug	4	322	120	741	138	1,771	91	2,150	349	4,662		24			83		44		1738		719
3-Aug	4	326	38	779	91	1,862	56	2,206	185	4,847		24			83		44	2	1740	3	722
5-Aug	2	328	26	805	50	1,912	27	2,233	103	4,950		24			83		44		1740		722
7-Aug	4	332	13	818	20	1,932	20	2,253	53	5,003		24			83	2	46		1740	1	723
10-Aug		332	11	829	11	1,943	14	2,267	36	5,039		24			83		46		1740	2	725
14-Aug		332				1,943		2,267		5,039	1	25			83	1	47	1	1741		725
17-Aug		332				1,943		2,267		5,039		25			83		47		1741		725
21-Aug		332				1,943		2,267		5,039		25			83		47		1741	4	729
24-Aug		332				1,943		2,267		5,039		25			83		47		1741	1	730

Table 4. Commercial sockeye salmon catch by area and date, Upper Cook Inlet, 1998.

Date	Ditt		Salamatof		K-Beach		East Side Seiner		Coho/Nutlinchik		Total		Western		Kuatsum		Kalgim Island		Chentna Bay		West Side		East Side	
	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily
1-Jun	143																							143
3-Jun	143																							143
5-Jun	143																							143
8-Jun	171																							171
10-Jun	171																							171
12-Jun	171																							171
15-Jun	171																							171
17-Jun	171																							171
19-Jun	171																							171
22-Jun	171																							171
26-Jun	23,065	8,525																						610
29-Jun	23,065	8,525																						610
3-Jul	26,918	58,508																						883
6-Jul	37,602	116,110																						2,920
10-Jul	150,993	267,103																						4,020
11-Jul	1,160	268,263																						4,020
13-Jul	6,358	274,621																						4,020
15-Jul	87,610	362,231																						4,673
17-Jul	178,251	540,482	60,593																					4,673
19-Jul	540,482	66,268	66,268																					8,145
20-Jul	540,482	66,268	66,268																					8,145
24-Jul	540,482	66,268	66,268																					8,145
27-Jul	540,482	66,268	66,268																					8,145
31-Jul	540,482	66,268	66,268																					8,145
1-Aug	545,935	7,185	73,453	20,430																				15,349
2-Aug	8,772	554,777	19,411	92,864	9,924																			15,349
3-Aug	28,337	583,064	14,115	106,979	9,310																			15,964
5-Aug	1,425	584,489	4,480	111,459	3,521																			15,964
7-Aug	14,713	599,202	3,232	114,691	1,554																			16,508
10-Aug	599,202	599,202	5,199	119,890	2,061																			17,319
14-Aug	599,202	599,202																						17,319
17-Aug	599,202	599,202																						18,036
21-Aug	599,202	599,202																						18,240
24-Aug	599,202	599,202																						18,290
28-Aug	599,202	599,202																						18,308
31-Aug	599,202	599,202																						18,315
4-Sep	599,202	599,202																						18,322
7-Sep	599,202	599,202																						18,326
11-Sep	599,202	599,202																						18,332

Table 5. Commercial coho salmon catch by area and date, Upper Cook Inlet, 1998.

Date	East Side Setnet										Northern District												
	Drift		Salamatof		K-Beach		Cohoe/Ninilchik		Total		Western		Kustatan		Kalgin Island		Chinitna Bay		West Side		East Side		
	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	
1-Jun																							
3-Jun																							
5-Jun																							
8-Jun																			4	4			
10-Jun																					4	4	
12-Jun																					4	4	
15-Jun																					4	4	
17-Jun																					4	4	
19-Jun																					4	4	
22-Jun																					4	4	
26-Jun	50	50												6	6					28	32	56	56
29-Jun	1112	1162			1	1			1	1				48	54					26	58	3	59
3-Jul	3360	4522					1	14	14	14			8	8	204	258			139	197	28	87	
6-Jul	4790	9,312			8	9	17	31	25	40			10	18	94	352			844	1041	132	219	
10-Jul	23898	33,210	90	90	13	22	17	48	120	160	32	32	24	42	405	757			955	1996	63	282	
11-Jul	126	33,336		90	6	28	15	63	21	181				42		757				1996		282	
13-Jul	187	33,523	374	464	102	130	123	186	599	780	110	142	67	109	2,240	2997			1635	3631	302	584	
15-Jul	437	33,960		464	91	221	251	437	342	1122		142		109	2997					3,631		584	
17-Jul	31,134	65,094	1125	1589	150	371	196	633	1471	2593	63	205	71	180	2175	5172	21	21	5290	8,921	1129	1713	
19-Jul		65,094		1589		371		633		2,593		205		180		5172		21	548	9,469		1713	
20-Jul		65,094		1589	20	391	91	724	111	2,704	735	940		180	1076	6248		21		9,469		1713	
24-Jul		65,094		1,589		391		724		2,704	972	1912	173	353	1503	7751	29	50	5702	15,171	1331	3044	
27-Jul		65,094		1,589		391		724		2,704	1268	3180	164	517	1470	9221	70	120		15,171		3044	
31-Jul		65,094		1,589		391		724		2,704	755	3935	151	668	1629	10850	33	153		15,171		3044	
1-Aug	498	65,592	230	1,819	461	852	1268	1992	1959	4,663		3935		668		10850		153		15,171		3044	
2-Aug	945	66,537	986	2,805	734	1586	1414	3406	3134	7,797		3935		668		10,850		153		15,171		3044	
3-Aug	7,949	74,486	529	3,334	623	2209	1957	5363	3,109	10,906	913	4848	103	771	152	11,002	35	188	3023	18,194	1047	4091	
5-Aug	254	74,740	505	3,839	533	2,742	1146	6,509	2,184	13,090		4848		771		11,002		188		18,194		4091	
7-Aug	8,597	83,337	503	4,342	611	3,353	801	7,310	1,915	15,005	1603	6,451	28	799	1,124	12,126	83	271	2,292	20,486	618	4709	
10-Aug		83,337	1640	5,982	992	4,345	1025	8,335	3,657	18,662	981	7,432		799	93	12,219		271	1104	21,590	657	5366	
14-Aug		83,337		5,982		4,345		8,335		18,662	1169	8,601		799	379	12,598	26	297	1032	22,622	1785	7151	
17-Aug		83,337		5,982		4,345		8,335		18,662	519	9,120		799	76	12,674	5	302	245	22,867	1804	8955	
21-Aug		83,337		5,982		4,345		8,335		18,662	423	9,543		799	35	12,709		302	113	22,980	956	9911	
24-Aug		83,337		5,982		4,345		8,335		18,662	294	9,837		799	65	12,774		302	179	23,159	521	10432	
28-Aug		83,337		5,982		4,345		8,335		18,662	423	10,260		799	56	12,830	27	329		23,159	282	10714	
31-Aug		83,337		5,982		4,345		8,335		18,662		10,260		799		12,830		329		23,159	38	10,752	
4-Sep		83,337		5,982		4,345		8,335		18,662	68	10,328		799		12,830		329		23,159	285	11,037	
7-Sep		83,337		5,982		4,345		8,335		18,662		10,328		799		12,830		329		23,159	134	11,171	
11-Sep		83,337		5,982		4,345		8,335		18,662		10,328		799		12,830		329		23,159	29	11,200	

Table 6. Commercial pink salmon catch by area and date, Upper Cook Inlet, 1998.

Date	Drift		East Side Setnet				Western				Kustatan				Kaigin Island				Chinitna Bay				Northern District						
	Daily	Cum	Salamatof	K-Beach	Coho/Nimilchuk	Total	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	
1-Jun																													
3-Jun																													
5-Jun																													
8-Jun																													
10-Jun																													
12-Jun																													
15-Jun																													
17-Jun																													
19-Jun																													
22-Jun																													
26-Jun	15	15																											
29-Jun	77	92																											
3-Jul	218	310																											
6-Jul	1,007	1,317																											
10-Jul	9,361	10,678	96	11	24	36	5	5	12	7	12	5	12	7	12	5	12	7	12	7	12	5	12	7	12	5	12	7	12
11-Jul	151	10,829	96	33	103	244	590	277	789	465	512	47	47	35	47	35	47	35	47	35	47	35	47	35	47	35	47	35	47
13-Jul	452	11,281	275	105	208	292	882	672	1,461	672	1,461																		
15-Jul	4,272	15,553	371	67	275	408	1,290	475	1,936	475	1,936																		
17-Jul	101,585	117,138	1,285	198	473	779	2,069	2,262	4,198	2,262	4,198																		
19-Jul		117,138	1,656		473		2,069		4,198		4,198																		
20-Jul		117,138	1,656	31	504	402	2,471	433	4,631	433	4,631	23	23																
24-Jul		117,138	1,656		504		2,471		4,631		4,631	30	53																
27-Jul		117,138	1,656		504		2,471		4,631		4,631	30	83																
31-Jul		117,138	1,656		504		2,471		4,631		4,631	50	133																
1-Aug	7,812	124,950	1,639	3,295	5,133	5,637	13,718	16,189	20,490	20,490	25,121		133																
2-Aug	9,998	134,948	13,789	17,084	12,841	18,478	17,985	34,174	44,615	44,615	69,736		133																
3-Aug	41,769	176,717	8,891	25,975	20,994	39,472	30,638	64,812	60,523	130,259		133																	
5-Aug	2,879	179,596	14,620	40,595	27,208	66,680	60,315	125,127	102,143	232,402		183																	
7-Aug	20,786	200,382	11,536	52,131	11,349	78,029	36,136	161,263	59,021	291,423		183																	
10-Aug		200,382	15,690	67,821	11,358	89,387	13,621	174,884	40,669	332,092		276																	
14-Aug		200,382		67,821		89,387		174,884		332,092		305																	
17-Aug		200,382		67,821		89,387		174,884		332,092		305																	
21-Aug		200,382		67,821		89,387		174,884		332,092		305																	
24-Aug		200,382		67,821		89,387		174,884		332,092		305																	
28-Aug		200,382		67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	
				67,821		89,387		174,884		332,092		305																	

Table 8. Commercial catch by gear, statistical area and species, Upper Cook Inlet, 1998.

Gear	District	Subdistrict	Stat Area	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total		
Drift	Central	All	All	528	332	599,202	83,337	200,382	88,036	971,289		
Set Net	Central	Upper	24421	85	1,202	100,913	4,427	93,410	177	200,129		
			24422	105	1,065	132,758	3,908	81,474	234	219,439		
			24430	143	1,943	158,472	4,345	89,387	156	254,303		
			24440	89	829	119,890	5,982	67,821	121	194,643		
			All	383	5,039	512,033	18,662	332,092	688	868,514		
		Kalgin Is.	24610	20	39	15,283	9,282	4,966	306	29,876		
			24620	7	8	7,990	3,548	1,674	74	13,294		
			All	26	47	23,273	12,830	6,640	380	43,170		
		Chinitna	24510	2	0	163	329	46	550	1,088		
		Western	24520	8	4	289	1,381	10	218	1,902		
			24530	15	12	3,519	6,316	441	1,731	12,019		
			24540	1	9	510	3	5	26	553		
			24550	6	0	15,556	2,628	0	44	18,228		
			All	25	25	19,874	10,328	456	2,019	32,702		
		Kustatan	24555	7	78	2,555	0	0	0	2,633		
			24560	2	5	1,210	799	89	4	2,107		
			All	9	83	3,765	799	89	4	4,740		
		All	All	All	441	5,194	559,108	42,948	339,323	3,641	950,214	
		Set Net	Northern	General	24710	17	282	4,474	1,909	559	8	7,232
					24720	23	743	11,466	4,446	1,241	363	18,259
24730	28				420	18,544	6,619	2,768	749	29,100		
24741	14				105	1,580	3,194	707	820	6,406		
24742	10				99	763	1,676	316	564	3,418		
24743	7				92	2,890	4,767	1,221	1,053	10,023		
24750	11				0	2,597	548	0	105	3,250		
All	77				1,741	42,314	23,159	6,812	3,662	77,688		
Eastern	24770			22	572	8,490	5,379	2,839	281	17,561		
	24780			10	43	4,560	3,110	494	13	8,220		
	24790			9	115	5,282	2,711	1,410	21	9,539		
	All			34	730	18,332	11,200	4,743	315	35,320		
All	All			All	102	2,471	60,646	34,359	11,555	3,977	113,008	
All	All			All	539	7,665	619,754	77,307	350,878	7,618	1,063,222	
Seine	All			All	All	0	0	0	0	0	0	
All	All	All	All	1,067	7,997	1,218,956	160,644	551,260	95,654	2,034,511		

Table 9. Commercial salmon catch per permit by statistical area, Upper Cook Inlet, 1998.

Gear	District	Subdistrict	Stat Area	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total	
Drift	Central	All	All	528	1	1,135	158	380	167	1,843	
Set Net	Central	Upper	24421	85	14	1,187	52	1,099	2	2,382	
			24422	105	10	1,264	37	776	2	2,110	
			24430	143	14	1,108	30	625	1	1,791	
			24440	89	9	1,347	67	762	1	2,212	
			All	383	13	1,337	49	867	2	2,290	
		Kalgin Is.	24610	20	2	764	464	248	15	1,568	
			24620	7	1	1,141	507	239	11	2,169	
			All	26	2	895	493	255	15	1,724	
		Chinitna	24510	2	0	82	165	23	275	679	
		Western	24520	8	1	36	173	1	27	264	
			24530	15	1	235	421	29	115	847	
			24540	1	9	510	3	5	26	1,080	
			24550	6	0	2,593	438	0	7	3,543	
			All	25	1	795	413	18	81	1,357	
		Kustatan	24555	7	11	365	0	0	0	430	
			24560	2	3	605	400	45	2	1,579	
			All	9	9	418	89	10	0	585	
		All	All	All	441	12	1,268	97	769	8	2,160
		Northern	General	24710	17	17	263	112	33	0	450
				24720	23	32	499	193	54	16	828
				24730	28	15	662	236	99	27	1,075
				24741	14	8	113	228	51	59	486
				24742	10	10	76	168	32	56	370
				24743	7	13	413	681	174	150	1,615
				24750	11	0	236	50	0	10	321
				All	77	23	550	301	88	48	1,021
				Eastern	24770	22	26	386	245	129	13
24780	10				4	456	311	49	1	904	
24790	9				13	587	301	157	2	1,177	
All	34				21	539	329	140	9	1,069	
All	All			All	102	24	595	337	113	39	1,118
All	All			All	539	14	1,150	143	651	14	1,976
Seine	All	All	All	0	0	0	0	0	0		

Table 10. Commercial fishery emergency orders issued during the 1998 Upper Cook Inlet season.

Emergency Order No.	Effective Date	Action	Reason
2S-01-98	April 15	Opened herring fishing in the Eastern Subdistrict of the Northern District and the Upper Subdistrict of the Central District on Mondays and Thursdays from April 15 to May 20.	Reopen a fishery that had been closed since 1992 to assess the herring stocks.
2S-02-98	June 11	Closed set gill netting in the Northern District on June 15 and June 22.	Poor chinook salmon returns to many streams.
2S-03-98	June 23	Closed until further notice set netting in the Western Subdistrict south of Redoubt Point and drifting west of 152 degrees 25 minutes W.long.	Lagging escapement rate of Crescent River sockeye.
2S-04-98	June 23	Redescribe the Kenai and Kasilof sections using Latitude and Longitude.	Improve precision of Kenai and Kasilof sections harvests to more discrete stocks.
2S-05-98	June 28	Opened the Kasilof Section for set netting from 7am. To 7pm. on June 29 and open for regularly scheduled fishing periods from that day on.	Attainment of 50,000 escapement of sockeye salmon in the Kasilof River as per 5 AAC. 21.310.
2S-06-98	July 11	Opened the Kasilof Section for set netting from 5am until 7pm on July 11 and drifting on July 11 from 5am to 7pm..	Reduce the escapement rate of Kasilof River sockeye.
2S-07-98	July 13	Closed drifting in all areas except in the Kenai and Kasilof Sections on Monday, July 13.	Reduce the exploitation of Susitna River sockeye.
2S-08-98	July 15	Opened the Kasilof Section for set netting and drifting on July 15 from 3pm until 11pm .	Reduce the escapement rate of Kasilof River sockeye.
2S-09-98	July 20	Rescinds Emergency Order Number 2S-03-98 and reopens set netting in the Western Subdistrict south of Redoubt Point and drifting west of 152 degrees 25 minutes W.long.	Minimum escapement levels in Crescent River assured and further protection of this stock unwarranted.
2S-10-98	July 20	Closed drifting in all areas of the Central District and set gillnetting in the Northern District and the Upper Subdistrict, except that portion of the Kasilof Section within 1/2 mile of shore on Monday, July 20.	Reduce the exploitation of Kenai River and Susitna River sockeye.
2S-11-98	July 21	Closed set netting in the Fish Creek harvest area in Knik arm on Tuesday July 21.	Reduce the exploitation of sockeye salmon bound for Fish Creek.
2S-12-98	July 24	Closed drifting all areas of the Central District and set gillnetting in the Upper Subdistrict of the Central District on Friday July 24.	Decrease the harvest rate of sockeye salmon bound for the Kenai River.
2S-13-98	July 26	Closed set netting in the Fish Creek harvest area in Knik arm on Sunday July 26.	Reduce the exploitation of sockeye salmon bound for Fish Creek.
2S-14-98	July 27	Closed drifting all areas of the Central District and set gillnetting in the Upper Subdistrict of the Central District and the Northern District on Monday July 27.	Reduce the exploitation rate of sockeye salmon bound for the Kenai and Susitna rivers.
2S-15-98	July 31	Closed drifting all areas of the Central District and set gillnetting in the Upper Subdistrict of the Central District and the Northern District on Friday July 31.	Reduce the exploitation rate of sockeye salmon bound for the Kenai and Susitna rivers.

Table 10. Page 2 of 2.

Emergency Order No.	Effective Date	Action	Reason
2S-16-98	August 1	Opened set netting in the Kasilof Section of the Upper Subdistrict within ½ mile of shore from 7am to 7 p.m.	Increase the harvest rate of sockeye salmon bound for the Kasilof River.
2S-17-98	August 1	Opened set netting in the Upper Subdistrict from 5pm August 1 until 7pm August 2 and drifting in the Kenai and Kasilof Sections on August 1 from 5pm to 10pm and August 2 from 5am to 7pm.	Increase the harvest rate of sockeye salmon bound for the Kenai and Kasilof rivers.
2S-18-98	August 2	Opened set netting in the Upper Subdistrict from 7pm August 2 until 7am August 3 and drifting in the Kenai and Kasilof Sections on August 2 from 7pm to 10pm and August 3 from 5am to 7am.	Increase the harvest rate of sockeye salmon bound for the Kenai and Kasilof rivers.
2S-19-98	August 5	Opened set netting in the Upper Subdistrict from 7am until 7pm August 5 and drifting in the Kenai and Kasilof Sections on August 5 from 7am to 7pm.	Increase the harvest rate of sockeye salmon bound for the Kenai and Kasilof rivers.

Table 11. Commercial salmon fishing periods, Upper Cook Inlet, 1998.

Date	Day	Time	Set Gill Net	Drift Gill Net
1-Jun	Monday	0700-1900 0700-1300	Big River Area Northern District	
3-Jun	Wednesday	0700-1900	Big River Area	
5-Jun	Friday	0700-1900	Big River Area	
8-Jun	Monday	0700-1900 0700-1300	Big River Area Northern District	
10-Jun	Wednesday	0700-1900	Big River Area	
12-Jun	Friday	0700-1900	Big River Area	
15-Jun	Monday	0700-1900	Big River Area	
17-Jun	Wednesday	0700-1900	Big River Area	
19-Jun	Friday	0700-1900	Big River Area, Western	
22-Jun	Monday	0700-1900	Big River Area, Western	
26-Jun	Friday	0700-1900	All except Upper Subdistrict and Western South of Redoubt Point	All except west of 152.25
29-Jun	Monday	0700-1900	All except Kenai, East Forelands Sections and Western south of Redoubt Pt.	All except west of 152.25
3-Jul	Friday	0700-1900	All except Kenai, East Forelands Sections and Western south of Redoubt Pt.	All except west of 152.25
6-Jul	Monday	0700-1900	All except Kenai, East Forelands Sections and Western south of Redoubt Pt.	All except west of 152.25
10-Jul	Friday	0700-1900	All except Western s. of Redoubt Pt.	All except west of 152.25
11-Jul	Saturday	0500-1900	Kasilof Section	Kasilof Section
13-Jul	Monday	0700-1900	All except Western s. of Redoubt Pt.	Kenai, Kasilof Sections Only
15-Jul	Wednesday	1500-2300	Kasilof Section	Kasilof Section
17-Jul	Friday	0700-1900	All except Western s. of Redoubt Pt.	All except west of 152.25
19-Jul	Sunday	0700-1900	Knik Arm	
20-Jul	Monday	0700-1900	Kalgin, Kustatan, Western, Chinitna, Kasilof Section w/ 1/2 mile of shore	
24-Jul	Friday	0700-1900	All except Upper	
27-Jul	Monday	0700-1900	All except Upper and Northern	
31-Jul	Friday	0700-1900	Kalgin, Kustatan, Western, Chinitna	

Table 11. Page 2 of 2.

Date	Day	Time	Set Gill Net	Drift Gill Net
1-Aug	Saturday	0700-1700 1700-2400 1700-2200	Kasilof w/ 1/2 mile of shore Upper Subdistrict	Kenai, Kasilof Sections
2-Aug	Sunday	0000-2400 0500-2200	Upper Subdistrict	Kenai, Kasilof Sections
3-Aug	Monday	0000-0700 0500-0700 0700-1900	Upper Subdistrict All	Kenai, Kasilof Sections All
5-Aug	Wednesday	0700-1900	Upper Subdistrict	Kenai, Kasilof Sections
7-Aug	Friday	0700-1900	All	All
10-Aug	Monday	0700-1900	All	
14-Aug	Friday	0700-1900	All except Upper Subdistrict	
17-Aug	Monday	0700-1900	All except Upper Subdistrict	
21-Aug	Friday	0700-1900	All except Upper Subdistrict	

Fishing continued each Monday and Friday as described for 8/17 and 8/21 for the remainder of the season.

Table 12. Age composition (in percent) of sockeye salmon escapements, Upper Cook Inlet, 1998.

Stream	Age Class												
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	2.4	3.3
Kenai River	0.0	0.3	0.0	27.1	6.6	40.7	9.6	0.1	1.3	13.9	0.1	0.1	0.1
Kasilof River	0.1	0.1	0.0	39.7	0.6	28.1	22.2	0.0	0.4	8.9	0.0	0	0
Yentna River	0.7	0.3	5.7	15.7	0.0	62.7	4.0	0.0	0.3	10.5	0.0	0	0
Crescent River	0.0	0.0	0.0	9.9	0.0	44.5	10.1	0.0	0.3	35.2	0.0	0	0
Fish Creek	0.0	0.2	0.5	6.4	0.2	75.4	4.0	0.0	0.2	12.2	0.3	0	0.3
Packers Creek	0.0	0.0	0.0	2.9	0.3	26.8	40.1	0.0	0.0	23.3	0.0	0.3	6.2

Table 13. Upper Cook Inlet salmon average weights (in pounds) by area, 1998.¹

Fishery	CHINOOK	SOCKEYE	COHO	PINK	CHUM
Upper Cook Inlet Total	22.67	5.48	6.88	3.78	7.26
Northern District Total	15.91	5.65	7.19	3.89	7.35
Northern District West	16.57	5.89	7.15	3.85	7.38
Trading Bay 247-10	17.04	5.83	6.45	3.92	7.62
Tyonck 247-20	16.05	6.07	6.86	3.82	6.59
Beluga 247-30	15.31	6.02	6.57	4.02	7.35
Susitna Flat 247-41	21.35	5.90	8.25	3.76	7.92
Pt. Mackenzic 247-42	18.78	5.23	7.45	3.21	6.86
Fire Island 247-43	17.26	5.62	7.66	3.69	7.45
Knik Arm 247-50		4.79	7.07		8.25
Northern District East	14.33	5.10	7.29	3.94	6.97
Pt. Possession 247-70	14.02	5.38	6.98	3.87	6.87
Birch Hill 247-80	17.28	4.76	7.77	3.97	9.00
Number 3 Bay 247-90	14.73	4.93	7.37	4.08	7.14
Central District Total	25.70	5.47	6.79	3.78	7.26
Upper Subdistrict Set Total	26.55	5.15	7.36	3.83	6.73
Salamatof 244-40	30.79	5.78	7.38	4.25	7.19
Kalifonsky Beach 244-30	26.37	5.14	7.74	3.93	6.61
Cohoc/Ninilchik	25.15	4.82	7.14	3.62	6.64
Cohoc 244-22	23.55	4.99	7.39	3.81	6.44
Ninilchik 244-21	26.56	4.61	6.92	3.45	6.89
Western Subdistrict Set Total	23.72	4.71	7.86	3.87	7.49
Little Jack Slough 245-50		4.45	7.52		8.89
Polly Creek 245-40	25.89	5.82	6.67	3.00	9.04
Tuxedni Bay 245-30	20.42	5.69	7.81	3.82	7.44
Silver Salmon 245-20	28.75	5.29	8.73	6.90	7.44
Kustatan Subdistrict Total	26.35	5.09	7.05	3.26	7.00
Big River 245-55	26.69	4.72			
West Foreland 245-60	21.00	5.89	7.05	3.26	7.00
Kalgin Island Subdistrict Total	21.34	5.06	7.05	3.59	7.06
West Side 246-10	22.03	5.03	7.04	3.63	7.18
East Side 246-20	18.00	5.11	7.08	3.47	6.58
Chinitna Bay Subdistrict Total		6.02	7.32	3.96	7.43
Central District Set Total	26.48	5.13	7.38	3.83	7.29
Central District Drift Total	13.39	5.8	6.48	3.71	7.26

¹ Pounds of fish divided by numbers of fish from commercial harvest fishtickets.

Table 14. Buyers and processors of Upper Cook Inlet fishery products, 1998.

Buyer/Processor	Plant Site	Contact	Address
Alaskan Gourmet F0403	Anchorage		P.O. Box 190733 Anchorage, Ak. 99519-0733
Alaska Salmon Purchasers F3529	Kenai	Mark Powell	HC01 Box 240 Kenai, Ak. 99611-0240
Carlson Seafoods F1232-6	Kasilof	Dorius Carlson	HC2 Box 544 Kasilof Ak. 99610
Coal Point Trading F1757	Homer	Nancy Hillstrand	P.O. 674 Homer, Ak. 99603
Cook Inlet Processing F0186-3	Kenai	Pat Hardina	Box 8163 Nikiski Ak. 99635
Deep Creek Custom Packing F1051-5	Ninilchik	Jeff Berger	P.O. Box 39229 Ninilchik Ak. 99639
Dragnet Fisheries F0030-4	Kenai	Mike McCune	P.O. Box 1260 Kenai Ak. 99611
Glacier Fresh Seafoods F1979	Seward	Keith Bailey	P.O. Box 1989 Seward, Ak. 99664-1989
Fishhawk Fisheries F1540-1	Kenai	Steve Frick	P.O. Box 715 Astoria Or. 97103
His Catch F3293	Homer	Doug Stuart	P.O. Box 770 Homer, AK. 99603-0770
Icicle Seafoods F0133-0	Homer	Dennis Guhike	P.O. Box 79003 Seattle Wa. 98119
Inlet Fisheries Inc. F1039-7	Kenai	Patrick Klier	P.O. Box 530 Kenai Ak. 99611
North Alaska Fisheries F1681-7	Wasilla	Jack Schulteis	P.O. Box 877351 Wasilla Ak. 99687
Pacific Alaska Seafoods F0130-7	Nikiski	Jerry Cartee	P.O. Box 7498 Nikiski Ak. 99635
Pacific Star Seafoods F1834	Kenai	Dan Foley	2300 Eastlake Ave. E. Seattle, Wa. 98102
R & J Enterprises F0838-6	Kasilof	Juanita Meier	Box 165 Kasilof Ak. 99610
Royal Pacific Fisheries F0409-1	Kenai	Marvin Dragseth	P.O. Box 1370 Kenai Ak. 99611
Sahalee of Alaska F1485	Anchorage	Christa Lind	P.O. 104174 Anchorage, Ak. 99510
Salamatof Seafoods F0037-1	Kenai	Wylie Reed	P.O. Box 1450 Kenai Ak. 99615
Saltory Inc. F2273	Halibut Cove	David Beck	P.O. Box 6410 Halibut Cove, Ak. 99603-6410
Seasonal Seafoods F0998-7	Kasilof	Baily Wharton	4039 21st Ave. Seattle Wa. 98199
Snug Harbor Seafoods F1302-5	Kenai	Paul Dale	Box 701 Kenai Ak. 99611
Trans Aqua Int'l F1193-2	Kasilof	Taka Iwasaki	One Union Sq. #2800 Seattle Wa. 981101
Wards Cove Packing F0270-2	Kenai	Bill Brindle	P.O. Box C-5030 Seattle Wa. 98105-0030

Table 15. Reported personal use harvest by gear, area and species, Upper Cook Inlet, 1998.

Fishery	Number of Households	Harvest					Total
		Chinook	Sockeye	Coho	Pink	Chum	
Did Not Fish	4,382						
Kasilof Gillnet	592	107	14,049	0	12	5	14,173
Kasilof Dip Net	1,952	130	41,172	693	563	71	42,629
Kenai Dip Net	5,868	227	94,553	908	877	81	96,646
Fish Creek Dip Net	579	1	3,725	617	65	28	4,436
Unkown	445	27	6,277	222	169	20	6,715
Permit Not Returned	2,286						
Total	15,476	492	159,776	2,440	1,686	205	164,599

Does not include educational or subsistence fishery harvests. Harvest data is not expanded for those permits (approximately 14.8 percent) that were not returned as required.

Table 16. Seldovia District tide tables, April-September, 1998.

APRIL										MAY													
HIGH TIDES					LOW TIDES					HIGH TIDES					LOW TIDES								
Date	Day	A.M. Time	Feet	P.M. Time	Feet	Date	Day	A.M. Time	Feet	P.M. Time	Feet	Date	Day	A.M. Time	Feet	P.M. Time	Feet	Date	Day	A.M. Time	Feet	P.M. Time	Feet
1	Wed	5:06	20.2	5:58	17.5	1	Wed	11:32	-2.2	11:45	2.2	1	Fri	6:31	17.7	7:41	16	1	Fri	0:28	2.7	1:04	-0.9
2	Thur	5:54	18.3	6:59	15.7	2	Thur	—	—	12:27	-0.4	2	Sat	7:26	15.8	8:47	14.8	2	Sat	1:25	4.3	2:03	0.9
3	Fri	6:50	16.3	8:14	14.3	3	Fri	0:42	4.2	1:33	1.4	3	Sun	8:33	14.1	10:01	14.2	3	Sun	2:34	5.4	3:13	2.4
4	Sat	8:02	14.7	9:42	13.8	4	Sat	1:55	5.7	2:55	2.5	4	Mon	9:54	13.1	11:13	14.4	4	Mon	3:58	5.8	4:30	3.1
5	Sun	10:31	13.9	—	—	5	Sun	4:26	6.1	5:20	2.7	5	Tue	11:19	13.1	—	—	5	Tue	5:20	5.1	5:37	3.2
6	Mon	0:02	14.4	11:57	14.2	6	Mon	5:52	5.4	6:26	2.2	6	Wed	0:10	15	12:26	13.8	6	Wed	6:21	3.9	6:29	3
7	Tue	0:58	15.3	12:59	15.1	7	Tue	6:52	4.1	7:13	1.7	7	Thur	0:52	15.8	1:15	14.8	7	Thur	7:06	2.6	7:10	2.7
8	Wed	1:39	16.3	1:44	16.2	8	Wed	7:35	2.8	7:50	1.1	8	Fri	1:25	16.7	1:56	15.8	8	Fri	7:43	1.3	7:45	2.4
9	Thur	2:10	17.3	2:21	17.1	9	Thur	8:11	1.5	8:23	0.7	9	Sat	1:56	17.5	2:32	16.6	9	Sat	8:16	0.2	8:19	2.1
10	Fri	2:38	18.1	2:55	17.9	10	Fri	8:43	0.4	8:53	0.5	10	Sun	2:26	18.3	3:07	17.3	10	Sun	8:48	-0.8	8:53	1.9
11	Sat	3:05	18.8	3:28	18.4	11	Sat	9:14	-0.4	9:23	0.5	11	Mon	2:56	18.8	3:43	17.7	11	Mon	9:20	-1.5	9:26	2
12	Sun	3:32	192.0	4:01	18.5	12	Sun	9:45	-0.9	9:54	0.8	12	Tue	3:27	19.1	4:18	17.7	12	Tue	9:53	-1.8	10:01	2.3
13	Mon	4:00	19.3	4:35	18.3	13	Mon	10:16	-1.1	10:26	1.4	13	Wed	4:00	19	4:55	17.4	13	Wed	10:26	-1.8	10:37	2.8
14	Tue	4:29	19.1	5:10	17.6	14	Tue	10:48	-0.9	10:58	2.2	14	Thur	4:33	18.6	5:34	16.8	14	Thur	11:02	-1.6	11:15	3.4
15	Wed	4:59	18.5	5:47	16.6	15	Wed	11:21	-0.4	11:33	3.2	15	Fri	5:09	17.9	6:17	16	15	Fri	11:40	-1	11:56	4.1
16	Thur	5:30	17.7	6:28	15.5	16	Thur	11:57	0.3	—	—	16	Sat	5:49	16.9	7:04	15.3	16	Sat	—	—	12:22	-0.3
17	Fri	6:06	16.7	7:16	14.3	17	Fri	0:10	4.4	12:38	1.2	17	Sun	6:36	15.9	7:59	14.7	17	Sun	0:44	4.8	1:11	0.6
18	Sat	6:49	15.6	8:17	13.5	18	Sat	0:55	5.5	1:29	2.1	18	Mon	7:36	14.8	9:01	14.6	18	Mon	1:43	5.3	2:10	1.4
19	Sun	7:49	14.5	9:32	13.2	19	Sun	1:54	6.3	2:35	2.8	19	Tue	8:50	14.1	10:06	15.1	19	Tue	2:55	5.2	3:19	1.9
20	Mon	9:09	13.9	10:48	13.9	20	Mon	3:14	6.5	3:55	2.8	20	Wed	10:12	14.1	11:08	16.2	20	Wed	4:13	4.2	4:31	1.9
21	Tue	10:36	14.3	11:51	15.3	21	Tue	4:39	5.6	5:11	2.1	21	Thur	11:29	15	—	—	21	Thur	5:24	2.4	5:36	1.4
22	Wed	11:52	15.5	—	—	22	Wed	5:50	3.7	6:13	0.9	22	Fri	0:03	17.6	12:37	16.3	22	Fri	6:24	0.2	6:34	0.8
23	Thur	0:43	17.1	12:56	17.2	23	Thur	6:48	1.3	7:06	-0.3	23	Sat	0:53	19.1	1:35	17.7	23	Sat	7:17	-2	7:26	0.2
24	Fri	1:28	19.0	1:50	18.9	24	Fri	7:38	-1.2	7:53	-1.3	24	Sun	1:40	20.4	2:28	18.8	24	Sun	8:06	-3.8	8:15	-0.2
25	Sat	2:10	20.6	2:40	20.2	25	Sat	8:24	-3.3	8:38	-1.9	25	Mon	2:25	21.3	3:17	19.6	25	Mon	8:52	-5.1	9:02	-0.3
26	Sun	2:51	21.8	3:28	20.9	26	Sun	9:09	-4.8	9:22	-1.9	26	Tue	3:09	21.6	4:04	19.8	26	Tue	9:38	-5.6	9:48	0
27	Mon	3:33	22.3	4:15	20.9	27	Mon	9:54	-5.5	10:07	-1.4	27	Wed	3:53	21.4	4:51	19.5	27	Wed	10:22	-5.3	10:34	0.7
28	Tue	4:15	22.1	5:03	20.2	28	Tue	10:39	-5.3	10:51	-0.3	28	Thur	4:38	20.5	5:39	18.7	28	Thur	11:07	-4.4	11:21	1.6
29	Wed	4:58	21.2	5:52	19.0	29	Wed	11:24	-4.4	11:38	1.1	29	Fri	5:23	19.1	6:27	17.6	29	Fri	11:53	-3	—	—
30	Thur	5:43	19.7	6:44	17.5	30	Thur	—	—	12:12	-2.8	30	Sat	6:10	17.4	7:18	16.5	30	Sat	0:10	-2.8	12:40	-1.3
												31	Sun	7:01	15.7	8:12	15.5	31	Sun	1:03	-3.9	1:30	0.5

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Table 16. (page 2 of 3)

June										July													
HIGH TIDES					LOW TIDES					HIGH TIDES					LOW TIDES								
Date	Day	A.M. Time	Feet	P.M. Time	Feet	Date	Day	A.M. Time	Feet	P.M. Time	Feet	Date	Day	A.M. Time	Feet	P.M. Time	Feet	Date	Day	A.M. Time	Feet	P.M. Time	Feet
1	Mon	7:59	14.0	9:09	14.8	1	Mon	2:04	4.9	2:26	2.1	1	Wed	8:19	13.3	9:02	15.0	1	Wed	2:22	4.7	2:28	3.5
2	Tue	9:08	12.9	10:09	14.5	2	Tue	3:15	5.3	3:28	3.4	2	Thur	9:26	12.4	9:54	14.7	2	Thur	3:27	4.9	3:24	4.8
3	Wed	10:24	12.4	11:05	14.7	3	Wed	4:30	5.0	4:32	4.1	3	Fri	10:43	12.1	10:48	14.9	3	Fri	4:38	4.6	4:28	5.5
4	Thur	11:38	12.7	11:53	15.3	4	Thur	5:37	4.1	5:31	4.3	4	Sat	11:57	12.5	11:41	15.4	4	Sat	5:42	3.7	5:30	5.7
5	Fri	—	—	12:39	13.5	5	Fri	6:28	2.9	6:21	42.0	5	Sun	—	—	12:57	13.5	5	Sun	6:34	2.6	6:25	5.5
6	Sat	0:34	16.0	1:27	14.4	6	Sat	7:10	1.7	7:05	4.0	6	Mon	0:29	16.2	1:46	14.6	6	Mon	7:18	1.3	7:14	4.9
7	Sun	1:12	16.8	2:09	15.4	7	Sun	7:47	0.5	7:45	3.6	7	Tue	1:14	17.1	2:28	15.7	7	Tue	7:58	0.0	7:58	4.2
8	Mon	1:48	17.7	2:48	16.3	8	Mon	8:22	-0.6	8:24	3.2	8	Wed	1:57	18.1	3:07	16.7	8	Wed	8:35	-1.2	8:40	3.4
9	Tue	2:24	18.4	3:25	16.9	9	Tue	8:57	-1.5	9:01	3.0	9	Thur	2:38	18.9	3:44	17.6	9	Thur	9:12	-2.2	9:20	2.7
10	Wed	3:00	18.8	4:03	17.3	10	Wed	9:32	-2.2	9:40	2.8	10	Fri	3:19	19.5	4:22	18.2	10	Fri	9:50	-2.9	10:02	2.2
11	Thur	3:37	19.0	4:41	17.5	11	Thur	10:08	-2.5	10:19	2.8	11	Sat	4:00	19.8	5:00	18.5	11	Sat	10:28	-3.2	10:44	1.8
12	Fri	4:15	18.9	5:21	17.3	12	Fri	10:45	-25.0	11:00	3.0	12	Sun	4:43	19.6	5:40	18.6	12	Sun	11:08	-3.1	11:28	1.7
13	Sat	4:55	18.5	6:02	17.0	13	Sat	11:25	-2.2	11:44	3.3	13	Mon	5:28	19.0	6:21	18.5	13	Mon	11:49	-2.4	—	—
14	Sun	5:38	17.7	6:47	16.7	14	Sun	—	—	12:07	-1.6	14	Tue	6:17	18.0	7:06	18.1	14	Tue	0:16	1.7	12:34	-1.3
15	Mon	6:27	16.7	7:35	16.3	15	Mon	0:32	3.5	12:54	-0.7	15	Wed	7:12	16.6	7:56	17.7	15	Wed	1:09	1.9	1:24	0.2
16	Tue	7:25	15.6	8:29	16.2	16	Tue	1:29	3.7	1:47	0.4	16	Thur	8:16	15.3	8:51	17.4	16	Thur	2:10	2.0	2:20	1.7
17	Wed	8:33	14.6	9:28	16.4	17	Wed	2:34	3.5	2:48	1.4	17	Fri	9:31	14.4	9:53	17.2	17	Fri	3:19	1.9	3:25	3.0
18	Thur	9:50	14.2	10:28	16.9	18	Thur	3:46	2.8	3:55	2.1	18	Sat	10:53	14.2	10:59	17.4	18	Sat	4:34	1.3	4:37	3.8
19	Fri	11:09	14.5	11:28	17.7	19	Fri	4:58	1.5	5:03	2.4	19	Sun	—	—	12:12	14.8	19	Sun	5:46	.2	5:48	3.8
20	Sat	—	—	12:21	15.4	20	Sat	6:03	-0.2	6:07	2.3	20	Mon	0:03	18.0	1:18	15.9	20	Mon	6:48	-1.1	6:52	3.4
21	Sun	0:24	18.7	1:24	16.5	21	Sun	7:00	-1.9	7:05	1.9	21	Tue	1:02	18.8	2:12	17.1	21	Tue	7:42	-2.2	7:47	2.6
22	Mon	1:16	19.7	2:19	17.7	22	Mon	7:52	-3.4	7:57	1.5	22	Wed	1:55	19.5	2:59	18.1	22	Wed	8:28	-3.1	8:36	1.9
23	Tue	2:06	20.4	3:08	18.5	23	Tue	8:39	-4.4	8:47	1.1	23	Thur	2:42	20.0	3:40	18.8	23	Thur	9:11	-3.5	9:20	1.5
24	Wed	2:52	20.7	3:54	19.0	24	Wed	9:24	-4.8	9:33	1.0	24	Fri	3:25	20.1	4:19	19.1	24	Fri	9:51	-3.5	10:03	1.3
25	Thur	3:38	20.6	4:38	19.0	25	Thur	10:08	-4.6	10:19	1.2	25	Sat	4:06	19.9	4:56	19.1	25	Sat	10:29	-3.0	10:43	1.4
26	Fri	4:22	20.0	5:21	18.7	26	Fri	10:50	-3.9	11:04	1.7	26	Sun	4:46	19.2	5:31	18.7	26	Sun	11:05	-2.1	11:23	1.8
27	Sat	5:05	19.0	6:03	18.0	27	Sat	11:31	-2.8	11:49	2.5	27	Mon	5:25	18.2	6:06	18.0	27	Mon	11:41	-.8	—	—
28	Sun	5:48	17.6	6:45	17.2	28	Sun	—	—	12:12	-1.3	28	Tue	6:05	17.0	6:41	17.2	28	Tue	0:03	2.5	12:17	0.7
29	Mon	6:34	16.1	7:28	16.3	29	Mon	0:36	3.3	12:54	0.3	29	Wed	6:47	15.6	7:18	16.4	29	Wed	0:44	3.3	12:54	2.3
30	Tue	7:23	14.6	8:13	15.5	30	Tue	1:26	4.1	1:38	2.0	30	Thur	7:35	14.1	7:58	15.6	30	Thur	1:29	4.1	1:35	3.9
												31	Fri	8:34	12.9	8:46	14.9	31	Fri	2:23	4.7	2:24	5.4

Table 16. (page 3 of 3)

August										September													
HIGH TIDES					LOW TIDES					HIGH TIDES					LOW TIDES								
Date	Day	A.M. Time	Feet	P.M. Time	Feet	Date	Day	A.M. Time	Feet	P.M. Time	Feet	Date	Day	A.M. Time	Feet	P.M. Time	Feet	Date	Day	A.M. Time	Feet	P.M. Time	Feet
1	Sat	9:48	12.1	9:44	14.6	1	Sat	3:29	5.0	3:26	6.5	1	Tue	11:55	13.1	11:17	14.9	1	Tue	5:08	4.6	5:19	7.4
2	Sun	11:13	12.2	10:48	14.8	2	Sun	4:45	4.7	4:40	7.0	2	Wed	—	—	12:53	14.5	2	Wed	6:14	3.2	6:24	6.1
3	Mon	12:28	13.0	11:51	15.5	3	Mon	5:55	3.7	5:50	6.7	3	Thur	0:22	16.3	1:36	16.2	3	Thur	7:03	1.5	7:14	4.4
4	Tue	—	—	1:22	14.3	4	Tue	6:49	2.3	6:47	5.8	4	Fri	1:15	18.0	2:13	17.9	4	Fri	7:45	-0.2	7:59	2.4
5	Wed	0:46	16.7	2:05	15.7	5	Wed	7:32	0.8	7:36	4.6	5	Sat	2:02	19.6	2:49	19.5	5	Sat	8:24	-1.7	8:41	0.6
6	Thur	1:35	18.0	2:43	17.1	6	Thur	8:12	-0.8	8:19	3.2	6	Sun	2:47	21.0	3:25	20.9	6	Sun	9:03	-2.7	9:22	-1.0
7	Fri	2:20	19.3	3:20	18.4	7	Fri	8:50	-2.1	9:01	1.9	7	Mon	3:31	21.8	4:02	21.7	7	Mon	9:43	-3.1	10:05	-2.0
8	Sat	3:03	20.3	3:56	19.4	8	Sat	9:28	-3.0	9:43	0.8	8	Tue	4:16	22.0	4:40	22.0	8	Tue	10:23	-2.8	10:49	-2.5
9	Sun	3:46	20.9	4:33	20.1	9	Sun	10:07	-3.5	10:25	0.0	9	Wed	5:02	21.4	5:20	21.7	9	Wed	11:05	-1.8	11:35	-2.2
10	Mon	4:30	21.0	5:11	20.4	10	Mon	10:47	-3.3	11:09	-0.4	10	Thur	5:51	20.1	6:03	20.8	10	Thur	11:49	-0.2	—	—
11	Tue	5:16	20.4	5:51	20.3	11	Tue	11:28	-2.4	11:56	-0.3	11	Fri	6:44	18.3	6:51	19.4	11	Fri	0:24	-1.3	12:37	1.7
12	Wed	6:04	19.2	6:34	19.7	12	Wed	—	—	12:12	-1.1	12	Sat	7:46	16.5	7:48	17.8	12	Sat	1:21	0.0	1:34	3.7
13	Thur	6:58	17.7	7:22	18.9	13	Thur	0:47	0.2	1:00	0.7	13	Sun	9:02	15.1	8:58	16.4	13	Sun	2:28	1.4	2:44	5.4
14	Fri	8:01	16.0	8:17	17.9	14	Fri	1:45	0.9	1:55	2.6	14	Mon	10:32	14.6	10:23	15.8	14	Mon	3:50	2.2	4:11	6.1
15	Sat	9:15	14.7	9:23	17.0	15	Sat	2:53	1.5	3:01	4.3	15	Tue	11:56	15.2	11:47	16.1	15	Tue	5:16	2.1	5:37	5.6
16	Sun	10:42	14.2	10:38	16.7	16	Sun	4:12	1.7	4:20	5.2	16	Wed	—	—	12:58	16.3	16	Wed	6:24	1.4	6:43	4.4
17	Mon	12:07	14.8	11:53	17.1	17	Mon	5:32	1.1	5:40	5.1	17	Thur	0:52	17.0	1:44	17.5	17	Thur	7:16	0.6	7:32	3.0
18	Tue	—	—	1:12	16.1	18	Tue	6:39	0.2	6:47	4.2	18	Fri	1:41	18.0	2:20	18.5	18	Fri	7:57	-0.1	8:12	1.8
19	Wed	0:57	17.9	2:02	17.2	19	Wed	7:32	-0.9	7:41	3.1	19	Sat	2:22	18.8	2:52	19.3	19	Sat	8:32	-0.4	8:48	0.9
20	Thur	1:49	18.7	2:44	18.3	20	Thur	8:16	-1.6	8:26	2.1	20	Sun	2:57	19.4	3:20	19.8	20	Sun	9:04	-0.5	9:21	0.2
21	Fri	2:33	19.5	3:20	19.0	21	Fri	8:55	-2.0	9:06	1.3	21	Mon	3:31	19.7	3:48	20.0	21	Mon	9:35	-0.2	9:53	0.0
22	Sat	3:13	19.9	3:53	19.5	22	Sat	9:30	-2.1	9:43	0.9	22	Tue	4:05	19.6	4:15	19.9	22	Tue	10:05	0.3	10:25	0.0
23	Sun	3:50	19.9	4:23	19.6	23	Sun	10:03	-1.7	10:19	0.8	23	Wed	4:38	19.1	4:43	19.5	23	Wed	10:36	1.2	10:57	0.4
24	Mon	4:25	19.6	4:54	19.4	24	Mon	10:36	-1.0	10:54	1.0	24	Thur	5:13	18.3	5:12	18.8	24	Thur	11:08	2.3	11:30	1.2
25	Tue	5:01	18.9	5:24	18.9	25	Tue	11:08	0.1	11:28	1.5	25	Fri	5:50	17.1	5:43	17.8	25	Fri	11:41	3.7	—	—
26	Wed	5:37	17.8	5:54	18.1	26	Wed	11:40	1.4	—	—	26	Sat	6:30	15.7	6:16	16.7	26	Sat	0:05	2.1	12:16	5.1
27	Thur	6:16	16.5	6:26	17.2	27	Thur	0:04	2.3	12:14	2.9	27	Sun	7:19	14.3	6:57	15.5	27	Sun	0:45	3.2	12:59	6.5
28	Fri	6:58	15.0	7:02	16.2	28	Fri	0:42	3.2	12:51	4.5	28	Mon	8:24	13.2	7:55	14.4	28	Mon	1:36	4.2	1:57	7.7
29	Sat	7:50	13.6	7:46	15.2	29	Sat	1:27	4.2	1:34	6.1	29	Tue	9:50	12.8	9:16	13.9	29	Tue	2:47	4.9	3:21	8.2
30	Sun	9:00	12.5	8:44	14.4	30	Sun	2:24	4.9	2:34	7.3	30	Wed	11:14	13.6	10:44	14.4	30	Wed	4:15	4.7	4:50	7.5
31	Mon	10:30	12.3	10:00	14.2	31	Mon	3:43	5.2	3:56	7.9												

Appendix A.1. Upper Cook Inlet commercial chinook salmon harvest by gear type and area, 1966-1998.

Year	Central District Drift Gillnet		Central District Set Gillnet				Northern District Set Gillnet		Total
	Number	%	East Side		Kalgin/West Side		Number	%	
			Number	%	Number	%			
1966	392	4.6	7,329	85.8	401	4.7	422	4.9	8,544
1967	489	6.3	6,646	85.0	500	6.4	184	2.4	7,819
1968	182	4.0	3,304	72.8	579	12.8	471	10.4	4,536
1969	362	2.9	5,834	47.1	3,286	26.5	2,904	23.4	12,386
1970	367	4.4	5,366	64.3	1,152	13.8	1,460	17.5	8,345
1971	237	1.2	7,055	35.7	2,875	14.5	9,598	48.6	19,765
1972	375	2.3	8,599	53.5	2,199	13.7	4,913	30.5	16,086
1973	244	4.7	4,411	84.9	369	7.1	170	3.3	5,194
1974	422	6.4	5,571	84.5	434	6.6	169	2.6	6,596
1975	250	5.2	3,675	76.8	733	15.3	129	2.7	4,787
1976	690	6.4	8,249	75.9	1,469	13.5	457	4.2	10,865
1977	3,411	23.1	9,732	65.8	1,084	7.3	565	3.8	14,792
1978	2,072	12.0	12,468	72.1	2,093	12.1	666	3.8	17,299
1979	1,089	7.9	8,671	63.1	2,264	16.5	1,714	12.5	13,738
1980	889	6.4	9,643	69.9	2,273	16.5	993	7.2	13,798
1981	2,320	19.0	8,358	68.3	837	6.8	725	5.9	12,240
1982	1,293	6.2	13,658	65.4	3,203	15.3	2,716	13.0	20,870
1983	1,125	5.5	15,043	72.9	3,534	17.1	933	4.5	20,635
1984	1,377	13.7	6,165	61.3	1,516	15.1	1,004	10.0	10,062
1985	2,048	8.5	17,723	73.6	2,427	10.1	1,890	7.8	24,088
1986	1,834	4.7	19,810	50.5	2,108	5.4	15,488	39.5	39,240
1987	4,552	11.5	21,379	53.9	1,029	2.6	12,701	32.0	39,661
1988	2,217	7.6	12,870	44.3	1,137	3.9	12,836	44.2	29,060
1989	0	0.0	10,919	40.8	3,092	11.6	12,731	47.6	26,742
1990	621	3.9	4,139	25.7	1,763	10.9	9,582	59.5	16,105
1991	241	1.8	4,891	36.1	1,544	11.4	6,859	50.7	13,535
1992	615	3.6	10,718	62.4	1,284	7.5	4,554	26.5	17,171
1993	746	4.0	13,977	74.7	719	3.8	3,277	17.5	18,719
1994	460	2.3	15,885	78.4	730	3.6	3,185	15.7	20,260
1995	594	3.3	12,032	67.4	1,101	6.2	4,130	23.1	17,857
1996	387	2.7	11,521	80.9	395	2.8	1,945	13.7	14,248
1997	627	4.7	11,281	85.2	207	1.6	1,120	8.5	13,235
1998	332	4.2	5,039	63.0	155	1.9	2,471	30.9	7,997
Average	996	6.2	9,756	64.9	1,469	9.8	3,726	19.0	15,948

Appendix A.2. Upper Cook Inlet commercial sockeye salmon harvest by gear type and area, 1966-1998.

Year	Central District Drift Gillnet		Central District Set Gillnet				Northern District Set Gillnet		Total
	Number	%	East Side		Kalgin/West Side		Number	%	
			Number	%	Number	%			
1966	1,103,261	59.6	485,330	26.2	132,443	7.2	131,080	7.1	1,852,114
1967	890,152	64.6	303,858	22.0	66,414	4.8	118,065	8.6	1,378,489
1968	561,737	50.8	317,535	28.7	85,049	7.7	140,575	12.7	1,104,896
1969	371,747	53.7	210,834	30.5	71,184	10.3	38,050	5.5	691,815
1970	460,690	62.9	142,701	19.5	62,723	8.6	66,458	9.1	732,572
1971	423,107	66.5	111,505	17.5	61,144	9.6	40,533	6.4	636,289
1972	506,281	57.5	204,599	23.3	83,176	9.5	85,755	9.7	879,811
1973	375,695	56.1	188,816	28.2	59,973	8.9	45,614	6.8	670,098
1974	265,771	53.5	136,889	27.5	52,962	10.7	41,563	8.4	497,185
1975	368,124	53.8	177,336	25.9	73,765	10.8	65,526	9.6	684,751
1976	1,055,786	63.4	476,376	28.6	62,338	3.7	69,649	4.2	1,664,149
1977	1,073,098	52.3	751,178	36.6	104,265	5.1	123,780	6.0	2,052,321
1978	1,803,479	68.8	660,797	25.2	105,767	4.0	51,378	2.0	2,621,421
1979	454,707	49.1	248,359	26.8	108,422	11.7	113,918	12.3	925,406
1980	770,247	48.9	559,812	35.6	137,882	8.8	105,647	6.7	1,573,588
1981	633,380	44.0	496,003	34.5	60,217	4.2	249,662	17.3	1,439,262
1982	2,103,429	64.5	971,423	29.8	66,952	2.1	118,060	3.6	3,259,864
1983	3,222,428	63.8	1,508,511	29.9	134,575	2.7	184,219	3.6	5,049,733
1984	1,235,337	58.6	490,273	23.3	162,139	7.7	218,965	10.4	2,106,714
1985	2,032,957	50.1	1,561,200	38.4	285,081	7.0	181,191	4.5	4,060,429
1986	2,834,534	59.2	1,657,904	34.6	153,714	3.2	141,830	3.0	4,787,982
1987	5,631,746	59.3	3,495,802	36.8	208,036	2.2	164,602	1.7	9,500,186
1988	4,129,878	60.4	2,428,597	35.5	146,154	2.1	129,713	1.9	6,834,342
1989	3	0.0	4,543,066	90.7	186,828	3.7	280,801	5.6	5,010,698
1990	2,305,742	64.0	1,116,975	31.0	84,949	2.4	96,398	2.7	3,604,064
1991	1,117,514	51.3	844,156	38.8	99,705	4.6	116,201	5.3	2,177,576
1992	6,069,495	66.6	2,838,076	31.2	131,291	1.4	69,478	0.8	9,108,340
1993	2,558,492	53.8	1,941,706	40.8	108,181	2.3	146,319	3.1	4,754,698
1994	1,878,463	52.7	1,482,957	41.6	85,830	2.4	120,142	3.4	3,567,392
1995	1,773,873	60.3	961,216	32.7	96,735	3.3	109,098	3.7	2,940,922
1996	2,204,933	56.7	1,482,998	38.1	96,719	2.5	104,128	2.7	3,888,778
1997	2,197,706	52.6	1,832,816	43.9	48,723	1.2	97,451	2.3	4,176,696
1998	599,202	49.2	512,033	42.0	47,075	3.9	60,646	5.0	1,218,956
Average	1,606,454	55.4	1,064,898	33.2	105,164	5.5	115,954	5.9	2,892,471

Appendix A.3. Upper Cook Inlet commercial coho salmon harvest by gear type and area, 1966-1998

Year	Central District			Central District Set Gillnet			Northern District		Total
	Drift Gillnet		%	East Side		%	Set Gillnet		
	Number	%		Number	%		Number	%	
1966	80,901	27.9	68,877	23.8	59,509	20.5	80,550	27.8	289,837
1967	53,071	29.9	40,738	22.9	40,066	22.5	43,854	24.7	177,729
1968	167,383	35.8	80,828	17.3	63,301	13.5	156,648	33.5	468,160
1969	33,053	32.8	18,988	18.9	28,231	28.0	20,425	20.3	100,697
1970	114,070	40.9	30,114	10.8	52,299	18.7	82,722	29.6	279,205
1971	35,491	35.4	16,589	16.5	26,188	26.1	22,094	22.0	100,362
1972	21,577	26.7	24,673	30.5	15,300	18.9	19,346	23.9	80,896
1973	31,784	30.4	23,901	22.9	24,784	23.7	23,951	22.9	104,420
1974	75,640	37.8	36,837	18.4	40,610	20.3	47,038	23.5	200,125
1975	88,579	40.0	46,209	20.9	53,537	24.2	33,051	14.9	221,376
1976	80,712	38.7	47,873	22.9	42,243	20.2	37,835	18.1	208,663
1977	110,184	57.2	23,693	12.3	38,093	19.8	20,623	10.7	192,593
1978	76,259	34.8	34,134	15.6	61,711	28.2	47,089	21.5	219,193
1979	114,496	43.2	29,284	11.0	68,306	25.8	53,078	20.0	265,164
1980	89,510	33.0	40,281	14.8	51,527	19.0	90,098	33.2	271,416
1981	226,366	46.6	36,024	7.4	88,390	18.2	134,625	27.7	485,405
1982	416,274	52.5	108,393	13.7	182,205	23.0	85,352	10.8	792,224
1983	326,965	63.3	37,694	7.3	97,796	18.9	53,867	10.4	516,322
1984	213,423	47.4	37,166	8.3	84,618	18.8	114,786	25.5	449,993
1985	357,388	53.6	70,657	10.6	147,331	22.1	91,837	13.8	667,213
1986	506,405	66.9	76,385	10.1	85,932	11.4	88,108	11.6	756,830
1987	202,306	44.8	74,977	16.6	74,930	16.6	98,920	21.9	451,404
1988	277,703	49.6	55,419	9.9	77,058	13.8	149,742	26.7	560,022
1989	743	0.2	81,744	24.1	81,004	23.9	175,710	51.8	339,201
1990	247,453	49.4	40,351	8.1	73,429	14.7	139,401	27.8	500,634
1991	175,504	41.2	30,435	7.1	87,515	20.6	132,270	31.1	425,724
1992	267,300	57.0	57,078	12.2	53,400	11.4	91,133	19.4	468,911
1993	121,828	39.7	43,075	14.0	35,661	11.6	106,258	34.6	306,822
1994	306,217	52.7	69,281	11.9	61,005	10.5	144,064	24.8	580,567
1995	241,473	54.0	44,750	10.0	71,431	16.0	89,300	20.0	446,954
1996	171,361	53.3	40,548	12.6	31,405	9.8	78,097	24.3	321,411
1997	78,662	51.6	19,668	12.9	16,705	11.0	37,369	24.5	152,404
1998	83,337	51.9	18,662	11.6	24,286	15.1	34,359	21.4	160,644
Average	163,437	43.0	45,616	14.8	61,812	18.7	79,503	23.5	350,379

Appendix A.4. Upper Cook Inlet commercial pink salmon harvest by gear type and area, 1966-1998.

Year	Central District Drift Gillnet		Central District Set Gillnet				Northern District Set Gillnet		Total
	Number	%	East Side		Kalgin/West Side		Number	%	
			Number	%	Number	%			
1966	593,654	29.6	969,624	48.3	70,507	3.5	371,960	18.5	2,005,745
1967	7,475	23.3	12,900	40.2	3,256	10.1	8,460	26.4	32,091
1968	880,512	38.7	785,887	34.5	75,755	3.3	534,839	23.5	2,276,993
1969	8,233	25.3	10,968	33.7	5,711	17.6	7,587	23.3	32,499
1970	334,737	41.1	281,067	34.5	24,763	3.0	174,193	21.4	814,760
1971	6,433	18.1	18,097	50.8	2,637	7.4	8,423	23.7	35,590
1972	115,117	18.3	403,706	64.2	18,913	3.0	90,830	14.5	628,566
1973	91,901	28.2	80,596	24.7	16,437	5.0	137,250	42.1	326,184
1974	140,432	29.0	291,408	60.2	9,014	1.9	42,876	8.9	483,730
1975	113,868	33.9	112,423	33.4	19,086	5.7	90,953	27.0	336,330
1976	599,594	47.7	479,024	38.1	30,030	2.4	148,080	11.8	1,256,728
1977	286,308	51.7	125,817	22.7	25,212	4.6	116,518	21.0	553,855
1978	934,442	55.3	372,601	22.1	54,785	3.2	326,614	19.3	1,688,442
1979	19,554	26.8	19,983	27.4	7,061	9.7	26,382	36.1	72,980
1980	964,526	54.0	299,444	16.8	47,963	2.7	474,488	26.6	1,786,421
1981	53,888	42.4	15,654	12.3	4,276	3.4	53,325	41.9	127,143
1982	270,380	34.2	432,715	54.7	14,242	1.8	73,307	9.3	790,644
1983	26,629	37.9	18,309	26.0	3,785	5.4	21,604	30.7	70,327
1984	273,565	44.3	220,895	35.8	16,708	2.7	106,284	17.2	617,452
1985	34,228	39.0	17,715	20.2	5,653	6.4	30,232	34.4	87,828
1986	614,453	47.3	530,445	40.8	15,460	1.2	139,002	10.7	1,299,360
1987	38,660	35.2	47,707	43.4	5,229	4.8	18,205	16.6	109,801
1988	226,776	48.3	179,092	38.1	9,890	2.1	54,210	11.5	469,968
1989	1	0.0	37,971	56.3	5,580	8.3	23,878	35.4	67,430
1990	323,955	53.7	225,429	37.3	10,302	1.7	43,944	7.3	603,630
1991	5,791	39.5	2,670	18.2	1,049	7.2	5,153	35.1	14,663
1992	423,738	60.9	244,068	35.1	4,248	0.6	23,805	3.4	695,859
1993	46,457	46.0	41,674	41.3	2,313	2.3	10,468	10.4	100,918
1994	251,602	48.3	236,582	45.5	3,116	0.6	29,181	5.6	520,481
1995	64,632	48.4	53,420	40.0	3,810	2.9	11,713	8.8	133,575
1996	122,728	50.5	95,717	39.4	3,792	1.6	20,674	8.5	242,911
1997	29,912	42.2	32,046	45.2	4,701	6.6	4,269	6.0	70,928
1998	200,382	36.3	332,092	60.2	7,231	1.3	11,555	2.1	551,260
Average	245,593	38.6	212,962	37.6	16,137	4.4	98,190	19.4	572,882

Appendix A.5. Upper Cook Inlet commercial chum salmon harvest by gear type and area, 1966-1998.

Year	Central District Drift Gillnet		Central District Set Gillnet				Northern District Set Gillnet		Total
	Number	%	East Side		Kalgin/West Side		Number	%	
			Number	%	Number	%			
1966	424,972	79.8	7,461	1.4	64,725	12.1	35,598	6.7	532,756
1967	233,041	78.5	399	0.1	25,013	8.4	38,384	12.9	296,837
1968	1,022,900	90.7	1,563	0.1	44,986	4.0	58,454	5.2	1,127,903
1969	238,497	89.1	399	0.1	16,954	6.3	11,836	4.4	267,686
1970	678,448	90.4	1,228	0.2	48,591	6.5	22,507	3.0	750,774
1971	274,567	84.8	128	0.0	32,647	10.1	16,603	5.1	323,945
1972	564,726	90.2	1,727	0.3	40,179	6.4	19,780	3.2	626,412
1973	605,738	90.7	1,965	0.3	29,019	4.3	30,851	4.6	667,573
1974	344,496	86.8	506	0.1	15,346	3.9	36,492	9.2	396,840
1975	886,474	93.2	980	0.1	33,347	3.5	30,787	3.2	951,588
1976	405,769	86.5	1,484	0.3	47,882	10.2	14,045	3.0	469,180
1977	1,153,454	93.5	1,413	0.1	54,708	4.4	23,861	1.9	1,233,436
1978	489,119	85.5	4,563	0.8	40,946	7.2	37,151	6.5	571,779
1979	609,239	93.8	867	0.1	30,342	4.7	9,310	1.4	649,758
1980	339,970	87.7	2,147	0.6	28,970	7.5	16,728	4.3	387,815
1981	756,922	91.0	2,386	0.3	26,461	3.2	46,208	5.6	831,977
1982	1,348,510	94.1	4,777	0.3	36,647	2.6	43,006	3.0	1,432,940
1983	1,044,636	93.7	2,822	0.3	38,079	3.4	29,321	2.6	1,114,858
1984	568,097	83.5	3,695	0.5	34,207	5.0	74,727	11.0	680,726
1985	700,848	90.7	4,133	0.5	31,746	4.1	36,122	4.7	772,849
1986	1,012,028	89.2	7,027	0.6	39,078	3.4	76,040	6.7	1,134,173
1987	211,580	60.6	16,608	4.8	53,558	15.3	67,180	19.3	348,926
1988	580,650	81.9	11,841	1.7	40,354	5.7	75,728	10.7	708,573
1989	72	0.1	12,302	10.1	27,705	22.7	81,948	67.2	122,027
1990	289,521	82.4	4,611	1.3	21,355	6.1	35,710	10.2	351,197
1991	215,469	76.9	2,387	0.9	22,974	8.2	39,393	14.1	280,223
1992	232,955	84.9	2,867	1.0	13,180	4.8	25,301	9.2	274,303
1993	88,823	72.4	2,977	2.4	5,566	4.5	25,401	20.7	122,767
1994	245,854	82.1	2,944	1.0	10,443	3.5	40,059	13.4	299,300
1995	468,224	88.4	3,711	0.7	13,820	2.6	43,667	8.2	529,422
1996	140,924	90.1	1,448	0.9	2,314	1.5	11,771	7.5	156,457
1997	92,163	89.4	1,222	1.2	1,770	1.7	7,881	7.6	103,036
1998	88,036	92.0	688	0.7	2,953	3.1	3,977	4.2	95,654
Average	495,658	83.8	3,493	1.0	29,572	6.1	35,328	9.1	564,051

Appendix A.6. Upper Cook Inlet commercial salmon harvest by species, 1954-1998.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1954	63,780	1,207,046	321,525	2,189,207	510,068	4,291,626
1955	45,926	1,027,528	170,777	101,680	248,343	1,594,254
1956	64,977	1,258,789	198,189	1,595,375	782,051	3,899,381
1957	42,158	643,712	125,434	21,228	1,001,470	1,834,002
1958	22,727	477,392	239,765	1,648,548	471,697	2,860,129
1959	32,651	612,676	106,312	12,527	300,319	1,064,485
1960	27,512	923,314	311,461	1,411,605	659,997	3,333,889
1961	19,737	1,162,303	117,778	34,017	349,628	1,683,463
1962	20,210	1,147,573	350,324	2,711,689	970,582	5,200,378
1963	17,536	942,980	197,140	30,436	387,027	1,575,119
1964	4,531	970,055	452,654	3,231,961	1,079,084	5,738,285
1965	9,741	1,412,350	153,619	23,963	316,444	1,916,117
1966	8,544	1,852,114	289,837	2,005,745	532,756	4,688,996
1967	7,859	1,380,062	177,729	32,229	296,837	1,894,716
1968	4,536	1,104,904	469,850	2,278,197	1,119,114	4,976,601
1969	12,397	692,175	100,777	33,383	269,847	1,108,579
1970	8,336	732,605	275,399	814,895	776,229	2,607,464
1971	19,765	636,303	100,636	35,624	327,029	1,119,357
1972	16,086	879,824	80,933	628,574	630,103	2,235,520
1973	5,194	670,098	104,420	326,184	667,573	1,773,469
1974	6,596	497,185	200,125	483,730	396,840	1,584,476
1975	4,787	684,752	227,379	336,333	951,796	2,205,047
1976	10,865	1,664,150	208,695	1,256,728	469,802	3,610,240
1977	14,790	2,052,291	192,599	553,855	1,233,722	4,047,257
1978	17,299	2,621,421	219,193	1,688,442	571,779	5,118,134
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	390,675	4,035,918
1981	12,240	1,439,277	484,411	127,164	833,542	2,896,634
1982	20,870	3,259,864	793,937	790,648	1,433,866	6,299,185
1983	20,634	5,049,733	516,322	70,327	1,114,858	6,771,874
1984	10,062	2,106,714	449,993	617,452	680,726	3,864,947
1985	24,088	4,060,429	667,213	87,828	772,849	5,612,407
1986	39,240	4,787,982	756,830	1,299,360	1,134,173	8,017,585
1987	39,661	9,500,186	451,404	109,801	349,139	10,450,191
1988	29,060	6,834,342	560,022	469,972	708,573	8,601,969
1989	26,742	5,010,698	339,201	67,430	122,027	5,566,098
1990	16,105	3,604,064	500,634	603,630	351,197	5,075,630
1991	13,535	2,177,576	425,724	14,663	280,223	2,911,721
1992	17,171	9,108,340	468,911	695,859	274,303	10,564,584
1993	18,719	4,754,698	306,822	100,918	122,767	5,303,924
1994	20,260	3,567,392	580,567	520,481	299,300	4,988,000
1995	17,857	2,951,827	446,954	133,575	529,422	4,079,635
1996	14,248	3,888,778	321,411	242,911	156,457	4,623,805
1997	13,235	4,176,696	152,404	70,928	103,036	4,516,299
1998	7,997	1,218,956	160,644	551,260	95,654	2,034,511
Average						
45 Year	19,951	2,383,315	318,056	709,328	571,628	4,002,279
10 Year	16,587	4,045,903	370,327	300,166	233,439	4,966,421

Appendix A. 7. Approximate exvessel value of Upper Cook Inlet commercial salmon harvest by species, 1960-1998.

Year	Chinook	%	Sockeye	%	Coho	%	Pink	%	Chum	%	Total
1960	\$ 140,000	5.0%	\$ 1,334,000	47.9%	\$ 307,000	11.0%	\$ 663,000	23.8%	\$ 343,000	12.3%	\$ 2,787,000
1961	\$ 100,000	4.7%	\$ 1,687,000	79.4%	\$ 118,000	5.6%	\$ 16,000	0.8%	\$ 204,000	9.6%	\$ 2,125,000
1962	\$ 100,000	2.5%	\$ 1,683,000	42.3%	\$ 342,000	8.6%	\$ 1,274,000	32.0%	\$ 582,000	14.6%	\$ 3,981,000
1963	\$ 89,000	4.6%	\$ 1,388,000	72.3%	\$ 193,000	10.1%	\$ 13,000	0.7%	\$ 236,000	12.3%	\$ 1,919,000
1964	\$ 20,000	0.5%	\$ 1,430,000	38.9%	\$ 451,000	12.3%	\$ 1,131,000	30.8%	\$ 646,000	17.6%	\$ 3,678,000
1965	\$ 50,000	2.0%	\$ 2,099,000	82.1%	\$ 109,000	4.3%	\$ 70,000	2.7%	\$ 230,000	9.0%	\$ 2,558,000
1966	\$ 50,000	1.2%	\$ 2,727,000	64.4%	\$ 295,000	7.0%	\$ 823,000	19.4%	\$ 338,000	8.0%	\$ 4,233,000
1967	\$ 49,000	1.9%	\$ 2,135,000	82.6%	\$ 187,000	7.2%	\$ 13,000	0.5%	\$ 202,000	7.8%	\$ 2,586,000
1968	\$ 30,000	0.7%	\$ 1,758,000	40.4%	\$ 515,000	11.8%	\$ 1,209,000	27.8%	\$ 843,000	19.4%	\$ 4,355,000
1969	\$ 70,000	4.0%	\$ 1,296,697	73.9%	\$ 134,003	7.6%	\$ 18,291	1.0%	\$ 236,404	13.5%	\$ 1,755,394
1970	\$ 89,382	3.0%	\$ 1,190,303	39.9%	\$ 468,179	15.7%	\$ 456,354	15.3%	\$ 780,622	26.2%	\$ 2,984,840
1971	\$ 189,504	9.2%	\$ 1,250,771	61.0%	\$ 137,815	6.7%	\$ 18,402	0.9%	\$ 454,483	22.2%	\$ 2,050,974
1972	\$ 224,396	6.3%	\$ 1,863,177	52.6%	\$ 137,315	3.9%	\$ 478,246	13.5%	\$ 840,057	23.7%	\$ 3,543,192
1973	\$ 121,156	2.0%	\$ 3,225,847	52.3%	\$ 318,950	5.2%	\$ 362,658	5.9%	\$ 2,135,025	34.6%	\$ 6,163,635
1974	\$ 209,712	3.2%	\$ 3,072,221	46.8%	\$ 843,048	12.8%	\$ 919,916	14.0%	\$ 1,517,637	23.1%	\$ 6,562,535
1975	\$ 63,990	1.0%	\$ 2,628,036	39.2%	\$ 838,859	12.5%	\$ 419,173	6.3%	\$ 2,752,555	41.1%	\$ 6,702,612
1976	\$ 274,172	2.0%	\$ 8,668,095	63.4%	\$ 819,006	6.0%	\$ 1,874,915	13.7%	\$ 2,041,225	14.9%	\$ 13,677,413
1977	\$ 523,776	2.4%	\$ 13,318,720	61.8%	\$ 932,540	4.3%	\$ 767,273	3.6%	\$ 5,995,611	27.8%	\$ 21,537,920
1978	\$ 661,375	2.0%	\$ 26,167,741	80.3%	\$ 1,380,312	4.2%	\$ 2,154,176	6.6%	\$ 2,217,510	6.8%	\$ 32,581,114
1979	\$ 616,360	4.2%	\$ 8,093,280	55.3%	\$ 1,640,277	11.2%	\$ 82,339	0.6%	\$ 4,199,765	28.7%	\$ 14,630,021
1980	\$ 414,771	3.2%	\$ 7,937,699	61.7%	\$ 891,098	6.9%	\$ 2,114,283	16.4%	\$ 1,513,960	11.8%	\$ 12,871,810
1981	\$ 424,390	2.3%	\$ 11,080,411	60.1%	\$ 2,623,598	14.2%	\$ 170,038	0.9%	\$ 4,150,158	22.5%	\$ 18,448,596
1982	\$ 763,267	2.4%	\$ 25,154,115	80.0%	\$ 4,080,570	13.0%	\$ 553,635	1.8%	\$ 886,129	2.8%	\$ 31,437,716
1983	\$ 590,730	2.0%	\$ 24,016,294	81.8%	\$ 1,601,976	5.5%	\$ 41,338	0.1%	\$ 3,109,814	10.6%	\$ 29,360,152
1984	\$ 310,899	1.8%	\$ 12,450,532	71.8%	\$ 2,039,681	11.8%	\$ 522,795	3.0%	\$ 2,011,253	11.6%	\$ 17,335,160
1985	\$ 799,318	2.3%	\$ 27,497,929	80.0%	\$ 3,359,824	9.8%	\$ 57,412	0.2%	\$ 2,644,995	7.7%	\$ 34,359,478
1986	\$ 915,189	2.0%	\$ 38,683,950	83.3%	\$ 2,909,043	6.3%	\$ 724,367	1.6%	\$ 3,197,973	6.9%	\$ 46,430,522
1987	\$ 1,609,777	1.6%	\$ 95,915,522	94.9%	\$ 2,373,254	2.3%	\$ 84,439	0.1%	\$ 1,116,165	1.1%	\$ 101,099,156
1988	\$ 1,120,885	0.9%	\$ 111,537,736	91.3%	\$ 4,738,463	3.9%	\$ 650,931	0.5%	\$ 4,129,002	3.4%	\$ 122,177,017
1989	\$ 803,494	1.4%	\$ 56,194,753	95.0%	\$ 1,674,393	2.8%	\$ 86,012	0.1%	\$ 415,535	0.7%	\$ 59,174,188
1990	\$ 436,822	1.1%	\$ 35,804,485	88.0%	\$ 2,422,214	6.0%	\$ 512,591	1.3%	\$ 1,495,827	3.7%	\$ 40,671,938
1991	\$ 348,522	2.3%	\$ 12,249,200	80.4%	\$ 1,996,049	13.1%	\$ 5,478	0.0%	\$ 643,400	4.2%	\$ 15,242,649
1992	\$ 634,466	0.6%	\$ 96,026,864	96.0%	\$ 2,261,862	2.3%	\$ 404,772	0.4%	\$ 740,294	0.7%	\$ 100,068,258
1993	\$ 617,092	2.1%	\$ 27,969,409	93.1%	\$ 1,081,175	3.6%	\$ 36,935	0.1%	\$ 322,205	1.1%	\$ 30,026,815
1994	\$ 642,291	1.9%	\$ 29,441,442	85.5%	\$ 3,297,865	9.6%	\$ 240,545	0.7%	\$ 831,121	2.4%	\$ 34,453,264
1995	\$ 474,475	2.2%	\$ 19,168,077	87.1%	\$ 1,295,353	5.9%	\$ 53,114	0.2%	\$ 1,023,926	4.7%	\$ 22,014,944
1996	\$ 402,980	1.4%	\$ 28,238,578	95.0%	\$ 800,423	2.7%	\$ 44,386	0.1%	\$ 225,751	0.8%	\$ 29,712,117
1997	\$ 365,316	1.1%	\$ 31,439,536	97.1%	\$ 434,327	1.3%	\$ 12,004	0.0%	\$ 143,244	0.4%	\$ 32,394,427
1998	\$ 199,925	2.1%	\$ 8,831,336	92.6%	\$ 281,341	3.0%	\$ 96,471	1.0%	\$ 127,220	1.3%	\$ 9,536,293

Appendix A.8. Commercial herring harvest by fishery, Upper Cook Inlet, 1973-1998.

Harvest (Tons)				
Year	Eastside	Chinitna Bay	Tuxedni Bay	Total
1973	13.8	-	-	13.8
1974	36.7	-	-	36.7
1975	6.2	-	-	6.2
1976	5.8	-	-	5.8
1977	17.3	-	-	17.3
1978	8.3	55.3	-	63.6
1979	67.3	96.2	24.8	188.3
1980	37.4	20	86.5	143.9
1981	86.2	50.5	84.9	221.6
1982	60.2	91.8	50.2	202.2
1983	165.3	49.2	238.2	452.7
1984	117.5	90.6	159	367.1
1985	121.7	47.4	220.5	389.6
1986	178.9	111.1	191.9	481.9
1987	130.5	65.1	152.5	348.1
1988	50.7	23.4	14.1	88.2
1989	55.2	122.3	34.3	211.8
1990	55.4	55.9	16.1	127.4
1991	13.4	15.7	1.6	30.7
1992	24.7	10.4	-	35.1
1993	-	-	-	-
1994	-	-	-	-
1995	-	-	-	-
1996	-	-	-	-
1997	-	-	-	-
1998	19.5	-	-	19.5

Appendix A.9. Commercial harvest of razor clams in Cook Inlet, 1919-1998.

Year	Pounds	Year	Pounds
1919	76,963	1959	0
1920	11,952	1960	372,872
1921	72,000	1961	277,830
1922	510,432	1962	195,650
1923	470,280	1963	0
1924	156,768	1964	0
1925	0	1965	0
1926	0	1966	0
1927	25,248	1967	0
1928	0	1968	0
1929	0	1969	0
1930	0	1970	0
1931	No Record	1971	14,755
1932	93,840	1972	31,360
1933	No Record	1973	34,415
1934	No Record	1974	0
1935	No Record	1975	10,020
1936	No Record	1976	0
1937	8,328	1977	1,762
1938	No Record	1978	45,931
1939	No Record	1979	144,358
1940	No Record	1980	140,420
1941	0	1981	441,949
1942	0	1982	460,639
1943	0	1983	269,618
1944	0	1984	261,742
1945	15,000	1985	319,034
1946	11,424	1986	258,632
1947	11,976	1987	312,349
1948	2,160	1988	392,610
1949	9,672	1989	222,747
1950	304,073	1990	323,602
1951	112,320	1991	201,320
1952	0	1992	296,727
1953	0	1993	310,289
1954	0	1994	355,165
1955	0	1995	248,358
1956	0	1996	355,448
1957	0	1997	366,532
1958	0	1998	371,877

Appendix A.10. Enumeration goals and counts of sockeye salmon in selected Streams of Upper Cook Inlet, 1968-1998.

Year	Kenai River		Kasilof River		Fish Creek	
	Enumeration Goal	Enumeration Estimate ¹	Enumeration Goal	Enumeration Estimate ¹	Enumeration Goal	Enumeration Estimate ¹
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	N/C	75,000	N/C	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	75,000-150,000	276,000	50,000	29,800
1987	400,000-700,000	1,597,000	150,000-250,000	249,000	50,000	91,215
1988	400,000-700,000	1,021,500	150,000-250,000	202,000	50,000	71,603
1989	400,000-700,000	1,599,959	150,000-250,000	158,206	50,000	67,224
1990	400,000-700,000	658,908	150,000-250,000	144,289	50,000	50,000
1991	400,000-700,000	645,000	150,000-250,000	238,000	50,000	50,500
1992	400,000-700,000	994,760	150,000-250,000	183,178	50,000	71,385
1993	400,000-700,000	813,617	150,000-250,000	149,939	50,000	117,619
1994	400,000-700,000	1,003,446	150,000-250,000	205,117	50,000	95,107
1995	450,000-700,000	628,760	150,000-250,000	205,902	50,000	115,000
1996	550,000-800,000	797,847	150,000-250,000	249,944	50,000	63,160
1997	550,000-825,000	1,064,818	150,000-250,000	266,025	50,000	54,656
1998	550,000-850,000	767,558	150,000-250,000	273,213	50,000	22,853

Year	Susitna River		Crescent River		Packers Creek	
	Enumeration Goal	Enumeration Estimate ¹	Enumeration Goal	Enumeration Estimate ¹	Enumeration Goal	Enumeration 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	50,000	41,000	0	13,024
1982	200,000	216,000	50,000	59,000	0	15,687
1983	200,000	112,000	50,000	92,000	0	18,403
1984	200,000	279,000	50,000	118,000	0	30,684
1985	200,000	228,000	50,000	129,000	0	36,850
1986	100,000-150,000 ⁴	92,000	50,000	N/C	0	29,604
1987	100,000-150,000 ⁴	66,000	50,000-100,000	119,000	0	35,401
1988	100,000-150,000 ⁴	52,347	50,000-100,000	57,716	15,000-25,000	18,607
1989	100,000-150,000 ⁴	96,269	50,000-100,000	71,064	15,000-25,000	22,304
1990	100,000-150,000 ⁴	140,379	50,000-100,000	52,180	15,000-25,000	31,868
1991	100,000-150,000 ⁴	105,000	50,000-100,000	44,500	15,000-25,000	41,275
1992	100,000-150,000 ⁴	66,057	50,000-100,000	58,227	15,000-25,000	28,361
1993	100,000-150,000 ⁴	141,694	50,000-100,000	37,556	15,000-25,000	40,869
1994	100,000-150,000 ⁴	128,032	50,000-100,000	30,355	15,000-25,000	30,788
1995	100,000-150,000 ⁴	121,479	50,000-100,000	52,250	15,000-25,000	29,473
1996	100,000-150,000 ⁴	90,781	50,000-100,000	28,729	15,000-25,000	19,095
1997	100,000-150,000 ⁴	157,822	50,000-100,000	70,768	15,000-25,000	33,846
1998	100,000-150,000 ⁴	119,623	50,000-100,000	62,257	15,000-25,000	17,732

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 River 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 A.11. Average price paid for commercially harvested salmon,
Upper Cook Inlet, 1969-1998.

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
1987	1.40	1.50	0.80	0.22	0.45
1988	1.30	2.47	1.20	0.37	0.76
1989	1.25	1.70	0.75	0.40	0.47
1990	1.20	1.55	0.75	0.25	0.60
1991	1.20	1.00	0.77	0.12	0.35
1992	1.50	1.60	0.75	0.15	0.40
1993	1.20	1.00	0.60	0.12	0.45
1994	1.00	1.45	0.80	0.12	0.40
1995	1.00	1.15	0.45	0.12	0.27
1996	1.00	1.15	0.40	0.05	0.19
1997	1.00	1.15	0.45	0.05	0.19
1998	1.00	1.15	0.45	0.09	0.19

Price is expressed as dollars per pound.

Data Source: 1969-1983- Commercial Fisheries Entry Commission
1984-1998 Random fishticket averages, does not include bonuses
or post season adjustments.

Appendix A.12. Average weight¹ (in pounds) of commercially harvested salmon, Upper Cook Inlet, 1969-1998.

Year	Chinook	Sockeye	Coho	Pink	Chum
1969	17.11	6.69	7.00	3.91	7.30
1970	26.81	5.80	6.80	4.00	7.18
1971	25.91	6.55	6.52	3.44	9.26
1972	29.68	6.23	6.28	4.00	6.67
1973	37.62	7.41	6.11	3.71	7.61
1974	36.13	6.79	6.38	4.13	7.22
1975	24.75	6.09	6.83	3.56	7.05
1976	27.43	6.85	6.43	4.03	8.05
1977	28.11	7.55	6.72	3.65	7.97
1978	32.96	7.56	6.36	3.75	7.60
1979	27.52	6.21	6.31	3.32	7.34
1980	26.14	5.93	5.76	3.48	7.33
1981	23.75	6.42	6.53	3.52	7.66
1982	28.80	7.01	7.14	3.89	8.24
1983	29.51	6.43	6.89	3.27	7.75
1984	28.61	5.91	7.08	4.03	7.58
1985	27.65	5.64	7.19	3.27	7.61
1986	25.91	5.77	6.41	3.72	7.42
1987	28.99	6.73	6.57	3.50	7.10
1988	29.67	6.61	7.05	3.74	7.67
1989	24.04	6.60	6.58	3.19	7.25
1990	22.60	6.41	6.45	3.40	7.10
1991	21.46	5.63	6.09	3.11	6.56
1992	24.63	6.59	6.43	3.88	6.75
1993	27.47	5.88	5.87	3.05	5.83
1994	31.70	5.69	7.10	3.85	6.94
1995	26.57	5.65	6.44	3.31	7.16
1996	28.28	6.31	6.23	3.65	7.59
1997	27.60	6.55	6.33	3.38	7.32
1998	22.67	5.48	6.88	3.78	7.26
Average	27.34	6.37	6.56	3.62	7.38

¹ Total poundage divided by numbers of fish from fishticket totals.

Appendix A.13. Registered units of gillnet fishing effort by gear type in Cook Inlet, 1960-1998.

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	705	686	42	728	1,433
1970	537	220	757	707	65	772	1,529
1971	519	191	710	693	38	731	1,441
1972	419	152	571	672	35	707	1,278
1973	516	146	662	632	43	675	1,337
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	552	697	47	744	1,296
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
1987	422	164	586	666	77	743	1,329
1988	421	163	584	659	82	741	1,325
1989	420	165	585	648	95	743	1,328
1990	408	174	582	648	97	745	1,327
1991	414	168	582	643	98	741	1,323
1992	405	178	583	638	107	745	1,328
1993	400	182	582	634	106	740	1,322
1994	392	187	579	620	117	737	1,316
1995	391	186	577	618	120	738	1,315
1996	393	189	582	622	123	745	1,327
1997	393	188	581	622	123	745	1,326
1998	393	186	579	620	125	745	1,324

Source: 1960-1974 ADF&G unpublished reports, 1975-1998 Commercial Fisheries Entry Commission.

Appendix A.14. Forecast¹ and projected² commercial harvests of salmon by species, Upper Cook Inlet, 1984-1998.

Year	Sockeye			Coho			Pink			Chum			Chinook		
	Forecast	Actual	Error	Projected	Actual	Error	Projected	Actual	Error	Projected	Actual	Error	Projected	Actual	Error
1984	2,200,000	2,102,767	-4%	250,000	442,619	77%	1,700,000	622,510	-63%	350,000	684,124	95%	14,000	8,819	-37%
1985	3,700,000	4,060,260	10%	250,000	667,213	167%	112,500	87,828	-22%	700,000	772,829	10%	17,500	24,086	38%
1986	4,200,000	4,787,982	14%	450,000	756,830	68%	1,250,000	1,299,360	4%	900,000	1,134,173	26%	32,500	39,240	21%
1987	4,800,000	9,500,186	98%	500,000	451,404	-10%	150,000	109,801	-27%	1,000,000	349,132	-65%	30,000	39,661	32%
1988	5,300,000	6,834,342	29%	400,000	560,022	40%	400,000	469,972	17%	800,000	708,573	-11%	35,000	29,060	-17%
1989	2,500,000	5,010,698	100%	400,000	339,201	-15%	100,000	67,430	-33%	800,000	122,027	-85%	30,000	26,742	-11%
1990	4,300,000	3,604,064	-16%	250,000	500,026	100%	600,000	603,630	1%	400,000	351,197	-12%	25,000	16,105	-36%
1991	3,200,000	2,177,576	-32%	400,000	425,724	6%	90,000	14,663	-84%	500,000	280,223	-44%	20,000	13,535	-32%
1992	3,600,000	9,108,340	153%	400,000	468,911	17%	400,000	695,859	74%	350,000	274,303	-22%	20,000	17,171	-14%
1993	2,500,000	4,754,698	90%	450,000	306,822	-32%	25,000	100,918	304%	350,000	122,767	-65%	15,000	18,719	25%
1994	2,000,000	3,567,392	78%	400,000	580,567	45%	600,000	520,481	-13%	250,000	299,300	20%	15,000	20,260	35%
1995	2,700,000	2,951,827	9%	400,000	446,954	12%	100,000	133,575	34%	250,000	529,422	131%	15,000	17,857	19%
1996	3,300,000	3,888,778	18%	400,000	321,411	-20%	600,000	242,911	-60%	350,000	156,457	-56%	15,000	14,248	-5%
1997	5,300,000	4,176,696	-21%	400,000	152,404	-62%	100,000	70,928	-29%	250,000	103,036	-59%	15,000	13,235	-12%
1998	2,500,000	1,218,956	-51%	300,000	160,644	-46%	300,000	551,260	84%	200,000	95,654	-52%	17,000	7,997	-53%
1999	2,000,000			300,000			75,000			200,000			16,000		

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¹ Harvest forecasts have typically been prepared using average return per spawner values, parent-year escapements and average marine maturity schedules or time series modeling tempered by available juvenile production data or combinations of these data sets.

² Harvest projections are prepared using subjective estimates of parent-year escapements, gross trends in harvest and expected intensity of fishery.

Appendix A. 15. Subsistence and personal use salmon harvest, Upper Cook Inlet, 1980-1998.

Fishery	No. of					
	Permits	Chinook	Sockeye	Coho	Pink	Chum
<u>Tyonek Subsistence</u>						
1980	67	1,936	262	0	0	0
1981	70	2,002	269	64	32	15
1982	69	1,565	209	113	15	4
1983	75	2,750	185	40	0	2
1984	75	2,354	310	66	3	23
1985	76	1,720	44	8	0	10
1986	65	1,523	198	210	45	44
1987	64	1,552	161	149	5	24
1988	47	1,474	52	185	6	9
1989	49	1,314	67	175	0	1
1990	42	797	92	366	124	10
1991	57	1,105	25	80	0	0
1992	57	905	74	234	7	19
1993	54	1,264	43	36	11	9
1994	58	840	41	111	0	22
1995	70	1,271	45	123	14	15
1996	73	1,032	65	110	21	18
1997	70	642	94	127	0	8
1998	74	870	127	49	1	1
<u>Non-Commercial Gillnet</u>						
1981	1,108	68	466	12,713	149	305
<u>Kasilof Personal Use</u>						
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
1987	N/A	184	9,375	0	0	0
1988	N/A	118	9,803	0	0	0
1989	N/A	186	9,928	0	0	0
1990	N/A	133	7,123	0	0	0
1991	N/A	34	8,380	0	0	0
1993	N/A	47	7,942	0	0	0
1996	349	45	9,161	0	12	1
1997	514	62	16,838	1	18	3
1998	592	107	14,049	0	12	5
<u>Fall Coho Personal Use/Subsistence</u>						
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
1987	486	8	9	2,213	2	37
1988	449	2	19	2,662	38	10
1989	365	0	0	2,376	0	0
1990	420	0	0	2,290	0	0
1991	360	0	0	2,703	0	8
1993	535	0	0	1,168	23	0
<u>Northern/Central Districts Subsistence/ Personal Use</u>						
1985	638	117	2,218	1,427	90	121
1991	7,065	550	32,230	3,520	537	1,598
1992	9,200	1,139	46,419	10,320	1,818	1,827
1994	10,127	1,501	53,333	12,181	2,975	1,729
1995	9,300	1,415	61,602	11,186	1,454	1,734
<u>Knik Arm Subsistence</u>						
1985	405	4	1,649	2,055	48	212