**Fishery Management Report No. 19-25**

# Upper Cook Inlet Commercial Fisheries Annual Management Report, 2018

**by**

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**and**

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**December 2019**

**Alaska Department of Fish and Game** **Divisions of Sport Fish and Commercial Fisheries**

# Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

**Weights and measures (metric)**

| | |
|---|---|
| centimeter | cm |
| deciliter | dL |
| gram | g |
| hectare | ha |
| kilogram | kg |
| kilometer | km |
| liter | L |
| meter | m |
| milliliter | mL |
| millimeter | mm |

**Weights and measures (English)**

| | |
|---|---|
| cubic feet per second | $ft^3/s$ |
| foot | ft |
| gallon | gal |
| inch | in |
| mile | mi |
| nautical mile | nmi |
| ounce | oz |
| pound | lb |
| quart | qt |
| yard | yd |

**Time and temperature**

| | |
|---|---|
| day | d |
| degrees Celsius | °C |
| degrees Fahrenheit | °F |
| degrees kelvin | K |
| hour | h |
| minute | min |
| second | s |

**Physics and chemistry**

| | |
|---|---|
| all atomic symbols | |
| alternating current | AC |
| ampere | A |
| calorie | cal |
| direct current | DC |
| hertz | Hz |
| horsepower | hp |
| hydrogen ion activity (negative log of) | pH |
| parts per million | ppm |
| parts per thousand | ppt, ‰ |
| volts | V |
| watts | W |

**General**

| | |
|---|---|
| Alaska Administrative Code | AAC |
| all commonly accepted abbreviations | e.g., Mr., Mrs., AM, PM, etc. |
| all commonly accepted professional titles | e.g., Dr., Ph.D., R.N., etc. |
| at | @ |
| compass directions: | |
| east | E |
| north | N |
| south | S |
| west | W |
| copyright | © |
| corporate suffixes: | |
| Company | Co. |
| Corporation | Corp. |
| Incorporated | Inc. |
| Limited | Ltd. |
| District of Columbia | D.C. |
| et alii (and others) | et al. |
| et cetera (and so forth) | etc. |
| exempli gratia (for example) | e.g. |
| Federal Information Code | FIC |
| id est (that is) | i.e. |
| latitude or longitude | lat or long |
| monetary symbols (U.S.) | $, ¢ |
| months (tables and figures): first three letters | Jan,...,Dec |
| registered trademark | ® |
| trademark | ™ |
| United States (adjective) | U.S. |
| United States of America (noun) | USA |
| U.S.C. | United States Code |
| U.S. state | use two-letter abbreviations (e.g., AK, WA) |

**Mathematics, statistics**

| | |
|---|---|
| *all standard mathematical signs, symbols and abbreviations* | |
| alternate hypothesis | $H_A$ |
| base of natural logarithm | $e$ |
| catch per unit effort | CPUE |
| coefficient of variation | CV |
| common test statistics | ($F$, $t$, $\chi^2$, etc.) |
| confidence interval | CI |
| correlation coefficient (multiple) | R |
| correlation coefficient (simple) | r |
| covariance | cov |
| degree (angular) | ° |
| degrees of freedom | df |
| expected value | $E$ |
| greater than | > |
| greater than or equal to | ≥ |
| harvest per unit effort | HPUE |
| less than | < |
| less than or equal to | ≤ |
| logarithm (natural) | ln |
| logarithm (base 10) | log |
| logarithm (specify base) | $\log_2$, etc. |
| minute (angular) | ' |
| not significant | NS |
| null hypothesis | $H_O$ |
| percent | % |
| probability | P |
| probability of a type I error (rejection of the null hypothesis when true) | α |
| probability of a type II error (acceptance of the null hypothesis when false) | β |
| second (angular) | " |
| standard deviation | SD |
| standard error | SE |
| variance | |
| population | Var |
| sample | var |

*FISHERY MANAGEMENT REPORT NO. 19-25*

# UPPER COOK INLET COMMERCIAL FISHERIES ANNUAL MANAGEMENT REPORT, 2018

by
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# ABSTRACT

The 2018 Upper Cook Inlet area management report describes commercial fishing in Upper Cook Inlet (UCI). The UCI management area includes the waters of Cook Inlet north of Anchor Point and consists of 2 districts. A line between Boulder Point and the West Forelands separates the area into the Northern and Central Districts. In the south, the Central District includes 6 subdistricts, and to the north, the Northern District includes 2 subdistricts. All 5 species of Pacific salmon (sockeye *Oncorhynchus nerka*, Chinook *O. tshawytscha*, chum *O. keta*, coho *O. kisutch*, and pink *O. gorbuscha*), razor clams (*Siliqua patula*), Pacific herring (*Clupea pallasii*), and eulachon (*Thaleichthys pacificus*) are commercially harvested. All species of salmon are harvested from all districts, but herring and clams are only fished in the Central District, and eulachon are only harvested in the Northern District. The total sockeye salmon run estimate to UCI in 2018 of 3.1 million fish was 32% below the preseason forecast of 4.6 million. The 2018 estimated exvessel value of the commercial harvest of all salmon was $12 million, which was 67% less than the 2008–2017 average annual exvessel value of $30 million, and approximately 58% less than the 1960–2017 long-term average annual exvessel value of $26 million. Sockeye salmon accounted for only 82% of the total exvessel value, which was the lowest proportion of the total value since 1991. The commercial harvest of 1.3 million salmon was approximately 69% less than the 1970–2017 average annual harvest of 4.1 million fish, and the commercial sockeye salmon harvest of 818,000 fish was 72% less than the 1970–2017 average annual harvest of 2.9 million fish. For the 2018 season, 5 of 7 sockeye salmon drainage escapement estimates fell within established goal ranges, and 2 of 7 exceeded goal ranges.

Key words: sockeye *Oncorhynchus nerka*, Chinook *O. tshawytscha*, chum *O. keta*, coho *O. kisutch*, pink *O. gorbuscha*, salmon, Pacific herring *Clupea pallasii*, smelt, eulachon *Thaleichthys pacificus*, razor clam *Siliqua patula*, commercial fishery, personal use fishery, gillnet, escapement, Upper Cook Inlet, Annual Management Report, AMR

# INTRODUCTION

The Upper Cook Inlet (UCI) commercial fisheries management area, located in Southcentral Alaska, consists of that portion of Cook Inlet north of the latitude of the Anchor Point Light (lat 59°46.15′N) and is divided into the Central and Northern Districts (Figures 1 and 2). The Central District is approximately 75 miles long, averages 32 miles in width, and is divided into 6 subdistricts. The Northern District is 50 miles long, averages 20 miles in width, and is divided into 2 subdistricts. Harvest statistics are gathered and reported by statistical areas and subareas within the subdistricts (Figures 3 and 4); each statistical area is assigned a 5-digit numerical reference code. UCI commercial fisheries target 5 species of Pacific salmon (*Oncorhynchus* spp.), razor clams (*Siliqua patula*), Pacific herring (*Clupea pallasii*), and eulachon (*Thaleichthys pacificus*).

## SALMON

Over its 140-year history since 1878[1], the commercial salmon fishery in UCI waters has included many gear types with varying degrees of success, including fish traps, gillnets, and seines. Currently, set gillnets are the only gear permitted in the Northern District, but both set and drift gillnets are used in the Central District. The use of seine gear is restricted to 1 area, the Chinitna Bay Subdistrict, where it may be operated via emergency order (EO) only; however, seine gear has not been fished in Chinitna Bay since 1982. Salmon are found in drainages throughout the UCI management area, and the run timing and migration routes used by all species overlap to such a degree that the commercial fishery is mostly mixed stock and mixed species in nature. Typically, UCI salmon harvest represents approximately 5% of the statewide commercial harvest. Nearly 10% of all salmon permits issued statewide are for the Cook Inlet area.

[1] See Alaska State Library–Historical Collections, Robert N. DeArmond papers, ca. 1945–1969, The Cook Inlet Fishing Industry, available at http://library.alaska.gov/hist/hist_docs/docs/asl_ms39_4_4.pdf (accessed January 3, 2020).

Detailed commercial salmon harvest statistics about UCI specific to gear type and location are available since 1966 (Appendices B1–B6). Since 1966, drift gillnets have accounted for approximately 6% of the average annual harvest of Chinook salmon (*O. tshawytscha*), which may be referred to as king salmon in regulations), as well as 55% of sockeye (*O. nerka*), 49% of coho (*O. kisutch*), 46% of pink (*O. gorbuscha*), and 89% of chum salmon (*O. keta*) (Appendices B1–B5); set gillnets have harvested virtually all of the remainder. Since 2007, the proportion of coho, pink, and chum salmon harvested by drift gillnets in UCI total yearly harvest has increased, but the proportion of sockeye salmon has not changed. The proportion of Chinook salmon harvested by drift gillnets in UCI total yearly harvest has been stable since 2007. In terms of recent economic value, sockeye salmon are the most important species of the UCI commercial salmon harvest, followed by coho, Chinook, chum, and pink salmon (Appendix B7).

## HERRING

Commercial herring fishing began in UCI in 1973 (Flagg 1974), including a modest harvest of bait-quality fish along the east side of the Central District, which was expanded in the late 1970s to include small-scale sac roe fisheries in Chinitna and Tuxedni Bays (Appendix B8). Beginning in 1988, large decreases in herring abundance were observed in Tuxedni Bay, as well as a shift towards older herring, subsequently leading to the closure of Tuxedni Bay to commercial herring fishing prior to the 1992 season. In Chinitna Bay and along the eastside beaches of Cook Inlet, similar declines began to materialize after the 1990 season. As a result of these widespread declines, the Alaska Department of Fish and Game (ADF&G) submitted a proposal to the Alaska Board of Fisheries (BOF) to open the UCI herring fishery by EO only. This proposal became regulation in 1993, ending a long period of fixed opening dates on April 15 on the east side, and April 22 on the west side of Cook Inlet. This action effectively closed these fisheries to provide time for herring stocks to recover.

By 1997 some improvement in herring stock biomass was suspected. In 1998, the Upper Subdistrict of the Central District and the Eastern Subdistrict of the Northern District (Figure 1) were opened to commercial herring fishing to assess the status of the herring population. Herring fisheries on the west side of Cook Inlet remained closed until the status of the east side stocks was determined. In 1999, ADF&G again submitted proposals to the BOF, seeking to restructure the herring fishery to two 30-hour periods per week on Mondays and Thursdays. These proposals included the condition that fishermen register their intent to participate in the fishery prior to April 10, as well as the requirement to report harvests within 12 hours of the closure of a fishing period. These proposals were passed in the form of a specified management plan, *Central District Herring Recovery Management Plan* (5 AAC 27.409), which became active prior to the 1999 season, and limited herring fishing in UCI to the waters of the Upper, Western, and Chinitna Bay Subdistricts. In the Upper Subdistrict, fishing for herring is not allowed closer than 600 feet of the mean high tide mark on the Kenai Peninsula in order to reduce the incidental harvest of salmon. The management plan was amended by the BOF in 2002, to extend the closing date for the fishery from May 20 to May 31.

Sampling of the herring population has also occurred in conjunction with recent BOF management plan changes. In 2001, samples of herring were collected in Chinitna and Tuxedni Bays. Age, sex, and size distribution of the samples revealed the years of closed fishing in these areas resulted in an increase of younger-aged fish recruited into the population. As a result of these analyses, and in accordance with the herring recovery management plan, the commercial

fishery was reopened in 2002 in both Chinitna Bay and the Western Subdistrict. The management plan allows a very conservative harvest quota, not to exceed 40 short tons[2] in Chinitna Bay and 50 short tons in the Western Subdistrict. There has been very little participation in either fishery since they were reopened (Appendix B8).

The herring management plan was further modified by the BOF in 2005 and 2008. In 2005, the plan was no longer referred to as a recovery management plan, the Kalgin Island Subdistrict was included in legal waters, and fishing periods in the Upper Subdistrict were expanded to 108 hours per week, or from Monday at 6:00 AM until Friday at 6:00 PM. Additionally in 2005, the mesh size for herring gillnets was modified to no smaller than 2.0 inches or no greater than 2.5 inches. In 2008, the 108-hour weekly fishing period went into effect for all areas open to herring fishing, and the registration deadline of April 10 was amended to state that fishermen must register any time prior to fishing.

Because the glacial waters of UCI preclude the use of aerial surveys to estimate the biomass of herring stocks, management of these fisheries follows a limited and precautionary approach that restricts harvest strategies. In the Central District, herring may be taken only by set or drift gillnets, except in the Chinitna Bay and Kalgin Island Subdistricts where only set gillnets may be used. Gillnets are much less efficient at capturing herring than purse seines. Moreover, conservative guideline harvest levels have been set, which provide for a low-level commercial fishery on these stocks. In the Upper Subdistrict, harvests are generally concentrated in the Clam Gulch area, with very little or no participation in the Western Subdistrict (Tuxedni Bay), Chinitna Bay, or Kalgin Island Subdistricts.

## SMELT

Smelt return to many of the larger river systems in UCI, including particularly large runs to the Susitna and Kenai Rivers. Both longfin smelt *Spirinchus thaleichthys* and eulachon *Thaleichthys pacificus* (referred to as smelt in this report, although often identified in local vernacular as hooligan) are documented in Cook Inlet. Smelt begin returning to spawning areas in Cook Inlet from mid-May to mid-June and return in quantities large enough to support a limited commercial fishery. Longfin smelt return to Cook Inlet in the fall but are not targeted because of the small run size.

Prior to adoption of the *Forage Fish Management Plan* in 1999 (5 AAC 39.212), the entire UCI area was open to smelt fishing from October 1 to June 1 (Shields 2005). The only documented commercial harvest of smelt occurred in 1978 (300 lb), 1980 (4,000 lb), 1998 (18,900 lb), and 1999 (100,000 lb). All harvests occurred in salt water near the Susitna River.

Fisheries for smelt in UCI were closed after the 1998 season due to concerns about the role of forage fish in the ecosystem, and beginning in 2000 the BOF began drafting the *Forage Fish Management Plan*. From 1998 to 2004 no fisheries occurred in UCI for smelt. At the 2005 BOF meeting, proposals were submitted to reopen the fishery, which the BOF accepted, authorizing a commercial smelt fishery beginning with the 2005 season. The fishery is conducted under 5 AAC 21.505, the *Cook Inlet Smelt Fishery Management Plan*. This fishery is allowed only in salt water from May 1 to June 30, specifically in that area of Cook Inlet from the Chuitna River

[2] The Alaska Board of Fisheries requires that inseason catch and aerial survey biomass estimates be calculated and reported in short tons. All references of "ton" or "tons" in this report indicate the English short ton, unless otherwise stated. The English short ton equals 2,000 lb or 907.2 kg.

to the Little Susitna River and in the Susitna River south of lat 61°21.50′N. Legal gear for the fishery is limited to a hand-operated dip net, as defined in 5 AAC 39.105, and total harvest may not exceed 100 tons of smelt. At the 2017 BOF meeting, the harvest cap was increased to 200 tons of smelt, based in part on a 2016 total biomass estimate of 48,000 metric tons (tonnes) (Willette and DeCino 2016). Any salmon caught during the fishery are to be immediately returned to the water unharmed. To participate in this fishery, a miscellaneous finfish permit is required, as well as a commissioner's permit, which can be obtained from the ADF&G office in Soldotna.

Very little quantitative data are available about Susitna River smelt. The Alaska Energy Authority contracted HDR Alaska and LGL Alaska Research Associates to evaluate life history, run timing, abundance, distribution, and habitat of eulachon as part of Susitna-Watana Hydroelectric feasibility studies (Alaska Energy Authority 2014). In 2016, ADF&G conducted the first year of an anticipated 3-year study to estimate the run timing, age, sex, and size composition and biomass of smelt spawning in the Susitna River watershed (Willette and DeCino 2016). Prior to this study, the total biomass of the smelt run in the Susitna River had not been estimated. The biomass estimate made during the 2016 run was calculated indirectly from estimates of larval densities and stream discharge data. Adult eulachon biomass was then estimated, similar to Moffitt (2002) for the Copper River, from the total number of larvae, estimated survival from egg to larvae, mean fecundity of female eulachon, mean female body weight, the sex ratio of males to females, and mean male body weight. This method indicated total smelt biomass in 2016 was 48,000 metric tons (Willett and DeCino 2016).

### RAZOR CLAMS

Commercial harvest of razor clams from UCI beaches dates back to 1919 (Appendix B9). Harvest levels have fluctuated from no fishery to catches in excess of 500,000 lb. The sporadic nature of the fishery was more a function of limited market opportunities than limited availability of the resource. Razor clams are present in many areas of Cook Inlet and particularly dense concentrations occur near Polly Creek on the western shore and from Clam Gulch to Ninilchik on the eastern shore (Nickerson 1975). 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 and Crescent River sandbar areas. A large portion of the Polly Creek beach is approved by the Alaska Department of Environmental Conservation for the harvest of clams for the human food market. Within this approved area, a limit of 10% shell breakage is allowed, and broken-shelled clams are required to be dyed prior to sale as bait clams. A 4.5 inch size limit is also in regulation. No overall commercial harvest limits are in place for any area in regulation; however, ADF&G manages the commercial razor clam fishery to achieve a harvest of no more than 350,000–400,000 lb (in the shell) annually. Virtually all 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 1 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. Mechanical means of harvesting is no longer permitted in any area of Cook Inlet.

## 2018 COMMERCIAL SALMON FISHERY

The overall harvest and value of the 2018 UCI commercial salmon fishery was poor. The 2018 harvest of approximately 1.3 million salmon was 61% less than the 2008–2017 average annual

harvest of 3.4 million fish (Appendix B6). Although all 5 species of Pacific salmon are present in UCI, sockeye salmon are the most valuable, accounting for nearly 93% of the total value during the past 20 years. The estimated exvessel value of the 2018 harvest of all salmon species of approximately $12 million was 60% less than the previous 2008–2017 average annual exvessel value of $30 million. All species-specific exvessel values other than coho salmon were well below average in 2018 (Appendix B7).

Estimating average annual price paid per pound (Appendix B11) of UCI salmon is challenging because an increasing number of fishermen sell some or all of their harvest to niche markets where they often receive higher prices. In addition, early-season price of Chinook and sockeye salmon is often much higher than what is paid later in the season. The price per pound paid for sockeye salmon in 2018 was estimated to be $2.04, which was 20% more than the average price of $1.64 from the previous 10 years (2008–2017).

Currently, there are 7 sockeye salmon systems with escapement and/or inriver goals that are monitored in UCI (Table 1; Appendices A2–B10).

In 2018, 5 of 7 sockeye salmon assessment counts fell within established goal ranges, and 2 of 7 counts exceeded goal ranges. After the 2018 harvest of sockeye salmon above the sonar site is accounted for in the Kenai River, escapement in this drainage will probably also fall within the sustainable escapement goal (SEG) for this system. The 2018 inriver goal was also achieved. This marked the tenth year when sockeye salmon escapement in the Susitna River drainage was monitored at individual lakes in the Yentna River (Chelatna and Judd Lakes) and mainstem Susitna River (Larson Lake). These lakes are the major producers of sockeye salmon in the Susitna River watershed. Sockeye salmon escapement was also monitored at Fish Creek, which drains Big Lake, and in 1 drainage of the Central District at Packers Lake on Kalgin Island (Figure 1) using a remote video system.

The Upper Subdistrict of the Central District contains the East Side Setnet (ESSN) Fishery, which is the most highly regulated fishery in UCI. The Kasilof, Kenai, and East Foreland sections set gillnet fisheries (collectively, the ESSN fishery) primarily target sockeye salmon, but Chinook salmon are also harvested. During the last decade in the ESSN fishery, an average of 17 different days (77%) have been used for commercial fishery openings of the 22 potential days available for openings given typical management plan stipulations that include 2 mandatory closed periods each week. In 2018, during the month of July, the Kasilof Section set gillnet fishery was open on 13 different days (59%) of the potential 22 days available, and the Kenai and East Foreland sections were open on 8 different days (44%) of the 18 available days (Figure 5). The Kenai and East Foreland sections season opens 1 week later by regulation so that fewer days in July are available for these sections of the ESSN fishery. In August 2018, openings to the ESSN fishery were limited to the Kasilof River Special Harvest Area (KRSHA) which was opened on 5 concurrent days to specifically target Kasilof River sockeye salmon. Outside of the KRSHA, an average of 5 days have been used in the ESSN fishery of the 15 total days available in August during the past decade. In 2018, no fishery openings of the ESSN fishery occurred outside the KRSHA, due to low sockeye salmon abundance and very late sockeye salmon run timing in the Kenai River.

## CHINOOK SALMON

The 2018 UCI commercial harvest of 3,405 Chinook salmon was the 2nd smallest since 1966 (52 years) and was approximately 60% less than the 2008–2017 average annual harvest of

8,430 fish (Appendices A3, B1, and B6). Exvessel value for UCI Chinook salmon in 2018 was estimated at $207,901, which represented approximately 1.7% of the total exvessel value for all salmon (Appendix B7).

Chinook salmon harvests are concentrated in 2 different fisheries in UCI. These 2 fisheries are the set gillnet fisheries in the Northern District and in the Upper Subdistrict of the Central District. The recent pattern of below-average Chinook salmon harvests is the result of lower abundance of Chinook salmon in all of Cook Inlet, but largely related to restrictions placed upon commercial fisheries for the conservation of this species in the Kenai River and the Susitna Drainage.

### Northern District

In the Northern District, the directed Chinook salmon set gillnet fishery was closed for the entire 2018 season to reduce the harvest of Northern Cook Inlet (NCI) Chinook salmon. In addition, the initial Northern District period for all salmon on June 25, which primarily targets sockeye salmon, was also closed to conserve Chinook salmon. Zero fish were harvested in 2018 in the Northern District directed Chinook salmon fishery. The estimated harvest of Chinook salmon in the subsequent Northern District salmon fishery in 2018 was only 143 fish, which resulted in a Northern District Chinook salmon harvest that was 93% less than the average annual Chinook salmon harvest of 1,986 fish (Appendix A3).

The *Northern District King Salmon Management Plan* (5 AAC 21.366) was created by the BOF in 1986 and was most recently modified in 2011. This plan provides direction to ADF&G regarding management of the Northern District of UCI for the commercial harvest of Chinook salmon. The fishing season opens on the first Monday on or after May 25 and is limited to openings 1 day per week for every Mondays through June 24. The most productive waters for harvesting Chinook salmon, which occur from 1 mile south of the Theodore River to the mouth of the Susitna River, are open to fishing only 1 day per year, on the second regular Monday period only. However, if the Theodore, Ivan, or Lewis Rivers are closed to sport fishing, the area from 1 mile south of the Theodore River to the Susitna River will be closed to commercial fishing. The plan further specifies that if the Chuitna River is closed to sport fishing, commercial fishing shall close for the remainder of the directed Chinook salmon fishery in that portion of the Northern District from a point at the wood chip dock (located approximately 2 miles south of Tyonek), to the Susitna River. Finally, if the Deshka River is closed to sport fishing, the Chinook salmon commercial fishery in the entire Northern District will close for all fishing periods provided for under this plan.

The management plan further stipulates that each permit holder can fish only one 35-fathom set gillnet, with a minimum separation of 1,200 feet between nets, which is twice the normal separation between nets in other UCI setnet fisheries. The commercial fishery is also limited to an annual harvest not to exceed 12,500 Chinook salmon. Fishing periods are 12 hours per day, or from 7:00 AM to 7:00 PM.

At the 2011 BOF meeting, Chuitna River Chinook salmon were found to be a stock of management concern, which resulted in the closure of the sport fishery on this river beginning with the 2011 season. In compliance with the *Northern District King Salmon Management Plan,* and continued low Chinook salmon abundance, the Northern District set gillnet fishery has remained closed from the wood chip dock to the Susitna River since 2011. Beginning in 2012, ADF&G began taking even more restrictive actions by reducing all 12-hour commercial fishing

periods to 6 hours in duration, and then from 2013 to 2015, the first fishing period of the year was also closed. All of these actions were taken in response to below-average Chinook salmon runs throughout northern Cook Inlet. Because Chinook salmon escapements had improved modestly in some NCI watersheds in recent years, sport fish restrictions had been relaxed in the Susitna River drainage, but 2018 abundance levels again declined, which resulted in further restrictions to sport fisheries and a total closure of the Northern District directed Chinook salmon setnet fishery.

The Deshka River is the primary system in NCI where Chinook salmon escapement has been monitored inseason using a weir; the SEG for this system is 13,000–28,000 fish. At the 2017 BOF meeting, a new Chinook salmon SEG of 2,100–4,300 fish in the Little Susitna River was adopted. The 2018 preseason run forecast for Deshka River Chinook salmon was approximately 12,800 fish. Based on this forecast, the 2018 run to the Deshka River would not be large enough to achieve the SEG, even without any harvest. The preseason outlook for the all other NCI Chinook salmon stocks in 2018 was poor. This followed 2017 when weak Chinook salmon production also occurred in NCI streams, which resulted in 12 of the 14 monitored Chinook salmon stocks not achieving their escapement goals, including all 7 Chinook salmon Stocks of Concern. The estimated final 2018 escapement of Chinook salmon in the Deshka River was approximately 8,544 fish, which was below the lower end of the SEG. The Little Susitna River weir count in 2018 was only 549 Chinook salmon, and even though the weir was submerged for considerable time due to high rainfall, the SEG was probably not achieved (Oslund et al. *In prep*).

The number of permit holders participating in the Northern District setnet fishery declined precipitously beginning in 1993, which was the year that UCI set gillnet fishermen were required to register (prior to fishing) to fish in 1 of 3 areas, either the Northern District, Upper Subdistrict, or Greater Cook Inlet area for the entire year (5 AAC 21.345). The registration requirement served to eliminate a common practice of fishing in multiple areas in UCI during the same year and resulted in lower overall Northern District Chinook salmon effort.

## Upper Subdistrict (ESSN)

Following the 2012 season, a new SEG of 15,000–30,000 late-run Kenai River Chinook salmon was recommended by ADF&G (Fleischman and McKinley 2013), to be counted using dual frequency identification sonar (DIDSON). During the 2013 season, 5 abundance indices were used to corroborate the DIDSON estimates of passage (Eskelin and Miller 2010). At the 2014 BOF meeting, the Kenai River late-run Chinook salmon SEG was reviewed, but no changes were made. However, the BOF did implement numerous changes to the *Kenai River Late-Run King Salmon Management Plan* (KRLKSMP) beginning in 2014 (Shields and Dupuis 2015). Furthermore, at the 2017 BOF meeting, a substantial change in management of Kenai River late-run Chinook salmon was adopted. The Chinook salmon SEG was changed to 13,500–27,000 large (>75 cm mid eye to tail fork) fish, counted using adaptive resolution imaging sonar (ARIS) units.

The 2018 preseason outlook for early-run Chinook salmon to the Kenai River anticipated a total run of approximately 5,499 large fish[3], which was within the new large-fish SEG of 2,800–5,600 fish; the large-fish optimal escapement goal (OEG) for this stock is 3,900–6,600 fish. The 2018

[3] https://www.adfg.alaska.gov/sf/EONR/index.cfm?adfg=region.NR&NRID=2526&Year=2018

Kenai River early-run Chinook salmon sport fishery was open prior to June 10, but on June 11 the fishery was restricted to catch and release due to low fish abundance, and on June 20, the fishery was closed after continued low Chinook salmon counts. The 2018 escapement estimate was 2,859 fish and approximately 141 fish (harvest and catch-and-release mortality) were killed above the sonar (Lipka et al. *In prep*).

The 2018 preseason forecast for Kenai River late-run Chinook salmon was for a total run of approximately 21,503 large fish[3]. Based on average harvest rates of large fish in both commercial and sport fisheries, the forecasted run would probably provide for the new large-fish SEG to be met (13,500–27,000 Chinook salmon). However, lackluster early-run Kenai Chinook salmon abundance along with low Chinook salmon counts throughout the inlet led the Kenai River sport fishery for Chinook salmon to be restricted to no bait beginning July 1 and the fishery was subsequently further restricted to no retention on July 18 in response to continued low passage estimates (Lipka et al. *In prep*). Using mean run-timing and projected sport fishery mortality of 373 large fish, the projected final escapement of Kenai River late-run Chinook salmon was approximately 17,343 large fish (R. Begich, Division of Sport Fish Biologist, ADF&G, Soldotna, personal communication). The total run of large Chinook salmon was estimated to be 17,803 fish (Lipka et al. *In prep*), which was approximately 17% less than the preseason forecast.

Approximately 68% of the UCI Chinook salmon commercial harvest in 2018 occurred in the Upper Subdistrict or ESSN fishery (Appendix B1). The 2018 estimated harvest of 2,312 Chinook salmon was 57% less than the 2008–2017 average annual harvest and was approximately 75% less than the 1966–2017 average annual harvest in this fishery of 9,141 fish. In 2018, the peak daily harvest of 465 Chinook salmon of all stocks occurred on July 12, and the peak harvest week was from July 4 to July 12. The daily average harvest of Chinook salmon of all stocks per day was 105 fish (range 2 to 465) and the daily average percentage of total harvest of all stocks per day equaled 5% (range 0.08% to 20%) (Appendix A3). Of the 2,311 total year end Chinook salmon harvested in the ESSN fishery, an estimated 555 (24%) were large Kenai River mainstem (late-run) stock, based on sampling of the commercial catch (T. Eskelin, Division of Sport Fish, ADF&G, Soldotna, personal communication). Applying 24% to daily harvests, the 2018 estimated daily harvest of large Chinook salmon of the Kenai River mainstem stock in the 2018 ESSN fishery ranged from 1 to 111 fish.

## SOCKEYE SALMON

Management of the UCI sockeye salmon fishery integrates information from a variety of programs, which together provide an inseason model of the actual annual run. These programs include: an offshore test fishery (OTF) that creates an index of run strength and timing; passage and escapement counts by sonar, weir, remote camera, and various mark–recapture studies (Shields and Dupuis 2015); comparative analyses of historical commercial harvest and effort levels; genetic stock identification (GSI); and age composition studies. Inseason analyses of the age composition of sockeye salmon escapement into the principal watersheds of UCI provides information necessary to estimate the stock contribution in various commercial fisheries by comparing age and size data in the escapement with that in the commercial harvest (Tobias and Tarbox 1999). Beginning in 2005, a comprehensive sampling program was initiated to estimate the stock composition of sockeye salmon harvested in UCI commercial fisheries using improved

GSI analyses. Publications of GSI data describing the UCI sockeye salmon catch allocation are available for the years 2005–2016 (Barclay 2017).

OTF assessments in UCI have been conducted since 1979. During the OTF project in 2018, a State of Alaska vessel (R/V *Solstice*) fished 6 fixed stations along a transect across southern Cook Inlet from Anchor Point to the Red River delta (Frothingham and Willette 2018). The OTF program was used to provide an inseason estimate of sockeye salmon run strength by determining the passage rate, which was an estimate of the number of sockeye salmon that enter the district per index point or catch per unit of effort (CPUE) statistic (Appendix A1). The cumulative CPUE curve was then compared to historical run timing profiles so that an estimate could be made of the final CPUE during the season. This in turn provided an inseason estimate of the total run of sockeye salmon to UCI. Based on OTF data, the timing of the 2018 sockeye salmon run was estimated to be approximately 4 days late, and well below forecast (R. DeCino, Division of Commercial Fisheries, ADF&G, Soldotna, personal communication).

Both sonar (hydroacoustics) and weirs are used to estimate inseason abundance of sockeye salmon. Sonar technology was first employed to quantify sockeye salmon escapement into glacial rivers in UCI in the Kenai and Kasilof rivers in 1968, then expanded to the Susitna River in 1978, and the Crescent River in 1979 (Westerman and Willette 2011). In 2011, ADF&G transitioned from older Bendix sonar systems to DIDSON (Westerman and Willette 2011) in both the Kenai and Kasilof rivers. The sockeye salmon sonar project in the Yentna River was terminated after the 2008 season when a comprehensive mark–recapture study in the Susitna River drainage verified that sockeye salmon passage estimates in the Yentna River were low due to fish wheel selectivity bias (Appendix A12; Yanusz et al. 2007). Based on this information, beginning in 2009, the Yentna River sockeye salmon SEG was replaced with 3 weir-based SEGs at Chelatna and Judd Lakes in the Yentna River drainage and at Larson Lake in the Susitna River drainage (Fair et al. 2009). At the 2017 BOF meeting, these 3 SEGs were modified (Table 1; Erikson et al. 2017) after incorporating 7 years of additional escapement data using the new 3-tier percentile approach (Clark et al. 2014). The new SEGs are 20,000–45,000 fish at Chelatna Lake, 15,000–40,000 at Judd Lake, and 15,000–35,000 at Larson Lake. A sonar project on the Crescent River, operational since 1979, was discontinued in 2013 due to a lack of funding. Age composition of adult sockeye salmon returning to certain systems was also assessed at weir sites detailed in Appendix A13.

In addition to the weirs in the Susitna River drainage, an adult salmon weir was operated by the Division of Sport Fish at Fish Creek (Knik Arm) and provided daily sockeye salmon escapement counts. Historically, a counting weir has also been employed at the outlet of Packers Lake (on Kalgin Island) but has since been replaced by a remote video camera system (Appendix B10; Shields and Dupuis 2012). The camera system was in operation from 2005 to 2006 and 2009 through 2018. However, in 2006, an electronic malfunction did not allow for a complete census of the escapement. From 2010 to 2013, and in 2016–2018, technical difficulties prevented retrieval of some data, but minimum counts were obtained. A complete count of the escapement into Packers Lake was obtained in 2014 and 2015 (Shields and Frothingham 2018).

In 2018, approximately 4.6 million sockeye salmon were forecast to return to UCI (Table 3; Appendix C1). The actual 2018 run estimate totaled 3.1 million fish, which was 32% less than the preseason forecast. The 2018 sport fishery harvests were not available; therefore, sport harvest was estimated by comparing previous years' catches from similar sized runs. Of the expected run of 4.6 million sockeye salmon, approximately 2.0 million fish were expected to

escape all fisheries, leaving 2.6 million sockeye salmon available for harvest to all users. If sport and personal use harvests in 2018 were similar in proportion to previous runs of this size, the commercial catch in 2018 was projected to be approximately 1.9 million sockeye salmon. The actual 2018 commercial sockeye salmon harvest of 818,000 fish (Appendices A4 and B2) was well below preseason expectations. Drift gillnet fishermen accounted for approximately 49% of the 2018 commercial sockeye salmon harvest, or 400,285 fish and set gillnet fishermen caught 51% of the commercial harvest, or 417,000 sockeye salmon (Appendix B2). The 2018 run was allocated to individual river systems inseason using a weighted age-composition catch allocation method (Tobias and Tarbox 1999). GSI samples were collected from the 2018 commercial harvest and will be analyzed later. The last reported commercial fishing activity in any area of UCI in 2018 was September 17.

In 2018, the total sockeye salmon harvest from commercial, sport, personal use, subsistence, and educational fisheries was estimated at 1.4 million fish (Appendix A22). This amount was approximately 61% less than the 1996–2017 average annual harvest of 3.6 million fish (for the Kenai River, these data include late-run sockeye salmon only) and 46% less than preseason expectations (Appendix A22). The 2018 sport harvest was estimated based on harvest from similar sized runs. The 2018 personal use harvest estimate of approximately 292,000 sockeye salmon was 16% less than the average annual harvest of 349,000 fish from 1996 to 2017. For more details about the specifics of personal use harvests, including demographics, see Reimer and Sigurdsson (2004), Dunker and Lafferty (2007), and Dunker (2010).

The average price paid per pound for all commercially harvested salmon are typically higher earlier in the season and declines as the season progresses (Appendix B11). Average prices reported here are generated from inseason grounds prices and do not reflect any postseason adjustments. Based on these estimated prices, the total exvessel value of the 2018 salmon fishery was approximately $12 million (Appendix B7). Using an average price of $2.04/lb (Appendix B11), the exvessel value for sockeye salmon was estimated to be $10.1 million, which was 63% less than the previous 2008–2017 average value of $27.6 million. In addition, sockeye salmon made up 82% of the 2018 total exvessel value, 10% less than the average proportion, and the lowest in proportion since 1991 (Appendix B7).

## Big River

The first commercial salmon fishery to open in UCI in 2018 was the Big River fishery, which is managed under the *Big River Sockeye Salmon Management Plan* (5 AAC 21.368). This plan was adopted in 1989 and allows a small set gillnet fishery in the northwest corner of the Central District. At the 2005 BOF meeting, the plan was modified to expand the area open to fishing to include the waters along the west side of Kalgin Island. Between June 1 and June 24, fishing is allowed each Monday, Wednesday, and Friday from 7:00 AM to 7:00 PM. Permit holders are limited to a single 35 fathom set gillnet, and the minimum distance between nets is 1,800 feet, which is 3 times the normal separation of gear. Although targeting an early-run of sockeye salmon returning to Big River, this fishery also encounters Chinook salmon migrating through the area. The management plan limits the harvest of Chinook salmon to no more than 1,000 fish per year. Since 2005, when the management plan was changed, the average annual Chinook salmon harvest has been 450 fish, which was well below the 1,000 fish cap. Since 2005, the average annual sockeye salmon harvest has been 15,254 fish. The 2018 fishery began on Friday, June 1, and harvests were reported from 10 different days, yielding a total harvest of 5,994 sockeye and 341 Chinook salmon (Appendices A3 and A4). Of the total 2018 harvest,

81% of the Chinook and 59% of the sockeye salmon were caught in the Kalgin Island west side waters, which is Statistical Area 246-10 (Figure 3). There were 15 permit holders in 2018 who reported participating in the fishery on its peak day of June 20, which was less than half the historical highest peak number of participating permit holders for this fishery.

### Western Subdistrict

The 2nd commercial fishery to open in 2018 was the set gillnet fishery in the Western Subdistrict of the Central District. This fishery opens on the first Monday or Thursday on or after June 16, and the regular fishing schedule consists of two 12-hour weekly fishing periods (Mondays and Thursdays) throughout the season, unless modified by EO. The fishery primarily targets sockeye salmon bound for Crescent Lake.

The Crescent River sockeye salmon sonar project has not been in operation since 2012. When it was operational, the set gillnet fishery in this area was often expanded to fishing 24 hours per day, 7 days per week in an attempt to keep escapement into Crescent Lake from exceeding the escapement goal range of 30,000–70,000 fish. In 2018, the Western Subdistrict set gillnet fishery opened for the season on Monday, June 18, and remained open for regular Monday and Thursday fishing periods through Thursday, July 5. An examination of sockeye salmon harvest near the Crescent River was similar to harvest in years when escapements fell within or exceeded the escapement goal range. Therefore, EO No. 8 was issued on July 7, opening that portion of the Western Subdistrict south of the latitude of Redoubt Point from 6:00 AM until 10:00 PM on Mondays, Thursdays, and Saturdays, beginning on Saturday, July 7. This fishing schedule remained in place until 10:00 PM on Monday, August 6, when EO No. 26 was issued, returning the fishery to its regular schedule of 2 fishing periods per week beginning on Thursday, August 9. In 2018, approximately 36,000 sockeye salmon were harvested by 17 permit holders fishing in the Western Subdistrict set gillnet fishery, which was 18% less than the 2008–2017 average annual harvest of approximately 44,000 fish (Appendices A8 and B2).

### Northern District

The set gillnet fishery in the Northern District opens by regulation on or after June 25 for regular Monday and Thursday 12-hour periods. This fishery is managed primarily by the *Northern District Salmon Management Plan* (NDSMP; 5 AAC 21.358), and the *Susitna River Sockeye Salmon Action Plan* (SSSAP). The intent of these plans is to allow a mixed-stock commercial fishery while minimizing the harvest of NCI coho salmon and conserving Susitna River sockeye salmon.

At the 2008 BOF meeting, Susitna River sockeye salmon were found to be a stock of yield concern. No change was made to this assessment during the 2011 UCI BOF meeting. At the 2013 BOF work session, ADF&G recommended Susitna River sockeye salmon remain classified as a stock of yield concern because: 1) 5 of the lake escapement goals (out of 15 total) were below the minimum goal, and 2) harvests in Central and Northern Districts from 2008 through 2013 were generally less than long-term averages. Research studies are ongoing to better understand sockeye salmon abundance and distribution. According to the *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222), a stock of yield concern is defined as "a concern arising from a chronic inability, despite the use of specific management measures, to maintain expected yields, or harvestable surpluses, above a stock's escapement needs; a yield concern is less severe than a management concern, which is less severe than a conservation concern." As a result of this finding, an action plan was developed by ADF&G and

the BOF to identify conservative management measures in both the sport and commercial fisheries targeting Susitna River sockeye salmon stocks. Adopted by the BOF at the 2008 meeting, the SSSAP included the following statement: "In light of recent ADF&G data revealing concerns about the validity of Yentna River sockeye salmon count data, it is the intent of the BOF that Susitna River sockeye salmon stocks will be conservatively managed while ADF&G continues its studies in this drainage." At the 2017 BOF meeting, ADF&G recommended Susitna River sockeye salmon remain a stock of yield concern, which the BOF approved.

In 2018, management of the Northern District set gillnet fishery was guided by provisions within the NDSMP and the SSSAP. These plans allow ADF&G to reduce the total allowable gear in the Northern District from July 20 through August 6 in order to aid in achieving the escapement goals at Judd, Chelatna, and Larson Lakes. EO No. 17 was issued on July 22 reducing legal gear in the General Subdistrict to 1 set gillnet per permit, and gear was reduced in the Eastern Subdistrict to no more than 2 set gillnets per permit. On Wednesday, August 1, EO No. 22 was released, which modified EO No. 17 and changed legal gear for that portion of the General Subdistrict of the Northern District, south of the Susitna River, and all of the Eastern Subdistrict to no more than 2 set gillnets per permit. That portion of the General Subdistrict east of the Susitna River remained limited to no more than 1 set gillnet per permit. On Monday, August 9, gear restrictions imposed by the NDSMP and the SSSAP expired and a full complement of gear became legal for the remainder of the season. In 2018, approximately 52,500 sockeye salmon were harvested by 73 permit holders in the Northern District set gillnet fishery (Appendices A4 and B2). This harvest was approximately 37% greater than the 2008–2017 average annual harvest of 38,261, similar to 2017, and was the third highest sockeye salmon harvest in the Northern District since 1999 (Appendix B2). Low fishing hours south of the district, in the Central District, due to Kenai River Chinook and sockeye salmon shortages, may contribute to high harvest spikes in the Northern District.

### ESSN and Central District Drift Gillnet

At the 2014 BOF meeting, numerous changes to management of the ESSN fishery during years of low Kenai River Chinook salmon abundance were adopted which can have a large effect on sockeye salmon harvest (Shields and Dupuis 2017). Management of this fishery is now guided by 5 AAC 21.365, the *Kasilof River Salmon Management Plan* (KRSMP); 5 AAC 21.360, the *Kenai River Late-Run Sockeye Salmon Management Plan* (KRLSSMP); and 5 AAC 21.359, the KRLKSMP. In addition, the BOF also made fairly substantive changes to 5 AAC 21.353, the *Central District Drift Gillnet Fishery Management Plan* (CDDGFMP), in an attempt to pass more coho salmon to streams in NCI. At the 2017 BOF meeting, some of the changes made at the 2014 meeting were modified (Appendix C).

Within the KRSMP and KRLSSMP, there are 2 principal restrictions to the ESSN fishery that must be met each management week: 1) a limit on the number of additional hours that may be fished each week beyond the 2 regular 12-hour fishing periods, and 2) implementation of weekly closed fishing periods (or "windows"). By regulation, a week is defined as a period of time beginning at 12:01 AM Sunday and ending at 12:00 midnight the following Saturday (5 AAC 21.360 (i)). Weekly hour limitations vary according to the time of year and the size of the sockeye salmon run returning to the Kenai River. Restrictions to these fisheries must be balanced with meeting escapement goals, as provided for in 5 AAC 21.363, the *Upper Cook Inlet Salmon Management Plan* (UCISMP), which states, that although in most circumstances, ADF&G should adhere to the management plans in the chapter, no provision within a specific

management plan was intended to limit the commissioner's use of EO authority, under AS 16.06.060, to achieve established escapement goals in the management plans.

The Kasilof Section set gillnet fishery is open from June 25 through August 15. However, if 50,000 sockeye salmon are in the Kasilof River before June 25, the season may begin as early as June 20. The Kenai and East Foreland sections are open from July 8 through August 15. Beginning July 8, the Kasilof Section is managed in concert with the Kenai and East Foreland sections per the KRLSSMP. Drift gillnet fishing in the Central District of UCI opens on the third Monday in June, or June 19, whichever is later.

The 2018 commercial drift gillnet season began on Thursday, June 21, as provided for in the CDDGFMP. The drift fleet opening day harvest of approximately 1,200 sockeye salmon was below average for early in the season, as was the CPUE of 23 fish/boat (average of 45 fish/boat) (Appendix A4). Drifting was open for 1 regular period on June 21 that first week. The cumulative harvest after the first week of about 1,200 sockeye salmon was well below average (Appendix A4). Through June 20, only 8,600 sockeye salmon had passed the Kasilof River sonar counter (Appendix A2). Thus, the Kasilof Section setnet fishery was not opened until June 25. Per KRLSSMP, the total hours available were the 2 regular Monday and Thursday 12-hour periods, and 51 potential EO hours. Sockeye salmon passage in the Kasilof River through June 24 was 23,477 fish (Appendix A2). Approximately 11,500 sockeye salmon were harvested in the setnet fishery during the first fishing period, which was lower than any opening day harvest for the last 10 years (Appendix A4).

During the management week of June 24 to June 30, the drift gillnet fleet fished the regularly scheduled 12-hour districtwide fishing periods on June 25 and June 28, as well as 1 additional day in the regular Kasilof Section (Figure 6), which was a 14-hour period on June 30 (Appendices A10 and A11). The Kasilof Section set gillnet fishery was opened for the same schedule as the drift gillnet fishery during this week. Sockeye salmon passage into the Kasilof River through June 30 had reached only 38,000 fish (Appendix A2). Typically, passage into the Kasilof River through June 30 is about 24% complete, as such the June passage total projected a final passage of approximately 152,000 fish, well below the lower end of the BEG of 160,000 fish. The Kenai River sockeye salmon sonar project began count activities on July 1 and a first day passage estimate of 2,000 fish. For the week, drifters harvested approximately 20,000 sockeye salmon, and Kasilof Section setnetters harvested 36,000 sockeye salmon.

During the management week of July 1–7, the drift and set gillnet fisheries were both open for the 2 regular 12-hour periods on Monday and Thursday, with no extensions. The Kasilof Section was opened an additional 4 hours on July 4, and 8 hours on July 7 for both set and drift gillnets (Appendices A10 and A11). The total number of hours fished was 36 and the 36-hour no-fishing weekly "window" was implemented (Table 4). Drifters harvested approximately 88,500 sockeye salmon and setnetters took about 29,000 fish during the week (Appendix A4). Sockeye salmon passage in the Kasilof River through July 7 was estimated to be approximately 75,400 fish, which projected a final passage total of 216,000 fish based on average run timing (Appendix A2). The Kenai River sockeye salmon passage estimate through July 8 was 32,000 fish, and the run was typically only 4% complete through this date.

The week of July 8–14 marked the first time the entire ESSN fishery was open because this week included opening days for the Kenai and East Foreland sections along with continued openings in the Kasilof Section (Appendices A10 and A11). This management week also lined up with the

July 9–15 time period when mandatory area restrictions to the drift fishery per the CDDGFMP must occur. Thus, in compliance with this plan, the regularly scheduled drift gillnet fishing periods on July 9 and July 12 were restricted to Drift Area 1 and the Expanded Kenai and Expanded Kasilof sections (Figures 7 and 8). The preseason forecast for Kenai River sockeye salmon (Appendix C1) anticipated a total run greater than 2.3 million fish, and with this forecast, the KRLSSMP would allow up to 51 hours of additional fishing time during the week in the ESSN fishery. However, the implementation of the KRLKSMP (*Kenai River Late-Run King Salmon Management Plan*) limited fishing to a total of no more than 48 hours each week by EO south of the East Foreland Section. Both Monday and Thursday regular fishing periods occurred this week in the East Foreland section, as did coinciding EO openers for the remaining ESSN areas of the Kenai and Kasilof sections. The Kasilof Section setnet fishery was also opened and restricted to one-half mile from shore on July 14 for 12 additional hours. All additional fishing time during the week for the drift fishery was confined to the Expanded Kenai and Expanded Kasilof sections. At the end of the week, no additional fishing time had occurred in East Foreland section, where only the regular fishing periods were used, while 24 hours by EO were used in the Kenai Section and 36 hours in the Kasilof section. The estimated sockeye salmon harvest in the drift fishery for the week was 168,000 fish, and the setnet fishery harvested approximately 56,000 fish (Appendix A4). In the Kasilof River, the estimated total sockeye salmon passage through July 15 was 124,000 fish, which projected a final passage estimate of 271,000 fish based on average run timing (Appendix A2). Sockeye salmon passage in the Kenai River had reached 98,000 fish through July 15, projecting a season final passage of 805,000 fish based on average run timing.

The management week of July 15–21 presented challenges to commercial fishery management driven primarily by decreasing sockeye salmon passage into the Kenai River combined with low Chinook salmon abundance. The Kenai River Chinook salmon sport fishery was further restricted to no retention on July 18, which further limited hours in the Kenai and Kasilof sections of the ESSN fishery to no more than 24 total hours by EO only. The East Foreland section was fished only 1 time during the week, that being the regularly scheduled period on Monday, July 16 (Appendices A10 and A11). The Kasilof Section set gillnet fishery was open for 7 hours on Wednesday, July 18, but only within 600 feet of the mean high tide. Fishing periods were also open in the for 12 hours on Thursday, July 19, within one-half mile of shore in the Kasilof Section, and within 600 feet of shore in The North K. Beach Statistical Area (244-32) of the Kenai Section. On Saturday July 21, fishing was again open within one-half mile of shore in the Kasilof Section, and within 600 feet of shore in the North K. Beach Statistical Area. Setnetting was not open in the East Foreland Section (244-42) on Wednesday, Thursday, or Saturday during the week, and setnetting in the Salamatof Statistical Area (244-41) was not opened at all. The drift fleet was restricted to the Expanded Kenai and Expanded Kasilof sections, as required by the CDDGFMP, on Monday, but drift fishing was closed entirely for Thursday. The estimated passage of sockeye salmon into the Kasilof River was 127,000 fish and projected a total passage for the year of 255,000 fish based on average run timing (Appendix A2). At the beginning of the week in the Kenai River, the estimated sockeye salmon passage through July 15 was 105,000 fish, which projected a total passage of 675,000–1.1 million fish for on-time runs to 3-day late runs. However, as the week progressed, Kenai River run entry slowed and by July 17 the year-end inriver run projection was below 900,000 fish, even at 3 days late run timing. The drift fishery harvested 81,812 sockeye salmon, and the setnet fishery took 72,000 fish during the week (Appendix A4). The total sockeye

salmon commercial harvest through July 22 was 588,000 fish, which was well below pace to achieve the preseason commercial harvest forecast (Appendix C2) of 1.70 million sockeye salmon by year's end.

The July 22–28 management week started with an improvement to sockeye salmon passage in the Kenai River spurred by a daily passage on July 21 of 62,000 fish (Appendix A2), and stabilization of Chinook salmon projections within the SEG range (Lipka et al. *In prep*). During the week, the regularly scheduled fishing period on Monday July 23 was open for the entire ESSN fishery, and with drift nets in Drift Area 1 plus the expanded Kasilof and Kenai sections (Appendices A10 and A11). Although Chinook salmon counts remained stable throughout the week, sockeye salmon daily counts decreased after July 22, and as such, the Thursday ESSN commercial opening was restricted to within 600 feet of shore in the Kasilof Section only; all other areas in the ESSN fishery were closed, as was the drift fleet. An additional fishing period restricted to within 600 feet of shore was allowed in the Kasilof Section only on Saturday, July 28, to target Kasilof River sockeye salmon. The North K. Beach Statistical Area was not opened during this management week because the results from an inseason genetic mixed stock analysis of fish sampled from the preceding week's harvest of the area showed that, when fishing was restricted within 600 feet of shore, 47.6% (90% credibility interval: 38.8–57.3%) of the harvest was composed of Kenai River origin sockeye salmon (A. Barclay, Division of Commercial Fisheries, ADF&G Genetics Lab, Anchorage, personal communication). The estimated passage in the Kenai River through Sunday, July 22, had reached 270,000 fish, which now projected a final passage of greater than 900,000 fish for runs 4 days late, but this projection decreased quickly after that date. Passage in the Kasilof River through July 22 was 220,000 fish, projecting in excess of 320,000 sockeye salmon.

On July 24, UCI Commercial Fisheries staff completed an inseason assessment of the sockeye salmon run to date and estimated the Kenai River sockeye salmon run would be less than 2.3 million fish and would probably be 1 to 3 days late in run timing. Based on this assessment, the ESSN and Central District drift gillnet commercial fisheries changed to management plan provisions for runs less than 2.3 million sockeye salmon. Changes to 2018 management due to the lowered run abundance included a decrease to the Kenai River inriver goal from 1,000,000–1,300,000 fish to 900,000–1,100,000 fish. The ESSN fishery (except for the E. Foreland Section) remained limited to fishing no more than 24 hours (Appendix A10) by EO due to low Chinook salmon abundance. The Friday 36-hour no-fishing window was still in effect. For the week, drifters harvested 34,000 sockeye salmon for a season total of 394,000 fish (Appendix A4), and setnetters harvested 50,000 sockeye salmon for a season total of 278,000 fish.

During the week of July 29–August 4, the set and drift gillnet fisheries were closed entirely (Appendix A10) due to a continued slump in sockeye salmon abundance in the Kenai River. The paired restrictive provisions found in the KRLKSMP ended on July 31, by regulation. By the end of the week, the cumulative passage in the Kenai River was only 667,000 sockeye salmon, which projected a final passage of less than 750,000 fish (Appendix A2). In the Kasilof River, passage through August 4 was 339,000 sockeye salmon, which projected a final passage of 363,000–376,000 fish. Because no periods were open, no sockeye salmon were harvested during this week (Appendix A4).

The last full week of the 2018 ESSN season was August 5 to August 11. The regularly scheduled fishing period on Monday, August 6, was closed in the entire ESSN fishery as was the districtwide drift period. Both actions were taken to reduce the harvest of Kenai River sockeye

salmon (Appendices A10 and A11). Drift gillnetting was opened for a 12-hour period in Drift Gillnet Area 3 only on Tuesday, August 7. The KRSHA was opened to set and drift gillnetting on August 8 to focus harvest pressure on Kasilof River sockeye salmon; this area remained open for the remainder of the management week. Utilization of the KRSHA instead of the 600 foot fishery in the Kasilof Section was necessary due to continued low sockeye salmon run entry in the Kenai River, and also in response to very high sockeye salmon passage in the Kasilof River, where the BEG had already been exceeded and the OEG of 160,000 to 390,000 was projected to be exceeded without additional harvest of this stock (Appendix A2). During the week, a total of 9,800 sockeye salmon were harvested by setnets in the KRSHA and 3,900 by drift gillnets (Appendix A4). By August 12, sockeye salmon passage in the Kenai River had increased some and the total count had reached 727,500, which projected a season total of 788,000 to 820,000 fish for on-time to 3-day late runs. In the Kasilof River, the cumulative sockeye salmon passage through August 11 was 388,000 fish, projecting a season total of 395,000–400,000 fish that were on-time to 3-days late.

The final management week of Upper Subdistrict fishing occurred from Sunday, August 12, to Wednesday, August 15. By regulation, the ESSN fishery closes no later than August 15, and after that date the Central District drift gillnet fishery is open for Monday/Thursday fishing periods in Drift Gillnet Areas 3 and 4 (Figure 9). An extension of the previous week's KRSHA opener continued through 8:00 AM on August 12 (Appendix A10). The regularly scheduled fishing period for the ESSN fishery and full Central District drift fishery on Monday, August 13, was closed by EO; however, drift gillnetting was again allowed in Drift Gillnet Area 3 only for this period. For the week, the set gillnet fishery harvested approximately 1,600 sockeye salmon in the KRSHA, and drifters harvested 1 (Appendix A4). The season total harvest for the ESSN fishery was 290,000 fish, and the drift fleet season total was 398,000 fish (Appendices A4 and B2). Total EO hours used in the ESSN fishery in 2018 was considerably below that allowed by regulation (Table 4) due to low late run Chinook salmon abundance, as well as low abundance and very late run timing of sockeye salmon in the Kenai River.

The drift fleet was restricted to Drift Areas 3 and 4 beginning on Wednesday, August 16, by management plan provision. However, extraordinarily late run entry of sockeye salmon into the Kenai River from August 16 through August 21 prompted a late expansion of the drift opener on August 23 to include Area 1 in addition to drift Areas 3 and 4 (Appendices A10 and A11). Only 200 sockeye salmon were harvested (Appendix A4) by 26 drift boats that day, indicating no major abundance of sockeye salmon were left in Drift Area 1. Sockeye salmon counts in the Kenai River decreased rapidly after August 25 (Appendix A2).

Aerial surveys of Chinitna River/Clearwater Creek conducted in August of 2018 produced estimates below the SEG for Chinitna River/Clearwater Creek chum salmon (SEG: 3,500–8,000 fish). As such, Chinitna Bay was not opened to drift gillnetting until August 31, when the chum salmon run is nearly complete (Appendices A10 and A11). The drift fleet harvested an additional 2,000 sockeye salmon in Drift Areas 3 and 4 and approximately 60 sockeye salmon in Chinitna Bay for the remainder of the 2018 season (Appendix A4).

The 2018 total sockeye salmon harvest for drift gillnetters was approximately 400,000 fish, which represented 49% of the UCI total harvest (Appendix B2). This was the lowest harvest in the drift fleet since 1975, and more than 1.2 million fish less than the 2008–2017 average of nearly 1.6 million fish. The ESSN fishery total sockeye salmon harvest was approximately

290,000 fish, or 35% of the UCI total harvest. This harvest was about 700,000 fish less than the 2008–2017 average of 1 million fish (Appendix B2).

In 2018, sockeye salmon passage was monitored in the Kasilof River through August 14, producing a final estimate of 394,288 fish (Appendix A2). Of the previous 10 years passage, only 3 were higher than this value and 7 were lower (Appendix B10). The OEG for Kasilof River sockeye salmon for 2018 of 160,000–390,000 (used only when the lower end of the Kenai River escapement goal is in jeopardy) was exceeded by nearly 4,000 fish, whereas the BEG (160,000 to 340,000) was exceeded by approximately 50,000 fish. The Kenai River sockeye salmon sonar project was operational through August 28, producing a final passage estimate of 1,034,771 fish, thereby landing nearly in the middle of the inriver goal of 900,000 to 1,100,000 fish. Once sport fishing harvest above the sonar is subtracted, the SEG of 700,000–1,200,000 fish was probably met.

The midpoint of the 2018 sockeye salmon run measured at the Anchor Point OTF transect occurred on July 20, which was 4 days later than the historical average date of July 16. The cumulative sockeye salmon catch from the 2018 OTF was the second lowest since 1992 and the cumulative OTF CPUE was third lowest since 1992 (Appendix A1). At the Kasilof River sonar site, 50% of the 2018 sockeye salmon passage was reached on July 20 (Appendix A2), which was 5 days later than the 2008–2017 average date of July 15. In the Kenai River, 50% of the total 2018 sockeye salmon count had passed the sonar on August 4, which was 11 days later than the 2008–2017 average 50% date of July 23.

### Kalgin Island Subdistrict

The total sockeye salmon harvest in the Kalgin Island Subdistrict in 2018 was estimated to be 36,367 fish. Approximately 3,550 fish, or 10% of the season total, was harvested on the west side of the island (Statistical Area 246-10) during the Big River sockeye salmon fishery, which occurs from June 1 to June 24 (Appendix A4). The 2018 Kalgin Island Subdistrict sockeye salmon harvest was 32% less than the 2008–2017 average annual harvest of approximately 53,000 fish. In 2018, a remote video system was once again used to estimate sockeye salmon escapement into Packers Lake. The video recording system operated from June 15 through August 24, producing a sockeye salmon escapement estimate of 16,247 fish. The solar panels and wind generator failed to provide enough power to operate the recorder in late August, which resulted in an incomplete census of the escapement. Although the count of the escapement was incomplete, enough data was collected to show that the sockeye salmon SEG for Packers Lake of 15,000–30,000 fish was achieved. No additional fishing time was provided in the Kalgin Island Subdistrict in 2018 beyond regular periods (Appendices A10 and A11).

## COHO SALMON

The 2018 UCI commercial coho salmon harvest of 232,000 fish was approximately 29% greater than the 2008–2017 average annual harvest of approximately 180,000 fish but was approximately 19% less than the 1966–2017 average annual harvest of 289,000 coho salmon (Appendix B3).

The largest harvest of UCI coho salmon occurs in the UCI drift fishery (Appendix A5), where 109,000 fish were harvested in 2018, which was about equal to the 2008–2017 average annual harvest of 107,000 fish and 25% less than the 1966–2017 average annual harvest of 146,000 fish. Coho salmon catches in the OTF fishery were the highest observed since 2008 (1,157)

(Appendix A1). Along with the large OTF catch for coho salmon, and the good commercial catch, all coho salmon escapement goals were achieved or exceeded. Coho salmon escapement objectives were either projected well above the goal, such as in the Little Susitna River (7,583 projecting to 26,000 when weir was lost), within the goal, such as in the Deshka River (12,262), or exceeded the goal, such as in Fish Creek (5,203). The postseason foot survey at Jim Creek of 1,215 fish also exceeded the SEG of 450–700 fish for this system (Oslund et al. *In prep*).

Chinitna Bay was opened to drift gillnetting on Tuesdays and Fridays, beginning on Friday, August 31 (Appendices A10 and A11). The estimated coho salmon harvest by drifters in Chinitna Bay was 2,277 fish (Appendix A5).

The exvessel value of coho salmon from the 2018 UCI commercial fishery was $1.4 million, or 11% of the total exvessel value (Appendix B7). The average price paid for coho salmon was estimated at $0.94/lb (Appendix B11), which was the second highest price since 1988. Typically, the price paid for coho salmon in August and September is higher than July pricing.

## PINK SALMON

Pink salmon runs in UCI are even-year dominant. Odd-year average harvests are typically about 15% of even-year harvests (Appendices A6 and B4). The 2018 UCI commercial pink salmon harvest of 126,923 fish was 67% less than the 2008–2017 average annual harvest of 386,000 fish. Chinook and sockeye salmon time restrictions to the drift and ESSN fisheries undoubtedly resulted in lower pink salmon harvests in 2018. Based on an average weight of 3.8 lb/fish (Appendix B12) and an average price of $0.25 a pound (Appendix B11), the estimated exvessel value for the 2018 pink salmon harvest was $115,431 or 0.9 % of the total exvessel value (Appendix B7).

## CHUM SALMON

A total of 115,366 chum salmon were harvested by UCI commercial fishermen in 2018, which was 33% less than the 2008–2017 average annual harvest of 172,000 fish (Appendix B5). Similar to pink salmon, the above average harvest of chum salmon in 2018 should be viewed in light of the greatly diminished fishing time provided to the drift fleet in 2018 due to sockeye salmon shortfalls in the Kenai River. Drifters are the largest harvesters of chum salmon, capturing 94% of the total chum salmon harvest in the past 10 years. The 2018 exvessel value for chum salmon was $569,659, or 4.6% of the overall exvessel value of the 2018 fishery (Appendix B7). The average price paid for chum salmon in 2018 was estimated to be $0.68 per pound (Appendix B11), which was about $0.12 a pound more than the previous 10-year average.

## PRICE, AVERAGE WEIGHT, AND PARTICIPATION

The estimated price per pound paid to UCI commercial fishermen for their harvest in 2018 was higher than the 2008–2017 average for all species. (Appendix B11). The estimate of $2.04 per pound for sockeye salmon was $0.18 more than the $1.86 a pound paid in 2017, and $0.40 more the 2008–2017 average annual price of $1.64. Calculating the average price for what fishermen receive for their harvest is difficult (Shields and Dupuis 2013). Average prices reported here are generated from inseason grounds prices and do not reflect any postseason adjustments. Harvest statistics showed that salmon size was variable in 2018 compared to previous years. The weights of salmon in the 2018 UCI commercial harvest showed a sockeye salmon yearly average weight

of 5.2 lb, which was the smallest yearly average ever (Appendix B12). The 13.8 lb yearly average weight of Chinook salmon was also the smallest ever, but the yearly average weight of 8.3 lb for chum salmon was the largest yearly average ever. The yearly average pink salmon weight of 3.8 lb and yearly average weight of 6.3 lb for coho salmon were very close to the previous 10-year averages.

In 2018, the Chinook salmon yearly average weight dropped back significantly to a value lowest yet recorded from its increase in 2017, similar to the very small average weight seen in 2013. As noted by Shields and Dupuis (2017), the small size of commercially harvested Chinook salmon in 2018, as well as most of the recent years other than 2017, was probably due to the age of the fish in the harvest. For example, from 2001 to 2018, the age composition of Chinook salmon harvested in the ESSN fishery averaged 44% for fish that had spent 2 years or less in salt water. This was about twice the 1987–2000 average of 22% for these age classes (Figure 10; Appendix A15)

The Commercial Fisheries Entry Commission (CFEC) reported that 576 active drift gillnet permits were issued in 2018, of which 430 (75%) were issued to Alaskan residents (Appendix B13). In the setnet fishery, CFEC reported that 740 permits were issued of which 621 (84%) were issued to Alaskan residents. In 2018, 446 drift gillnet permits and 490 set gillnet permits reported fishing in UCI (Appendix A8). In the drift fishery, 96 vessels and 100 different permits were reported fishing as part of a dual-permit operation. Farrington et al. (2014) discuss detailed information about dual-permit fishing operations in the Cook Inlet drift gillnet fishery.

Ten major fish processors (Appendix A16), out of a total of 17 shore-based processors, purchased UCI fish in 2018, as well as 14 direct marketing vessels, 3 catcher-exporters, 2 buyer-exporters, and 42 catcher-sellers. A catcher-seller is defined in 5 AAC 39.130(k) as a "commercial fisherman who sells or attempts to sell unprocessed fish that were legally harvested by the catcher-seller." These fish may be sold 1) to the general public for use for noncommercial purposes; 2) for use as bait for commercial or noncommercial purposes; 3) to restaurants, grocery stores, and established fish markets; or 4) by shipping the fish to a licensed buyer, processor, or exporter within the state.

Direct marketing means selling a product directly to a user at a higher point on the distribution chain than the primary processor (http://www.adfg.alaska.gov/index.cfm?adfg=fishlicense.marketers).

## SALMON ENHANCEMENT

Salmon enhancement through hatchery stocking has been a part of UCI salmon production since the early 1970s. Currently, there is a single private hatchery that is fully operational in UCI, the Trail Lakes facility operated by Cook Inlet Aquaculture Association (CIAA). The Trail Lakes hatchery is in the upper Kenai River drainage near Moose Pass. This hatchery was originally built and operated by ADF&G's Fisheries Rehabilitation and Enhancement Division, but was subsequently leased to CIAA in 1990, as State of Alaska operating budgets declined. The Trail Lakes hatchery primarily produces sockeye salmon, but minor production of coho and Chinook salmon also occurs. Most of the production from this facility has benefited Lower Cook Inlet fishermen.

From 1975 to 2008, a sockeye salmon enhancement project was conducted at Big Lake, located in the Matanuska-Susitna Valley, approximately 15 miles west of Wasilla (Figure 1). ADF&G directed the stocking program from 1975 through 1992; beginning in 1993, CIAA took over the

program and was responsible for gamete collection, incubation, and release activities. As a result of poor fry survival in Big Lake, CIAA ceased their involvement in salmon enhancement activities after the 2008 season. Because the fry/smolt stocking program was terminated, CIAA also ceased the smolt count project at Fish Creek, the stream that runs out of Big Lake. After CIAA terminated their involvement in the smolt count project, ADF&G was able to secure funding to operate smolt count studies from 2011 to 2015. The Big Lake sockeye salmon smolt count project was discontinued in 2016 due to budget shortfalls (Table 5). CIAA conducts other activities that benefit wild salmon production, such as trapping and netting of northern pike *Esox lucius*, removal of beaver dams, installation and monitoring of flow control structures, and other seasonal barrier modifications.

The only lake in UCI currently stocked with sockeye salmon is Hidden Lake, which is located on the Kenai Peninsula. Production from this enhancement program contributes to the UCI commercial, personal use, educational, and recreational fisheries. In 2017, no hatchery fry were released into Hidden Lake because low sockeye salmon escapement into the lake in 2016 (only 1,225 adults) did not provide enough fish for broodstock collection. From May 16 to July 6, 2017 CIAA counted approximately 254,883 sockeye salmon smolt emigrating Hidden Lake, of which 55.3% were estimated to be of hatchery origin, and 93% were age-1 smolt (Wizik 2018). Adult salmon are also sampled and examined for hatchery otolith marks when they swim through the weir at Hidden Creek. In 2017, CIAA counted approximately 10,032 adult sockeye salmon returning to Hidden Lake. Based on thermal mark readings from 468 pairs of otoliths, 61% of the fish escaping into the lake were of hatchery origin. The dominant age class of the escapement were age-1.2 (85%) and age-2.2 (12%) (Wizik 2018).

# STOCK STATUS AND OUTLOOK

Overall, the status of UCI monitored salmon stocks is positive. However, some stocks warrant additional management review due to low abundance. These stocks include Susitna River and Fish Creek (Big Lake) sockeye salmon and 7 Northern Cook Inlet Chinook salmon stocks.

## SOCKEYE SALMON

### Susitna River

The Susitna River sockeye salmon run forecast (Table 3) for 2018 of 329,000 fish was 18% less than the 2008–2017 average of 398,000. This forecast was derived using mean return per spawner by age class and mark–recapture estimates of spawner abundance for brood years 2006–2014. Sonar estimates of spawner abundance were not used, because mark-recapture studies have shown that the Yentna sonar project underestimated sockeye salmon escapement causing estimates of adult returns to also be underestimated. The 5 year mean absolute percent error (MAPE) for this forecast method is 17%. The predominant age classes in the 2018 Susitna sockeye salmon run forecast were age-1.2 (20%), and age-1.3 (57%).

The 2018 sockeye salmon actual run to the Susitna River was estimated at 256,000 fish (using the escapement and the mean harvest rate estimated from genetic stock composition of the commercial harvest in 2007–2010; Table 6). The 2018 run was about 22% less than the preseason forecast (Table 3). Weirs were operated on Susitna River drainage tributaries at Chelatna, Judd, and Larson Lakes. At Chelatna Lake, 20,438 fish were counted (SEG: 20,000–45,000; Table 1); at Judd Lake the count estimate was 30,683 (SEG: 15,000–40,000); and the weir estimate at Larson Lake was 23,444 (SEG: 15,000–35,000). Thus, even though the

total sockeye salmon run to the Susitna River was 18% less than the preseason forecast, all 3 SEGs were met.

Since 1976, Susitna River sockeye salmon total annual run estimates have ranged from 147,000 to 773,000 fish (Fair et al. 2009). As a result of undercounting sockeye salmon at the Yentna River sockeye salmon sonar site (Shields and Dupuis 2013), ADF&G initiated an out-of-cycle Susitna River sockeye salmon escapement goal review in late 2008 (Fair et al. 2009). This analysis concluded the existing escapement goal for the Susitna River drainage was inappropriate. The report from these analyses recommended that the Yentna River sockeye salmon SEG should be eliminated and replaced with SEGs for the 3 subdrainages of Chelatna, Judd, and Larson Lakes. Details about the declining sockeye salmon runs to the Susitna River drainage over the past decade are discussed in Shields (2007).

Susitna River sockeye salmon were first designated as a stock of yield concern in 2008. As a result of this classification, an action plan was developed by ADF&G and BOF to identify restrictive management measures in those fisheries harvesting Susitna River sockeye salmon stocks. These restrictions have undoubtedly reduced the harvest of Susitna sockeye salmon, but even with a reduction in harvest, Susitna sockeye salmon as a whole merit continued concern. In a memo to the BOF, dated October 3, 2016, ADF&G recommended no change to the stock of yield concern status for Susitna River sockeye salmon. In a separate memo presented to the BOF on the same date, recommendations were made regarding escapement goals at Chelatna, Judd, and Larson Lakes. With 7 additional years of escapement data since the lake goals were first developed, coupled with an updated methodology (Clark et al. 2014), the escapement goal committee recommended updating the SEG at Chelatna Lake to 20,000–45,000 fish; at Judd Lake, the recommendation was for an SEG of 15,000–40,000 fish; and at Larson Lake, the SEG recommendation was 15,000–35,000 fish. Thus, the lower end of the new goals did not change at Chelatna and Larson Lakes, but the upper bound of the SEGs for both lakes decreased. At Judd Lake, both the lower and upper end of the new SEG decreased as a result of the additional years of data and new escapement goal setting methodology.

A number of factors or activities have been identified that have potential negative effects on the production of salmonids in the Matanuska-Susitna basin[4]. Potential affects can be characterized in 2 different categories: natural and anthropogenic. Natural threats include natural loss or alteration of wetland and riparian habitats, alteration in water quality and quantity, and beaver dams blocking fish migration. Anthropogenic affects include urbanization that increases loss or alteration of wetlands and riparian habitats and decreases water quantity and quality; culverts that block or impair fish passage; ATV affects to spawning habitats, stream channels, wetlands and riparian habitats; and introduction of invasive northern pike.

In summary, Susitna River sockeye salmon stocks warrant continued close monitoring. Within the Susitna River drainage, sockeye salmon production from Judd, Chelatna, and Larson Lakes appears to be stable. However, there are other lakes within the drainage that are producing fewer adults than they once did, and some are now void of sockeye salmon altogether, such as Red Shirt Lake. Sockeye salmon production at Shell Lake, which has been estimated to have a production potential of 10% of the total production from the Susitna River drainage (Tarbox and

[4] ADF&G Habitat Research and Restoration Staff. 2013. A comprehensive inventory of impaired anadromous fish habitats in the Matanuska-Susitna basin, with recommendations for restoration, 2013. Alaska Department of Fish and Game, Division of Habitat Research and Restoration. http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2013-2014/uci/anadromous_fish.pdf (Accessed: December 2019).

Kyle 1989), has experienced a large decline in sockeye salmon abundance. CIAA has identified at least 4 contributing factors to the collapse: beaver dams blocking adult salmon passage; predation by invasive northern pike; and 2 diseases, proliferate kidney disease and *Loma salmonae*, a pathogen associated with pre-spawning mortality (Wizik 2016). This coming field season will mark the final year of CIAA's involvement with Alaska Sustainable Salmon Fund (AKSSF) project 44172, which was designed to mitigate northern pike predation on sockeye salmon in Shell Lake. In 2016, 759 northern pike were removed from Shell Lake, and an additional 784 northern pike were taken out in 2017, and 575 in 2018. A CIAA remote video camera at Shell Lake estimated 575 adult sockeye salmon escaping into the lake in 2017, which was the most fish observed there since 2011, but much less than the average escapement of approximately 13,000 sockeye salmon per year from 2001 to 2011. ADF&G and CIAA were awarded a 3-year (2018–2020) AKSSF project for northern pike suppression at Hewitt and Whiskey Lakes and ADF&G has 2 years remaining on AKSSF project 44365, designed to remove northern pike from Chelatna Lake. Continued research is needed to better understand sockeye salmon abundance and distribution within the Susitna River drainage.

## Fish Creek

Fish Creek drains Big Lake, which is located approximately 60 highway miles north of Anchorage, and empties into the turbid waters of Knik Arm. A decline in sockeye salmon numbers in the late 1990s led to a technical review assessing Fish Creek sockeye salmon production (Litchfield and Willette 2001). The report proposed 2 possible causes for the decline: 1) degradation of spawning habitat as a result of questionable hatchery practices; and 2) placement of a coffer dam at the outlet of the lake, which prevented many wild fry from being able to recruit into the lake, as well as causing a productive spawning area at the lake outlet to be filled in with silt and mud. At the 2002 BOF meeting, Fish Creek sockeye salmon were found to be a stock of yield concern, and ADF&G proposed additional studies to more clearly define limitations to sockeye salmon production in this system. As a result of identifying the coffer dam as a barrier to upstream migration of juvenile sockeye salmon fry, modifications were made at the lake outlet that allowed fry to more easily recruit into Big Lake. It was expected that more adults would again utilize this productive spawning area. Fish hatchery culture methods and stocking procedures were also modified in the hope that these changes, combined with the modifications at the lake outlet, would improve sockeye salmon production in Big Lake. In response to improved runs, Fish Creek sockeye salmon were removed as a stock of yield concern at the 2005 BOF meeting.

CIAA historically stocked Big Lake with sockeye salmon fry, but fry-to-smolt survival was very poor (Dodson 2006). The number of smolt emigrating Big Lake from 2003 to 2008 ranged from 117,000 to 632,000 fish (Table 5). In an attempt to try and isolate the mechanisms leading to poor juvenile survival, CIAA released fish at 3 different time intervals and juvenile life history stage: spring fry, fall fry, and spring smolt. However, the number of smolt emigrating Big Lake did not increase, even with the stocking of larger juveniles. As a result of poor sockeye salmon smolt emigrations from Big Lake, CIAA ceased enhancement activities after the fry release in 2008. From 2002 to 2012, the average annual hatchery proportion of the run to Big Lake was 40%, ranging from 2% in 2002 to 73% in 2006 (W. Gist, Commercial Fisheries Biologist, ADF&G, Soldotna, personal communication). No smolt emigration counting was conducted at Fish Creek in 2017.

The 2018 total run forecast for Fish Creek sockeye salmon was 211,000 fish (Table 3), but the actual run was approximately 116,000 fish (Table 5), or 45% below forecast. The 2018 escapement estimate of 71,556 fish was 21% above the upper end of the modified SEG of 15,000–45,000 fish for this system (Table 1). As a result of the strong escapement, the Fish Creek personal use dip net fishery was open from July 24–31, with 18,659 fish harvested. Using the age-composition allocation method of allocating the commercial harvest to stock of origin, the commercial fishery harvest rate of Fish Creek sockeye salmon averaged approximately 34% per year. In 2018, approximately 25,627 (Table 6) Fish Creek sockeye salmon were estimated to have been harvested commercially, which represented a harvest rate of 22% for this stock.

Although sockeye salmon runs to Fish Creek have been highly variable (Table 5), ranging from as few as 25,000 fish to as many as 209,000 fish, escapement goals have been met fairly regularly. From 1982 to 2001 (20 years), Fish Creek escapement goal was a point goal of 50,000 fish; during this time the goal was met 15 times (75%) and missed 5 times (25%). Beginning in 2002, the goal became an SEG of 20,000–70,000 fish, and from 2002–2016 the SEG was met or exceeded 10 times (67%), and was not achieved 5 times (33%). In 2017, the Fish Creek SEG was changed to 15,000–45,000 fish (Erickson et al. 2017); the 2018 estimated escapement was more than 71,000 fish. In summary, from 1982 to 2018 (37 years), the escapement goal at Fish Creek has been met or exceeded 28 times, or 76% of the time. The 2019 run forecast for Fish Creek sockeye salmon is 124,000 fish (Appendix C2). If this stock is harvested at the commercial average of 34%, then approximately 82,000 fish could enter the stream. If the run returns as forecasted, then nearly 37,000 fish will need to be harvested in the dip net fishery in order to not exceed the SEG.

## 2018 Sockeye Salmon Outlook

A run of approximately 4.6 million sockeye salmon was forecasted to return to Upper Cook Inlet (UCI) in 2018 (Table 3 and Appendix C1), and expected harvest by all user groups was 2.6 million fish. The commercial fishery harvest in 2018 was estimated to be approximately 817,895 sockeye salmon, which is 2 million fish less than the 2008–2017 average annual commercial sockeye salmon harvest of 2.8 million fish.

The run forecast for the Kenai River (Table 3) was approximately 2.5 million, which is 1.1 million less than the 20-year average run of 3.6 million. In 2018, the predominant age classes were projected to be age-1.3 (47%), age-1.2 (17%), age-2.2 (5%), and age-2.3 (29%). The 10-year mean absolute percent error (MAPE) for the set of models used for the 2018 Kenai River sockeye salmon forecast is 14%.

The Kasilof River sockeye salmon run forecast was 866,000 fish (Table 3), which is 11% less than the 20-year average of 971,000. The predominant age classes in the run forecast are age-1.2 (29%), age-1.3 (34%), age-2.2 (26%), and age-2.3 (9%). The 10-year MAPE for the set of models used for the 2018 Kasilof sockeye salmon run forecast is 21%.

The Susitna River sockeye salmon run forecast was 329,000 (Table 3), which is 18% less than the 2008–2017 average of 398,000. This forecast was derived using mean return per spawner by age class and mark–recapture estimates of spawner abundance for brood years 2006–2014. Sonar estimates of spawner abundance were not used, because mark–recapture studies have shown that the Yentna sonar project underestimated sockeye salmon escapement causing estimates of adult returns to also be underestimated. The 5-year MAPE for this forecast method is 17%. The

predominant age classes in the 2018 Susitna sockeye salmon run forecast are age-1.2 (20%) and age-1.3 (57%).

The Fish Creek sockeye salmon run forecast was 211,000 (Table 3), which is 276% greater than the 20-year average run of 76,000. The predominant age classes in the 2017 Fish Creek run forecast are age-1.2 (78%) and age-1.3 (11%). The 10-year MAPE for the Fish Creek sockeye salmon run forecast is 69%.

## PINK SALMON

Pink salmon runs in UCI are even-year dominant and odd-year average annual harvests are about one-seventh of even-year harvests (Appendix B4).

Pink salmon are generally harvested in relatively large quantities in UCI beginning in late July and early August. The 2018 UCI commercial harvest of pink salmon was estimated to be approximately 126,923 fish which was nearly 67% less than average annual harvest of 396,000 fish from the previous 10 years of even-year harvests (Table 7). It also was the smallest even-year harvest since 1966. (Appendix B4).

Prior to 2009, a weir on the Deshka River counted the majority of the pink salmon run (Table 7). Although pink salmon are still counted there, the weir is now removed prior to the end of the pink salmon run. Additionally, there are no escapement goals in UCI for this species. Thus, the only data collected on pink salmon stocks are from commercial fisheries harvests, recreational fishing surveys, and some information collected at projects designed to count other species (e.g., the Deshka River weir).

In general, pink salmon stocks in UCI have maintained even-year dominance; however, the 2007 and 2009 harvests were above average for odd-year runs. Although pink salmon count data are limited, ADF&G did conduct a marine tagging project designed to estimate total population size, escapement, and harvest rates for coho, pink, and chum salmon returning to UCI in 2002 (Willette et al. 2003). This study estimated the harvest rate of pink salmon by the UCI commercial fishery to range between 1% and 12%, indicating pink salmon were harvested at very low rates in UCI.

## CHUM SALMON

Chum salmon runs to UCI are concentrated predominately in the western and northern watersheds, and the most substantial harvest comes from the Central District drift gillnet fishery. The 2018 harvest of 114,000 chum salmon was approximately 31% less than the 2008–2017 average annual harvest of 165,000 fish (Appendix B5). An evaluation of UCI chum salmon stocks is difficult because of a lack of information other than commercial harvest data and very limited escapement data. Chum salmon are no longer counted at either the Deshka River or Little Susitna River weirs. They are captured in the Anchor Point OTF project, but this project was designed temporally and spatially to assess UCI sockeye salmon stocks. The only chum salmon escapement goal in UCI is an aerial survey SEG in Clearwater Creek (Chinitna Bay) of 3,500–8,000 fish (Erickson et al. 2017). Since 2002, this SEG has been met or exceeded in 15 of 17 years. An aerial survey of Clearwater Creek/Chinitna River on August 23, 2018 estimated escapement at only 1,800 fish, which meant the SEG had not been achieved. Therefore, no early drift openings were allowed for chum salmon in Chinitna Bay in 2018. Emergency Order No. 32 opened set and drift gillnetting in the Chinitna Bay Subdistrict on Tuesdays and Fridays from

7:00 AM until 7:00 PM, beginning on Friday, August 31, after run timing data showed chum salmon had typically left salt waters.

Although ADF&G lacks long-term quantitative chum salmon escapement information, escapements to streams throughout UCI have benefited by management actions or regulatory changes aimed principally at other species. These actions have included the following: 1) large reductions in the offshore drift gillnet and Northern District set gillnet fisheries to conserve Susitna River sockeye salmon; 2) adoption of the NDSMP (5 AAC 21.358), which states that its primary purpose is to minimize the harvest of coho salmon bound for the Northern Cook Inlet; 3) lack of participation in the directed chum salmon fishery in Chinitna Bay; and 4) harvest avoidance by the drift fishery as a result of lower prices being paid for chum salmon than for sockeye salmon. Other than aerial counts in Chinitna Bay, most of the sporadic chum salmon data available to assess annual runs can be used to make general conclusions (i.e., determining if the run was below average, average, or above average). It is unclear how the chum salmon stocks in all of UCI did in 2018 due to low harvest hours allowed in the drift fishery relative to Kenai River Restrictions. The low assessment of chum salmon in Chinitna Bay may suggest that chum salmon stocks in that area of UCI were depressed.

## COHO SALMON

Commercial coho salmon harvests in UCI during the 1980s and early 1990s were much higher than the long-term average (Appendix B3). This can be attributed to good coho salmon production, but also due to additional fishing time on strong sockeye salmon runs to UCI. Recent coho salmon harvest data, however, may or may not be a true indication of run strength, largely due to regulatory changes that were made to reduce commercial harvest of coho salmon. For example, coho salmon runs in 1997 and 1999 were viewed as mediocre to poor, prompting BOF actions in 1997, 1999, and 2000 that placed restrictions on sport and commercial fishermen in much of UCI. From 2000 to 2004, the commercial ESSN fishery was closed no later than August 7, and no more than 1 EO, not to exceed 24 hours in duration, was allowed during the month of August. These actions resulted in marked reductions in commercial coho salmon harvests. However, coho salmon runs in 2000 and 2001 improved, and the 2002 run was exceptional (Lafferty et al. 2007). Therefore, at the 2005 BOF meeting, restrictions on commercial fishing in August in the ESSN fishery and Central District drift gillnet fishery were relaxed. Both fisheries' closing dates were changed to no later than August 10, and the set gillnet fishery would now be managed under the same set of weekly guidelines in August that were applicable in July. In 2008, the BOF extended the ESSN and districtwide drift gillnet fishing seasons to no later than August 15. These changes were made largely due to data revealing good coho salmon runs and low Kenai River coho salmon harvest by commercial fishermen during this extended time period. Recent years' coho salmon harvests have undoubtedly been affected by restrictions to the ESSN fishery for Chinook salmon conservation and by modifications made to the CDDGFMP at the 2014 BOF meeting to reduce coho salmon harvest by the drift fishery (Shields and Dupuis 2015).

### Northern District

The Division of Sport Fish has used coho salmon weir counts at the Little Susitna River as a surrogate of escapement for all Knik Arm coho salmon stocks since 2005. The SEG for this system was set in 2000 at 10,100–17,700 fish (Fair et al. 2007). The SEG was met or exceeded in 13 of 18 years from 2000–2017 (Table 8).

It should be noted that the weir washed out early in 2006, but based on the inriver sport fishing performance, the 2006 coho salmon run in the Little Susitna River was categorized as very early and very strong and the SEG was probably achieved (S. Ivey, Sport Fish Biologist, ADF&G, Palmer, personal communication). The weir also washed out early in 2005, which means the estimated passage of 16,839 fish was less than the actual escapement (Ivey et al. 2009). In 2012, the Little Susitna River weir was moved downstream approximately 40 miles to its current location at river mile (RM) 32.5. This provided managers with timelier inseason information of coho salmon passage.

At the 2017 UCI BOF meeting, ADF&G recommended a new coho salmon SEG of 10,200–24,100 for the Deshka River using the Clark et al. (2014) percentile approach. Nearly 13,000 coho salmon were counted at the Deshka River weir in 2018.

When coho salmon run abundances (Table 8) are viewed over a long period of time in Northern Cook Inlet, there are no substantive concerns about the sustainability of these stocks. The Little Susitna River coho salmon escapement goal was first established in 1990, and since that time (29 years), the escapement goal has been met or exceeded in 23 years, or 79% of the time. The coho salmon escapement goal at Fish Creek has been achieved or exceeded in 21 years out of the 24 years (87%) it has been in existence, including every year for the past 19 years. There is a coho salmon single foot-survey escapement goal at Jim Creek; from 1994 to 1999, it was a point goal of 830 fish, then in 2000, the goal was changed to an SEG of 400–700 fish. Since then, the SEG has been achieved or exceeded 14 times (74%), including 2018. Finally, 12,962 fish were counted at the Deshka River and the new coho salmon SEG was met in in 2018 (Oslund et al. *In prep*).

### Kenai River

The status of Kenai River coho salmon were reviewed in Shields and Dupuis 2016. Current sport and commercial fishing regulations for Kenai River coho salmon are believed to be providing for sustainable harvest and the most recent inriver harvest estimates (2007–2009) were stable and near the historical average. There are no known conservation concerns for Kenai River coho salmon, currently.

## CHINOOK SALMON

### Northern District

The Northern District has approximately 345 streams and rivers where Chinook salmon are present and its largest drainage, The Susitna River, has an estimated total annual Chinook salmon run between 100,000 and 200,000 fish (see Delaney and Vincent-Lang, *Unpublished*).[5] In response to the proposed Susitna-Watana hydroelectric project, studies are underway to document salmon abundance in the Susitna drainage. Based on these investigations, the estimated Chinook salmon abundance in the Susitna River upstream of the Yentna River was approximately 89,463 fish in 2013; 68,225 fish in 2014; and 88,600 fish in 2015 (Alaska Energy Authority 2014 and 2015). Additionally, the estimated Chinook salmon abundance in the Yentna River was approximately 22,267 fish in 2014 and 48,400 in 2015 (Alaska Energy Authority

[5] Delaney, K., and D. Vincent-Lang. *Unpublished*. Current status and recommendations for the future management of the Chinook salmon stocks of Northern Cook Inlet. A report to the Alaska Board of Fisheries, Anchorage, Alaska, November 1992. Alaska Department of Fish and Game, Division of Sport Fish, Anchorage.

2015). The average harvest in the Northern District directed commercial Chinook salmon fishery for the previous 10 years (2006–2015) was approximately 2,100 fish (Table 2), or about 18% of the total Northern District Chinook salmon harvest (including sport harvest). Based on recent estimates of Chinook salmon abundance in the Susitna River, the commercial fisheries average annual harvest rate would range between 1.2% and 2.4%. If all northern Cook Inlet Chinook salmon stocks were considered, the commercial fisheries harvest rate would be even less.

In an ADF&G memo (RC 6[6]) to the BOF dated October 1, 2010, a summary of results from the stock of concern evaluation for UCI salmon was presented. ADF&G's recommendation stated that despite sport fishery restrictions already in place and recent commercial fishery restrictions and closures on Westside fisheries, Chuitna, Theodore, and Lewis Rivers' Chinook salmon escapement goals had not been achieved for 4 consecutive years. Escapements were evaluated with a single aerial census flight each year. ADF&G recommended that the BOF consider these systems for stock of management concern status. In addition, ADF&G recommended Alexander Creek Chinook salmon as a stock of management concern because runs to this system had declined drastically over the previous 5 years despite closure of the sport fishery beginning in 2008. The ADF&G memo also recommended Willow and Goose Creeks' Chinook salmon be considered as stocks of yield concern in response to a failure to meet the SEG over several consecutive years. The BOF reviewed these ADF&G recommendations at the 2011 UCI BOF finfish meeting in Anchorage, and agreed with ADF&G staff to list Chinook salmon stocks in Alexander, Willow, and Goose Creeks, and the Chuitna, Theodore, and Lewis Rivers, as stocks of concern. At the 2014 BOF meeting, additional stock status information was presented, including repeated failure to meet the SEG at Goose Creek. As a result, this system was elevated to a stock of management concern; and Sheep Creek was added as a stock of management concern.

As a result of the decision to list the Theodore, Lewis, and Chuitna Rivers as stocks of concern, the sport fishery in these rivers has been closed by regulation since 2011. In response to the sport fishing closures, commercial fishing with set gillnets has also been closed from the wood chip dock to the Susitna River during the directed Chinook salmon fishery per the *Northern District King Salmon Management Plan*. Additional restrictions beyond the area closure have also been implemented in the commercial fishery, including closures of fishing periods and reductions in hours fished (Shields and Dupuis 2016), and a season closure in 2018.

## Deshka River

After experiencing a marked decline in abundance in the early to mid-1990s, Northern District Chinook salmon stocks rebounded, and exceptional runs were measured at the Deshka River weir, which was the only site where total counts of Chinook salmon occurred in the Northern District (Table 9). From 1999 through 2006, the upper end of the Deshka River BEG of 13,000–28,000 fish was exceeded (Fair et al. 2007). As a result of strong runs during this time, there were numerous liberalizations to the inriver sport fishery through inseason EO. In addition, in 2005, the BOF lengthened fishing periods for the commercial fishery from 6 hours to 12 hours and in 2008, allowed the commercial fishery to remain open through June 24 (Monday periods only). The commercial fishery harvest cap of 12,500 Chinook salmon remained in effect. The 2007 Deshka River run fell within the BEG range. The 2008 and 2009 runs, which were

[6] http://www.adfg.alaska.gov/index.cfm?adfg=fisheriesboard.meetinginfo&date=10-13-2010&meeting=kenai

projected to be smaller than average, were both poor runs, which resulted in closures to both sport and commercial fisheries. The lower end of the BEG was not achieved either year.

The poor runs that were experienced in 2008, 2009, and 2010 resulted in restrictions to the sport and commercial fisheries that harvest Chinook salmon throughout northern Cook Inlet (Shields and Dupuis 2012). Although recent forecasts for Deshka River Chinook salmon have projected below average runs, restrictive actions taken in both sport and commercial fisheries have resulted in the SEG being met for 7 of the past 8 years. In 2017, the use of bait was prohibited in the lower portion of the Deshka River beginning on Friday, June 23. In the commercial fishery, the June 19 final fishing period of the year was reduced from 12 hours to 6 hours in duration. The final Chinook salmon escapement estimate of approximately 11,400 fish was below the SEG range of 13,000–28,000 fish (Table 9). Although Chinook salmon stocks throughout Cook Inlet are experiencing a period of lower abundance, the escapement goal at the Deshka River has been met or exceeded in 20 of the past 24 years. However, in recent years, restrictive actions, and in 2018, closures in both commercial and sport fisheries have been enacted to conserve fish.

### Kenai River

The early-run of Kenai River Chinook salmon migrates through Cook Inlet in May and June, and therefore receives very little commercial exploitation.

Beginning in 1986, Kenai River late-run Chinook salmon estimates of inriver passage were completed via traditional target-strength (TS) sonar by the Division of Sport Fish. The original escapement goal was developed in 1989 and set a minimum goal of 15,500 fish and an optimum escapement of 22,300 (McBride et al. 1989). In 1999, this goal was revised to a BEG of 17,800–35,700 (Fried 1999). In 2011, ADF&G changed the escapement goal from a BEG to an SEG (still 17,800–35,700 fish) because of the uncertainty in the estimates of escapement and lack of stock-specific information in the commercial harvest. In addition, ADF&G informed the public that it would discontinue use of TS-based estimates of inriver run in favor of 5 abundance indices and would also continue development of the new DIDSON-based assessment (Shields and Dupuis 2013). In 2011, ADF&G managed the Kenai River late-run Chinook salmon fishery primarily on these indices of abundance, rather than use of traditional sonar technology. For the 2012 season, the TS-based sonar was replaced with the newer DIDSON technology. Because the escapement goals were not DIDSON-based goals, estimation of late-run Chinook salmon passage was completed using several indices of abundance.

At the annual work session meeting in October 2012, the BOF formed the Cook Inlet Task Force. The mission of the task force was to evaluate the *Kenai River Late-Run Chinook Salmon Management Plan* and attempt to come to consensus on a set of recommended adjustments that would allow for both sport and commercial fishing opportunity during times of low Chinook salmon abundance, as experienced in the 2012 season. The 11-member task force (9 members of the public and 2 BOF members, Vince Webster and Tom Kluberton) met 3 different times (November 2012, January 2013, and February 2013) to address proposals submitted by task force members suggesting modifications to the management plan. A list of suggested changes was developed, but no consensus was reached on how to proceed. However, this list of changes formed the basis of a full BOF review at the statewide meeting in March of 2013.

In March 2013, ADF&G released a new DISON-based interim escapement goal for Kenai River late-run Chinook salmon (Fleischman and McKinley 2013). The new goal was developed, in part, to facilitate the change in sonar technology and to address the confusion over assessment

methods that was experienced in 2011 and 2012. An age-structured state-space model and Bayesian statistical methods were used to develop the new goal. It was recommended that an interim SEG of 15,000–30,000 fish be adopted for the Kenai River late-run Chinook salmon. The BOF adopted the recommended SEG at the March 2013 meeting but left the rest of the *Kenai River Late-Run Chinook Salmon Management Plan* intact.

For the 2013 season, DIDSON was the primary method of Chinook salmon assessment. Two DIDSON sites were operational during the 2013 season (at RM 9 and RM 14), but only counts from the RM 9 project were used for inseason management. Because the forecast for late-run Chinook salmon indicated the run would be below average, the ESSN fishery and the sport fishery in the Kenai River were prosecuted conservatively. There were numerous restrictions and even closures to both commercial and sport fisheries during the 2013 season, which resulted in an estimated late-run Chinook salmon escapement of approximately 15,400 fish (Shields and Dupuis 2013).

The BOF made numerous changes to the KRLKSMP at their 2014 UCI finfish meeting that affected prosecution of sport and commercial fisheries from 2014 to 2016 (Shields and Dupuis 2015). During each of these 3 years, restrictive actions to the ESSN fishery were implemented in compliance with the modified KRLKSMP. The SEG was achieved all 3 years.

In 2015, the Division of Sport Fish announced that Chinook salmon sonar operations in the Kenai River at RM 8.6 (RM 9) would be discontinued and replaced with sonar counts from a site at RM 13.7 (RM 14). The SEG of 15,000–30,000 fish remained in place for the 2015 and 2016 seasons. At the 2016 work session, ADF&G presented the BOF with its annual escapement goal memo, where it was stated that a new goal for both early- and late-run Chinook salmon stocks in the Kenai River was being developed. The memo clarified that ADF&G was finalizing run reconstructions and stock-recruit analyses for fish approximately 75 cm (~33.3 inches) in length or greater for both Kenai River Chinook salmon runs. Based on these analyses, recommendations to determine new large fish SEGs were being developed. At the 2017 UCI BOF meeting, ADF&G presented a written report detailing spawner-recruit analyses that were used to set the new large-fish SEGs for both early- and late-run Kenai River Chinook salmon (Fleischman and Reimer 2017). Both of these new large-fish SEGs were in place for the 2017 season and both were achieved.

In summary, the Kenai River Chinook salmon late-run stock have never failed to achieve its minimum escapement objective since counting began in 1986. In addition, the upper end of the escapement goal has been exceeded in 15 out of the 31 years escapements have been monitored. However, similar to other Chinook salmon stocks in Cook Inlet, Kenai River Chinook salmon are currently experiencing a period of low abundance.

# COMMERCIAL HERRING FISHERY

The 2018 UCI herring fishery produced a harvest of 17.6 short tons, and all of the harvest came from the Upper Subdistrict (Appendix B8). A total of 10 permit holders reported fishing, which was slightly less than the 2008–2017 average annual numbers of 11 participants per year. Although open to both set and drift gillnets, all of the harvest was harvested by set gillnets. Samples of the harvest were obtained annually to assess age, weight, size, and sex distribution. In the Upper Subdistrict, 4 age classes dominated the population in 2018, comprising 96% of the 184 samples collected from 3 sample dates. The average by age class was age-2 (32%), age-3 (20%), age-4 (28%), age-5 (16%), age-6 (4%), and age-7 (1%) (Appendix A19). It should be

noted that the samples used for these analyses are obtained from the set gillnet fishery and may reflect biases in the gear type used to collect the samples.

All of the herring harvested in UCI were used exclusively for personal use or sold as bait. Because Prince William Sound and Kamishak Bay herring fisheries have remained closed for many years, bait herring from UCI has risen in value. Demand by commercial and sport halibut fishermen has resulted in an average price of at least $1.00 per pound or $2,000 per ton. Based on this price, and harvest of 17.6 short tons (Appendix B8), the estimated exvessel value of the 2018 commercial herring fishery was approximately $35,000.

# COMMERCIAL SMELT FISHERY

From 1978 to 2018, commercial smelt harvests in UCI have ranged from 0.2 tons to 191 tons (Table 10). For more details about the history of smelt fishing in UCI, see Shields (2005). The fishery is prosecuted under 5 AAC 21.505, the *Cook Inlet Smelt Fishery Management Plan*. In 2018, the total smelt harvest in UCI was approximately 191.5 tons, the largest recorded harvest since the harvest cap on the fishery had increased from 100 tons to 200 tons at the 2017 BOF meeting. The amount of smelt harvested in this fishery has typically been limited by market demand and the logistics of getting the harvest to a location where the smelt can be processed (boxed and frozen) prior to shipment, rather than abundance of fish.

Estimating the exvessel value of this fishery is difficult. Participants catch and market all of their harvest. Most of the product is transported by boat to the Kenai River, where it is boxed and frozen for shipment to the west coast of the U.S. The harvest is sold as bait and also marketed for human consumption. The final value of the smelt fishery is unknown, but probably exceeds $1.00 per pound. Using this price estimate and the harvest of 383,000 pounds (Table 10), the estimated exvessel value was approximately $383,000.

Age-composition analyses (determined from otoliths) of samples collected from the 2006 to 2018 harvests show that age-4 smelt were typically the most abundant age class, ranging from 64% to 81% of the sampled fish (Appendix A20). The average fork length from the 2018 samples of 168 mm was smaller than the average fork length of 199 mm from 2006 to 2017. In 2018, 112 smelt were sampled for age and length data and 79 fish (71%) were females. This was a higher proportion female than the average of 44% females from all previous years (Appendix A20). It should be noted that due to budgetary constraints, the smelt samples collected for age and size data were taken from a single date of the harvest, and therefore may not reflect temporal changes in these parameters or differences between harvested fish and the overall population.

# COMMERCIAL RAZOR CLAM FISHERY

The razor clam fishery on the west side of Cook Inlet has historically been confined to the area between Crescent River and Redoubt Creek (Figure 11). 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 the total harvest) of broken clams, which may be sold for bait. Razor clams are present throughout UCI and dense concentrations are present in the Polly Creek and Crescent River areas. In the remainder of the UCI Management Area, there are no restrictions on the amount of clams that can be sold for bait. Currently, though, there is no directed effort to harvest razor clams for the bait market. The minimum legal size for razor clams is 4.5 inches (114 mm) in shell length (5 AAC 38.075).

In 2016, ADF&G began a study in the Polly Creek/Crescent River area beach with the goal being able to estimate razor clam abundance and to collect data needed to develop an optimal sampling design for a future full-scale survey of this beach (Dupuis and Willette 2016). A grant was awarded to ADF&G in 2017 from the North Pacific Research Board that allowed testing of the sampling designs and gear to assess razor clam populations in all of Cook Inlet.

The 2018 commercial razor clam harvest, taken primarily from the Polly Creek/Crescent River area, was approximately 199,160 lb in the shell (Appendices A23 and B9). A total of 14 diggers participated in the fishery. Harvest was reported from 73 different days from May 12 to August 15. Diggers were paid an average of $0.66/lb for their harvest, which resulted in an exvessel value for this fishery of approximately $131,500. The average clam size from the 2018 harvest was 5.0 inches or 128 mm (Figure 12).

# SUBSISTENCE AND PERSONAL USE FISHERIES

There is a long history of Alaskans harvesting fish and game for their personal consumptive needs under sport, personal use, 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 Cook Inlet. Beginning in 1981, a new category of fisheries was established. Personal use fishing was created to provide the personal consumptive needs of state residents not able to meet their needs in other fisheries. Since inception, numerous changes have occurred in the personal use and subsistence fisheries in Cook Inlet, and many of these changes came as a result of challenges in the State of Alaska court system, the Alaska State Legislature, or the BOF process. The only personal use or subsistence fishery that has occurred consistently in Cook Inlet during this entire period is the Tyonek Subdistrict subsistence fishery. A review of the various personal use and subsistence fisheries that have been conducted in Cook Inlet are reported in Brannian and Fox (1996), Reimer and Sigurdsson (2004), Dunker and Lafferty (2007), and Holen and Fall (2011).

## TYONEK SUBSISTENCE SALMON FISHERY

The subsistence fishery in the Tyonek Subdistrict was mandated by an Anchorage Superior Court order in May 1980. In March 1981, the BOF adopted permanent regulations for this fishery (Stanek et al. 2007). Originally open only to those individuals living in the community of Tyonek, court decisions ruled all Alaska residents are eligible to participate. According to 5 AAC 01.560, *Fishing Seasons and Daily Fishing Periods*, subsistence fishing is allowed in the Tyonek Subdistrict of the Northern District during 2 distinct time periods. A separate permit is required for each period. The early-season permit allows for fishing from 4:00 AM to 8:00 PM each Tuesday, Thursday, and Friday from May 15 to June 15. The late-season permit allows for fishing from 6:00 AM to 6:00 PM each Saturday after June 15. Both permits allow for 25 salmon per permit holder and 10 salmon for each dependent. However, 5 AAC 01.595(a)(3) allows for up to 70 Chinook salmon per permit holder in the Tyonek Subdistrict subsistence fishery, which are mostly caught during the early season. At the 2011 BOF meeting in Anchorage, a report was given to BOF members by the Division of Subsistence (Holen and Fall 2011), which the BOF relied upon to specify the amounts necessary for subsistence of Chinook salmon and other salmon in the Tyonek Subdistrict as 700–2,700 Chinook salmon and 150–500 other salmon. Each permit holder is allowed a single 10 fathom gillnet, with a mesh size no greater than

6.0 inches. The early-season permit targeting the Chinook salmon run is the most popular fishery. Few late-season permits are issued.

The 2018 harvest in the Tyonek subsistence salmon fishery included 1,413 Chinook, 217 sockeye, 154 coho, 10 pink, and 11 chum salmon harvested by 22 permit holders (Appendix B15).

### UPPER YENTNA RIVER SUBSISTENCE SALMON FISHERY

A subsistence salmon fishery (5 AAC 01.593) is allowed in the Yentna River drainage outside the Anchorage-Matsu-Kenai Nonsubsistence Area, which is described in 5 AAC 99.015(a)(3). The BOF has determined that 400–700 salmon, other than Chinook salmon, are reasonably necessary for subsistence uses in the Yentna River (5 AAC 01.566(e)). The provisions of this fishery allow for the harvest of 25 salmon per head of household, plus 10 more for each dependent. All Chinook salmon and rainbow trout must be returned to the water alive. The specific area open for the fishery is in the mainstem Yentna River from its confluence with Martin Creek upstream to its confluence with the Skwentna River. Legal gear consists of fish wheels only. The subsistence fishing season typically occurs from July 15 through July 31 from 4:00 AM to 8:00 PM each Monday, Wednesday, and Friday during this timeframe. However, in 2018, ADF&G Division of Sport Fish issued EO 2-KS-2-24-18 closing the Upper Yentna River subsistence fishery during the Chinook salmon season effective June 25. The 2018 Yentna River subsistence fisheries harvest included 405 sockeye, 167 coho, 8 pink, and 10 chum salmon harvested by 29 permit holders (Appendix B15).

## EDUCATIONAL FISHERIES

Educational fisheries first began in UCI in 1989 after a federal court-ordered subsistence fishery for the Kenaitze Indian Tribe began (Sweet et al. 2004). The fishery was labeled as a subsistence fishery due to differences in interpretations of subsistence. The Alaska Superior Court ordered ADF&G to issue educational fishing permits beginning with the 1993 fishing season. The objectives for educational fisheries are specified in 5 AAC 93.235 as "educating persons concerning historic, contemporary, or experimental methods for locating, harvesting, handling, or processing fishery resources." The present standards for educational fisheries are established by the BOF under 5 AAC 93.200 and include the following: 1) instructors must be qualified to teach the subject matter; 2) there must be students enrolled in the fishery; 3) there are minimum attendance requirements; 4) procedures for testing a student's knowledge of the subject matter or the student's proficiency in performing learned tasks must be administered; and 5) standards for successful completion of the program must be set. According to 5 AAC 93.210, the commissioner will issue a nontransferable, no-cost educational fishery permit to an applicant who proposes to operate an educational fishery program that meets the above standards, except in the following cases: 1) when the commissioner determines that the educational objective of the program can be accomplished under existing fisheries statutes and regulations; 2) the sustained yield of any fishery resource would be jeopardized or the fishery resource would be significantly reallocated among existing users; 3) the applicant failed to provide the information required by the permit; 4) the applicant violated a condition or requirement of an educational fishery permit; or 5) the applicant failed to comply with the reporting requirements of the permit.

The total harvest from all educational fisheries in 2018 was 8,581 fish. The average annual harvest from 1994 through 2017 was approximately 7,188 fish (Appendix B16).

## CENTRAL DISTRICT EDUCATIONAL FISHERIES

In the Central District of UCI, there currently are 8 groups permitted to conduct educational fisheries, including the Kenaitze Tribal Group, Ninilchik Traditional Council (NTC), Ninilchik Native Descendants (NND), Ninilchik Emergency Services, Anchor Point Veterans of Foreign Wars (VFW), Homer Sons of the American Legion Post 16, Kasilof Regional Historical Association, and the Southcentral Foundation.

In 1993, a state court ordered ADF&G to create an educational fishery for the Kenaitze Indian Tribe, pending final court rulings on other subsistence cases. In 2018, the Kenaitze Tribe harvested 3 Chinook, 6,155 sockeye, 887 coho, and 259 pink salmon, for a total of 7,304 salmon (Appendix B16). From 1994 through 2017, the average annual harvest of all salmon by the Kenaitze Indian Tribe was 5,156 fish. The total fish harvest quota for this group is 10,000 fish.

In 1993, NTC applied for and was granted a permit for an educational fishery (Szarzi and Begich 2004). In 1998, a group of NTC members formed a new organization, the NND, and requested a separate permit with similar goals of passing on traditional knowledge and providing food for tribal members. Initially 1 permit was issued for both groups, but this was not acceptable to the NTC and both groups were allowed to fish concurrently. There have been a number of changes to the annual harvest limits allowed under these permits, but the total salmon quota more than tripled in 2007 from 850 to 2,800 fish for both the NTC and NND groups. In 2018, the NTC harvested 5 Chinook, 169 sockeye, 219 coho, and 110 pink salmon. The NND reported a harvest of 6 Chinook, 23 sockeye, 85 coho, and 15 pink salmon (Appendix B16).

In 2003, another group from Ninilchik, the Ninilchik Emergency Services (NES), applied for and was granted an educational fishery. In 2018, the NES harvested a total of 6 sockeye (Appendix B16).

The Anchor Point VFW applied for and was granted an educational fishery permit in 2007. They reported the following harvest from their 2018 fishing activities: 28 sockeye, 21 coho, and 20 pink salmon (Appendix B16).

In 2011, the Sons of American Legion applied for and were granted an educational fishery permit. They reported a harvest of 35 sockeye and 27 coho salmon in 2018 (Appendix B16).

The Kasilof Regional Historical Association applied for an educational permit beginning with the 2008 season. In 2018, they reported the following harvest: 10 sockeye and 37 coho salmon (Appendix B16).

Finally, the Southcentral Foundation (SCF) applied for an educational permit beginning in 2010. They are an Alaska Native-owned, nonprofit health care organization serving nearly 60,000 Alaska Native and American Indian people living in Anchorage, the Matanuska-Susitna Valley, and 60 rural villages in the Anchorage Service Unit. This fishery occurs on the west side of Cook Inlet in the Silver Salmon Creek area. The SCF harvest in 2018 was 14 sockeye, 17 coho, and 2 chum salmon (Appendix B16).

## NORTHERN DISTRICT EDUCATIONAL FISHERIES

In the Northern District of UCI, 3 groups were granted permits for educational fisheries and include the following: 1) the Knik Tribal Council; 2) Native Village of Eklutna; and 3) Alaska's Territorial Homestead Lodge, operated by Tim O'Brien (Appendix B16).

The Knik Tribal Council began an educational fishery in 1994 (Sweet et al. 2004). Its harvest in 2018 totaled 100 sockeye, 50 coho, and 12 chum salmon for an all species total of 162 fish (Appendix B16). The peak harvest from this group of 823 fish occurred in 2003.

The Native Village of Eklutna was also issued an educational fishery permit beginning in 1994. They reported a harvest in 2018 of 77 sockeye, 48 coho, 0 pink, and 11 chum salmon (Appendix B16).

The Native Village of Tyonek began an educational fishery in 1997. This educational fishery was denied a permit beginning in 2011 as a result of Chuitna, Theodore, and Lewis Rivers' Chinook salmon stocks being designated as stocks of management concern by the BOF.

Alaska's Territorial Homestead Lodge (Tim O'Brien) applied for and received an educational fishery permit beginning in 2007. This fishery is located near Moose Point in the Eastern Subdistrict of the Northern District. In 2018, the harvest from this fishery was 4 Chinook, 82 sockeye, 31 coho, 6 pink, and 7 chum salmon (Appendix B16).

The Chickaloon Native Village applied for and received their first educational fishery permit in 2016. However, there was no fishing activity that took place under this permit in 2018.

## PERSONAL USE SALMON FISHERY

Operating under the *Upper Cook Inlet Personal Use Salmon Fishery Management Plan* (5 AAC 77.540), personal use fishing is allowed in limited areas in Cook Inlet. The management plan received substantial changes at the BOF meeting in January of 1996. In 1995, personal use fishing was allowed with set gillnets in most areas of Cook Inlet normally open to commercial set gillnet fishing. Most of this area was closed in 1996, but to compensate for the lost opportunity, dip net fisheries were expanded to allow for approximately the same level of harvest that had occurred with gillnets in 1995. Personal use fishing using gillnets is now only open near the Kasilof River in the waters of UCI normally closed to commercial set gillnet fishing. This area encompasses approximately 1 mile on either side of the Kasilof River terminus, extending out from shore for 1 mile. In addition, personal use fishing with dip nets is allowed at the terminus of the Kenai and Kasilof Rivers, and in some years, at Fish Creek. The personal use management plan was again amended at the 2002 BOF meeting, modifying how the dip net fishery at Fish Creek in Knik Arm was to be managed, as well as making time changes to both the Kenai and Kasilof personal use fisheries. The Fish Creek dip net fishery was continued in regulation, but per 5 AAC 77.540(d)(1), it is open only from July 10 through July 31, and only if ADF&G projects that the escapement of sockeye salmon into Fish Creek will exceed 35,000 fish. All salmon other than Chinook salmon may be retained. The Kasilof River gillnet fishery was also modified by the BOF in 2002, expanding the days and hours that the fishery was open. The fishery now opens on June 15 and takes place from 6:00 AM until 11:00 PM daily. Instead of being managed for a harvest goal of 10,000–20,000 fish, the fishery remains open until 11:00 PM on June 24, regardless of how many fish are harvested. The Kasilof River dip net personal use fishery occurs from June 25 through August 7, 24 hours per day. The BOF-amended management plan also changed how the Kenai River dip net fishery was prosecuted. This fishery is open from July 10 through July 31, 7 days per week, but only from 6:00 AM to 11:00 PM daily, subject to the requirement of achieving the lower end of the Kenai River late-run sockeye salmon OEG. If ADF&G determines that the abundance of Kenai River late-run sockeye salmon is greater than 2.3 million fish, this fishery may be extended by EO to 24 hours per day.

In 2008, the BOF authorized a new UCI personal use fishery. Referred to as the *Beluga River Senior Citizen Personal Use Dip Net Fishery* (5 AAC 77.540(g)), salmon may be taken by dip net only by persons 60 years of age or older (no proxy fishing is allowed). The fishery is open 24 hours per day from July 10 through August 31 from the Beluga River Bridge downstream to an ADF&G regulatory marker located approximately 1 mile below the bridge. The annual limit in this fishery is the same as for other personal use fisheries, except that within the total annual limit, 1 Chinook salmon may be retained per household. The fishery will close, by EO, when 500 salmon, other than Chinook salmon, have been harvested. Permit holders are required to report their harvests weekly to ADF&G as specified in the permit.

A permit issued by ADF&G, and an Alaska resident sport fishing license, or an exemption from licensing under AS 16.05.400, is required to participate in any of the personal use fisheries. The annual limits are 25 salmon per head of household, and 10 additional salmon for each household member. In the Kasilof River dip net fishery, Chinook salmon may not be retained and must be released immediately to the water unharmed. In the Kenai River dip net fishery, 1 Chinook salmon may be retained per household. There are no Chinook salmon harvest restrictions in the Kasilof River gillnet personal use fisheries. Legal gear under the management plan are set gillnets and dip nets. A set gillnet cannot exceed 10 fathoms (60 feet) in length or 45 meshes in depth. Mesh size must be greater than 4.0 inches, but may not exceed 6 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) as a bag-shaped net supported on all sides by a rigid frame. The maximum straight-line distance between any 2 points on the net frame, as measured through the net opening, may not exceed 5 feet. The depth of the bag must be at least one-half of the greatest straight-line distance, as measured through the net opening. No portion of the bag may be constructed of webbing that exceeds a stretched measurement of 4.5 inches; the frame must be attached to a single rigid handle and be operated by hand.

## KASILOF RIVER GILLNET

In 2018, EO 2S-02-18 issued June 12, reduced the hours of the personal use set gillnet fishery at the mouth of the Kasilof River from 6:00 AM to 11:00 PM to 11:00 AM to 11:00 PM opening Friday, June 15 to Sunday, June 24. The reduction in hours was in response to the poor early-run Kasilof River Chinook salmon run. For the 2018 season, 120 Chinook, 14,390 sockeye, 2 coho, 22 pink, and 5 chum salmon were harvested in this fishery. The 2008–2017 average annual Chinook salmon harvest was 110 fish, and the 1996–2017 average was 176. The average annual sockeye salmon harvest during 2008–2017 was 22,746 fish (calculated from Appendix B17).

## KASILOF RIVER DIP NET

The Kasilof River dip net fishery was open 24 hours per day from June 25 through August 7, 2018 (44 days), producing an estimated harvest of 92,034 sockeye salmon (Appendix A17). The 2008–2017 average annual harvest of sockeye salmon was 72,062 fish (calculated from Appendix B17). For the second consecutive year, the area open to dipnetting at the Kasilof River was not expanded upstream to the highway bridge. Expansion of the area open to dipnetting is typically allowed in response to inseason assessments of sockeye salmon escapement that projects the sockeye salmon BEG will be exceeded. However, ADF&G did not determine that the BEG in the Kasilof River would be exceeded until after the personal use dip net fishery had closed. The final Kasilof River sockeye salmon escapement in 2017 was estimated to be 358,724 fish (Appendix A2), above the BEG range of 160,000–340,000 fish.

## KENAI RIVER DIP NET

The personal use dip net fishery located at the mouth of the Kenai River opened by regulation on July 10. The fishery was open from 6:00 AM to 11:00 PM daily. The sockeye salmon dip net harvest in 2018 was approximately 165,000 fish (Appendix A17), which was the smallest harvest since 2006 when 128,000 fish were harvested. The entry pattern of sockeye salmon into the Kenai River in 2018 was not conducive to large dip net harvests because large passage events took place late in the dip net season (Appendix A2; Appendix A18). In result of the late timing and poor sockeye salmon returns, the Kenai River personal dip net fishery was closed by EO 2-RS-1-45-18 effective Monday, July 30, closing the season 2 days early. The largest daily estimate of sockeye salmon passage in the Kenai River during the 2018 season was 55,768 fish on August 7. In previous years, large pulses of sockeye salmon entered the Kenai River on weekend days in mid-July; weekends typically see higher levels of effort and harvest than weekdays. The 2008–2017 average annual sockeye salmon harvest was approximately 369,000 fish (calculated from Appendix B17).

## UNKNOWN FISHERY

Households that failed to indicate which fishery they participated in were estimated as "unknown fishery" (Dunker 2016). In 2018, the total sockeye salmon harvest from all personal use fisheries categorized as "unknown" was 2,085. This was approximately 1.2% of the total personal use harvest of 406,889 sockeye salmon (Appendix B17).

## FISH CREEK DIP NET FISHERY

According to 5 AAC 77.540 (d), the *Upper Cook Inlet Personal Use Salmon Fishery Management Plan*, the Fish Creek dip net fishery may be opened from July 10 through July 31 if ADF&G projects that the escapement of sockeye salmon into Fish Creek will be more than 35,000 fish. During the 2018 season, the Division of Sport Fish issued an EO opening the Fish Creek personal use dip net fishery from July 24 to July 31. As stated in the EO, the escapement goal had been achieved and the overall sockeye salmon run was projected to be well over 35,000 sockeye salmon. The estimated harvest in 2018 was 18,659 sockeye salmon. By the end of the 2018 season, sockeye salmon escapement to Big Lake was approximately 71,000 fish (Table 1; Appendix B10).

## BELUGA RIVER SENIOR CITIZEN DIP NET FISHERY

Ten permit holders participated in the 2018 Beluga River senior citizen dip net fishery. The total harvest was 54 salmon (37 sockeye salmon and 17 coho salmon; Appendix A17).

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# TABLES AND FIGURES

Table 1.–Upper Cook Inlet sockeye salmon goals and passage, 2018.

| System | Goal type | Goal range | | 2018 Passage |
|---|---|---|---|---|
| | | Lower | Upper | |
| Fish Creek | SEG | 15,000 | 45,000 | 71,158 |
| Kasilof River | BEG | 160,000 | 340,000 | 394,288 |
| Kenai River | Inriver | 900,000 | 1,100,000[a] | 1,034,771 |
| Larson Lake | SEG | 15,000 | 35,000 | 23,444 |
| Chelatna Lake | SEG | 20,000 | 45,000 | 20,437 |
| Judd Lake | SEG | 15,000 | 40,000 | 30,683 |
| Packers Creek | SEG | 15,000 | 30,000 | 16,247 |

*Note*: Passage estimates do not account for any harvest above counting sites. BEG = biological escapement goal; SEG = sustainable escapement goal; OEG = optimal escapement goal.

[a] Inriver goal changed from 1,000,000–1,300,000 to 900,000–1,100,000 at midseason projection.

Table 2.–Chinook salmon harvest during the directed fishery in the Northern District, 1986–2018.

| Year | Chinook | Permits | Periods | Year | Chinook | Permits | Periods |
|---|---|---|---|---|---|---|---|
| 1986 | 13,771 | 135 | 3 | 2003 | 1,185 | 30 | 3 |
| 1987 | 11,541 | 129 | 4 | 2004 | 1,819 | 44 | 3 |
| 1988 | 11,122 | 142 | 3 | 2005 | 3,150 | 52 | 3 |
| 1989 | 11,068 | 137 | 3 | 2006 | 3,887 | 59 | 3 |
| 1990 | 8,072 | 130 | 3 | 2007 | 3,132 | 62 | 3 |
| 1991 | 6,305 | 140 | 4 | 2008 | 3,855 | 74 | 4 |
| 1992 | 3,918 | 137 | 3 | 2009 | 1,266 | 55 | 3 |
| 1993 | 3,072 | 80 | 4 | 2010 | 1,674 | 51 | 4 |
| 1994 | 3,014 | 73 | 2 | 2011 | 2,187 | 61 | 4 |
| 1995 | 3,837 | 65 | 1 | 2012 | 1,030 | 38 | 4 |
| 1996 | 1,690 | 58 | 1 | 2013 | 1,134 | 38 | 4 |
| 1997 | 894 | 45 | 2 | 2014 | 1,377 | 44 | 4 |
| 1998 | 2,240 | 51 | 2 | 2015 | 1,560 | 40 | 4 |
| 1999 | 2,259 | 56 | 2 | 2016 | 2,030 | 41 | 4 |
| 2000 | 2,046 | 47 | 3 | 2017 | 2,031 | 44 | 4 |
| 2001 | 1,616 | 43 | 3 | 2018 | 0 | 0 | 0 |
| 2002 | 1,747 | 36 | 3 | | | | |

Table 3.–Upper Cook Inlet sockeye salmon forecast versus actual run by river system, 2018.

| System | Forecast | Actual | Difference |
|---|---|---|---|
| Kenai River | 2,485 | 2,100 | -34% |
| Kasilof River | 866 | 695 | -19% |
| Susitna River | 329 | 256 | -22% |
| Fish Creek | 211 | 116 | -57% |
| Minor systems | 3,891 | 2,678 | -31% |
| Overall total | 4,556 | 3,094 | -32% |

Table 4.–Upper Subdistrict set gillnet fishing hours allowed beyond regular periods and mandatory closures, 2018.

| | Kasilof Section | | | | Kenai Section | | | | East Forelands | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Additional | | Window | | Additional | | Window | | Additional | | Window | |
| Week | Hours in plans | Hours used | Hours in plan | Hours observed | Hours in plans | Hours used | Hours in plan | Hours observed | Hours in plans | Hours used | Hours in plan | Hours observed |
| Jun 17–23 | Closed season | | | | | | | | | | | |
| Jun 24–30 | 51 | 0 | 60 | 60 | Closed season | | | | Closed season | | | |
| Jul 1–7[a] | 48 | 24 | 36 | 36 | | | | | | | | |
| Jul 8–14 | 48 | 36 | 36 | 36 | 48 | 24 | 36 | 36 | 51 | 0 | 60 | 60 |
| Jul 15–21[b] | 24 | 24 | 36 | 36 | 24 | 24 | 36 | 36 | 51 | 0 | 60 | 60 |
| Jul 22–28 | 24 | 12 | 36 | 36 | 24 | 12 | 36 | 36 | 51 | 0 | 60 | 60 |
| Jul 29–Aug 4[c] | 24 | 0 | 36 | 36 | 24 | 0 | 36 | 36 | 24 | 0 | 60 | 60 |
| Aug 5–11 | 24 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 24 | 0 | 60 | 60 |
| Aug 12–15 | 24 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 24 | 0 | 60 | 60 |
| Totals | 267 | 96 | 240 | 240 | 168 | 60 | 144 | 144 | 225 | 0 | 360 | 360 |

[a] Kenai River sport fishery for king salmon restricted to no bait, triggering a reduction in the total hours allowed for commercial fishing.

[b] Kenai River sport fishery for king salmon restricted to no retention, triggering a further reduction in the total hours allowed for commercial fishing.

[c] Inseason projection of the Kenai River late-run sockeye salmon updated to <2.3 million fish, reducing the allowable additional hours for commercial fishing.

Table 5.–Production of sockeye salmon in Big Lake, 1997–2018.

| Year | Total run | Weir count | Spawners | Spring fry release | Fall fry release | Smolt release | Smolt emigration Age-1 | Smolt emigration Age-2 |
|---|---|---|---|---|---|---|---|---|
| 1997 | 131,814 | 54,656 | 48,513 | 4,018,000 | | | | |
| 1998 | 45,622 | 22,859 | 18,789 | 5,000,000 | | | | |
| 1999 | 45,714 | 26,749 | 25,199 | | 197,000 | | | |
| 2000 | 37,635 | 19,533 | 16,704 | 846,000 | | | | |
| 2001 | 70,013 | 43,486 | 39,093 | | | | | |
| 2002 | 133,640 | 90,483 | 86,181 | 4,316,000 | | | | |
| 2003 | 149,586 | 91,743 | 86,858 | 3,589,000 | | | 114,654 | 2,340 |
| 2004 | 42,160 | 22,157 | 20,065 | 5,000,000 | | | 251,195 | 25,632 |
| 2005 | 21,967 | 14,215 | 12,140 | 1,742,300 | | | 135,739 | 22,623 |
| 2006 | 36,567 | 32,562 | 26,712 | 444,200 | 426,000 | | 205,135 | 19,307 |
| 2007 | 48,277 | 27,948 | 23,845 | 3,812,400 | 702,500 | 315,700 | 278,351 | 30,928 |
| 2008 | 26,872 | 19,339 | 19,314 | 3,610,000 | | 433,000 | 592,919 | 38,785 |
| 2009 | 121,965 | 83,477 | 83,477 | | | | | |
| 2010 | 209,000 | 126,826 | 126,826 | | | | | |
| 2011 | 119,528 | 66,183 | 66,183 | | | | 269,020 | 23,722 |
| 2012 | 32,460 | 18,813 | 18,713 | | | | 178,081 | 11,857 |
| 2013 | 25,082 | 18,912 | 18,315 | | | | 422,258 | 8,241 |
| 2014 | 64,729 | 43,915 | 43,824 | | | | 271,557 | 7,828 |
| 2015 | 120,085 | 102,309 | 102,124 | | | | 424,112 | 8,552 |
| 2016 | 63,938 | 46,202 | 46,202 | | | | None | None |
| 2017 | 98,281 | 61,469 | 61,310 | | | | None | None |
| 2018 | 116,081 | 72,148 | 70,840 | | | | None | None |

Table 6.–Upper Cook Inlet sockeye salmon run, 2018.

| System | Commercial harvest | Escapement | Other harvests | Total |
|---|---|---|---|---|
| Fish Creek | 25,627 | 71,556 | 19,423 | 116,000 |
| Kasilof River | 189,812 | 394,309 | 110,392 | 695,000 |
| Kenai River | 428,236 | 1,035,761 | 621,116 | 2,100,000 |
| Susitna River | 57,090 | 190,819 | 7,350 | 256,000 |
| All Others | 81,052 | 332,506 | 18,376 | 432,000 |
| Total | 781,817 | 2,024,951 | 776,657 | 3,599,000 |

Table 7.–Upper Cook Inlet pink salmon commercial harvests and Deshka River escapements, 1996–2018.

| | UCI Pink salmon | | | |
|---|---|---|---|---|
| | Commercial harvest | | Deshka River enumeration | |
| Year | Even-year | Odd-year | Even-year | Odd-year |
| 1997 | | 70,945 | | 1,101 |
| 1998 | 551,737 | | 541,946 | |
| 1999 | | 16,176 | | 766 |
| 2000 | 146,482 | | 1,248,498 | |
| 2001 | | 72,560 | | 3,845 |
| 2002 | 446,960 | | 946,255 | |
| 2003 | | 48,789 | | 9,214 |
| 2004 | 357,939 | | 390,087 | |
| 2005 | | 48,419 | | 7,088 |
| 2006 | 404,111 | | 83,454 | |
| 2007 | | 147,020 | | 3,954 |
| 2008 | 169,368 | | 12,947 | |
| 2009 | | 214,321 | | 26,077 |
| 2010 | 292,706 | | 9,328 | |
| 2011 | | 34,123 | | 4,489[a] |
| 2012 | 469,598 | | 78,853 | |
| 2013 | | 48,275 | | 27,926 |
| 2014 | 642,879 | | 78,111 | |
| 2015 | | 47,997 | | 6,328 |
| 2016 | 382,436 | | 65,456 | |
| 2017 | | 168,042 | | 24,868 |
| 2018 | 126,828 | | 59,153 | |

[a] No counts from Aug 8 to Aug 14 due to high water.

Table 8.–Coho salmon escapement and enumeration, 1996–2018.

| Year | Fish Creek | Little Susitna River | Jim Creek[a] | Deshka River | OTF CPUE[b] |
|---|---|---|---|---|---|
| 1996 | | 15,803 | | | 534 |
| 1997 | 2,578[c] | 9,894 | | | 362 |
| 1998 | 5,463 | 15,159 | | | 403 |
| 1999 | 1,766 | 3,017 | | | 294 |
| 2000 | 5,979 | 14,436 | 657 | | 766 |
| 2001 | 10,047 | 30,587 | 1,019 | | 838 |
| 2002 | 15,187 | 47,938 | 2,473 | 24,612 | 798 |
| 2003 | 2,142 | 10,877 | 1,421 | 17,305 | 368 |
| 2004 | 3,255[c] | 40,199 | 4,652 | 62,940 | 785 |
| 2005 | 3,836[c] | 16,839[d] | 1,464 | 47,887 | 367 |
| 2006 | 5,723[c] | 8,786[d] | 2,389 | 59,419 | 1,034 |
| 2007 | 9,618[c] | 17,573 | 725 | 10,575 | 482 |
| 2008 | 9,603[c] | 18,485 | 1,890 | 12,724 | 718 |
| 2009 | 8,666 | 9,523 | 1,331 | 27,348 | 283 |
| 2010 | 7,034 | 9,214 | 242 | 10,393 | 454 |
| 2011 | 1,428[c] | 4,826 | 261 | 7,326 | 264 |
| 2012 | 1,237 | 6,770 | 213 | 6,825 | 154 |
| 2013 | 7,593 | 13,583[d] | 663 | 22,141 | 494 |
| 2014 | 10,283 | 24,211 | 122 | 11,578 | 661 |
| 2015 | 7,912 | 12,756 | 571 | 10,775 | 277 |
| 2016 | 2,483 | 9,998 | 106 | 6,820 | 396 |
| 2017 | 8,966 | 17,781 | 5,646 | 36,869 | 527 |
| 2018 | 5,023 | 7,583 | 5,515 | 12,962 | 952 |

[a] Escapement is a foot index survey of a section of McRoberts Creek, a tributary of the Jim Creek drainage.

[b] OTF CPUE represents the number of fish caught in 100 fathoms of gillnet in one hour in the southern offshore test fishery.

[c] Represents a partial count, the weir was pulled before the coho salmon run was complete.

[d] Weir washed out, count incomplete.

Table 9.–Deshka River Chinook salmon passage, 1995–2017.

| Year | Passage | Year | Passage |
|---|---|---|---|
| 1995 | 10,044 | 2007 | 18,714 |
| 1996 | 14,349 | 2008 | 7,533 |
| 1997 | 35,587 | 2009 | 11,960 |
| 1998 | 15,409 | 2010 | 18,594 |
| 1999 | 29,649 | 2011 | 19,026 |
| 2000 | 35,242 | 2012 | 14,088 |
| 2001 | 29,004 | 2013 | 18,532 |
| 2002 | 29,427 | 2014 | 16,335 |
| 2003 | 40,069 | 2015 | 24,395 |
| 2004 | 57,934 | 2016 | 22,774 |
| 2005 | 37,725 | 2017 | 11,383 |
| 2006 | 31,150 | 2018 | 8,549 |

Table 10.–Commercial eulachon harvest, 1978, 1980, 1998–99, and 2006–2018.

| Year | Pounds | Tons[a] | Permits |
|---|---|---|---|
| 1978 | 300 | 0.2 | NA |
| 1980 | 4,000 | 2.0 | NA |
| 1998 | 18,610 | 9.3 | <3 |
| 1999 | 100,000 | 50.0 | NA |
| 2006 | 90,783 | 45.4 | 8.0 |
| 2007 | 125,044 | 62.5 | 11.0 |
| 2008 | 127,365 | 63.7 | 6.0 |
| 2009 | 78,258 | 39.1 | 6.0 |
| 2010 | 126,135 | 63.1 | 3.0 |
| 2011 | 201,570 | 100.8 | 5.0 |
| 2012 | 195,910 | 98.0 | 4.0 |
| 2013 | 190,830 | 95.4 | 4.0 |
| 2014 | 198,814 | 99.4 | 4.0 |
| 2015 | 213,934 | 107.0 | 4.0 |
| 2016 | 191,536 | 95.8 | 4.0 |
| 2017 | 18,685 | 9.3 | <3 |
| 2018 | 382,967 | 191.5 | 4.0 |

[a] Tons = short tons = 2,000 lb or 907.2 kg.

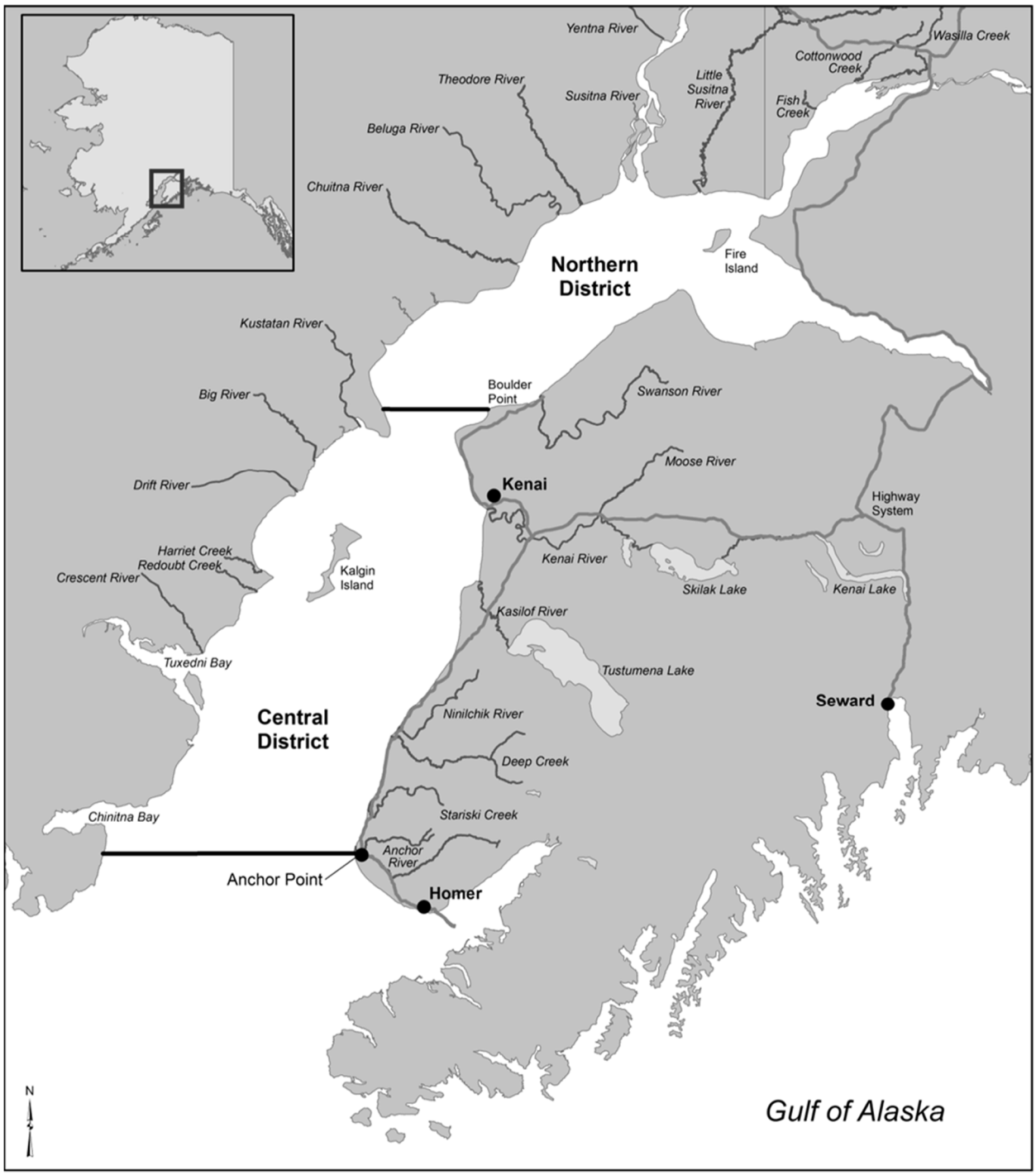



Figure 1.–Major tributaries of the Cook Inlet basin.

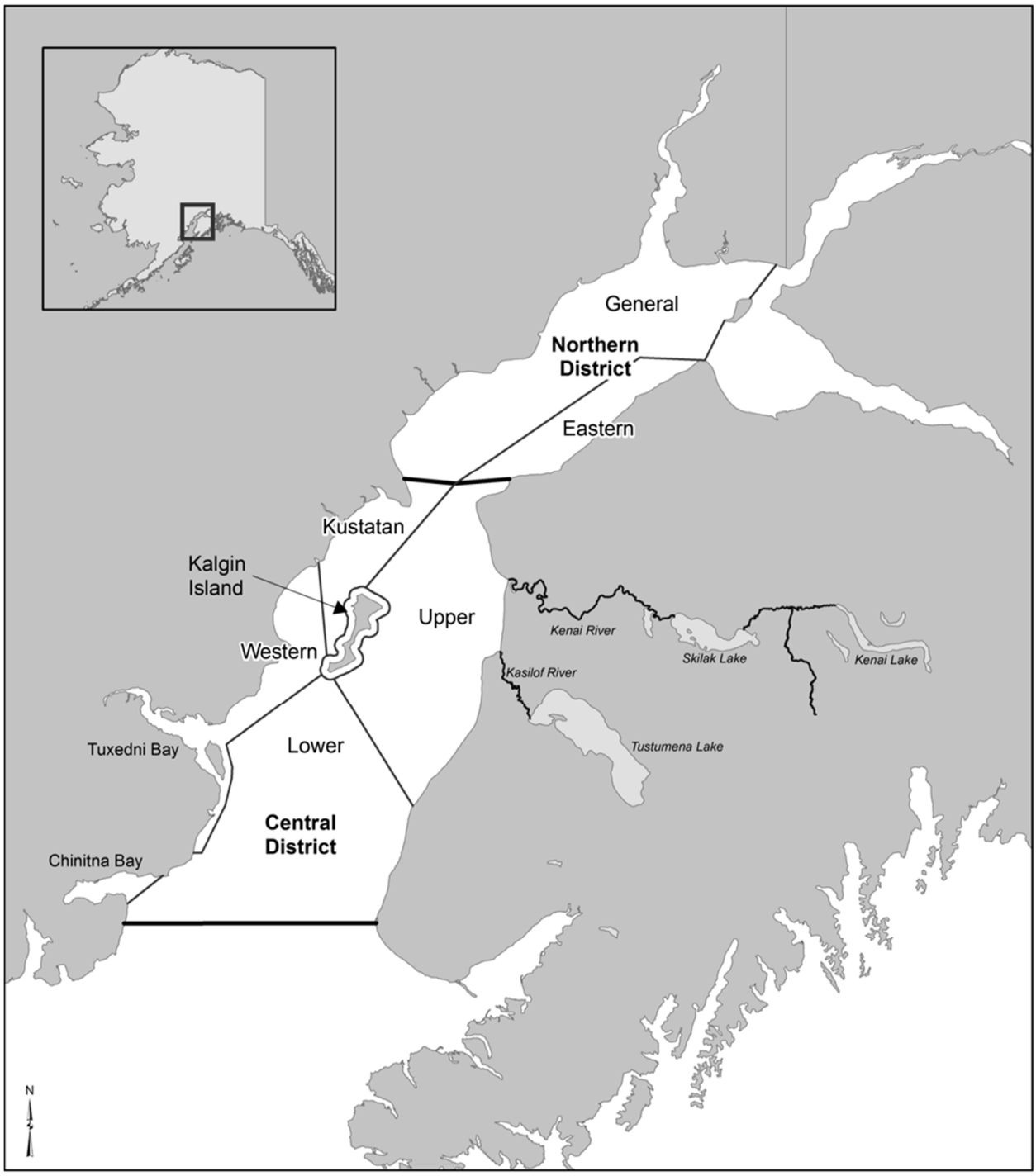



Figure 2.–Upper Cook Inlet commercial fisheries subdistrict fishing boundaries.

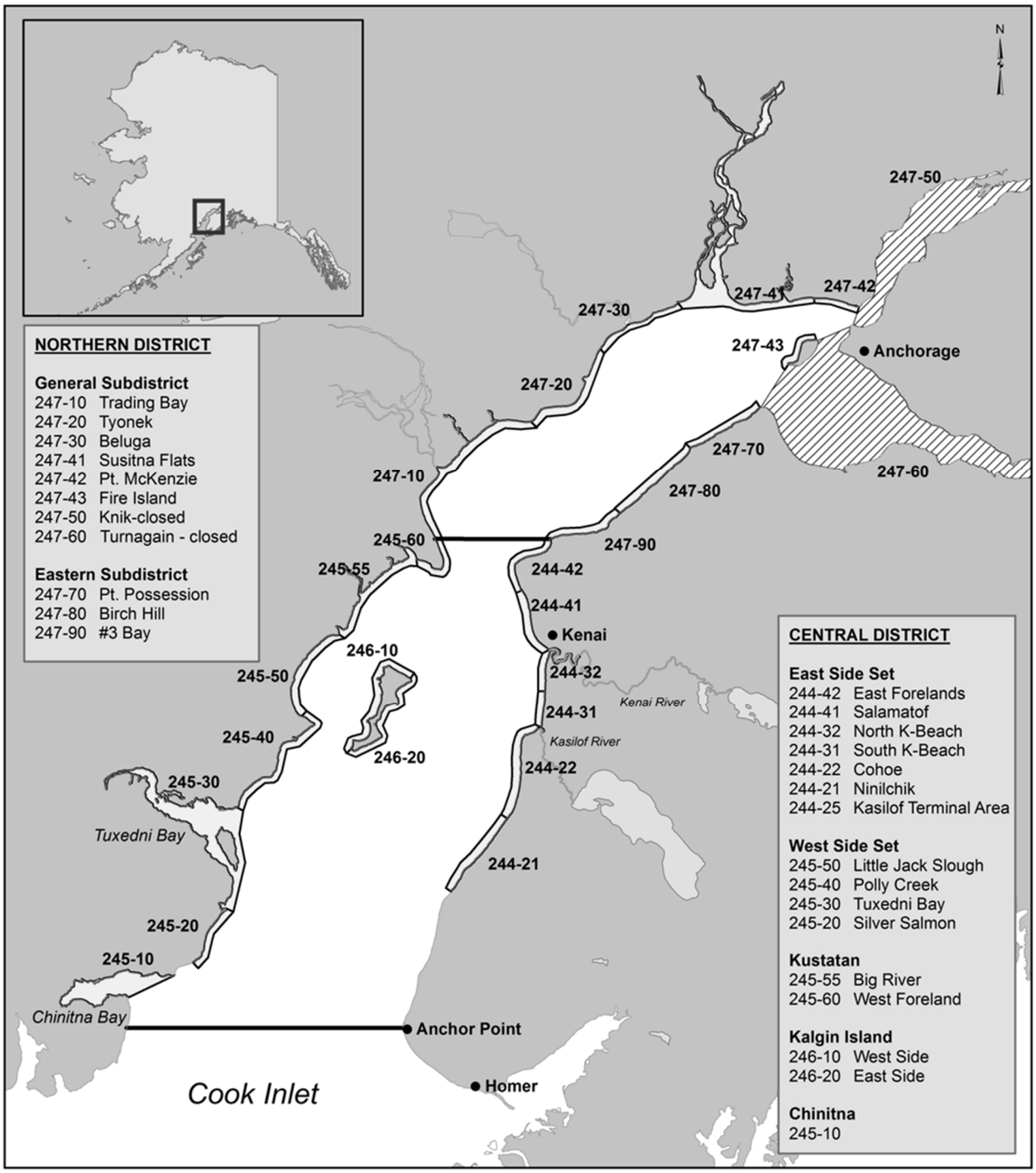



Figure 3.–Upper Cook Inlet commercial set gillnet statistical areas.

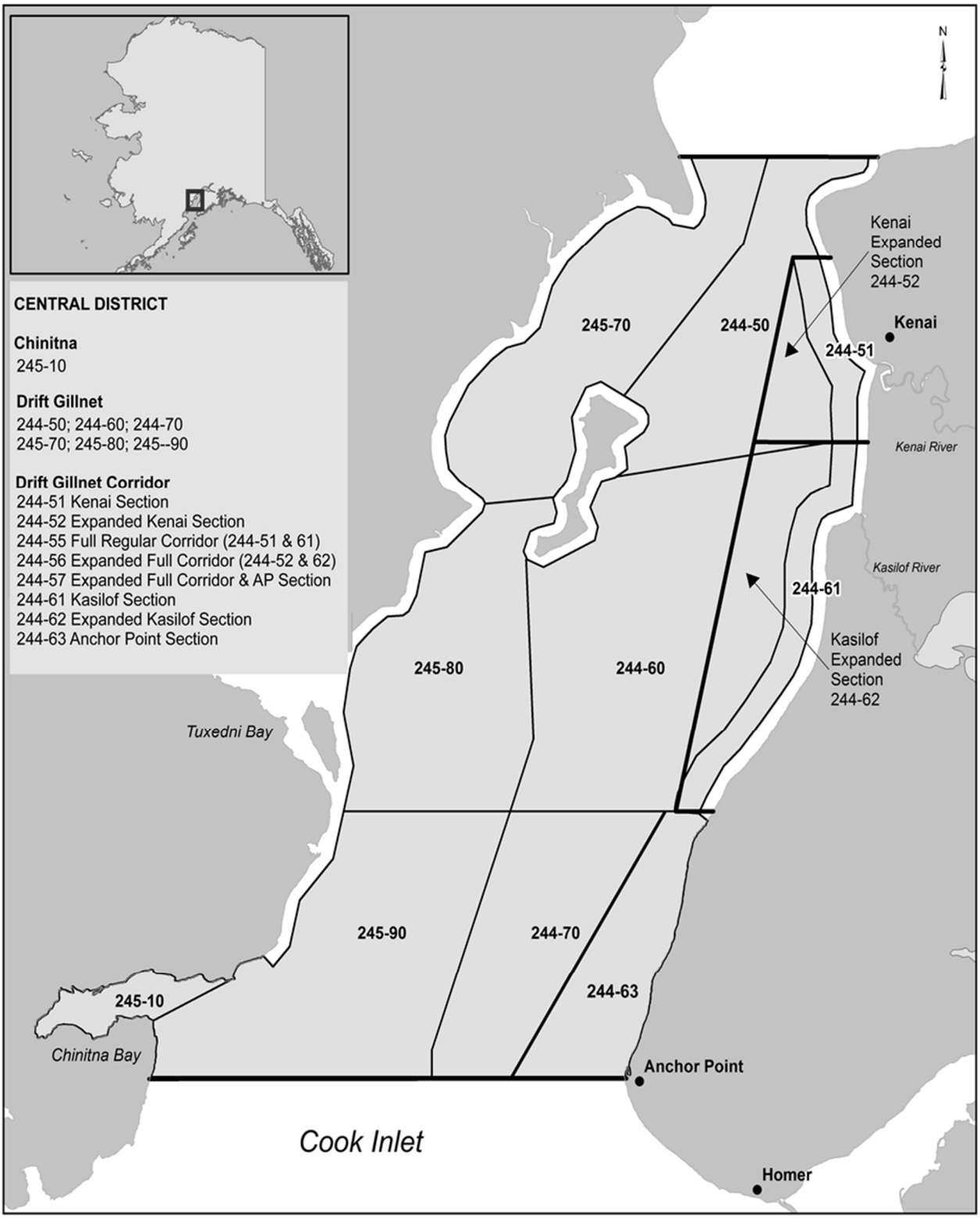



Figure 4.–Upper Cook Inlet commercial drift gillnet statistical areas.

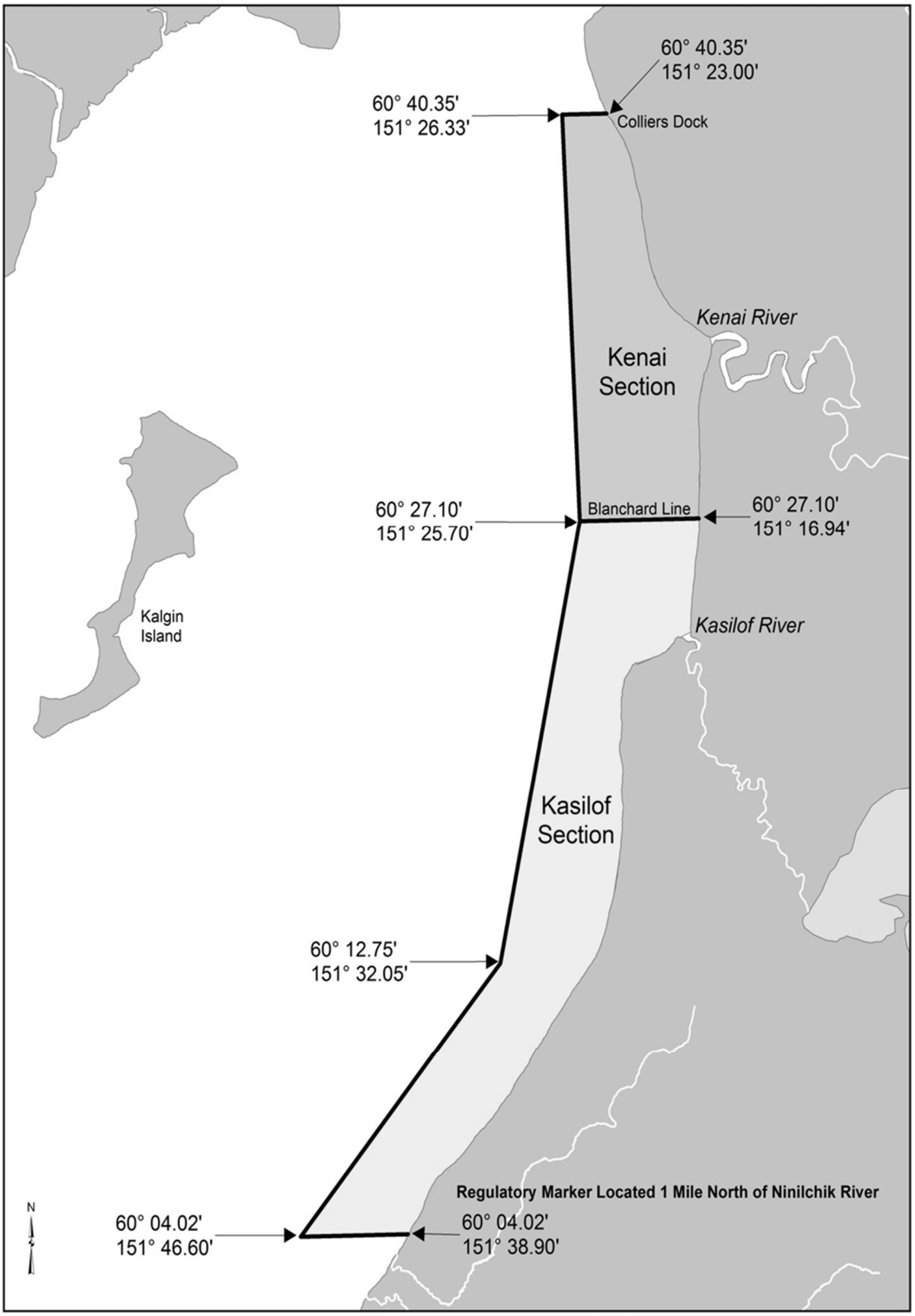



Figure 5.–Map of the Kenai and Kasilof Sections with waypoint descriptions.

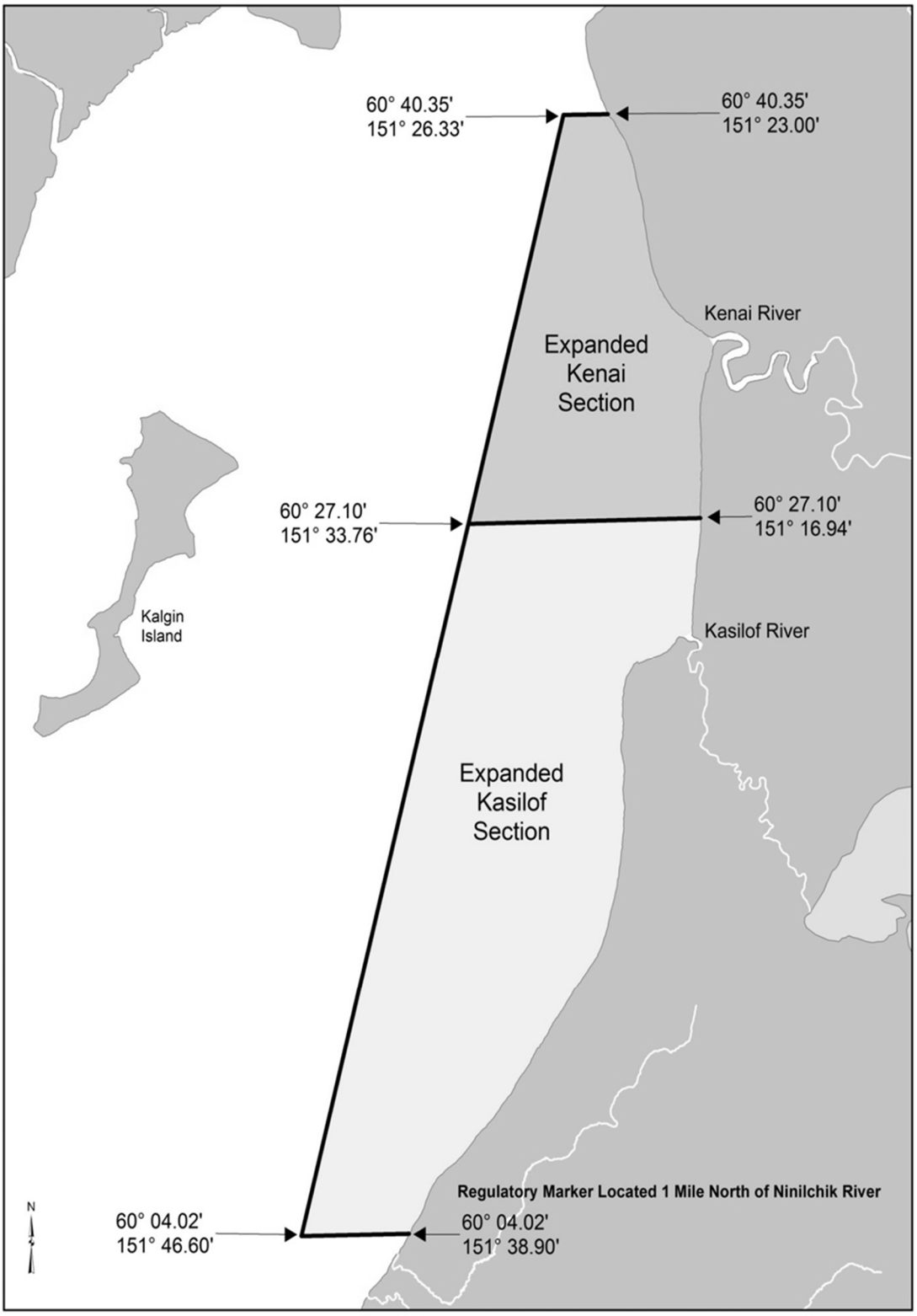



Figure 6.–Map of the Expanded Kenai and Expanded Kasilof Sections with waypoint descriptions.

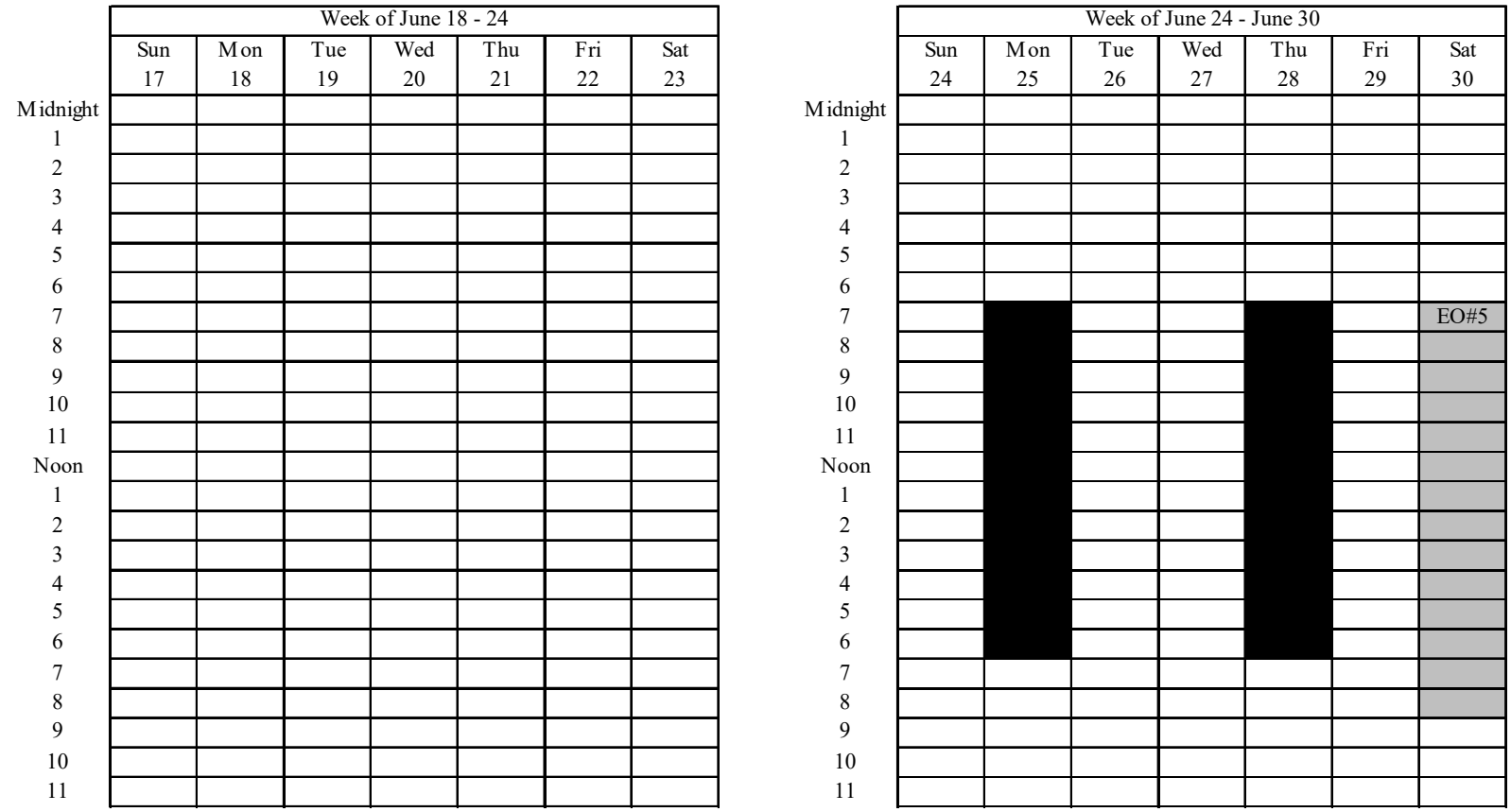
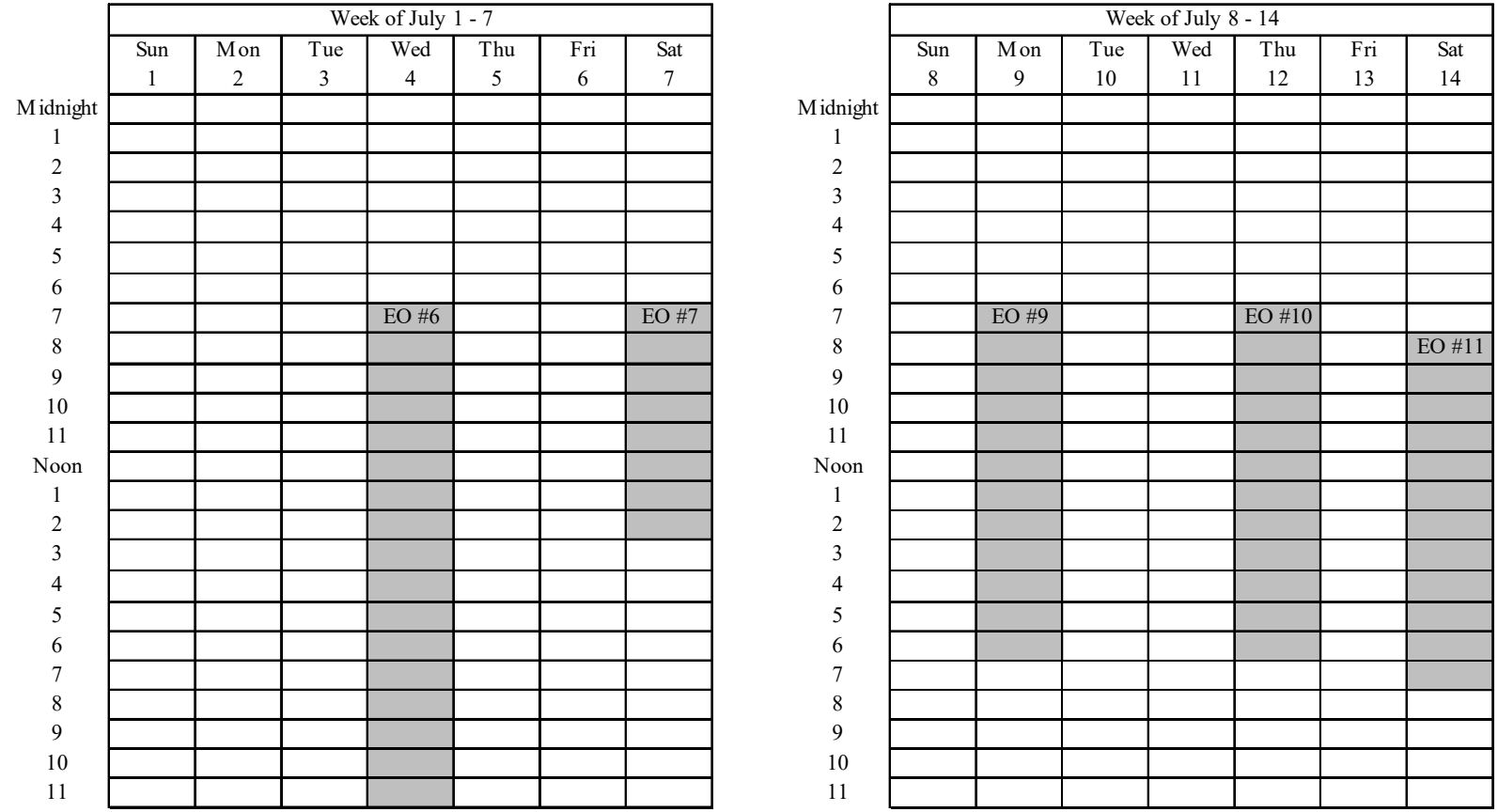



Figure 7.–Hours fished in the Upper Subdistrict set gillnet fishery, 2018




EO #6 Kasilof Section from 7am to 11pm
EO #7 Kasilof Section from 7am to 3pm

EO #9 Kenai and Kasilof Sections 7am to 7pm
EO #10 Kenai and Kasilof Sections 7am to 7pm
EO #11 Kasilof section within one-half mile 8am to 8pm

| Regular Fishing Periods |
|---|
| Additional Fishing Time |
| No Commercial Fishing |

| Regular Fishing Periods |
|---|
| Additional Fishing Time |
| No Commercial Fishing |

Figure 7.–Page 2 of 4.

| | Week of July 15 - 21 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Sun 15 | Mon 16 | Tue 17 | Wed 18 | Thu 19 | Fri 20 | Sat 21 |
| Midnight | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | EO #14 | | EO #15 |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| Noon | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | EO #13 | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |

EO #13 Kasilof section within 600ft 5pm to 11:59pm
EO #14 Kasilof section within one-half mile and N. K-beach 600ft
EO #15 Kasilof section within 600ft 7am to 7pm

| Regular Fishing Periods |
|---|
| Additional Fishing Time |
| No Commercial Fishing |

| | Week of July 22 - 28 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Sun 22 | Mon 23 | Tue 24 | Wed 25 | Thu 26 | Fri 27 | Sat 28 |
| Midnight | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | EO #18 | | | | | |
| 8 | EO #16 | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | EO #19 | | |
| Noon | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | EO #20 |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |

EO #16 Kasilof section within 600ft 8am to 8pm
EO #18 Kenai, Kasilof, E. Foreland Section 7am to 7pm
EO #19 Kasilof section within 600ft 11am to 11pm
EO #20 Kasilof section within 600ft 2pm to 10pm

| Regular Fishing Periods |
|---|
| Additional Fishing Time |
| No Commercial Fishing |

Figure 7.–Page 3 of 4.

| | Week of July 29 - Aug 4 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Sun 29 | Mon 30 | Tue 31 | Wed 1 | Thu 2 | Fri 3 | Sat 4 |
| Midnight | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| Noon | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |

| | Week of Aug 5 - 11 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Sun 5 | Mon 6 | Tue 7 | Wed 8 | Thu 9 | Fri 10 | Sat 11 |
| Midnight | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| Noon | | | | EO #25 | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | EO #28 | EO #29 | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |

EO #25 KRSHA 12 noon on 8/8 to 6pm on 8/9
EO #28 KRSHA 6pm on 8/9 to 6pm on 8/10
EO #29 KRSHA 6pm on 8/9 to 8am on 8/12

| Regular Fishing Periods |
|---|
| Additional Fishing Time |
| No Commercial Fishing |

| Regular Fishing Periods |
|---|
| Additional Fishing Time |
| No Commercial Fishing |

Figure 7.–Page 4 of 4.

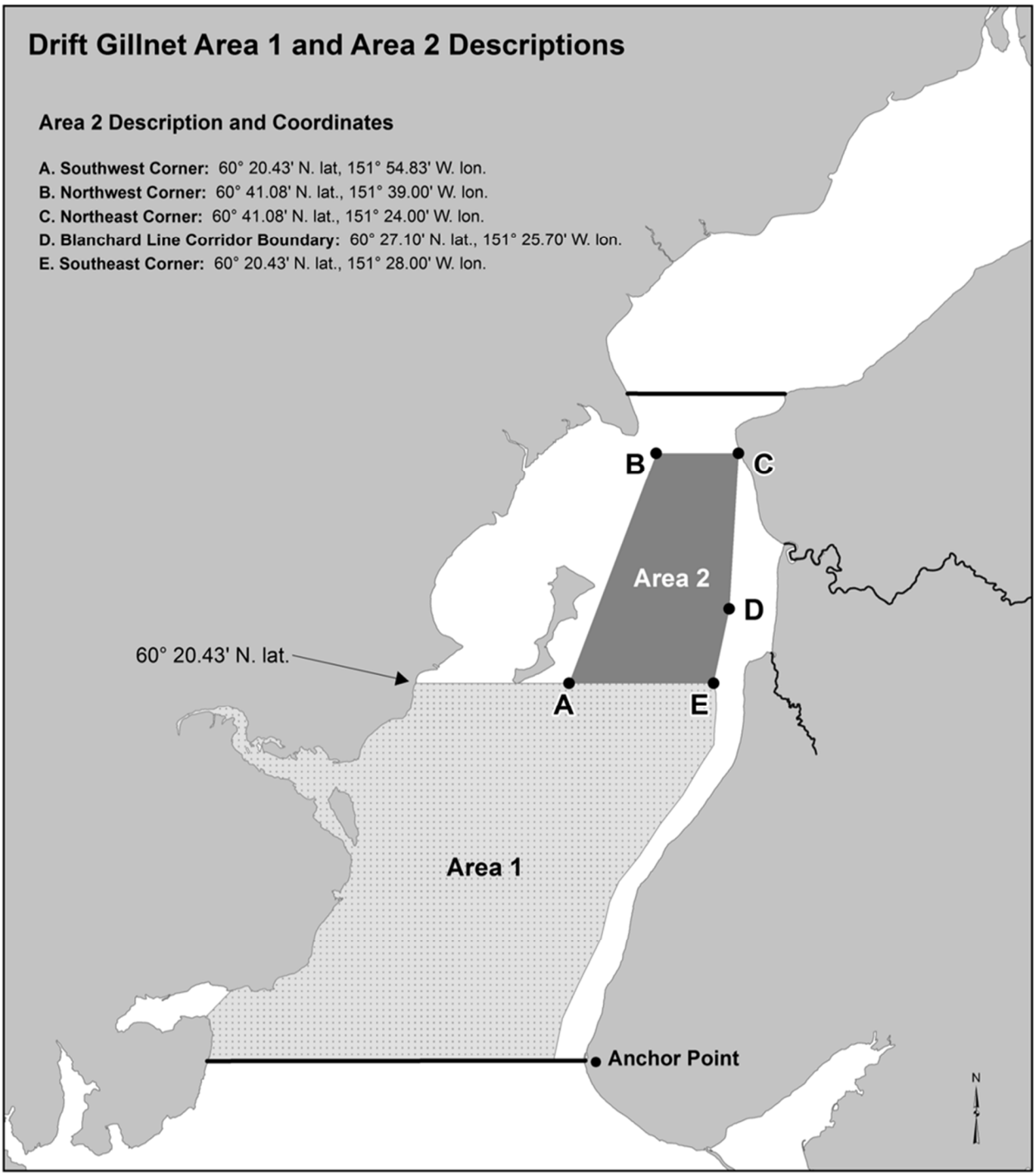



Figure 8.–Drift gillnet boundaries for fishing Areas 1 and 2.

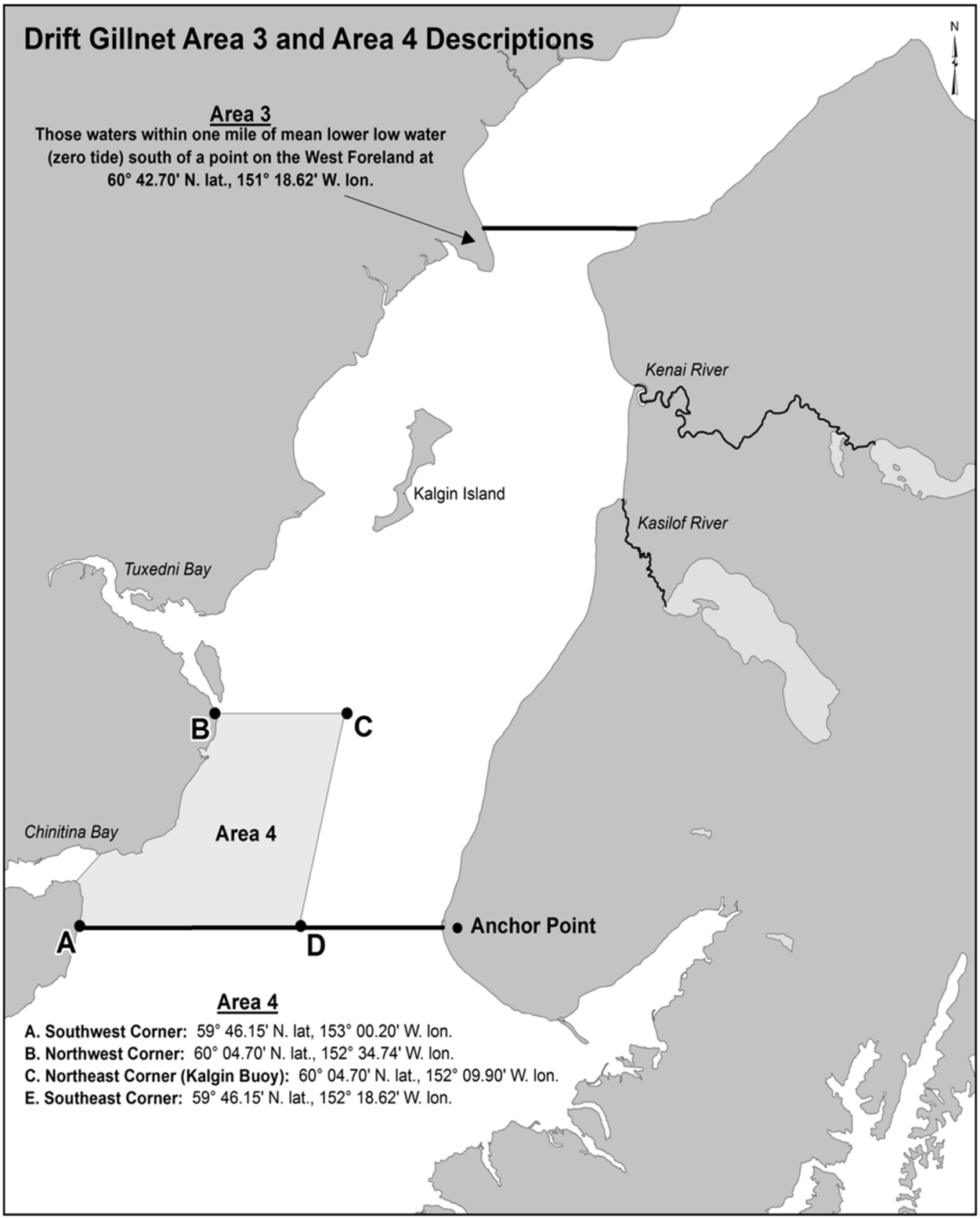



Figure 9.–Map of drift gillnet Areas 3 and 4.

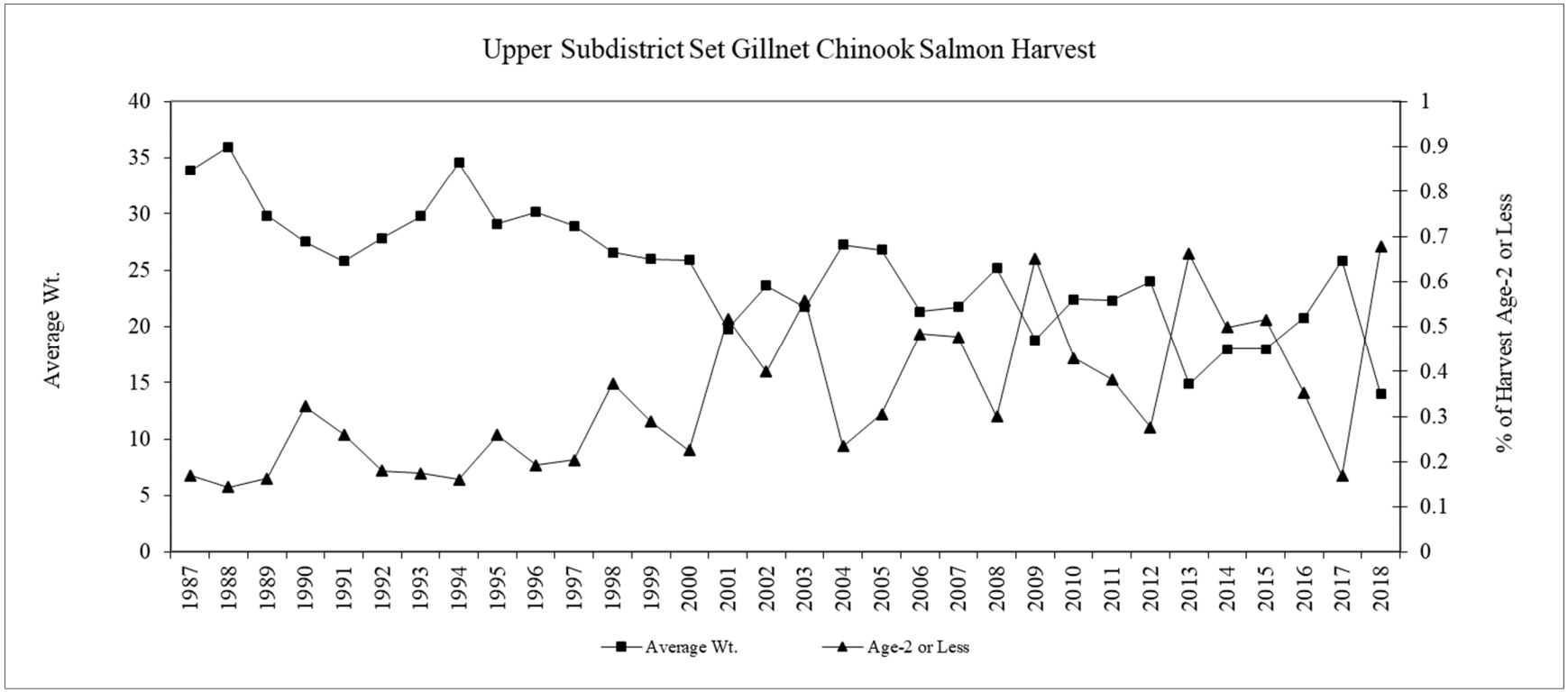



Figure 10.–Chinook salmon average weight in pounds (all fish) and percentage of the harvest composed of ocean-age-2 or less fish in the Upper Subdistrict set gillnet commercial fishery, 1987–2018.

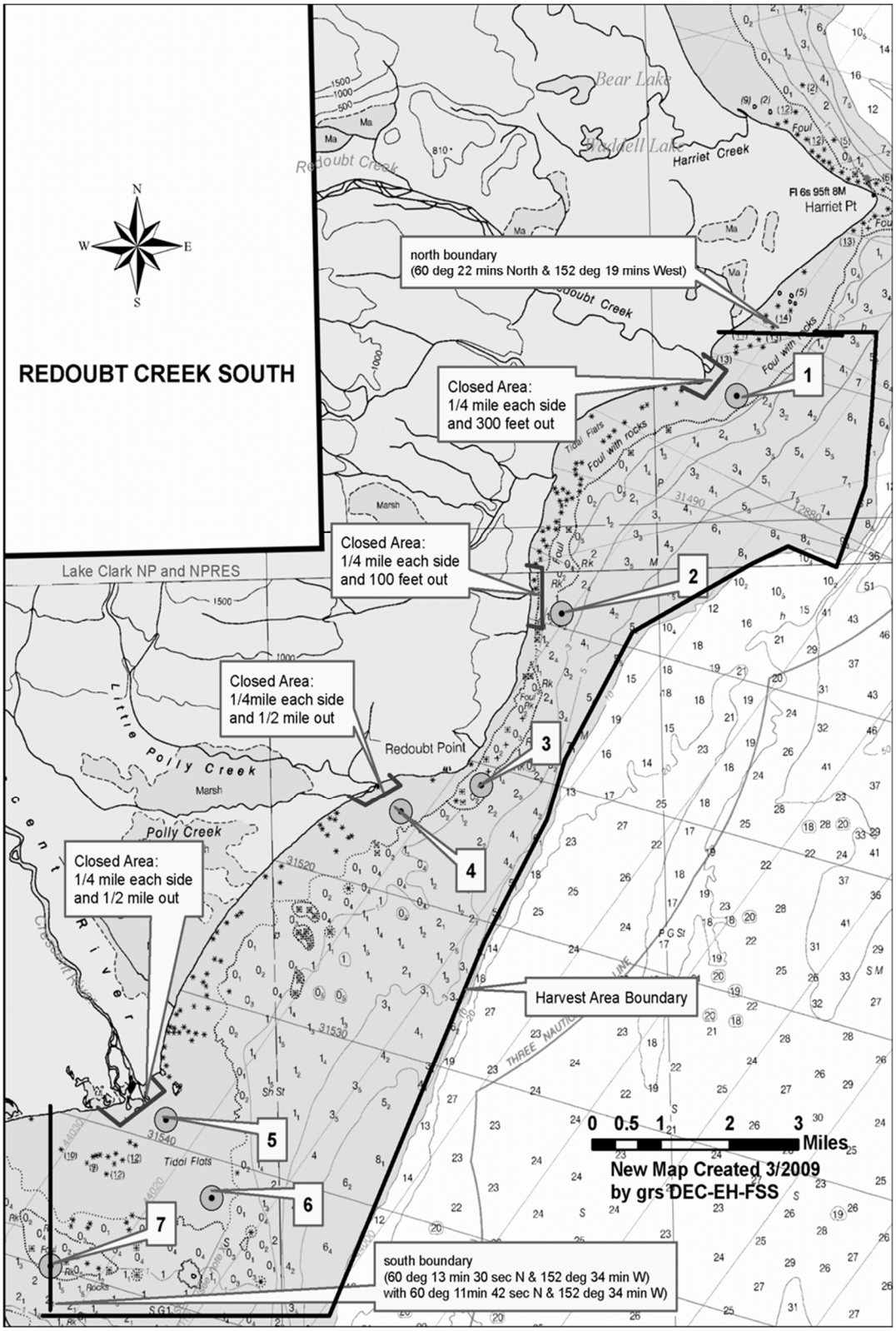



Figure 11.–Area open to the commercial razor clam fishery on the west side of Cook Inlet, Alaska.

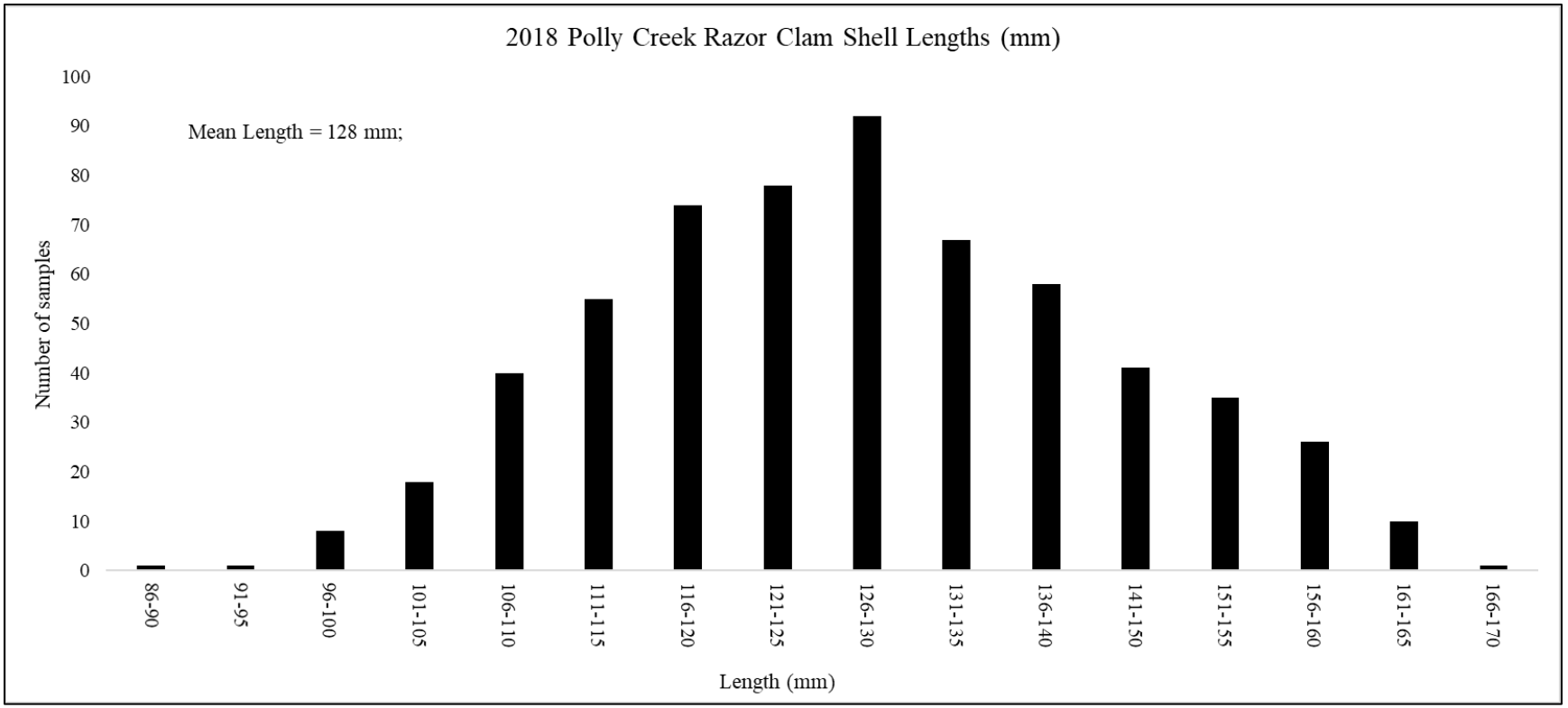



Figure 12.–Length frequency of razor clam shells sampled from the 2018 Polly Creek commercial razor clam fishery.

# APPENDIX A: 2018 SEASON DATA

Appendix A1.–Offshore test fishery sockeye salmon catch results and environmental data, 2018.

| Date | No. of stations | Fishing time (min) | Catch | | Index[a] | | Mean length (mm) | Water temp (°C) | Air temp (°C) | Salinity (ppm) | Beginning wind | | Ending wind | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Daily | Cum | Daily | Cum | | | | | Vel | Dir | Vel | Dir |
| 1 Jul | 6 | 218.5 | 3 | 3 | 2 | 2 | 572 | 9.6 | 15.7 | 27.0 | 12 | S | 6 | S |
| 2 Jul | 6 | 223.5 | 37 | 40 | 29 | 31 | 509 | 9.5 | 14.4 | 28.7 | 5 | - | 5 | - |
| 3 Jul | 6 | 227.5 | 5 | 45 | 4 | 35 | 569 | 10.2 | 17.6 | 27.0 | 2 | - | 5 | - |
| 4 Jul | 6 | 233.5 | 104 | 149 | 75 | 110 | 540 | 9.7 | 13.1 | 28.5 | 10 | S | 12 | S |
| 5 Jul | 6 | 225.0 | 20 | 169 | 15 | 125 | 529 | 10.3 | 16.3 | 28.1 | 10 | S | 12 | S |
| 6 Jul | 6 | 224.5 | 28 | 197 | 21 | 145 | 522 | 10.9 | 14.7 | 28.7 | 10 | S | 0 | - |
| 7 Jul | 6 | 220.0 | 31 | 228 | 25 | 170 | 534 | 10.5 | 14.4 | 28.4 | 15 | SW | 15 | SW |
| 8 Jul | 2[b] | 88.5 | 108 | 336 | 99 | 269 | 546 | 10.1 | 12.1 | 29.0 | 20 | SE | 20 | SE |
| 9 Jul | 6 | 236.5 | 90 | 426 | 67 | 336 | 546 | 10.7 | 11.9 | 26.9 | 15 | SE | 10 | NE |
| 10 Jul | 6 | 225.5 | 38 | 464 | 30 | 366 | 560 | 9.9 | 12.1 | 29.9 | 12 | NE | 0 | - |
| 11 Jul | 6 | 236.0 | 59 | 523 | 43 | 409 | 544 | 9.7 | 12.1 | 29.8 | 18 | SW | 18 | SW |
| 12 Jul | 6 | 218.0 | 42 | 565 | 34 | 443 | 536 | 9.8 | 12.8 | 29.5 | 10 | N | - | - |
| 13 Jul | 6 | 194.5 | 113 | 678 | 88 | 531 | 533 | 9.6 | 11.2 | 30.5 | 18 | NE | 20 | N |
| 14 Jul | 6 | 225.5 | 57 | 735 | 41 | 571 | 536 | 10.0 | 12.1 | 29.0 | 20 | N | 20 | N |
| 15 Jul | 6 | 220.5 | 10 | 745 | 8 | 579 | 509 | 10.3 | 15.5 | 29.0 | 2 | N | 4 | S |
| 16 Jul | 6 | 203.0 | 28 | 773 | 25 | 604 | 532 | 10.0 | 13.4 | 29.8 | 3 | SW | 5 | SW |
| 17 Jul | 5[b] | 195.5 | 119 | 892 | 95 | 699 | 538 | 10.6 | 14.4 | 29.5 | 9 | SE | 0 | - |
| 18 Jul | 6 | 224.5 | 94 | 986 | 73 | 773 | 532 | 10.4 | 13.7 | 29.3 | 9 | SE | 5 | SE |
| 19 Jul | 4[b] | 145.6 | 37 | 1,023 | 44 | 817 | 538 | 10.8 | 14.1 | 28.5 | 15 | SW | 0 | - |
| 20 Jul | 6 | 223.0 | 16 | 1,039 | 13 | 829 | 535 | 10.7 | 12.2 | 28.0 | 10 | SW | 2 | SW |
| 21 Jul | 6 | 226.0 | 75 | 1,114 | 52 | 881 | 547 | 11.5 | 14.7 | 28.0 | 5 | NW | 12 | SW |
| 22 Jul | 6 | 239.0 | 83 | 1,197 | 58 | 940 | 540 | 11.2 | 13.1 | 27.9 | 12 | SW | 12 | SW |
| 23 Jul | 6 | 220.0 | 71 | 1,268 | 54 | 994 | 539 | 11.5 | 13.1 | 27.3 | 8 | NE | 20 | N |
| 24 Jul | 4[b] | 160.0 | 43 | 1,311 | 35 | 1,029 | 536 | 11.2 | 13.4 | 26.5 | 15 | N | 0 | - |
| 25 Jul | 4[b] | 128.5 | 11 | 1,322 | 28 | 1,056 | 549 | 10.3 | 13.1 | 30.0 | 25 | N | 25 | N |
| 26 Jul | 6 | 219.0 | 29 | 1,351 | 23 | 1,080 | 543 | 10.8 | 12.8 | 28.1 | 10 | SW | 5 | SW |
| 27 Jul | 6 | 233.5 | 151 | 1,502 | 17 | 1,187 | 534 | 10.6 | 13.7 | 29.2 | 10 | S | 10 | SW |
| 28 Jul | 6 | 214.5 | 13 | 1,515 | 11 | 1,198 | 542 | 10.9 | 13.0 | 27.9 | 5 | N | 14 | NW |
| 29 Jul | 6 | 205.5 | 21 | 1,536 | 17 | 1,214 | 535 | 10.5 | 14.4 | 28.9 | 2 | - | 5 | N |
| 30 Jul | 6 | 212.0 | 10 | 1,546 | 8 | 1,223 | 551 | 10.9 | 13.9 | 27.4 | 10 | SW | 10 | SW |

*Note*: Wind velocity (Vel) is in knots.

[a] Sockeye salmon indices were linearly interpolated for days with missing stations.

[b] Not all stations fished due to weather or mechanical issues.

Appendix A2.–Upper Cook Inlet sockeye salmon counts by watershed and date, 2018.

| | Kenai River | | Kasilof River | | Fish Creek | | Chelatna Lake | | Larson Lake | | Judd Lake | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum |
| 15 Jun | | | 799 | 799 | | | | | | | | |
| 16 Jun | | | 958 | 1,757 | | | | | | | | |
| 17 Jun | | | 1063 | 2,820 | | | | | | | | |
| 18 Jun | | | 1,860 | 4,680 | | | | | | | | |
| 19 Jun | | | 1,872 | 6,552 | | | | | | | | |
| 20 Jun | | | 2,100 | 8,652 | | | | | | | | |
| 21 Jun | | | 1,920 | 10,572 | | | | | | | | |
| 22 Jun | | | 2,400 | 12,972 | | | | | | | | |
| 23 Jun | | | 4,997 | 17,969 | | | | | | | | |
| 24 Jun | | | 5,508 | 23,477 | | | | | | | | |
| 25 Jun | | | 4,151 | 27,628 | | | | | | | | |
| 26 Jun | | | 1,398 | 29,026 | | | | | | | | |
| 27 Jun | | | 2,364 | 31,390 | | | | | | | | |
| 28 Jun | | | 3,542 | 34,932 | | | | | | | | |
| 29 Jun | | | 1,254 | 36,186 | | | | | | | | |
| 30 Jun | | | 2,238 | 38,424 | | | | | | | | |
| 1 Jul | 1,968 | 1,968 | 2,454 | 40,878 | | | | | | | | |
| 2 Jul | 3,694 | 5,662 | 5,676 | 46,554 | | | | | | | | |
| 3 Jul | 2,394 | 8,056 | 6,738 | 53,292 | | | | | | | | |
| 4 Jul | 4,551 | 12,607 | 7,584 | 60,876 | | | | | | | | |
| 5 Jul | 5,065 | 17,672 | 3,603 | 64,479 | | | | | | | | |
| 6 Jul | 6,505 | 24,177 | 6,180 | 70,659 | | | | | | | | |
| 7 Jul | 7,786 | 31,963 | 4,746 | 75,405 | | | | | | | | |
| 8 Jul | 5,544 | 37,507 | 5,682 | 81,087 | | | | | | | | |
| 9 Jul | 5,730 | 43,237 | 5,226 | 86,313 | 557 | 557 | | | | | | |
| 10 Jul | 4,218 | 47,455 | 2,604 | 88,917 | 2,032 | 2,589 | | | 8 | 8 | 0 | |
| 11 Jul | 3,853 | 51,308 | 6,744 | 95,661 | 1,220 | 3,809 | | | 0 | 8 | 0 | |
| 12 Jul | 14,898 | 66,206 | 18,192 | 113,853 | 1,426 | 5,235 | | | 0 | 8 | 0 | |
| 13 Jul | 23,394 | 89,600 | 5,540 | 119,393 | 410 | 5,645 | | | 0 | 8 | 0 | |
| 14 Jul | 8,593 | 98,193 | 4,584 | 123,977 | 1,072 | 6,717 | | | 0 | 8 | 0 | |
| 15 Jul | 7,626 | 105,819 | 3,066 | 127,043 | 148 | 6,865 | | | 0 | 8 | 0 | |

-continued-

Appendix A2.–Page 2 of 3.

| | Kenai River | | Kasilof River | | Fish Creek | | Chelatna Lake | | Judd Lake | | Larson Lake | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum |
| 16 Jul | 7,110 | 112,929 | 6,366 | 133,409 | 424 | 7,289 | | | 0 | 8 | 0 | |
| 17 Jul | 11,072 | 124,001 | 15,102 | 148,511 | 103 | 7,392 | | | 60 | 68 | 0 | |
| 18 Jul | 19,240 | 143,241 | 26,616 | 175,127 | 550 | 7,942 | | | 20 | 88 | 0 | |
| 19 Jul | 30,293 | 173,534 | 13,218 | 188,345 | 484 | 8,426 | 0 | 0 | 870 | 958 | 0 | |
| 20 Jul | 33,858 | 207,392 | 21,312 | 209,657 | 1,998 | 10,424 | 1 | 1 | 737 | 1,695 | 0 | |
| 21 Jul | 62,623 | 270,015 | 10,734 | 220,391 | 3,785 | 14,209 | 0 | 1 | 624 | 2,319 | 0 | |
| 22 Jul | 24,618 | 294,633 | 8,484 | 228,875 | 3,469 | 17,678 | 59 | 60 | 410 | 2,729 | 0 | |
| 23 Jul | 33,606 | 328,239 | 8,658 | 237,533 | 3,290 | 20,968 | 511 | 571 | 1,184 | 3,913 | 0 | |
| 24 Jul | 25,470 | 353,709 | 5,670 | 243,203 | 394 | 21,362 | 664 | 1,235 | 342 | 4,255 | 0 | |
| 25 Jul | 14,186 | 367,895 | 13,488 | 256,691 | 55 | 21,417 | 801 | 2,036 | 1,344 | 5,599 | 226 | 226 |
| 26 Jul | 15,316 | 383,211 | 8,818 | 265,509 | 49 | 21,466 | 948 | 2,984 | 1,949 | 7,548 | 238 | 464 |
| 27 Jul | 16,043 | 399,254 | 6,162 | 271,671 | 0 | 21,466 | 1,058 | 4,042 | 1,685 | 9,233 | 221 | 685 |
| 28 Jul | 8,923 | 408,177 | 5,970 | 277,641 | 0 | 21,466 | 2,133 | 6,175 | 3,045 | 12,278 | 481 | 1,166 |
| 29 Jul | 11,501 | 419,678 | 4,657 | 282,298 | 79 | 21,545 | 2,256 | 8,431 | 2,201 | 14,479 | 242 | 1,408 |
| 30 Jul | 14,879 | 434,557 | 8,268 | 290,566 | 0 | 21,545 | 1,465 | 9,896 | 2,727 | 17,206 | 1,195 | 2,603 |
| 31 Jul | 18,579 | 453,136 | 8,526 | 299,092 | 21 | 21,566 | 1,396 | 11,292 | 837 | 18,043 | 997 | 3,600 |
| 1 Aug | 22,740 | 475,876 | 5,952 | 305,044 | 1,384 | 22,950 | 1,211 | 12,503 | 472 | 18,515 | 1,669 | 5,269 |
| 2 Aug | 17,838 | 493,714 | 11,448 | 316,492 | 4,448 | 27,398 | 522 | 13,025 | 440 | 18,955 | 2,417 | 7,686 |
| 3 Aug | 22,848 | 516,562 | 12,504 | 328,996 | 5,351 | 32,749 | 811 | 13,836 | 956 | 19,911 | 2,257 | 9,943 |
| 4 Aug | 27,423 | 543,985 | 9,792 | 338,788 | 4,738 | 37,487 | 931 | 14,767 | 450 | 20,361 | 1,820 | 11,763 |
| 5 Aug | 31,938 | 575,923 | 10,427 | 349,215 | 37 | 37,524 | 671 | 15,438 | 991 | 21,352 | 874 | 12,637 |
| 6 Aug | 30,190 | 606,113 | 5,936 | 355,151 | 5,065 | 42,589 | 634 | 16,072 | 632 | 21,984 | 946 | 13,583 |
| 7 Aug | 55,768 | 661,881 | 16,507 | 371,658 | 6,972 | 49,561 | 678 | 16,750 | 538 | 22,522 | 1,499 | 15,082 |
| 8 Aug | 11,146 | 673,027 | 6,822 | 378,480 | 2,363 | 51,924 | 454 | 17,204 | 185 | 22,707 | 1,597 | 16,679 |
| 9 Aug | 14,372 | 687,399 | 4,224 | 382,704 | 687 | 52,611 | 531 | 17,735 | 100 | 22,807 | 1,345 | 18,024 |
| 10 Aug | 14,265 | 701,664 | 2,958 | 385,662 | 623 | 53,234 | 710 | 18,445 | 289 | 23,096 | 955 | 18,979 |
| 11 Aug | 25,908 | 727,572 | 2,512 | 388,174 | 2,142 | 55,376 | 693 | 19,138 | 152 | 23,248 | 1,038 | 20,017 |
| 12 Aug | 40,048 | 767,620 | 1,236 | 389,410 | 2,109 | 57,485 | 730 | 19,868 | 196 | 23,444 | 1,550 | 21,567 |
| 13 Aug | 16,205 | 783,825 | 3,651 | 393,061 | 2,849 | 60,334 | 569 | 20,437 | | | 592 | 22,159 |
| 14 Aug | 6,692 | 790,517 | 1,227 | 394,288 | 1,714 | 62,048 | | | | | 615 | 22,774 |
| 15 Aug | 12,195 | 802,712 | | | 1,629 | 63,677 | | | | | 791 | 23,565 |

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Appendix A2.–Page 3 of 3.

| | Kenai River | | Kasilof River | | Fish Creek | | Chelatna Lake | | Judd Lake | | Larson Lake | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum |
| 16 Aug | 18,030 | 820,742 | | | 301 | 63,978 | | | | | 757 | 24,322 |
| 17 Aug | 23,004 | 843,746 | | | 1,973 | 65,951 | | | | | 669 | 24,991 |
| 18 Aug | 26,642 | 870,388 | | | 354 | 66,305 | | | | | 789 | 25,780 |
| 19 Aug | 28,742 | 899,130 | | | 1,271 | 67,576 | | | | | 630 | 26,410 |
| 20 Aug | 27,787 | 926,917 | | | 254 | 67,830 | | | | | 758 | 27,168 |
| 21 Aug | 17,005 | 943,922 | | | 1,241 | 69,071 | | | | | 862 | 28,030 |
| 22 Aug | 6,532 | 950,454 | | | 608 | 69,679 | | | | | 365 | 28,395 |
| 23 Aug | 28,895 | 979,349 | | | 355 | 70,034 | | | | | 279 | 28,674 |
| 24 Aug | 17,189 | 996,538 | | | 469 | 70,503 | | | | | 298 | 28,972 |
| 25 Aug | 19,651 | 1,016,189 | | | 301 | 70,804 | | | | | 366 | 29,338 |
| 26 Aug | 7,795 | 1,023,984 | | | 175 | 70,979 | | | | | 501 | 29,839 |
| 27 Aug | 9,351 | 1,033,335 | | | 179 | 71,158 | | | | | 428 | 30,267 |
| 28 Aug | 1,436 | 1,034,771 | | | | | | | | | 416 | 30,683 |
| 29 Aug | | | | | | | | | | | | |
| 30 Aug | | | | | | | | | | | | |
| 31 Aug | | | | | | | | | | | | |
| 1 Sep | | | | | | | | | | | | |
| 2 Sep | | | | | | | | | | | | |
| 3 Sep | | | | | | | | | | | | |
| 4 Sep | | | | | | | | | | | | |
| 5 Sep | | | | | | | | | | | | |
| 6 Sep | | | | | | | | | | | | |
| 7 Sep | | | | | | | | | | | | |
| 8 Sep | | | | | | | | | | | | |
| 9 Sep | | | | | | | | | | | | |
| 10 Sep | | | | | | | | | | | | |
| 11 Sep | | | | | | | | | | | | |
| 12 Sep | | | | | | | | | | | | |
| 13 Sep | | | | | | | | | | | | |
| 14 Sep | | | | | | | | | | | | |
| 15 Sep | | | | | | | | | | | | |
| 16 Sep | | | | | | | | | | | | |

*Note:* Days without data indicate time periods where the projects were not operational.

Appendix A3.–Commercial Chinook salmon harvest by area and date, Upper Cook Inlet, 2018.

| Upper Subdistrict set gillnet | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 244-21 Ninilchik | | 244-22 Cohoe | | 244-25 KRSHA | | 244-31 South K-Beach | | 244-32 North K-Beach | | 244-41 Salamatof | | 244-42 E. Forelands | | Total | |
| Date | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum |
| 25 Jun | 27 | 27 | 24 | 24 | | 0 | 8 | 8 | | 0 | | 0 | | 0 | 59 | 59 |
| 28 Jun | 31 | 58 | 81 | 105 | | 0 | 19 | 27 | | 0 | | 0 | | 0 | 131 | 190 |
| 30 Jun | 45 | 103 | 70 | 175 | | 0 | 18 | 45 | | 0 | | 0 | | 0 | 133 | 323 |
| 4 Jul | 74 | 177 | 105 | 280 | | 0 | 57 | 102 | | 0 | | 0 | | 0 | 236 | 559 |
| 7 Jul | 55 | 232 | 39 | 319 | | 0 | 36 | 138 | | 0 | | 0 | | 0 | 130 | 689 |
| 9 Jul | 36 | 268 | 54 | 373 | | 0 | 49 | 187 | 51 | 51 | 102 | 102 | 6 | 6 | 298 | 987 |
| 12 Jul | 25 | 293 | 62 | 435 | | 0 | 87 | 274 | 177 | 228 | 110 | 212 | 4 | 10 | 465 | 1,452 |
| 14 Jul | 38 | 331 | 63 | 498 | | 0 | 37 | 311 | | 228 | | 212 | | 10 | 138 | 1,590 |
| 16 Jul | | 331 | | 498 | | 0 | | 311 | | 228 | | 212 | 17 | 27 | 17 | 1,607 |
| 18 Jul | 2 | 333 | 19 | 517 | | 0 | 11 | 322 | | 228 | | 212 | | 27 | 32 | 1,639 |
| 19 Jul | 38 | 371 | 46 | 563 | | 0 | 41 | 363 | 5 | 233 | | 212 | | 27 | 130 | 1,769 |
| 21 Jul | 34 | 405 | 25 | 588 | | 0 | 24 | 387 | 6 | 239 | | 212 | | 27 | 89 | 1,858 |
| 22 Jul | 10 | 415 | 5 | 593 | | 0 | 12 | 399 | | 239 | | 212 | | 27 | 27 | 1,885 |
| 23 Jul | 27 | 442 | 26 | 619 | | 0 | 40 | 439 | 59 | 298 | 196 | 408 | 5 | 32 | 353 | 2,238 |
| 26 Jul | 7 | 449 | 6 | 625 | | 0 | 7 | 446 | | 298 | | 408 | | 32 | 20 | 2,258 |
| 28 Jul | 10 | 459 | 11 | 636 | | 0 | 4 | 450 | | 298 | | 408 | | 32 | 25 | 2,283 |
| 7 Aug | | 459 | | 636 | 1 | 1 | | 450 | | 298 | | 408 | | 32 | 1 | 2,284 |
| 8 Aug | | 459 | | 636 | 2 | 3 | | 450 | | 298 | | 408 | | 32 | 2 | 2,286 |
| 9 Aug | | 459 | | 636 | 7 | 10 | | 450 | | 298 | | 408 | | 32 | 7 | 2,293 |
| 10 Aug | | 459 | | 636 | 8 | 18 | | 450 | | 298 | | 408 | | 32 | 8 | 2,301 |
| 11 Aug | | 459 | | 636 | 4 | 22 | | 450 | | 298 | | 408 | | 32 | 4 | 2,305 |
| 12 Aug | | 459 | | 636 | 6 | 28 | | 450 | | 298 | | 408 | | 32 | 6 | 2,311 |

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Appendix A3.–Page 2 of 4.

Central District – west side set gillnet

| | 245-10 Chinitna Bay | | 245-20 Silver Salmon | | 245-30 Tuxedni Bay | | 245-40 Polly Creek | | 245-50 Little Jack Slough | | 245-55 Big River | | 245-60 West Forelands | | 246-10 Kalgin – West | | 246-20 Kalgin – East | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 1 Jun | | 0 | | 0 | | 0 | | 0 | | 0 | 6 | 6 | | 0 | 79 | 79 | | 0 | 85 | 85 |
| 4 Jun | | 0 | | 0 | | 0 | | 0 | | 0 | 4 | 10 | | 0 | 11 | 90 | | 0 | 15 | 100 |
| 6 Jun | | 0 | | 0 | | 0 | | 0 | | 0 | 16 | 26 | | 0 | 28 | 118 | | 0 | 44 | 144 |
| 8 Jun | | 0 | | 0 | | 0 | | 0 | | 0 | 18 | 44 | | 0 | 79 | 197 | | 0 | 97 | 241 |
| 11 Jun | | 0 | | 0 | | 0 | | 0 | | 0 | 8 | 52 | | 0 | 32 | 229 | | 0 | 40 | 281 |
| 13 Jun | | 0 | | 0 | | 0 | | 0 | | 0 | 2 | 54 | | 0 | 31 | 260 | | 0 | 33 | 314 |
| 15 Jun | | 0 | | 0 | | 0 | | 0 | | 0 | | 54 | | 0 | 2 | 262 | | 0 | 2 | 316 |
| 18 Jun | | 0 | | 0 | 2 | 2 | | 0 | | 0 | 4 | 58 | | 0 | 3 | 265 | | 0 | 9 | 325 |
| 20 Jun | | 0 | | 0 | | 2 | | 0 | | 0 | 2 | 60 | | 0 | 9 | 274 | | 0 | 11 | 336 |
| 21 Jun | | 0 | | 0 | 4 | 6 | | 0 | | 0 | | 60 | | 0 | | 274 | | 0 | 4 | 340 |
| 22 Jun | | 0 | | 0 | | 6 | | 0 | | 0 | | 60 | | 0 | 1 | 275 | | 0 | 1 | 341 |
| 25 Jun | | 0 | | 0 | 13 | 19 | | 0 | | 0 | | 60 | | 0 | 7 | 282 | 2 | 2 | 22 | 363 |
| 28 Jun | | 0 | | 0 | 6 | 25 | | 0 | | 0 | | 60 | | 0 | 4 | 286 | | 2 | 10 | 373 |
| 2 Jul | | 0 | | 0 | 16 | 41 | | 0 | | 0 | | 60 | | 0 | 4 | 290 | 2 | 4 | 22 | 395 |
| 5 Jul | | 0 | | 0 | 9 | 50 | | 0 | | 0 | | 60 | | 0 | 3 | 293 | 1 | 5 | 13 | 408 |
| 7 Jul | | 0 | | 0 | 5 | 55 | | 0 | | 0 | | 60 | | 0 | | 293 | | 5 | 5 | 413 |
| 9 Jul | | 0 | | 0 | 1 | 56 | | 0 | | 0 | | 60 | | 0 | 5 | 298 | 2 | 7 | 8 | 421 |
| 12 Jul | | 0 | | 0 | 2 | 58 | | 0 | | 0 | | 60 | | 0 | 2 | 300 | | 7 | 4 | 425 |
| 16 Jul | | 0 | | 0 | 1 | 59 | | 0 | | 0 | | 60 | | 0 | 6 | 306 | | 7 | 7 | 432 |
| 19 Jul | | 0 | | 0 | | 59 | | 0 | | 0 | | 60 | | 0 | 2 | 308 | | 7 | 2 | 434 |
| 23 Jul | | 0 | | 0 | 2 | 61 | | 0 | | 0 | | 60 | | 0 | 4 | 312 | | 7 | 6 | 440 |
| 26 Jul | | 0 | | 0 | | 61 | | 0 | | 0 | | 60 | | 0 | 2 | 314 | | 7 | 2 | 442 |
| 30 Jul | | 0 | | 0 | | 61 | | 0 | | 0 | | 60 | | 0 | 1 | 315 | | 7 | 1 | 443 |
| 2 Aug | | 0 | | 0 | 1 | 62 | | 0 | | 0 | | 60 | | 0 | | 315 | | 7 | 1 | 444 |
| 9 Aug | | 0 | | 0 | 1 | 63 | | 0 | | 0 | | 60 | | 0 | 2 | 317 | | 7 | 3 | 447 |

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Appendix A3.–Page 3 of 4.

Northern District set gillnet

| | 247-10 Trading Bay | | 247-20 Tyonek | | 247-30 Beluga | | 247-41 Susitna Flats | | 247-42 Pt. McKenzie | | 247-43 Fire Island | | 247-70 Point Possession | | 247-80 Birch Hill | | 247-90 #3 Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 28 Jun | 13 | 13 | 12 | 12 | | 0 | | 0 | | 0 | | 0 | 9 | 9 | 4 | 4 | 5 | 5 | 43 | 43 |
| 2 Jul | 1 | 14 | 22 | 34 | | 0 | | 0 | 1 | 1 | 1 | 1 | 2 | 11 | 2 | 6 | 2 | 7 | 31 | 74 |
| 5 Jul | 1 | 15 | 8 | 42 | 2 | 2 | | 0 | 2 | 3 | 1 | 2 | 7 | 18 | 1 | 7 | 3 | 10 | 25 | 99 |
| 9 Jul | 7 | 22 | 5 | 47 | | 2 | | 0 | | 3 | | 2 | | 18 | 3 | 10 | | 10 | 15 | 114 |
| 12 Jul | | 22 | 1 | 48 | 2 | 4 | | 0 | 1 | 4 | 2 | 4 | | 18 | 1 | 11 | | 10 | 7 | 121 |
| 16 Jul | | 22 | | 48 | 6 | 10 | | 0 | 2 | 6 | 1 | 5 | | 18 | 1 | 12 | | 10 | 10 | 131 |
| 19 Jul | | 22 | | 48 | | 10 | | 0 | | 6 | | 5 | | 18 | | 12 | 1 | 11 | 1 | 132 |
| 23 Jul | | 22 | | 48 | | 10 | | 0 | 1 | 7 | 1 | 6 | | 18 | | 12 | 1 | 12 | 3 | 135 |
| 26 Jul | | 22 | | 48 | | 10 | | 0 | | 7 | | 6 | 1 | 19 | | 12 | | 12 | 1 | 136 |
| 2 Aug | | 22 | | 48 | | 10 | | 0 | | 7 | 1 | 7 | 1 | 20 | | 12 | | 12 | 2 | 138 |
| 9 Aug | 1 | 23 | | 48 | 1 | 11 | 1 | 1 | | 7 | | 7 | 1 | 21 | | 12 | | 12 | 4 | 142 |
| 30 Aug | | 23 | | 48 | | 11 | | 1 | | 7 | | 7 | | 21 | | 12 | 1 | 13 | 1 | 143 |

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Central District drift gillnet

| | | 244-26 Kasilof SHA | | 244-57 Exp. Ken/Kas & AP[a] | | 244-60 District wide | | 244-61 Kasilof Section | | 245-10 Chinitna Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Deliveries | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum |
| 21 Jun | 4 | | | | | 5 | | | | | | 5 | 5 |
| 25 Jun | 19 | | | | | 26 | | | | | | 26 | 31 |
| 28 Jun | 16 | | | | | 22 | | | | | | 22 | 53 |
| 30 Jun | 2 | | | | | | | 3 | | | | 3 | 56 |
| 2 Jul | 65 | | | | | 90 | | | | | | 90 | 146 |
| 4 Jul | 2 | | | | | | | 2 | | | | 2 | 148 |
| 5 Jul | 82 | | | | | 163 | | | | | | 163 | 311 |
| 7 Jul | 3 | | | | | | | 3 | | | | 3 | 314 |
| 9 Jul | 59 | | | | | 94 | | | | | | 94 | 408 |
| 12 Jul | 31 | | | | | 40 | | | | | | 40 | 448 |
| 16 Jul | 24 | | | 36 | | | | | | | | 36 | 484 |
| 23 Jul | 7 | | | | | 8 | | | | | | 8 | 492 |
| 7 Aug | 3 | | | | | 3 | | | | | | 3 | 495 |
| 8 Aug | 2 | 3 | | | | | | | | | | 3 | 498 |
| 9 Aug | 2 | 1 | | | | 1 | | | | | | 2 | 500 |
| 16 Aug | 1 | | | | | 1 | | | | | | 1 | 501 |
| 20 Aug | 1 | | | | | 1 | | | | | | 1 | 502 |
| 23 Aug | 1 | | | | | 1 | | | | | | 1 | 503 |

*Note:* Days without data indicate days when there was no harvest.

[a] Statistical area 244-57 is composed of the Expanded Kenai (244-52), Expanded Kasilof (244-62), and Anchor Point (244-63) sections.

Appendix A4.–Commercial sockeye salmon harvest by area and date, Upper Cook Inlet, 2018.

| Upper Subdistrict set gillnet | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 244-21 Ninilchik | | 244-22 Cohoe | | 244-25 KRSHA | | 244-31 South K-Beach | | 244-32 North K-Beach | | 244-41 Salamatof | | 244-42 E. Forelands | | Total | |
| Date | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum |
| 25 Jun | 7,341 | 7,341 | 2,657 | 2,657 | | 0 | 1,568 | 1,568 | | 0 | | 0 | | 0 | 11,566 | 11,566 |
| 28 Jun | 7,283 | 14,624 | 3,035 | 5,692 | | 0 | 1,464 | 3,032 | | 0 | | 0 | | 0 | 11,782 | 23,348 |
| 30 Jun | 5,695 | 20,319 | 3,375 | 9,067 | | 0 | 3,121 | 6,153 | | 0 | | 0 | | 0 | 12,191 | 35,539 |
| 4 Jul | 9,652 | 29,971 | 5,663 | 14,730 | | 0 | 4,655 | 10,808 | | 0 | | 0 | | 0 | 19,970 | 55,509 |
| 7 Jul | 4,391 | 34,362 | 1,988 | 16,718 | | 0 | 2,532 | 13,340 | | 0 | | 0 | | 0 | 8,911 | 64,420 |
| 9 Jul | 5,675 | 40,037 | 2,521 | 19,239 | | 0 | 1,819 | 15,159 | 1,184 | 1,184 | 2,582 | 2,582 | 1,056 | 1,056 | 14,837 | 79,257 |
| 12 Jul | 10,726 | 50,763 | 14,737 | 33,976 | | 0 | 7,954 | 23,113 | 6,277 | 7,461 | 19,376 | 21,958 | 4,958 | 6,014 | 64,028 | 143,285 |
| 14 Jul | 4,504 | 55,267 | 5,535 | 39,511 | | 0 | 2,904 | 26,017 | | 7,461 | | 21,958 | | 6,014 | 12,943 | 156,228 |
| 16 Jul | | 55,267 | | 39,511 | | 0 | | 26,017 | | 7,461 | | 21,958 | 1,939 | 7,953 | 1,939 | 158,167 |
| 18 Jul | 2,654 | 57,921 | 5,380 | 44,891 | | 0 | 4,394 | 30,411 | | 7,461 | | 21,958 | | 7,953 | 12,428 | 170,595 |
| 19 Jul | 6,905 | 64,826 | 17,663 | 62,554 | | 0 | 8,504 | 38,915 | 6,885 | 14,346 | | 21,958 | | 7,953 | 39,957 | 210,552 |
| 21 Jul | 7,585 | 72,411 | 4,711 | 67,265 | | 0 | 3,037 | 41,952 | 2,172 | 16,518 | | 21,958 | | 7,953 | 17,505 | 228,057 |
| 22 Jul | 3,490 | 75,901 | 1,636 | 68,901 | | 0 | 2,588 | 44,540 | | 16,518 | | 21,958 | | 7,953 | 7,714 | 235,771 |
| 23 Jul | 5,469 | 81,370 | 2,367 | 71,268 | | 0 | 2,240 | 46,780 | 2,595 | 19,113 | 15,018 | 36,976 | 3,713 | 11,666 | 31,402 | 267,173 |
| 26 Jul | 2,408 | 83,778 | 2,153 | 73,421 | | 0 | 2,083 | 48,863 | | 19,113 | | 36,976 | | 11,666 | 6,644 | 273,817 |
| 28 Jul | 1,718 | 85,496 | 1,405 | 74,826 | | 0 | 1,491 | 50,354 | | 19,113 | | 36,976 | | 11,666 | 4,614 | 278,431 |
| 7 Aug | | 85,496 | | 74,826 | 62 | 62 | | 50,354 | | 19,113 | | 36,976 | | 11,666 | 62 | 278,493 |
| 8 Aug | | 85,496 | | 74,826 | 1,315 | 1,377 | | 50,354 | | 19,113 | | 36,976 | | 11,666 | 1,315 | 279,808 |
| 9 Aug | | 85,496 | | 74,826 | 3,855 | 5,232 | | 50,354 | | 19,113 | | 36,976 | | 11,666 | 3,855 | 283,663 |
| 10 Aug | | 85,496 | | 74,826 | 2,642 | 7,874 | | 50,354 | | 19,113 | | 36,976 | | 11,666 | 2,642 | 286,305 |
| 11 Aug | | 85,496 | | 74,826 | 1,965 | 9,839 | | 50,354 | | 19,113 | | 36,976 | | 11,666 | 1,965 | 288,270 |
| 12 Aug | | 85,496 | | 74,826 | 1,571 | 11,410 | | 50,354 | | 19,113 | | 36,976 | | 11,666 | 1,571 | 289,841 |

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Appendix A4.–Page 2 of 6.

Central District - west side set gillnet

| | 245-10 Chinitna Bay | | 245-30 Tuxedni Bay | | 245-50 L. J. Slough[a] | | 245-55 Big River | | 245-60 W. Forelands | | 246-10 Kalgin – West | | 246-20 Kalgin – East | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 1 Jun | | 0 | | 0 | | 0 | 127 | 127 | | 0 | 491 | 491 | | 0 | 618 | 618 |
| 4 Jun | | 0 | | 0 | | 0 | 42 | 169 | | 0 | 126 | 617 | | 0 | 168 | 786 |
| 6 Jun | | 0 | | 0 | | 0 | 104 | 273 | | 0 | 224 | 841 | | 0 | 328 | 1,114 |
| 8 Jun | | 0 | | 0 | | 0 | 180 | 453 | | 0 | 380 | 1,221 | | 0 | 560 | 1,674 |
| 11 Jun | | 0 | | 0 | | 0 | 224 | 677 | | 0 | 370 | 1,591 | | 0 | 594 | 2,268 |
| 13 Jun | | 0 | | 0 | | 0 | 152 | 829 | | 0 | 617 | 2,208 | | 0 | 769 | 3,037 |
| 15 Jun | | 0 | | 0 | | 0 | 96 | 925 | | 0 | 125 | 2,333 | | 0 | 221 | 3,258 |
| 18 Jun | | 0 | 114 | 114 | | 0 | 219 | 1,144 | | 0 | 151 | 2,484 | | 0 | 484 | 3,742 |
| 20 Jun | | 0 | | 114 | | 0 | 166 | 1,310 | | 0 | 791 | 3,275 | | 0 | 957 | 4,699 |
| 21 Jun | | 0 | 1,016 | 1,130 | | 0 | | 1,310 | | 0 | | 3,275 | | 0 | 1,016 | 5,715 |
| 22 Jun | | 0 | | 1,130 | | 0 | | 1,310 | | 0 | 279 | 3,554 | | 0 | 279 | 5,994 |
| 25 Jun | | 0 | 1,973 | 3,103 | 64 | 64 | | 1,310 | | 0 | 758 | 4,312 | 353 | 353 | 3,148 | 9,142 |
| 28 Jun | | 0 | 2,377 | 5,480 | 15 | 79 | | 1,310 | | 0 | 736 | 5,048 | 155 | 508 | 3,283 | 12,425 |
| 2 Jul | | 0 | 1,905 | 7,385 | 46 | 125 | | 1,310 | | 0 | 1,422 | 6,470 | 308 | 816 | 3,681 | 16,106 |
| 5 Jul | | 0 | 2,176 | 9,561 | | 125 | | 1,310 | | 0 | 1,866 | 8,336 | 371 | 1,187 | 4,413 | 20,519 |
| 7 Jul | | 0 | 2,884 | 12,445 | | 125 | | 1,310 | | 0 | | 8,336 | | 1,187 | 2,884 | 23,403 |
| 9 Jul | | 0 | 1,242 | 13,687 | 65 | 190 | | 1,310 | | 0 | 797 | 9,133 | 430 | 1,617 | 2,534 | 25,937 |
| 12 Jul | | 0 | 1,437 | 15,124 | 114 | 304 | | 1,310 | | 0 | 799 | 9,932 | 267 | 1,884 | 2,617 | 28,554 |

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Appendix A4.–Page 3 of 6.

Central District - west side set gillnet

| | 245-10 Chinitna Bay | | 245-30 Tuxedni Bay | | 245-50 L. J. Slough[a] | | 245-55 Big River | | 245-60 W. Forelands | | 246-10 Kalgin – West | | 246-20 Kalgin – East | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 14 Jul | | 0 | 1,963 | 17,087 | | 304 | | 1,310 | | 0 | | 9,932 | | 1,884 | 1,963 | 30,517 |
| 16 Jul | | 0 | 1,193 | 18,280 | 353 | 657 | | 1,310 | | 0 | 2,095 | 12,027 | 248 | 2,132 | 3,889 | 34,406 |
| 19 Jul | | 0 | 3,015 | 21,295 | 482 | 1,139 | | 1,310 | 357 | 357 | 3,993 | 16,020 | 749 | 2,881 | 8,596 | 43,002 |
| 21 Jul | | 0 | 2,323 | 23,618 | | 1,139 | | 1,310 | | 357 | | 16,020 | | 2,881 | 2,323 | 45,325 |
| 23 Jul | | 0 | 1,805 | 25,423 | 409 | 1,548 | | 1,310 | 119 | 476 | 2,572 | 18,592 | 817 | 3,698 | 5,722 | 51,047 |
| 26 Jul | | 0 | 1,493 | 26,916 | 321 | 1,869 | | 1,310 | 498 | 974 | 3,238 | 21,830 | 1,295 | 4,993 | 6,845 | 57,892 |
| 28 Jul | | 0 | 1,289 | 28,205 | | 1,869 | | 1,310 | | 974 | | 21,830 | | 4,993 | 1,289 | 59,181 |
| 30 Jul | 1 | 1 | 964 | 29,169 | 482 | 2,351 | | 1,310 | 561 | 1,535 | 1,777 | 23,607 | 581 | 5,574 | 4,366 | 63,547 |
| 2 Aug | | 1 | 1,263 | 30,432 | 302 | 2,653 | | 1,310 | 43 | 1,578 | 1,053 | 24,660 | 703 | 6,277 | 3,364 | 66,911 |
| 3 Aug | | 1 | | 30,432 | | 2,653 | | 1,310 | | 1,578 | 31 | 24,691 | | 6,277 | 31 | 66,942 |
| 4 Aug | | 1 | 1,453 | 31,885 | | 2,653 | | 1,310 | | 1,578 | | 24,691 | | 6,277 | 1,453 | 68,395 |
| 6 Aug | 2 | 3 | 321 | 32,206 | 238 | 2,891 | | 1,310 | | 1,578 | 1,020 | 25,711 | 215 | 6,492 | 1,796 | 70,191 |
| 9 Aug | 3 | 6 | 375 | 32,581 | 173 | 3,064 | | 1,310 | | 1,578 | 1,088 | 26,799 | 473 | 6,965 | 2,112 | 72,303 |
| 13 Aug | 3 | 9 | | 32,581 | | 3,064 | | 1,310 | | 1,578 | | 26,799 | | 6,965 | 3 | 72,306 |
| 16 Aug | | 9 | | 32,581 | 145 | 3,209 | | 1,310 | | 1,578 | 1,429 | 28,228 | 415 | 7,380 | 1,989 | 74,295 |
| 20 Aug | 4 | 13 | | 32,581 | 51 | 3,260 | | 1,310 | | 1,578 | 12 | 28,240 | 236 | 7,616 | 303 | 74,598 |
| 23 Aug | | 13 | | 32,581 | | 3,260 | | 1,310 | 54 | 1,632 | | 28,240 | 139 | 7,755 | 193 | 74,791 |
| 27 Aug | | 13 | | 32,581 | | 3,260 | | 1,310 | 54 | 1,686 | | 28,240 | 75 | 7,830 | 129 | 74,920 |
| 30 Aug | | 13 | | 32,581 | | 3,260 | | 1,310 | | 1,686 | | 28,240 | 70 | 7,900 | 70 | 74,990 |
| 3 Sep | | 13 | | 32,581 | | 3,260 | | 1,310 | | 1,686 | | 28,240 | 118 | 8,018 | 118 | 75,108 |
| 6 Sep | | 13 | | 32,581 | | 3,260 | | 1,310 | | 1,686 | | 28,240 | 56 | 8,074 | 56 | 75,164 |
| 10 Sep | | 13 | | 32,581 | | 3,260 | | 1,310 | | 1,686 | | 28,240 | 12 | 8,086 | 12 | 75,176 |
| 13 Sep | | 13 | | 32,581 | | 3,260 | | 1,310 | | 1,686 | | 28,240 | 12 | 8,098 | 12 | 75,188 |
| 17 Sep | | 13 | | 32,581 | | 3,260 | | 1,310 | | 1,686 | | 28,240 | 29 | 8,127 | 29 | 75,217 |

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Appendix A4.–Page 4 of 6.

Northern District Set Gillnet

| | 247-10 Trading Bay | | 247-20 Tyonek | | 247-30 Beluga | | 247-41 Su. Flats | | 247-42 Pt. McKenzie | | 247-43 Fire Island | | 247-70 Pt. Possesion | | 247-80 Birch Hill | | 247-90 #3 Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 28-Jun | 8 | 8 | 42 | 42 | | 0 | | 0 | | 0 | | 0 | 184 | 184 | 99 | 99 | 204 | 204 | 537 | 537 |
| 2-Jul | 55 | 63 | 341 | 383 | | 0 | | 0 | 34 | 34 | 25 | 25 | 765 | 949 | 346 | 445 | 419 | 623 | 1,985 | 2,522 |
| 5-Jul | 104 | 167 | 830 | 1,213 | 18 | 18 | | 0 | 61 | 95 | 31 | 56 | 1,582 | 2,531 | 603 | 1,048 | 419 | 1,042 | 3,648 | 6,170 |
| 9-Jul | 173 | 340 | 321 | 1,534 | 6 | 24 | 17 | 17 | 184 | 279 | | 56 | 946 | 3,477 | 811 | 1,859 | 138 | 1,180 | 2,596 | 8,766 |
| 12-Jul | 96 | 436 | 1,171 | 2,705 | 78 | 102 | 137 | 154 | 339 | 618 | 284 | 340 | 327 | 3,804 | 791 | 2,650 | 663 | 1,843 | 3,886 | 12,652 |
| 16-Jul | 19 | 455 | 410 | 3,115 | 475 | 577 | 148 | 302 | 728 | 1,346 | 485 | 825 | 581 | 4,385 | 243 | 2,893 | 278 | 2,121 | 3,367 | 16,019 |
| 19-Jul | 467 | 922 | 553 | 3,668 | 890 | 1,467 | 295 | 597 | 216 | 1,562 | 109 | 934 | 1,027 | 5,412 | 984 | 3,877 | 1,374 | 3,495 | 5,915 | 21,934 |
| 23-Jul | 275 | 1,197 | 488 | 4,156 | 1,163 | 2,630 | 401 | 998 | 478 | 2,040 | 331 | 1,265 | 956 | 6,368 | 1,080 | 4,957 | 687 | 4,182 | 5,859 | 27,793 |
| 26-Jul | 479 | 1,676 | 295 | 4,451 | 231 | 2,861 | 196 | 1,194 | 828 | 2,868 | 220 | 1,485 | 983 | 7,351 | 970 | 5,927 | 1,051 | 5,233 | 5,253 | 33,046 |
| 30-Jul | 435 | 2,111 | 591 | 5,042 | 635 | 3,496 | 262 | 1,456 | 552 | 3,420 | 318 | 1,803 | 664 | 8,015 | 545 | 6,472 | 502 | 5,735 | 4,504 | 37,550 |
| 2-Aug | 284 | 2,395 | 183 | 5,225 | 258 | 3,754 | 255 | 1,711 | 641 | 4,061 | 281 | 2,084 | 943 | 8,958 | 1,096 | 7,568 | 896 | 6,631 | 4,837 | 42,387 |
| 6-Aug | 16 | 2,411 | 94 | 5,319 | | 3,754 | 8 | 1,719 | 627 | 4,688 | 143 | 2,227 | 612 | 9,570 | 677 | 8,245 | 765 | 7,396 | 2,942 | 45,329 |
| 9-Aug | 112 | 2,523 | 195 | 5,514 | 124 | 3,878 | 343 | 2,062 | 1,040 | 5,728 | 279 | 2,506 | 353 | 9,923 | 433 | 8,678 | 393 | 7,789 | 3,272 | 48,601 |
| 13-Aug | | 2,523 | 5 | 5,519 | | 3,878 | 6 | 2,068 | 214 | 5,942 | | 2,506 | | 9,923 | 10 | 8,688 | 9 | 7,798 | 244 | 48,845 |
| 16-Aug | 242 | 2,765 | 170 | 5,689 | | 3,878 | | 2,068 | 144 | 6,086 | 230 | 2,736 | 187 | 10,110 | 251 | 8,939 | 412 | 8,210 | 1,636 | 50,481 |
| 20-Aug | 180 | 2,945 | 45 | 5,734 | | 3,878 | | 2,068 | 37 | 6,123 | 32 | 2,768 | 213 | 10,323 | 115 | 9,054 | 168 | 8,378 | 790 | 51,271 |
| 23-Aug | 11 | 2,956 | 63 | 5,797 | | 3,878 | 6 | 2,074 | 3 | 6,126 | | 2,768 | 146 | 10,469 | 171 | 9,225 | 161 | 8,539 | 561 | 51,832 |
| 27-Aug | 6 | 2,962 | | 5,797 | | 3,878 | | 2,074 | | 6,126 | | 2,768 | 175 | 10,644 | 101 | 9,326 | 224 | 8,763 | 506 | 52,338 |
| 30-Aug | 6 | 2,968 | 2 | 5,799 | | 3,878 | | 2,074 | 2 | 6,128 | | 2,768 | 27 | 10,671 | 39 | 9,365 | 56 | 8,819 | 132 | 52,470 |
| 3-Sep | 4 | 2,972 | | 5,799 | | 3,878 | | 2,074 | | 6,128 | | 2,768 | 14 | 10,685 | 16 | 9,381 | 28 | 8,847 | 62 | 52,532 |
| 6-Sep | | 2,972 | | 5,799 | | 3,878 | | 2,074 | | 6,128 | | 2,768 | 3 | 10,688 | 8 | 9,389 | 9 | 8,856 | 20 | 52,552 |

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Appendix A4.–Page 5 of 6.

Central District drift gillnet

| | | 244-26 Kasilof SHA | | 244-57 Exp. Ken/Kas & AP[b] | | 244-60 District Wide | | 244-61 Kasilof Section | | 245-10 Chinitna Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Deliveries | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 21 Jun | 52 | | 0 | | 0 | 1,208 | 1,208 | | 0 | | 0 | 1,208 | 1,208 |
| 25 Jun | 99 | | 0 | | 0 | 5,008 | 6,216 | | 0 | | 0 | 5,008 | 6,216 |
| 28 Jun | 165 | | 0 | | 0 | 15,268 | 21,484 | | 0 | | 0 | 15,268 | 21,484 |
| 30 Jun | 13 | | 0 | | 0 | | 21,484 | 189 | 189 | | 0 | 189 | 21,673 |
| 2 Jul | 275 | | 0 | | 0 | 36,424 | 57,908 | | 189 | | 0 | 36,424 | 58,097 |
| 4 Jul | 8 | | 0 | | 0 | | 57,908 | 100 | 289 | | 0 | 100 | 58,197 |
| 5 Jul | 307 | | 0 | | 0 | 51,885 | 109,793 | | 289 | | 0 | 51,885 | 110,082 |
| 7 Jul | 4 | | 0 | | 0 | | 109,793 | 108 | 397 | | 0 | 108 | 110,190 |
| 9 Jul | 338 | | 0 | | 0 | 78,474 | 188,267 | | 397 | | 0 | 78,474 | 188,664 |
| 12 Jul | 276 | | 0 | | 0 | 89,824 | 278,091 | | 397 | | 0 | 89,824 | 278,488 |
| 16 Jul | 350 | | 0 | 81,812 | 81,812 | | 278,091 | | 397 | | 0 | 81,812 | 360,300 |
| 23 Jul | 361 | | 0 | | 81,812 | 33,959 | 312,050 | | 397 | | 0 | 33,959 | 394,259 |
| 7 Aug | 73 | | 0 | | 81,812 | 1,656 | 313,706 | | 397 | | 0 | 1,656 | 395,915 |
| 8 Aug | 35 | 373 | 373 | | 81,812 | 2 | 313,708 | | 397 | | 0 | 375 | 396,290 |
| 9 Aug | 66 | 286 | 659 | | 81,812 | 1,459 | 315,167 | | 397 | | 0 | 1,745 | 398,035 |
| 10 Aug | 2 | 13 | 672 | | 81,812 | | 315,167 | | 397 | | 0 | 13 | 398,048 |
| 11 Aug | 5 | 70 | 742 | | 81,812 | | 315,167 | | 397 | | 0 | 70 | 398,118 |
| 12 Aug | 1 | 1 | 743 | | 81,812 | | 315,167 | | 397 | | 0 | 1 | 398,119 |
| 13 Aug | 1 | | 743 | | 81,812 | 7 | 315,174 | | 397 | | 0 | 7 | 398,126 |
| 16 Aug | 49 | | 743 | | 81,812 | 1,129 | 316,303 | | 397 | | 0 | 1,129 | 399,255 |
| 20 Aug | 30 | | 743 | | 81,812 | 510 | 316,813 | | 397 | | 0 | 510 | 399,765 |

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Central District drift gillnet

| | | 244-26 Kasilof SHA | | 244-57 Exp. Ken/Kas & AP[b] | | 244-60 District Wide | | 244-61 Kasilof Section | | 245-10 Chinitna Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Deliveries | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 23 Aug | 26 | | 743 | | 81,812 | 213 | 317,026 | | 397 | | 0 | 213 | 399,978 |
| 27 Aug | 5 | | 743 | | 81,812 | 61 | 317,087 | | 397 | | 0 | 61 | 400,039 |
| 30 Aug | 10 | | 743 | | 81,812 | 140 | 317,227 | | 397 | | 0 | 140 | 400,179 |
| 31 Aug | 3 | | 743 | | 81,812 | | 317,227 | | 397 | 10 | 10 | 10 | 400,189 |
| 3 Sep | 7 | | 743 | | 81,812 | 32 | 317,259 | | 397 | | 10 | 32 | 400,221 |
| 4 Sep | 6 | | 743 | | 81,812 | | 317,259 | | 397 | 25 | 35 | 25 | 400,246 |
| 6 Sep | 2 | | 743 | | 81,812 | 6 | 317,265 | | 397 | | 35 | 6 | 400,252 |
| 7 Sep | 5 | | 743 | | 81,812 | | 317,265 | | 397 | 18 | 53 | 18 | 400,270 |
| 10 Sep | 2 | | 743 | | 81,812 | 8 | 317,273 | | 397 | | 53 | 8 | 400,278 |
| 11 Sep | 1 | | 743 | | 81,812 | | 317,273 | | 397 | 7 | 60 | 7 | 400,285 |

*Note*: Days without data indicate days when there was no harvest.

[a] "L. J. Slough" = Little Jack Slough.

[b] Statistical area 244-57 is composed of the Expanded Kenai (244-52), Expanded Kasilof (244-62), and Anchor Point (244-63) sections.

Appendix A5.–Commercial coho salmon harvest by area and date, Upper Cook Inlet, 2018.

| Upper Subdistrict set gillnet | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 244-21 Ninilchik | | 244-22 Cohoe | | 244-25 Kasilof SHA | | 244-31 South K-Beach | | 244-32 North K-Beach | | 244-41 Salamatof | | 244-42 E. Foreland | | Total | |
| Date | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum |
| 25 Jun | | 0 | 1 | 1 | | 0 | | 0 | | 0 | | 0 | | 0 | 1 | 1 |
| 28 Jun | 1 | 1 | | 1 | | 0 | | 0 | | 0 | | 0 | | 0 | 1 | 2 |
| 4 Jul | 1 | 2 | 2 | 3 | | 0 | 1 | 1 | | 0 | | 0 | | 0 | 4 | 6 |
| 7 Jul | 4 | 6 | 1 | 4 | | 0 | 1 | 2 | | 0 | | 0 | | 0 | 6 | 12 |
| 9 Jul | 13 | 19 | 9 | 13 | | 0 | 3 | 5 | 5 | 5 | 62 | 62 | 76 | 76 | 168 | 180 |
| 12 Jul | 65 | 84 | 79 | 92 | | 0 | 20 | 25 | 39 | 44 | 200 | 262 | 77 | 153 | 480 | 660 |
| 14 Jul | 11 | 95 | 11 | 103 | | 0 | 2 | 27 | | 44 | | 262 | | 153 | 24 | 684 |
| 16 Jul | | 95 | | 103 | | 0 | | 27 | | 44 | | 262 | 333 | 486 | 333 | 1,017 |
| 18 Jul | 33 | 128 | 8 | 111 | | 0 | 2 | 29 | | 44 | | 262 | | 486 | 43 | 1,060 |
| 19 Jul | 85 | 213 | 59 | 170 | | 0 | 17 | 46 | 11 | 55 | | 262 | | 486 | 172 | 1,232 |
| 21 Jul | 223 | 436 | 93 | 263 | | 0 | 36 | 82 | 22 | 77 | | 262 | | 486 | 374 | 1,606 |
| 22 Jul | 84 | 520 | 65 | 328 | | 0 | 11 | 93 | | 77 | | 262 | | 486 | 160 | 1,766 |
| 23 Jul | 367 | 887 | 104 | 432 | | 0 | 14 | 107 | 25 | 102 | 136 | 398 | 173 | 659 | 819 | 2,585 |
| 26 Jul | 243 | 1,130 | 108 | 540 | | 0 | 13 | 120 | | 102 | | 398 | | 659 | 364 | 2,949 |
| 28 Jul | 292 | 1,422 | 122 | 662 | | 0 | 20 | 140 | | 102 | | 398 | | 659 | 434 | 3,383 |
| 8 Aug | | 1,422 | | 662 | 156 | 156 | | 140 | | 102 | | 398 | | 659 | 156 | 3,539 |
| 9 Aug | | 1,422 | | 662 | 350 | 350 | | 140 | | 102 | | 398 | | 659 | 350 | 3,889 |
| 10 Aug | | 1,422 | | 662 | 318 | 318 | | 140 | | 102 | | 398 | | 659 | 318 | 4,207 |
| 11 Aug | | 1,422 | | 662 | 222 | 222 | | 140 | | 102 | | 398 | | 659 | 222 | 4,429 |
| 12 Aug | | 1,422 | | 662 | 276 | 276 | | 140 | | 102 | | 398 | | 659 | 276 | 4,705 |

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Central District - west side set gillnet

| | 245-10 Chinitna Bay | | 245-20 Silv. Salmon | | 245-30 Tuxedni Bay | | 245-40 Polly Cr. | | 245-50 L. J. Slough[a] | | 245-55 Big River | | 245-60 W. Forelands | | 246-10 Kalgin – West | | 246-20 Kalgin – East | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 28 Jun | | 0 | | 0 | 3 | 3 | | 0 | | 0 | | | | 0 | 12 | 12 | | 0 | 15 | 15 |
| 2 Jul | | 0 | | 0 | 7 | 10 | | 0 | | 0 | | | | 0 | 18 | 30 | 5 | 5 | 30 | 45 |
| 5 Jul | | 0 | | 0 | 11 | 21 | | 0 | | 0 | | | | 0 | 84 | 114 | 29 | 34 | 124 | 169 |
| 7 Jul | | 0 | | 0 | 50 | 71 | | 0 | | 0 | | | | 0 | | 114 | | 34 | 50 | 219 |
| 9 Jul | | 0 | | 0 | 62 | 133 | | 0 | 11 | 11 | | | | 0 | 248 | 362 | 75 | 109 | 396 | 615 |
| 12 Jul | | 0 | | 0 | 160 | 293 | | 0 | 27 | 38 | | | | 0 | 641 | 1,003 | 110 | 219 | 938 | 1,553 |
| 14 Jul | | 0 | | 0 | 340 | 633 | | 0 | | 38 | | | | 0 | | 1,003 | | 219 | 340 | 1,893 |
| 16 Jul | | 0 | | 0 | 380 | 1,013 | | 0 | 80 | 118 | | | | 0 | 1,600 | 2,603 | 335 | 554 | 2,395 | 4,288 |
| 19 Jul | | 0 | | 0 | 553 | 1,566 | | 0 | 84 | 202 | | | 298 | 298 | 920 | 3,523 | 395 | 949 | 2,250 | 6,538 |
| 21 Jul | | 0 | | 0 | 590 | 2,156 | | 0 | | 202 | | | | 298 | | 3,523 | | 949 | 590 | 7,128 |
| 23 Jul | | 0 | | 0 | 889 | 3,045 | | 0 | 179 | 381 | | | 342 | 640 | 6,082 | 9,605 | 1,314 | 2,263 | 8,806 | 15,934 |
| 26 Jul | | 0 | | 0 | 1,377 | 4,422 | | 0 | 943 | 1,324 | | | 1,288 | 1,928 | 7,451 | 17,056 | 1,982 | 4,245 | 13,041 | 28,975 |
| 28 Jul | | 0 | | 0 | 1,485 | 5,907 | | 0 | | 1,324 | | | | 1,928 | | 17,056 | | 4,245 | 1,485 | 30,460 |
| 30 Jul | 73 | 73 | | 0 | 1,529 | 7,436 | | 0 | 862 | 2,186 | | | 340 | 2,268 | 3,484 | 20,540 | 1,110 | 5,355 | 7,398 | 37,858 |
| 2 Aug | | 73 | | 0 | 1,963 | 9,399 | | 0 | 791 | 2,977 | | | 699 | 2,967 | 2,622 | 23,162 | 729 | 6,084 | 6,804 | 44,662 |
| 4 Aug | | 73 | | 0 | 1,291 | 10,690 | | 0 | | 2,977 | | | | 2,967 | | 23,162 | | 6,084 | 1,291 | 45,953 |
| 6 Aug | 72 | 145 | | 0 | 399 | 11,089 | | 0 | 446 | 3,423 | | | | 2,967 | 192 | 23,354 | 36 | 6,120 | 1,145 | 47,098 |
| 9 Aug | 137 | 282 | | 0 | 278 | 11,367 | | 0 | 449 | 3,872 | | | | 2,967 | 668 | 24,022 | 96 | 6,216 | 1,628 | 48,726 |
| 13 Aug | 206 | 488 | | 0 | | 11,367 | | 0 | | 3,872 | | | | 2,967 | | 24,022 | | 6,216 | 206 | 48,932 |
| 16 Aug | | 488 | | 0 | | 11,367 | | 0 | 186 | 4,058 | | | | 2,967 | 306 | 24,328 | 12 | 6,228 | 504 | 49,436 |
| 20 Aug | 189 | 677 | | 0 | | 11,367 | | 0 | 79 | 4,137 | | | | 2,967 | | 24,328 | 58 | 6,286 | 326 | 49,762 |
| 23 Aug | | 677 | | 0 | | 11,367 | | 0 | | 4,137 | | | 62 | 3,029 | | 24,328 | 146 | 6,432 | 208 | 49,970 |
| 27 Aug | 223 | 900 | | 0 | | 11,367 | | 0 | | 4,137 | | | 43 | 3,072 | | 24,328 | 158 | 6,590 | 424 | 50,394 |
| 30 Aug | | 900 | | 0 | | 11,367 | | 0 | | 4,137 | | | | 3,072 | | 24,328 | 220 | 6,810 | 220 | 50,614 |
| 31 Aug | 789 | 1,689 | | 0 | | 11,367 | | 0 | | 4,137 | | | | 3,072 | | 24,328 | | 6,810 | 789 | 51,403 |
| 3 Sep | | 1,689 | | 0 | | 11,367 | | 0 | | 4,137 | | | | 3,072 | | 24,328 | 312 | 7,122 | 312 | 51,715 |
| 4 Sep | 982 | 2,671 | | 0 | | 11,367 | | 0 | | 4,137 | | | | 3,072 | | 24,328 | | 7,122 | 982 | 52,697 |
| 6 Sep | | 2,671 | | 0 | | 11,367 | | 0 | | 4,137 | | | | 3,072 | | 24,328 | 170 | 7,292 | 170 | 52,867 |
| 7 Sep | 492 | 3,163 | | 0 | | 11,367 | | 0 | | 4,137 | | | | 3,072 | | 24,328 | | 7,292 | 492 | 53,359 |
| 10 Sep | | 3,163 | | 0 | | 11,367 | | 0 | | 4,137 | | | | 3,072 | | 24,328 | 128 | 7,420 | 128 | 53,487 |
| 11 Sep | 14 | 3,177 | | 0 | | 11,367 | | 0 | | 4,137 | | | | 3,072 | | 24,328 | | 7,420 | 14 | 53,501 |
| 13 Sep | | 3,177 | | 0 | | 11,367 | | 0 | | 4,137 | | | | 3,072 | | 24,328 | 175 | 7,595 | 175 | 53,676 |
| 17 Sep | | 3,177 | | 0 | | 11,367 | | 0 | | 4,137 | | | | 3,072 | | 24,328 | 182 | 7,777 | 182 | 53,858 |

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Appendix A5.–Page 3 of 4.

Northern District Set Gillnet

| | 247-10 Trading Bay | | 247-20 Tyonek | | 247-30 Beluga | | 247-41 Su. Flats | | 247-42 Pt. McKenzie | | 247-43 Fire Island | | 247-70 Pt. Possession | | 247-80 Birch Hill | | 247-90 #3 Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 28-Jun | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 |
| 2-Jul | | 0 | 18 | 18 | | 0 | | 0 | 3 | 3 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 27 | 28 |
| 5-Jul | 11 | 11 | 70 | 88 | 2 | 2 | 1 | 1 | 2 | 5 | 5 | 6 | 25 | 27 | 12 | 14 | 6 | 8 | 134 | 162 |
| 9-Jul | 127 | 138 | 213 | 301 | 7 | 9 | 82 | 83 | 6 | 11 | | 6 | 108 | 135 | 92 | 106 | 12 | 20 | 647 | 809 |
| 12-Jul | 103 | 241 | 887 | 1,188 | 267 | 276 | 58 | 141 | 113 | 124 | 152 | 158 | 63 | 198 | 76 | 182 | 29 | 49 | 1,748 | 2,557 |
| 16-Jul | 181 | 422 | 994 | 2,182 | 1,558 | 1,834 | 395 | 536 | 207 | 331 | 395 | 553 | 158 | 356 | 57 | 239 | 95 | 144 | 4,040 | 6,597 |
| 19-Jul | 193 | 615 | 966 | 3,148 | 1,478 | 3,312 | 725 | 1,261 | 285 | 616 | 363 | 916 | 430 | 786 | 186 | 425 | 372 | 516 | 4,998 | 11,595 |
| 23-Jul | 325 | 940 | 1,290 | 4,438 | 2,809 | 6,121 | 378 | 1,639 | 849 | 1,465 | 1,086 | 2,002 | 740 | 1,526 | 619 | 1,044 | 101 | 617 | 8,197 | 19,792 |
| 26-Jul | 662 | 1,602 | 1,763 | 6,201 | 3,189 | 9,310 | 443 | 2,082 | 615 | 2,080 | 672 | 2,674 | 1,339 | 2,865 | 729 | 1,773 | 272 | 889 | 9,684 | 29,476 |
| 30-Jul | 177 | 1,779 | 732 | 6,933 | 1,351 | 10,661 | 274 | 2,356 | 773 | 2,853 | 822 | 3,496 | 799 | 3,664 | 464 | 2,237 | 132 | 1,021 | 5,524 | 35,000 |
| 2-Aug | 664 | 2,443 | 1,451 | 8,384 | 1,604 | 12,265 | 72 | 2,428 | 1,047 | 3,900 | 711 | 4,207 | 1,397 | 5,061 | 908 | 3,145 | 902 | 1,923 | 8,756 | 43,756 |
| 6-Aug | 161 | 2,604 | 398 | 8,782 | | 12,265 | 260 | 2,688 | 634 | 4,534 | 374 | 4,581 | 1,043 | 6,104 | 1,164 | 4,309 | 783 | 2,706 | 4,817 | 48,573 |
| 9-Aug | 167 | 2,771 | 521 | 9,303 | 201 | 12,466 | 3 | 2,691 | 888 | 5,422 | 418 | 4,999 | 472 | 6,576 | 1,421 | 5,730 | 528 | 3,234 | 4,619 | 53,192 |
| 13-Aug | | 2,771 | 28 | 9,331 | | 12,466 | | 2,691 | 48 | 5,470 | | 4,999 | | 6,576 | 32 | 5,762 | 12 | 3,246 | 120 | 53,312 |
| 16-Aug | 106 | 2,877 | 332 | 9,663 | | 12,466 | | 2,691 | 66 | 5,536 | 161 | 5,160 | 514 | 7,090 | 3,705 | 9,467 | 1,092 | 4,338 | 5,976 | 59,288 |
| 20-Aug | 224 | 3,101 | 150 | 9,813 | | 12,466 | 5 | 2,696 | 6 | 5,542 | 38 | 5,198 | 307 | 7,397 | 867 | 10,334 | 618 | 4,956 | 2,215 | 61,503 |
| 23-Aug | 37 | 3,138 | 178 | 9,991 | | 12,466 | | 2,696 | 4 | 5,546 | | 5,198 | 423 | 7,820 | 1,792 | 12,126 | 1,147 | 6,103 | 3,581 | 65,084 |
| 27-Aug | 18 | 3,156 | | 9,991 | | 12,466 | | 2,696 | | 5,546 | | 5,198 | 125 | 7,945 | 561 | 12,687 | 370 | 6,473 | 1,074 | 66,158 |
| 30-Aug | 9 | 3,165 | 18 | 10,009 | | 12,466 | | 2,696 | 3 | 5,549 | | 5,198 | 52 | 7,997 | 238 | 12,925 | 114 | 6,587 | 434 | 66,592 |
| 3-Sep | 21 | 3,186 | | 10,009 | | 12,466 | | 2,696 | | 5,549 | | 5,198 | 27 | 8,024 | 190 | 13,115 | 86 | 6,673 | 324 | 66,916 |
| 6-Sep | 3 | 3,189 | | 10,009 | | 12,466 | | 2,696 | | 5,549 | | 5,198 | 28 | 8,052 | 80 | 13,195 | 45 | 6,718 | 156 | 67,072 |
| 10-Sep | | 3,189 | | 10,009 | | 12,466 | | 2,696 | | 5,549 | | 5,198 | | 8,052 | 13 | 13,208 | | 6,718 | 13 | 67,085 |
| 13-Sep | | 3,189 | | 10,009 | | 12,466 | | 2,696 | | 5,549 | | 5,198 | | 8,052 | 13 | 13,221 | | 6,718 | 13 | 67,098 |

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Central District drift gillnet

| | | 244-26 Kasilof SHA | | 244-57 Exp. Ken/Kas & AP[b] | | 244-60 District Wide | | 244-61 Kasilof Section | | 245-10 Chinitna Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Deliveries | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 25 Jun | 10 | | 0 | | 0 | 12 | 12 | | 0 | | 0 | 12 | 12 |
| 28 Jun | 65 | | 0 | | 0 | 132 | 144 | | 0 | | 0 | 132 | 144 |
| 2 Jul | 181 | | 0 | | 0 | 492 | 636 | | 0 | | 0 | 492 | 636 |
| 5 Jul | 275 | | 0 | | 0 | 3,140 | 3,776 | | 0 | | 0 | 3,140 | 3,776 |
| 7 Jul | 1 | | 0 | | 0 | | 3,776 | 3 | 3 | | 0 | 3 | 3,779 |
| 9 Jul | 329 | | 0 | | 0 | 14,176 | 17,952 | | 3 | | 0 | 14,176 | 17,955 |
| 12 Jul | 272 | | 0 | | 0 | 28,391 | 46,343 | | 3 | | 0 | 28,391 | 46,346 |
| 16 Jul | 332 | | 0 | 7,537 | 7,537 | | 46,343 | | 3 | | 0 | 7,537 | 53,883 |
| 23 Jul | 354 | | 0 | | 7,537 | 33,140 | 79,483 | | 3 | | 0 | 33,140 | 87,023 |
| 7 Aug | 77 | | 0 | | 7,537 | 5,297 | 84,780 | | 3 | | 0 | 5,297 | 92,320 |
| 8 Aug | 30 | 253 | 253 | | 7,537 | 1 | 84,781 | | 3 | | 0 | 254 | 92,574 |
| 9 Aug | 54 | 103 | 356 | | 7,537 | 3,114 | 87,895 | | 3 | | 0 | 3,217 | 95,791 |
| 10 Aug | 2 | 18 | 374 | | 7,537 | | 87,895 | | 3 | | 0 | 18 | 95,809 |
| 11 Aug | 5 | 43 | 417 | | 7,537 | | 87,895 | | 3 | | 0 | 43 | 95,852 |
| 12 Aug | 1 | 7 | 424 | | 7,537 | | 87,895 | | 3 | | 0 | 7 | 95,859 |
| 13 Aug | 1 | | 424 | | 7,537 | 89 | 87,984 | | 3 | | 0 | 89 | 95,948 |
| 16 Aug | 51 | | 424 | | 7,537 | 3,417 | 91,401 | | 3 | | 0 | 3,417 | 99,365 |
| 20 Aug | 31 | | 424 | | 7,537 | 3,723 | 95,124 | | 3 | | 0 | 3,723 | 103,088 |
| 23 Aug | 30 | | 424 | | 7,537 | 1,122 | 96,246 | | 3 | | 0 | 1,122 | 104,210 |
| 27 Aug | 5 | | 424 | | 7,537 | 464 | 96,710 | | 3 | | 0 | 464 | 104,674 |
| 30 Aug | 11 | | 424 | | 7,537 | 997 | 97,707 | | 3 | | 0 | 997 | 105,671 |
| 31 Aug | 13 | | 424 | | 7,537 | | 97,707 | | 3 | 789 | 789 | 789 | 106,460 |
| 3 Sep | 7 | | 424 | | 7,537 | 829 | 98,536 | | 3 | | 789 | 829 | 107,289 |
| 4 Sep | 11 | | 424 | | 7,537 | | 98,536 | | 3 | 982 | 1,771 | 982 | 108,271 |
| 6 Sep | 2 | | 424 | | 7,537 | 64 | 98,600 | | 3 | | 1,771 | 64 | 108,335 |
| 7 Sep | 6 | | 424 | | 7,537 | | 98,600 | | 3 | 492 | 2,263 | 492 | 108,827 |
| 10 Sep | 2 | | 424 | | 7,537 | 65 | 98,665 | | 3 | | 2,263 | 65 | 108,892 |
| 11 Sep | 2 | | 424 | | 7,537 | | 98,665 | | 3 | 14 | 2,277 | 14 | 108,906 |

*Note*: Days without data indicate days when there was no harvest.

[a] "L. J. Slough" = Little Jack Slough

[b] Statistical area 244-57 is composed of the Expanded Kenai (244-52), Expanded Kasilof (244-62), and Anchor Point (244-63) sections.

Appendix A6.–Commercial pink salmon harvest by area and date, Upper Cook Inlet, 2018.

| Upper Subdistrict set gillnet | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 244-21 Ninilchik | | 244-22 Cohoe | | 244-25 Kasilof SHA | | 244-31 South K-Beach | | 244-32 North K-Beach | | 244-41 Salamatof | | 244-42 E. Foreland | | Total | |
| Date | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum |
| 25 Jun | 1 | 1 | 2 | 2 | | 0 | | 0 | | 0 | | 0 | | 0 | 3 | 3 |
| 28 Jun | 1 | 2 | 3 | 5 | | 0 | | 0 | | 0 | | 0 | | 0 | 4 | 7 |
| 30 Jun | 6 | 8 | 2 | 7 | | 0 | | 0 | | 0 | | 0 | | 0 | 8 | 15 |
| 4 Jul | 25 | 33 | 9 | 16 | | 0 | 4 | 4 | | 0 | | 0 | | 0 | 38 | 53 |
| 7 Jul | 23 | 56 | 12 | 28 | | 0 | 2 | 6 | | 0 | | 0 | | 0 | 37 | 90 |
| 9 Jul | 62 | 118 | 33 | 61 | | 0 | 10 | 16 | 14 | 14 | 88 | 88 | 88 | 88 | 295 | 385 |
| 12 Jul | 224 | 342 | 113 | 174 | | 0 | 23 | 39 | 28 | 42 | 328 | 416 | 353 | 441 | 1,069 | 1,454 |
| 14 Jul | 95 | 437 | 74 | 248 | | 0 | 21 | 60 | | 42 | | 416 | | 441 | 190 | 1,644 |
| 16 Jul | | 437 | | 248 | | 0 | | 60 | | 42 | | 416 | 754 | 1,195 | 754 | 2,398 |
| 18 Jul | 124 | 561 | 101 | 349 | | 0 | 4 | 64 | | 42 | | 416 | | 1,195 | 229 | 2,627 |
| 19 Jul | 267 | 828 | 252 | 601 | | 0 | 31 | 95 | 32 | 74 | | 416 | | 1,195 | 582 | 3,209 |
| 21 Jul | 1,413 | 2,241 | 293 | 894 | | 0 | 75 | 170 | 31 | 105 | | 416 | | 1,195 | 1,812 | 5,021 |
| 22 Jul | 737 | 2,978 | 181 | 1,075 | | 0 | 22 | 192 | | 105 | | 416 | | 1,195 | 940 | 5,961 |
| 23 Jul | 2,489 | 5,467 | 576 | 1,651 | | 0 | 169 | 361 | 127 | 232 | 996 | 1,412 | 1,642 | 2,837 | 5,999 | 11,960 |
| 26 Jul | 1,151 | 6,618 | 585 | 2,236 | | 0 | 205 | 566 | | 232 | | 1,412 | | 2,837 | 1,941 | 13,901 |
| 28 Jul | 1,396 | 8,014 | 788 | 3,024 | | 0 | 124 | 690 | | 232 | | 1,412 | | 2,837 | 2,308 | 16,209 |
| 8 Aug | | 8,014 | | 3,024 | 1,407 | 1,407 | | 690 | | 232 | | 1,412 | | 2,837 | 1,407 | 17,616 |
| 9 Aug | | 8,014 | | 3,024 | 1,824 | 3,231 | | 690 | | 232 | | 1,412 | | 2,837 | 1,824 | 19,440 |
| 10 Aug | | 8,014 | | 3,024 | 1,215 | 4,446 | | 690 | | 232 | | 1,412 | | 2,837 | 1,215 | 20,655 |
| 11 Aug | | 8,014 | | 3,024 | 748 | 5,194 | | 690 | | 232 | | 1,412 | | 2,837 | 748 | 21,403 |
| 12 Aug | | 8,014 | | 3,024 | 419 | 5,613 | | 690 | | 232 | | 1,412 | | 2,837 | 419 | 21,822 |

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Appendix A6.–Page 2 of 4.

Central District - west side set gillnet

| | 245-10 Chinitna Bay | | 245-20 Silv. Salmon | | 245-30 Tuxedni Bay | | 245-40 Polly Cr. | | 245-50 L. J. Slough[a] | | 245-55 Big River | | 245-60 W. Forelands | | 246-10 Kalgin – West | | 246-20 Kalgin – East | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 25 Jun | | 0 | | | 1 | 1 | | | | | | | | 0 | | 0 | | 0 | 1 | 1 |
| 28 Jun | | 0 | | | 2 | 3 | | | | | | | | 0 | | 0 | | 0 | 2 | 3 |
| 2 Jul | | 0 | | | 1 | 4 | | | | | | | | 0 | 1 | 1 | 1 | 1 | 3 | 6 |
| 5 Jul | | 0 | | | 5 | 9 | | | | | | | | 0 | 3 | 4 | 4 | 5 | 12 | 18 |
| 7 Jul | | 0 | | | 17 | 26 | | | | | | | | 0 | | 4 | | 5 | 17 | 35 |
| 9 Jul | | 0 | | | 16 | 42 | | | | | | | | 0 | 24 | 28 | 15 | 20 | 55 | 90 |
| 12 Jul | | 0 | | | 12 | 54 | | | | | | | | 0 | 48 | 76 | 10 | 30 | 70 | 160 |
| 14 Jul | | 0 | | | 6 | 60 | | | | | | | | 0 | | 76 | | 30 | 6 | 166 |
| 16 Jul | | 0 | | | 5 | 65 | | | | | | | | 0 | 987 | 1,063 | 19 | 49 | 1,011 | 1,177 |
| 19 Jul | | 0 | | | 23 | 88 | | | | | | | 40 | 40 | 1,870 | 2,933 | 160 | 209 | 2,093 | 3,270 |
| 21 Jul | | 0 | | | 47 | 135 | | | | | | | | 40 | | 2,933 | | 209 | 47 | 3,317 |
| 23 Jul | | 0 | | | 43 | 178 | | | | | | | 23 | 63 | 559 | 3,492 | 178 | 387 | 803 | 4,120 |
| 26 Jul | | 0 | | | 12 | 190 | | | | | | | 10 | 73 | 1,383 | 4,875 | 166 | 553 | 1,571 | 5,691 |
| 28 Jul | | 0 | | | 13 | 203 | | | | | | | | 73 | | 4,875 | | 553 | 13 | 5,704 |
| 30 Jul | 2 | 2 | | | 32 | 235 | | | | | | | 4 | 77 | 744 | 5,619 | 168 | 721 | 950 | 6,654 |
| 2 Aug | | 2 | | | 21 | 256 | | | | | | | 6 | 83 | 573 | 6,192 | 52 | 773 | 652 | 7,306 |
| 4 Aug | | 2 | | | 99 | 355 | | | | 0 | | | | | | 6,192 | | 773 | 99 | 7,405 |
| 6 Aug | 2 | 4 | | | 26 | 381 | | | 2 | 2 | | | | | 159 | 6,351 | | 773 | 189 | 7,594 |
| 9 Aug | | 4 | | | 10 | 391 | | | 8 | 10 | | | | | 446 | 6,797 | 47 | 820 | 511 | 8,105 |
| 16 Aug | | 4 | | | | 391 | | | | 10 | | | | | 188 | 6,985 | | 820 | 188 | 8,293 |
| 20 Aug | 1 | 5 | | | | 391 | | | | 10 | | | | | | 6,985 | | 820 | 1 | 8,294 |
| 31 Aug | 2 | 7 | | | | 391 | | | | 10 | | | | | | 6,985 | | 820 | 2 | 8,296 |
| 7 Sep | 1 | 8 | | | | 391 | | | | 10 | | | | | | 6,985 | | 820 | 1 | 8,297 |

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Appendix A6.–Page 3 of 4.

Northern District set gillnet

| | 247-10 Trading Bay | | 247-20 Tyonek | | 247-30 Beluga | | 247-41 Su. Flats | | 247-42 Pt. McKenzie | | 247-70 Pt. Possession | | 247-80 Birch Hill | | 247-90 #3 Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 2 Jul | | 0 | | 0 | | 0 | | 0 | | 0 | 4 | 4 | 2 | 2 | 1 | 1 | 7 | 7 |
| 5 Jul | | 0 | | 0 | | 0 | | 0 | | 0 | 24 | 28 | 5 | 7 | 4 | 5 | 33 | 40 |
| 9 Jul | | 0 | | 0 | | 0 | | 0 | | 0 | 154 | 182 | 97 | 104 | 17 | 22 | 268 | 308 |
| 12 Jul | | 0 | 2 | 2 | | 0 | 2 | 2 | 2 | 2 | 50 | 232 | 168 | 272 | 164 | 186 | 388 | 696 |
| 16 Jul | | 0 | | 2 | 39 | 39 | 2 | 4 | 7 | 9 | 227 | 459 | 182 | 454 | 195 | 381 | 652 | 1,348 |
| 19 Jul | 2 | 2 | | 2 | 63 | 102 | 22 | 26 | 15 | 24 | 1,012 | 1,471 | 1,054 | 1,508 | 695 | 1,076 | 2,863 | 4,211 |
| 23 Jul | 15 | 17 | | 2 | 1,027 | 1,129 | 71 | 97 | 22 | 46 | 1,056 | 2,527 | 1,190 | 2,698 | 806 | 1,882 | 4,187 | 8,398 |
| 26 Jul | 2 | 19 | | 2 | 210 | 1,339 | | 97 | 39 | 85 | 580 | 3,107 | 475 | 3,173 | 398 | 2,280 | 1,704 | 10,102 |
| 30 Jul | 3 | 22 | | 2 | 157 | 1,496 | 39 | 136 | 36 | 121 | 299 | 3,406 | 304 | 3,477 | 195 | 2,475 | 1,033 | 11,135 |
| 2 Aug | 10 | 32 | 7 | 9 | 52 | 1,548 | 46 | 182 | 66 | 187 | 482 | 3,888 | 326 | 3,803 | 237 | 2,712 | 1,226 | 12,361 |
| 6 Aug | | 32 | | 9 | | 1,548 | | 182 | 33 | 220 | 129 | 4,017 | 109 | 3,912 | 144 | 2,856 | 415 | 12,776 |
| 9 Aug | 6 | 38 | | 9 | 31 | 1,579 | 21 | 203 | 59 | 279 | 39 | 4,056 | 59 | 3,971 | 73 | 2,929 | 288 | 13,064 |
| 13 Aug | | 38 | | 9 | | 1,579 | | 203 | 2 | 281 | | 4,056 | | 3,971 | 2 | 2,931 | 4 | 13,068 |
| 16 Aug | 3 | 41 | | 9 | | 1,579 | | 203 | 1 | 282 | 23 | 4,079 | 24 | 3,995 | 98 | 3,029 | 149 | 13,217 |
| 20 Aug | | 41 | | 9 | | 1,579 | | 203 | | 282 | 2 | 4,081 | 2 | 3,997 | 3 | 3,032 | 7 | 13,224 |
| 23 Aug | | 41 | | 9 | | 1,579 | | 203 | | 282 | | 4,081 | 5 | 4,002 | 25 | 3,057 | 30 | 13,254 |
| 27 Aug | | 41 | | 9 | | 1,579 | | 203 | | 282 | | 4,081 | 3 | 4,005 | 11 | 3,068 | 14 | 13,268 |
| 30 Aug | | 41 | | 9 | | 1,579 | | 203 | | 282 | | 4,081 | | 4,005 | 1 | 3,069 | 1 | 13,269 |
| 3 Sep | | 41 | | 9 | | 1,579 | | 203 | | 282 | 1 | 4,082 | 1 | 4,006 | 1 | 3,070 | 3 | 13,272 |

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Central District drift gillnet

| | | 244-26 Kasilof SHA | | 244-57 Exp. Ken/Kas & AP[b] | | 244-60 District Wide | | 244-61 Kasilof Section | | 245-10 Chinitna Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Deliveries | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 25 Jun | 17 | | 0 | | 0 | 19 | 19 | | 0 | | | 19 | 19 |
| 28 Jun | 55 | | 0 | | 0 | 91 | 110 | | 0 | | | 91 | 110 |
| 2 Jul | 89 | | 0 | | 0 | 158 | 268 | | 0 | | | 158 | 268 |
| 4 Jul | 1 | | 0 | | 0 | | 268 | 1 | 1 | | | 1 | 269 |
| 5 Jul | 239 | | 0 | | 0 | 1,170 | 1,438 | | 1 | | | 1,170 | 1,439 |
| 9 Jul | 318 | | 0 | | 0 | 4,973 | 6,411 | | 1 | | | 4,973 | 6,412 |
| 12 Jul | 267 | | 0 | | 0 | 16,281 | 22,692 | | 1 | | | 16,281 | 22,693 |
| 16 Jul | 347 | | 0 | 22,183 | 22,183 | | 22,692 | | 1 | | | 22,183 | 44,876 |
| 23 Jul | 361 | | 0 | | 22,183 | 29,707 | 52,399 | | 1 | | | 33,148 | 78,024 |
| 7 Aug | 62 | | 0 | | 22,183 | 669 | 53,068 | | 1 | | | 3,720 | 81,744 |
| 8 Aug | 39 | 3,441 | 3,441 | | 22,183 | 22 | 53,090 | | 1 | | | 233 | 81,977 |
| 9 Aug | 59 | 3,051 | 6,492 | | 22,183 | 771 | 53,861 | | 1 | | | 1,209 | 83,186 |
| 10 Aug | 4 | 211 | 6,703 | | 22,183 | | 53,861 | | 1 | | | 21 | 83,207 |
| 11 Aug | 5 | 438 | 7,141 | | 22,183 | | 53,861 | | 1 | | | 0 | 83,207 |
| 12 Aug | 1 | 21 | 7,162 | | 22,183 | | 53,861 | | 1 | | | 0 | 83,207 |
| 16 Aug | 43 | | 7,162 | | 22,183 | 239 | 54,100 | | 1 | | | 239 | 83,446 |
| 20 Aug | 16 | | 7,162 | | 22,183 | 42 | 54,142 | | 1 | | | 42 | 83,488 |
| 23 Aug | 15 | | 7,162 | | 22,183 | 38 | 54,180 | | 1 | | | 38 | 83,526 |
| 27 Aug | 2 | | 7,162 | | 22,183 | 3 | 54,183 | | 1 | | | 3 | 83,529 |
| 30 Aug | 2 | | 7,162 | | 22,183 | 3 | 54,186 | | 1 | | | 3 | 83,532 |
| 31 Aug | | | | | | | | | | 2 | | 2 | 83,534 |
| 7 Sep | | | | | | | | | | 1 | | 1 | 83,535 |

*Note:* Days without data indicate days when there was no harvest.

[a] "L. J. Slough" = Little Jack Slough

[b] Statistical area 244-57 is composed of the Expanded Kenai (244-52), Expanded Kasilof (244-62), and Anchor Point (244-63) sections.

Appendix A7.–Commercial chum salmon harvest by area and date, Upper Cook Inlet, 2018.

| Upper Subdistrict set gillnet | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 244-21 Ninilchik | | 244-22 Cohoe | | 244-25 Kasilof SHA | | 244-31 South K-Beach | | 244-32 North K-Beach | | 244-41 Salamatof | | 244-42 E. Foreland | | Total | |
| Date | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum | Daily | Cum |
| 25 Jun | 1 | 1 | | 0 | | 0 | | | | | | 0 | | 0 | 1 | 1 |
| 4 Jul | 1 | 2 | | 0 | | 0 | | | | | | 0 | | 0 | 1 | 2 |
| 7 Jul | 1 | 3 | | 0 | | 0 | | | | | | 0 | | 0 | 1 | 3 |
| 9 Jul | 1 | 4 | | 0 | | 0 | | | | | 7 | 7 | 2 | 2 | 10 | 13 |
| 12 Jul | 2 | 6 | 1 | 1 | | 0 | | | | | 3 | 10 | 4 | 6 | 10 | 23 |
| 14 Jul | | 6 | 1 | 2 | | 0 | | | | | | 10 | | 6 | 1 | 24 |
| 16 Jul | | 6 | | 2 | | 0 | | | | | | 10 | 1 | 7 | 1 | 25 |
| 19 Jul | 6 | 12 | 3 | 5 | | 0 | | | | | | 10 | | 7 | 9 | 34 |
| 21 Jul | 4 | 16 | 2 | 7 | | 0 | | | | | | 10 | | 7 | 6 | 40 |
| 22 Jul | 2 | 18 | | 7 | | 0 | | | | | | 10 | | 7 | 2 | 42 |
| 23 Jul | 16 | 34 | 2 | 9 | | 0 | | | | | 3 | 13 | 2 | 9 | 23 | 65 |
| 26 Jul | 1 | 35 | 1 | 10 | | 0 | | | | | | 13 | | 9 | 2 | 67 |
| 28 Jul | 3 | 38 | 1 | 11 | | 0 | | | | | | 13 | | 9 | 4 | 71 |
| 8 Aug | | 38 | | 11 | 2 | 2 | | | | | | 13 | | 9 | 2 | 73 |
| 9 Aug | | 38 | | 11 | 5 | 7 | | | | | | 13 | | 9 | 5 | 78 |

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Appendix A7.–Page 2 of 4.

Central District - west side set gillnet

| | 245-10 Chinitna Bay | | 245-30 Tuxedni Bay | | 245-40 Polly Cr. | | 245-50 Little Jack Slough | | 245-60 W. Forelands | | 246-10 Kalgin – West | | 246-20 Kalgin – East | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 28 Jun | | 0 | 1 | 1 | | | | 0 | | 0 | 1 | 1 | | 0 | 2 | 2 |
| 5 Jul | | 0 | 6 | 7 | | | | 0 | | 0 | 5 | 6 | | 0 | 11 | 13 |
| 7 Jul | | 0 | 30 | 37 | | | | 0 | | 0 | | 6 | | 0 | 30 | 43 |
| 9 Jul | | 0 | 28 | 65 | | | | 0 | | 0 | 2 | 8 | | 0 | 30 | 73 |
| 12 Jul | | 0 | 31 | 96 | | | | 0 | | 0 | 8 | 16 | | 0 | 39 | 112 |
| 14 Jul | | 0 | 12 | 108 | | | | 0 | | 0 | | 16 | | 0 | 12 | 124 |
| 16 Jul | | 0 | 19 | 127 | | | 1 | 1 | | 0 | 14 | 30 | | 0 | 34 | 158 |
| 19 Jul | | 0 | 119 | 246 | | | 1 | 2 | | 0 | 93 | 123 | 10 | 10 | 223 | 381 |
| 21 Jul | | 0 | 135 | 381 | | | | 2 | | 0 | | 123 | | 10 | 135 | 516 |
| 23 Jul | | 0 | 170 | 551 | | | 5 | 7 | 1 | 1 | 47 | 170 | 44 | 54 | 267 | 783 |
| 26 Jul | | 0 | 101 | 652 | | | 6 | 13 | | 1 | 177 | 347 | 8 | 62 | 292 | 1,075 |
| 28 Jul | | 0 | 87 | 739 | | | | 13 | | 1 | | 347 | | 62 | 87 | 1,162 |
| 30 Jul | 305 | 305 | 121 | 860 | | | 15 | 28 | 2 | 3 | 33 | 380 | 9 | 71 | 485 | 1,647 |
| 2 Aug | | 305 | 194 | 1,054 | | | 3 | 31 | 1 | 4 | 51 | 431 | 3 | 74 | 252 | 1,899 |
| 4 Aug | | 305 | 195 | 1,249 | | | | 31 | | 4 | | 431 | | 74 | 195 | 2,094 |
| 6 Aug | 312 | 617 | 50 | 1,299 | | | 4 | 35 | | 4 | 5 | 436 | | 74 | 371 | 2,465 |
| 9 Aug | 206 | 823 | 34 | 1,333 | | | 3 | 38 | | 4 | 27 | 463 | 43 | 117 | 313 | 2,778 |
| 13 Aug | 41 | 864 | | 1,333 | | | | 38 | | 4 | | 463 | | 117 | 41 | 2,819 |
| 16 Aug | | 864 | | 1,333 | | | 3 | 41 | | 4 | 51 | 514 | 1 | 118 | 55 | 2,874 |
| 20 Aug | 10 | 874 | | 1,333 | | | | 41 | | 4 | | 514 | 1 | 119 | 11 | 2,885 |
| 23 Aug | | 874 | | 1,333 | | | | 41 | 8 | 12 | | 514 | | 119 | 8 | 2,893 |
| 27 Aug | 27 | 901 | | 1,333 | | | | 41 | 4 | 16 | | 514 | | 119 | 31 | 2,924 |
| 31 Aug | 211 | 1,112 | | 1,333 | | | | 41 | | 16 | | 514 | | 119 | 211 | 3,135 |
| 4 Sep | 23 | 1,135 | | 1,333 | | | | 41 | | 16 | | 514 | | 119 | 23 | 3,158 |
| 7 Sep | 15 | 1,150 | | 1,333 | | | | 41 | | 16 | | 514 | | 119 | 15 | 3,173 |
| 11 Sep | 8 | 1,158 | | 1,333 | | | | 41 | | 16 | | 514 | | 119 | 8 | 3,181 |

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Appendix A7.–Page 3 of 4.

Northern District - set gillnet

| | 247-10 Trading Bay | | 247-20 Tyonek | | 247-30 Beluga | | 247-41 Su. Flats | | 247-42 Pt. McKenzie | | 247-43 Fire Island | | 247-70 Pt. Possession | | 247-80 Birch Hill | | 247-90 #3 Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 2 Jul | 1 | 1 | | 0 | | 0 | | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | | 0 | 3 | 3 |
| 5 Jul | 3 | 4 | | 0 | | 0 | | 0 | | 0 | 2 | 2 | 12 | 13 | | 1 | 1 | 1 | 18 | 21 |
| 9 Jul | 16 | 20 | | 0 | 2 | 2 | 1 | 1 | 9 | 9 | | 2 | 21 | 34 | 10 | 11 | | 1 | 59 | 80 |
| 12 Jul | | 20 | 26 | 26 | 32 | 34 | 12 | 13 | 36 | 45 | 113 | 115 | 10 | 44 | 2 | 13 | 1 | 2 | 232 | 312 |
| 16 Jul | | 20 | 5 | 31 | 371 | 405 | 47 | 60 | 117 | 162 | 184 | 299 | 13 | 57 | | 13 | | 2 | 737 | 1,049 |
| 19 Jul | | 20 | | 31 | 231 | 636 | 72 | 132 | 46 | 208 | 120 | 419 | 65 | 122 | 6 | 19 | 1 | 3 | 541 | 1,590 |
| 23 Jul | 8 | 28 | 2 | 33 | 293 | 929 | 41 | 173 | 85 | 293 | 153 | 572 | 51 | 173 | 8 | 27 | | 3 | 641 | 2,231 |
| 26 Jul | | 28 | 2 | 35 | 248 | 1,177 | 22 | 195 | 75 | 368 | 108 | 680 | 36 | 209 | 3 | 30 | 3 | 6 | 497 | 2,728 |
| 30 Jul | | 28 | 3 | 38 | 375 | 1,552 | 73 | 268 | 74 | 442 | 62 | 742 | 35 | 244 | 5 | 35 | | 6 | 627 | 3,355 |
| 2 Aug | | 28 | | 38 | 57 | 1,609 | 36 | 304 | 158 | 600 | 55 | 797 | 61 | 305 | 10 | 45 | 4 | 10 | 381 | 3,736 |
| 6 Aug | | 28 | | 38 | | 1,609 | 15 | 319 | 42 | 642 | 35 | 832 | 16 | 321 | 8 | 53 | | 10 | 116 | 3,852 |
| 9 Aug | | 28 | 2 | 40 | 27 | 1,636 | 20 | 339 | 113 | 755 | 32 | 864 | 3 | 324 | | 53 | 2 | 12 | 199 | 4,051 |
| 13 Aug | | 28 | | 40 | | 1,636 | 1 | 340 | 28 | 783 | | 864 | | 324 | | 53 | | 12 | 29 | 4,080 |
| 16 Aug | 1 | 29 | | 40 | | 1,636 | | 340 | 16 | 799 | 13 | 877 | 4 | 328 | 3 | 56 | 6 | 18 | 43 | 4,123 |
| 20 Aug | 1 | 30 | | 40 | | 1,636 | | 340 | 2 | 801 | 2 | 879 | 1 | 329 | 1 | 57 | 1 | 19 | 8 | 4,131 |
| 23 Aug | | 30 | | 40 | | 1,636 | 1 | 341 | 1 | 802 | | 879 | | 329 | 1 | 58 | 3 | 22 | 6 | 4,137 |
| 27 Aug | | 30 | | 40 | | 1,636 | | 341 | | 802 | | 879 | 2 | 331 | 4 | 62 | | 22 | 6 | 4,143 |
| 3 Sep | 2 | 32 | | 40 | | 1,636 | | 341 | | 802 | | 879 | 1 | 332 | | 62 | 1 | 23 | 4 | 4,147 |
| 6 Sep | | 32 | | 40 | | 1,636 | | 341 | | 802 | | 879 | | 332 | 1 | 63 | | 23 | 1 | 4,148 |

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Appendix A7.–Page 4 of 4.

Central District drift gillnet

| | | 244-26 Kasilof SHA | | 244-57 Exp. Full Corridor & AP[a] | | 244-60 District Wide | | 244-61 Kasilof Section | | 245-10 Chinitna Bay | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Deliveries | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum | Day | Cum |
| 21 Jun | 17 | | 0 | | 0 | 32 | 32 | | 0 | | 0 | 32 | 32 |
| 25 Jun | 70 | | 0 | | 0 | 382 | 414 | | 0 | | 0 | 382 | 414 |
| 28 Jun | 149 | | 0 | | 0 | 3,420 | 3,834 | | 0 | | 0 | 3,420 | 3,834 |
| 2 Jul | 269 | | 0 | | 0 | 6,546 | 10,380 | | 0 | | 0 | 6,546 | 10,380 |
| 4 Jul | 1 | | 0 | | 0 | | 10,380 | 1 | 1 | | 0 | 1 | 10,381 |
| 5 Jul | 306 | | 0 | | 0 | 21,895 | 32,275 | | 1 | | 0 | 21,895 | 32,276 |
| 7 Jul | 1 | | 0 | | 0 | | 32,275 | 35 | 36 | | 0 | 35 | 32,311 |
| 9 Jul | 335 | | 0 | | 0 | 24,425 | 56,700 | | 36 | | 0 | 24,425 | 56,736 |
| 12 Jul | 274 | | 0 | | 0 | 26,495 | 83,195 | | 36 | | 0 | 26,495 | 83,231 |
| 16 Jul | 348 | | 0 | 9,620 | 9,620 | | 83,195 | | 36 | | 0 | 9,620 | 92,851 |
| 23 Jul | 361 | | 0 | | 9,620 | 13,642 | 96,837 | | 36 | | 0 | 13,642 | 106,493 |
| 7 Aug | 31 | 12 | 12 | | 9,620 | 491 | 97,328 | | 36 | | 0 | 503 | 106,996 |
| 8 Aug | 7 | 9 | 21 | | 9,620 | | 97,328 | | 36 | | 0 | 9 | 107,005 |
| 9 Aug | 31 | 1 | 22 | | 9,620 | 388 | 97,716 | | 36 | | 0 | 389 | 107,394 |
| 11 Aug | 1 | | 22 | | 9,620 | | 97,716 | | 36 | | 0 | 0 | 107,394 |
| 16 Aug | 42 | | 22 | | 9,620 | 307 | 98,023 | | 36 | | 0 | 307 | 107,701 |
| 20 Aug | 18 | | 22 | | 9,620 | 82 | 98,105 | | 36 | | 0 | 82 | 107,783 |
| 23 Aug | 24 | | 22 | | 9,620 | 83 | 98,188 | | 36 | | 0 | 83 | 107,866 |
| 27 Aug | 5 | | 22 | | 9,620 | 12 | 98,200 | | 36 | | 0 | 12 | 107,878 |
| 30 Aug | 5 | | 22 | | 9,620 | 60 | 98,260 | | 36 | | 0 | 60 | 107,938 |
| 31 Aug | 11 | | 22 | | 9,620 | | 98,260 | | 36 | 211 | 211 | 211 | 108,149 |
| 3 Sep | 3 | | | | | 20 | 98,280 | | | | 211 | 20 | 108,169 |
| 4 Sep | 6 | | | | | | 98,280 | | | 23 | 234 | 23 | 108,192 |
| 7 Sep | 3 | | | | | | 98,280 | | | 15 | 249 | 15 | 108,207 |
| 10 Sep | 1 | | | | | 1 | 98,281 | | | | 249 | 1 | 108,208 |
| 11 Sep | 1 | | | | | | 98,281 | | | 8 | 257 | 8 | 108,216 |

*Note:* Days without data indicate days when there was no harvest.

[a] Statistical area 244-57 is composed of the Expanded Kenai (244-52), Expanded Kasilof (244-62), and Anchor Point (244-63) sections.

Appendix A8.–Commercial salmon harvest by gear, stat area and species, Upper Cook Inlet, 2018.

| Gear | District | Subdistrict | Stat area | Permits[a] | Chinook | Sockeye | Coho | Pink | Chum | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Drift | Central | All | All | 392 | 503 | 400,285 | 108,906 | 83,535 | 108,216 | 701,445 |
| Setnet | Central | Upper | 244-21 | 74 | 460 | 85,496 | 1,422 | 8,014 | 38 | 95,430 |
| | | | 244-22 | 65 | 636 | 74,826 | 662 | 3,024 | 11 | 79,159 |
| | | | 244-31 | 48 | 450 | 50,354 | 140 | 690 | | 51,634 |
| | | | 244-32 | 36 | 298 | 19,113 | 102 | 232 | | 19,745 |
| | | | 244-41 | 45 | 408 | 36,976 | 398 | 1,412 | 13 | 39,207 |
| | | | 244-42 | 30 | 32 | 11,666 | 659 | 2,837 | 9 | 15,203 |
| | | | 244-25 | 48 | 28 | 11,410 | 1,322 | 5,613 | 7 | 18,380 |
| | | | All | 296 | 2,312 | 289,841 | 4,705 | 21,822 | 78 | 318,758 |
| | | Kalgin Is. | 246-10 | 23 | 317 | 28,240 | 24,328 | 6,985 | 514 | 60,384 |
| | | | 246-20 | 3 | 7 | 8,127 | 7,777 | 820 | 119 | 16,850 |
| | | | All | 23 | 324 | 36,367 | 32,105 | 7,805 | 633 | 77,234 |
| | | Chinitna | 245-10 | 1 | | 13 | 900 | 5 | 901 | 1,819 |
| | | Western | 245-20 | | | | | | | 0 |
| | | | 245-30 | 13 | 63 | 32,581 | 11,367 | 391 | 1,333 | 45,735 |
| | | | 245-40 | | | | | | | 0 |
| | | | 245-50 | 4 | 0 | 3,260 | 4,137 | 10 | 41 | 7,448 |
| | | | All | 17 | 63 | 35,841 | 15,504 | 401 | 1,374 | 53,183 |
| | | Kustatan | 245-55 | 10 | 60 | 1,310 | | | | 1,370 |
| | | | 245-60 | 3 | | 1,686 | 3,072 | 83 | 16 | 4,857 |
| | | | All | 13 | 60 | 2,996 | 3,072 | 83 | 16 | 6,227 |
| Setnet | Central | All | All | 344 | 2,759 | 365,058 | 56,286 | 30,116 | 3,002 | 457,221 |
| Setnet | Northern | General | 247-10 | 6 | 23 | 2,972 | 3,189 | 41 | 32 | 6,257 |
| | | | 247-20 | 8 | 48 | 5,799 | 10,009 | 9 | 40 | 15,905 |
| | | | 247-30 | 10 | 11 | 3,878 | 12,466 | 1,579 | 1,636 | 19,570 |
| | | | 247-41 | 7 | 1 | 2,074 | 2,696 | 203 | 341 | 5,315 |
| | | | 247-42 | 7 | 7 | 6,128 | 5,549 | 282 | 802 | 12,768 |
| | | | 247-43 | 5 | 7 | 2,768 | 5,198 | | 879 | 8,852 |
| | | | All | 39 | 97 | 23,619 | 39,107 | 2,114 | 3,730 | 68,667 |
| Setnet | Northern | Eastern | 247-70 | 15 | 21 | 10,688 | 8,052 | 4,082 | 332 | 23,175 |
| | | | 247-80 | 12 | 12 | 9,389 | 13,221 | 4,006 | 63 | 26,691 |
| | | | 247-90 | 8 | 13 | 8,856 | 6,718 | 3,070 | 23 | 18,680 |
| | | | All | 31 | 46 | 28,933 | 27,991 | 11,158 | 418 | 68,546 |
| Setnet | Northern | All | | 69 | 143 | 52,552 | 67,098 | 13,272 | 4,148 | 137,213 |
| Setnet | All | | | 314 | 2,902 | 417,610 | 123,384 | 43,388 | 7,150 | 594,434 |
| | | All UCI | | 802 | 3,405 | 817,895 | 232,290 | 126,923 | 115,366 | 1,295,879 |

[a] Permit totals may be less than the sum of individual statistical areas if some permits were fished in multiple statistical areas.

Appendix A9.–Commercial salmon harvest per permit by statistical area, Upper Cook Inlet, 2018.

| Gear | District | Subdistrict | Stat area | Permits[a] | Chinook | Sockeye | Coho | Pink | Chum | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Drift | Central | All | All | 392 | 1 | 1,021 | 278 | 213 | 276 | 1,789 |
| Set | Central | Upper | 244-21 | 74 | 6 | 1,155 | 19 | 108 | 1 | 1,290 |
| | | | 244-22 | 65 | 10 | 1,151 | 10 | 47 | 0 | 1,218 |
| | | | 244-31 | 48 | 9 | 1,049 | 3 | 14 | 0 | 1,076 |
| | | | 244-32 | 36 | 8 | 531 | 3 | 6 | 0 | 548 |
| | | | 244-41 | 45 | 9 | 822 | 9 | 31 | 0 | 871 |
| | | | 244-42 | 30 | 1 | 389 | 22 | 95 | 0 | 507 |
| | | | 244-25 | 48 | 1 | 238 | 28 | 117 | 0 | 383 |
| | | | All | 296 | 8 | 979 | 16 | 74 | 0 | 1,077 |
| | | Kalgin Is. | 246-10 | 23 | 14 | 1,228 | 1,058 | 304 | 22 | 2,625 |
| | | | 246-20 | 3 | 2 | 2,709 | 2,592 | 273 | 40 | 5,617 |
| | | | All | 23 | 14 | 1,581 | 1,396 | 339 | 28 | 3,358 |
| | | Chinitna | 245-10 | 1 | 0 | 13 | 900 | 5 | 901 | 1,819 |
| | | Western | 245-20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | 245-30 | 13 | 5 | 2,506 | 874 | 30 | 103 | 3,518 |
| | | | 245-40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | 245-50 | 4 | 0.0 | 815 | 1,034 | 3 | 10 | 1,862 |
| | | | All | 17 | 4 | 2,108 | 912 | 24 | 81 | 3,128 |
| | | Kustatan | 245-55 | 10 | 6 | 131 | 0 | 0 | 0 | 137 |
| | | | 245-60 | 3 | 0 | 562 | 1,024 | 28 | 5 | 1,619 |
| | | | All | 13 | 5 | 230 | 236 | 6 | 1 | 479 |
| | | All | All | 344 | 8 | 1,061 | 164 | 88 | 9 | 1,329 |
| | Northern | General | 247-10 | 23 | 1 | 129 | 139 | 2 | 1 | 272 |
| | | | 247-20 | 8 | 6 | 725 | 1,251 | 1 | 5 | 1,988 |
| | | | 247-30 | 10 | 1 | 388 | 1,247 | 158 | 164 | 1,957 |
| | | | 247-41 | 7 | 0 | 296 | 385 | 29 | 49 | 759 |
| | | | 247-42 | 7 | 1 | 875 | 793 | 40 | 115 | 1,824 |
| | | | 247-43 | 5 | 1 | 554 | 1,040 | 0 | 176 | 1,770 |
| | | | All | 39 | 2 | 606 | 1,003 | 54 | 96 | 1,761 |
| | | Eastern | 247-70 | 15 | 1 | 713 | 537 | 272 | 22 | 1,545 |
| | | | 247-80 | 12 | 1 | 782 | 1,102 | 334 | 5 | 2,224 |
| | | | 247-90 | 8 | 2 | 1,107 | 840 | 384 | 3 | 2,335 |
| | | | All | 31 | 1 | 933 | 903 | 360 | 13 | 2,211 |
| | | All | All | 69 | 2 | 762 | 972 | 192 | 60 | 1,989 |
| | All | All | All | 314 | 9 | 1,330 | 393 | 138 | 23 | 1,893 |
| All | All | All | All | 802 | 4 | 240 | 0 | 1 | 1 | 1,616 |

[a] Permit totals may be less than the sum of individual statistical areas if some permits were fished in multiple statistical areas.

Appendix A10.–Commercial fishing emergency orders issued during the 2018 Upper Cook Inlet fishing season.

| Emergency order no. | Effective date | Action | Reason |
|---|---|---|---|
| 2S-01-18 | 28 May | Closed that portion of the General Subdistrict of the Northern District from a point at the wood chip dock located approximately 3 miles south of Tyonek at 61°02.77' N. lat., 151° 10.04' W. long., to the Susitna River to commercial Chinook salmon fishing for the 2018 directed Chinook salmon fishery. The fishing periods affected by this announcement were May 28, June 4, June 11, and June 18, 2018. | Chuitna River Chinook salmon are a stock of management concern. As a result, sport fishing in the Chuitna River was closed, which, according to the N. Dist. King Salmon Mgmt. Plan, required a closure of the commercial fishery from the wood chip dock to the Susitna River. |
| 2S-02-18 | 15 Jun | Reduces the hours open during the Kasilof River personal use setnet fishery from 11:00 a.m. to 11:00 p.m. daily from Friday June 15th through Sunday, June 24, 2018. | To reduce the harvest of Kasilof River Chinook salmon |
| 2S-03-18 | 25 Jun | Closed set gillnetting in the Northern District from 7:00 a.m. until 7:00 p.m. on Monday, June 25, 2018. | To reduce the harvest of Chinook salmon migrating to streams throughout Northern Cook Inlet |
| 2S-04-18 | 1 Jul | Modified weekly fishing periods in the Upper Subdistrict of the Central District beginning 12:01 a.m. on July 1, 2018. | To reduce the harvest of Kenai bound Chinook salmon and to comply with the Kenai River Late-Run Chinook Salmon Management Plan |
| 2S-05-18 | 30 Jun | Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 7:00 a.m. until 9:00 p.m. on Saturday, June 30, 2018. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 a.m. until 9:00 p.m. on Saturday, June 30, 2018. | To reduce the escapement rate of Kasilof River sockeye salmon. |
| 2S-06-18 | 4 Jul | Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Wednesday, July 4, 2018. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Wednesday, July 4, 2018. | To reduce the escapement rate of Kasilof River sockeye salmon. |
| 2S-07-18 | 7 Jul | Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Wednesday, July 4, 2018. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 a.m. until 3:00 p.m. on Saturday, July 7, 2018. | To reduce the escapement rate of Kasilof River sockeye salmon. |

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| Emergency order no. | Effective date | Action | Reason |
|---|---|---|---|
| 2S-08-18 | 7 Jul | Opened commercial salmon fishing with set gillnets in that portion of the Western Subdistrict of the Central District south of the latitude of Redoubt Point from 6:00 a.m. until 10:00 p.m. on Mondays; from 6:00 a.m. until 10:00 p.m. on Thursdays; and from 6:00 a.m. until 10:00 p.m. on Saturdays each week until further notice, effective beginning at 6:00 a.m. on Saturday, July 7, 2018 | To reduce the escapement rate of Crescent River sockeye salmon. |
| 2S-09-18 | 9 Jul | Opened commercial salmon fishing with set gillnets in the Upper Subdistrict south of the East Foreland Section from 7:00 a.m. until 7:00 p.m. on Monday, July 9, 2018. Also restricted drift gillnetting to Drift Gillnet Area 1 and the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Monday, July 9, 2018 and Thursday, July 12, 2018 | To reduce the escapement rate of Kenai and Kasilof River sockeye salmon. |
| 2S-10-18 | 12 Jul | Opened commercial salmon fishing with set gillnets in the Upper Subdistrict south of the East Foreland Section from 7:00 a.m. until 7:00 p.m. on Thursday, July 12, 2018. Also restricted drift gillnetting to Drift Gillnet Area 1 and the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Thursday, July 12, 2018 | To reduce the escapement rate of Kenai and Kasilof River sockeye salmon. |
| 2S-11-18 | 14 Jul | Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict within one-half mile of the mean high tide mark on the Kenai Peninsula shoreline from 8:00 a.m. until 8:00 p.m. on Saturday, July 14, 2018 | To reduce the escapement rate of Kasilof River sockeye salmon. |
| 2S-12-18 | 16 Jul | Opened commercial salmon fishing with drift gillnets in the Expanded Kenai and Kasilof sections of the Upper Subdistrict and in the Anchor Point Section from 7:00 a.m. until 7:00 p.m. on Monday, July 16, 2018 | To reduce the escapement rate of Kenai and Kasilof River sockeye salmon. |
| 2S-13-18 | 18 Jul | Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict within 600 feet of the mean high tide mark on the Kenai Peninsula shoreline from 5:00 p.m. until 11:59 p.m. on Wednesday, July 18, 2018 | To reduce the escapement rate of Kasilof River sockeye salmon. |
| 2S-14-18 | 19 Jul | Closed commercial salmon fishing with drift gillnets in the Central District of Upper Cook Inlet and closed commercial salmon fishing with set gillnets in the East Foreland Section of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Thursday, July 19, 2018. Opened commercial fishing with set gillnets within one-half mile of the mean high tide mark on the Kenai Peninsula shoreline in the Kasilof Section of the Upper Subdistrict and will be open within 600 feet of the mean high tide mark of the Kenai Peninsula shoreline in that portion of the Kenai Section of the Upper Subdistrict south of the southern ADF&G regulatory marker at the mouth of the Kenai River at 60° 30.49’ N. lat., 151° 16.80” W long from 7:00 a.m. until 7:00 p.m. on Thursday, July 19, 2018. | To reduce the harvest rate of Kenai River sockeye salmon. |

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| Emergency order no. | Effective date | Action | Reason |
|---|---|---|---|
| 2S-15-18 | 21 Jul | Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict within one-half mile of the mean high tide mark on the Kenai Peninsula shoreline from 7:00 a.m. until 7:00 p.m. on Saturday, July 21, 2018. This announcement also opens commercial salmon fishing with set gillnets within 600 feet of the mean high tide mark in that portion of the Kenai Section of the Upper Subdistrict south of the southern ADF&G regulatory marker at the mouth of the Kenai River at 600 30.49' N. lat., 1510 16.80" W. long. from 7:00 a.m. until 7:00 p.m. on Saturday, July 21, 2018 | To reduce the escapement rate of Kasilof River sockeye salmon. |
| 2S-16-18 | 22 Jul | Opened commercial fishing with set gillnets in the Kasilof Section of the Upper Subdistrict within 600 feet of the mean high tide mark on the Kenai Peninsula shoreline from 8:00 a.m. until 8:00 p.m. on Sunday, July 22, 2018. | To reduce the escapement rate of Kasilof River sockeye salmon. |
| 2S-17-18 | 23 Jul | Reduced legal gear to one set gillnet per permit, measuring no more than 70 fathoms in length, in the General Subdistrict of the Northern District and to no more than 2 set gillnets per permit, measuring no more than 35 fathoms in length in the Eastern Subdistrict of the Northern District from 7:00 a.m. until 7:00 p.m. on Monday, July 23, 2018, and Thursday, July 26, 2018, and from 7:00 a.m. until 7:00 p.m. on Monday, July 30, 2018. | To comply with the Northern District Salmon Management Plan and the Susitna River Sockeye Salmon Action Plan |
| 2S-18-18 | 23 Jul | Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Monday, July 23, 2018. Drift gillnetting was opened in the Drift Gillnet Area 1 and the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Monday, July 23, 2018. | To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon. |
| 2S-19-18 | 26 Jul | Closed commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict and with drift gillnets in all waters of the Central District on Thursday, July 26, 2018. Opened commercial fishing within 600 feet of the mean high tide mark on the Kenai Peninsula shoreline in the Kasilof Section of the Upper Subdistrict from 11:00 a.m. until 11:00 p.m. on Thursday, July 26, 2018. | To reduce the harvest of Kenai River sockeye salmon. |
| 2S-20-18 | 28 Jul | Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict within 600 feet of the mean high tide mark on the Kenai Peninsula shoreline from 2:00 p.m. until 10:00 p.m. on Saturday, July 28, 2018. | To reduce the escapement rate of Kasilof River sockeye salmon. |
| 2S-21-18 | 30 Jul | Closed drift gillnetting in the Central District of Upper Cook Inlet and closes set gillnetting in the East Foreland Section of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Monday, July 30, 2018 | To reduce the harvest of Kenai River and Kasilof River sockeye salmon. |

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| Emergency order no. | Effective date | Action | Reason |
|---|---|---|---|
| 2S-22-18 | 2 Aug | Reduced legal gear in the General Subdistrict of the Northern District, south of the Susitna River, and in the Eastern subdistrict of the Northern District of Upper Cook Inlet to no more than two set gillnets per permit, with the aggregate length not to exceed 70 fathoms, from 7:00 a.m. until 7:00 p.m. on Thursday, August 2, 2018 and from 7:00 a.m. until 7:00 p.m. on Monday, August 6, 2018. Legal gear in the General Subdistrict of the Northern District east of the Susitna River, which includes Fire Island, will be limited to no more than one set gillnet per permit, measuring no more than 35 fathoms in length, from 7:00 a.m. until 7:00 p.m. on Thursday, August 2, 2018 and from 7:00 a.m. until 7:00 p.m. on Monday, August 6, 2018 | To comply with the Northern District Salmon Management Plan and the Susitna River Sockeye Salmon Action Plan |
| 2S-23-18 | 2 Aug | Closed commercial salmon fishing with set and drift gillnets in the entire Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Thursday, August 2, 2018. | To reduce the harvest of Kenai River and Kasilof River sockeye salmon. |
| 2S-24-18 | 6 Aug | Closed commercial salmon fishing with set and drift gillnets in the entire Upper Subdistrict from from 7:00 a.m. until 7:00 p.m. on Monday, August 6, 2018 | To reduce the harvest of Kenai River and Kasilof River sockeye salmon. |
| 2S-25-18 | 8 Aug | Opened commercial salmon fishing with set and drift gillnets in the Kasilof River Special Harvest Area (KRSHA) from 12:00 p.m. on Wednesday, August 8, 2018 until 6:00 p.m. on Thursday, August 9, 2018 | To reduce the escapement rate of Kasilof River sockeye salmon. |
| 2S-26-18 | 10 Aug | Rescinded Emergency Order No. 2S-08-18 and closed set gillnetting in that portion of the Western Subdistrict south of the latitude of Redoubt Point, effective immediately. This area reopened to set gillnetting during regular fishing periods only, on Mondays and Thursdays from 7:00 a.m. until 7:00 p.m., beginning on Thursday, August 9, 2018, at 7:00 a.m. | To reduce the harvest of Crescent Lake sockeye salmon. |
| 2S-27-18 | 9 Aug | Closed commercial salmon fishing with set gillnets in the entire Upper Subdistrict of Upper Cook Inlet, except for the Kasilof River Special Harvest Area from 7:00 a.m. until 7:00 p.m. on Thursday, August 9, 2018. Commercial Fishing Announcement No. 25 opened set gillnetting in the Kasilof River Special Harvest Area (KRSHA) from 12:00 p.m. on Wednesday August 8, 2018 until 6:00 p.m. on Thursday, August 9, 2018. Closed drift gillnetting in all waters of the Central District, except for Drift Gillnet Area 3, from 7:00 a.m. until 7:00 p.m. on Thursday, August 9, 2018. Commercial Fishing Announcement No. 25 opened drift gillnetting in the Kasilof River Special Harvest Area (KRSHA) from 12:00 p.m. on Wednesday August 8, 2018 until 6:00 p.m. on Thursday, August 9, 2018. | To reduce the escapement rate Kasilof River sockeye salmon. |

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| Emergency order no. | Effective date | Action | Reason |
|---|---|---|---|
| 2S-28-18 | 9 Aug | Extended commercial salmon fishing with set and drift gillnets in the Kasilof River Special Harvest Area (KRSHA) from 6:00 p.m. on Thursday, August 9, 2018 until 6:00 p.m. on Friday, August 10, 2018. | To reduce the escapement rate Kasilof River sockeye salmon. |
| 2S-29-18 | 14 Aug | Extended commercial salmon fishing with set and drift gillnets in the Kasilof River Special Harvest Area (KRSHA) from 6:00 p.m. on Friday, August 10, 2018 until 8:00 a.m. on Sunday, August 12, 2018. | To reduce the escapement rate Kasilof River sockeye salmon. |
| 2S-30-18 | 14 Aug | Closed commercial salmon fishing with set gillnets in the entire Upper Subdistrict of Upper Cook Inlet, from 7:00 a.m. until 7:00 p.m. on Monday, August 13, 2018. closes drift gillnetting in all waters of the Central District, except for Drift Gillnet Area 3, from 7:00 a.m. until 7:00 p.m. on Monday, August 13, 2018. | To reduce the harvest of Kenai River and Kasilof River sockeye salmon. |
| 2S-31-18 | 23 Aug | Opened drift gillnetting in Drift Gillnet Area 1 from 7:00 a.m. until 7:00 p.m. on Thursday, August 23, 2018. By regulation, Drift Gillnet Area 3 and 4 remain open from 7:00 a.m. until 7:00 p.m. on Thursday, August 23, 2018 | To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon. |
| 2S-32-18 | 31 Aug | Opened set and drift gillnetting in the Chinitna Bay Subdistrict of the Central District on Tuesdays and Fridays from 7:00 a.m. until 7:00 p.m., beginning at 7:00 a.m. on Friday, August 31, 2018 | To provide fishing opportunity in the Chinitna Bay Subdistrict |
| 2S-33-18 | 5 Oct | Closed commercial salmon fishing with set gillnets in the Northern District, and also in the Western, Kalgin Island, Kustatan, and Chinitna Bay Subdistricts of Upper Cook Inlet for the remainder of the 2018 season, effective at 7:00 p.m. on Friday, October 5, 2018. Commercial salmon fishing with drift gillnets was closed in the Central District of Upper Cook Inlet for the remainder of the 2018 season, effective at 7:00 p.m. on Friday, October 5, 2018. | In compliance with 5 AAC 21.310, that states these areas remain open until closed each year by emergency order |

Appendix A11.–Commercial salmon fishing periods, Upper Cook Inlet, 2018.

| Date | Day | Time | Set gillnet | Drift gillnet |
|---|---|---|---|---|
| 1 Jun | Fri | 0700-1900 | Kustatan (Big River) - Kalgin Island | |
| 4 Jun | Mon | 0700-1900 | Kustatan (Big River) - Kalgin Island | |
| 6 Jun | Wed | 0700-1900 | Kustatan (Big River) - Kalgin Island | |
| 8 Jun | Fri | 0700-1900 | Kustatan (Big River) - Kalgin Island | |
| 11 Jun | Mon | 0700-1900 | Kustatan (Big River) - Kalgin Island | |
| 13 Jun | Wed | 0700-1900 | Kustatan (Big River) - Kalgin Island | |
| 15 Jun | Fri | 0700-1900 | Kustatan (Big River) - Kalgin Island | |
| 18 Jun | Mon | 0700-1900 | Western Subdistrict | |
| | | 0700-1900 | Kustatan (Big River) - Kalgin Island | |
| 20 Jun | Wed | 0700-1900 | Kustatan (Big River) - Kalgin Island | |
| 21 Jun | Thu | 0700-1900 | Western Subdistrict | All |
| 22 Jun | Fri | 0700-1900 | Kustatan (Big River) - Kalgin Island | |
| 25 Jun | Mon | 0700-1900 | All except Kenai & E. Foreland Sections | All |
| 28 Jun | Thu | 0700-1600 | All except Kenai & E. Foreland Sections | All |
| 30 Jun | Sat | 0700-2100 | Kasilof Section | Kasilof Section |
| 2 Jul | Mon | 0700-1900 | All except Kenai & E. Foreland Sections | All |
| 4 Jul | Wed | 0700-2300 | Kasilof Section | Kasilof Section |
| 5 Jul | Thu | 0700-1900 | All except Kasilof, Kenai & E. Foreland Sections | All |
| 7 Jul | Sat | 0700-1500 | Kasilof Section | Kasilof Section |
| | | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| 9 Jul | Mon | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0700-1900 | All | Drift Area 1, Exp. Ken/Kas |
| 12 Jul | Thu | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0700-1900 | All | Drift Area 1, Exp. Ken/Kas |
| 14 Jul | Sat | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0800-2000 | Kasilof Section within one-half mile | |
| 16 Jul | Mon | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0700-1900 | All except Kenai Section of U. Subdistrict | Exp. Ken/Kas, and Anchor Pt. |
| 18 Jul | Wed | 1700-2359 | Kasilof Section within 600 ft | |
| 19 Jul | Thu | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0700-1900 | All except Salamatof Section of U. Subdistrict | |
| | | 0700-1900 | Ken & Kas Section within one-half mile and N. K. Beach 600 ft | |
| 21 Jul | Sat | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0700-1900 | Kasilof Section one-half mile and N. K Beach 600 ft | |
| 22 Jul | Sun | 0800-2200 | Kasilof Section within 600 ft | |
| 23 Jul | Mon | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0700-1900 | All | Exp. Ken/Kas, and Anchor Pt. |
| 26 Jul | Thu | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0700-1900 | All except Kenai and Salamatof Sections of U. Subdistrict | |
| | | 1100-2300 | Kasilof Section within 600 ft | |

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| Date | Day | Time | Set gillnet | Drift gillnet |
|---|---|---|---|---|
| 30 Jul | Mon | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0700-1900 | All except Upper Subdistrict | |
| 2 Aug | Thu | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0700-1900 | All except Upper Subdistrict | |
| 4 Aug | Sat | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| 6 Aug | Mon | 0600-2200 | Western Subdistrict south of Redoubt Pt. | |
| | | 0700-1900 | All except Upper Subdistrict | |
| 7 Aug | Tue | 0700-1900 | | Area 3 |
| 8 Aug | Wed | 1200-2359 | Kasilof River Special Harvest Area (KRSHA) | KRSHA |
| 9 Aug | Thu | 0700-1900 | Western Subdistrict south of Redoubt Pt. | |
| | | 0000-2359 | Kasilof Special Harvest Area | Area 3, KRSHA |
| 10 Aug | Fri | 0000-2359 | Kasilof Special Harvest Area | KRSHA |
| 11 Aug | Sat | 0000-2359 | Kasilof Special Harvest Area | KRSHA |
| 12 Aug | Sun | 0000-0800 | Kasilof Special Harvest Area | KRSHA |
| 13 Aug | Mon | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 |
| 16 Aug | Thu | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 20 Aug | Mon | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 23 Aug | Thu | 0700-1900 | All except Upper Subdistrict | Drift Areas 1, 3 and 4 |
| 24 Aug | Fri | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 27 Aug | Mon | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 28 Aug | Tue | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 30 Aug | Thu | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 31 Aug | Fri | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 3 Sep | Mon | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 4 Sep | Tue | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 6 Sep | Thu | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 7 Sep | Fri | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 10 Sep | Mon | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 11 Sep | Tue | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 13 Sep | Thu | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 14 Sep | Fri | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 17 Sep | Mon | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 18 Sep | Tue | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 20 Sep | Thu | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 21 Sep | Fri | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 24 Sep | Mon | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 25 Sep | Tue | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 27 Sep | Thu | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 28 Sep | Fri | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 1 Oct | Mon | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 2 Oct | Tue | 0700-1900 | Chinitna Bay | Chinitna Bay |
| 4 Oct | Thu | 0700-1900 | All except Upper Subdistrict | Drift Areas 3 & 4 |
| 5 Oct | Fri | 0700-1900 | Chinitna Bay | Chinitna Bay |

*Note*: "Exp. Ken/Kas" = Expanded Kenai and Kasilof Sections.

Appendix A12.–Susitna River sockeye salmon studies, 2006–2016.

| Yentna River passage | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015[a] | 2016[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bendix | 92,051 | 79,901 | 90,146 | 28,428 | | | | | | | |
| DIDSON-adjusted | 166,697 | 125,146 | 131,772 | 43,972–153,910 | 53,399–144,949 | 62,231–140,445 | 30,462–89,957 | 76,227–212,125 | 55,759–137,256 | ND | ND |

| Weir data | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chelatna | 18,433 | 41,290 | 74,469 | 17,721 | 37,784 | 70,353 | 36,736 | 70,555 | 26,212 | 69,897 | 72,657 |
| Judd | 40,633 | 57,392 | 53,681 | 44,616 | 18,446 | 39,984 | 18,715 | 14,088 | 22,416 | 47,934 | 48,218 |
| Larson | 57,411 | 47,924 | 34,595 | 40,929 | 20,324 | 12,190 | 16,566 | 21,821 | 12,040 | 23,185 | 14,313 |
| Weir totals | 116,477 | 146,606 | 162,745 | 103,266 | 76,554 | 122,527 | 72,017 | 106,464 | 60,668 | 141,016 | 135,188 |

| Susitna pop. est. | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mark–Recapture (M–R) | 418,197 | 327,732 | 304,449 | 219,041 | 190,460 | 314,447 | 141,804 | 228,536 | 167,374 | 373,915 | 312,068 |
| M–R: Weirs ratio | 3.6 | 2.2 | 1.9 | 2.1 | 2.5 | 2.6 | 2.0 | 2.1 | 2.8 | NA | NA |
| M–R: Bendix ratio | 4.5 | 4.1 | 3.4 | 9.7 | ND | ND | ND | ND | ND | ND | ND |

[a] DIDSON was not operational in 2015 and 2016.

Appendix A13.–Age composition (in percent) of sockeye salmon escapements, Upper Cook Inlet, 2018.

| | Age Group | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream | 0.2 | 1.1 | 1.2 | 2.1 | 1.3 | 2.2 | 1.4 | 2.3 | 3.1 | 2.4 | 3.2 | 3.3 | Total[a] |
| Kenai River | 0.1 | 0.1 | 42.1 | 2.3 | 37.6 | 11.8 | 1.7 | 3.6 | | 0.6 | | 0.1 | 100.0 |
| Kasilof River | | 0.8 | 52.0 | 1.2 | 11.3 | 34.0 | | 0.7 | | | | | 100.0 |
| Fish Creek | | 1.2 | 86.8 | | 2.3 | 9.7 | | | | | | | 100.0 |
| Hidden Creek | | 0.6 | 97.8 | 0.2 | 0.8 | 0.6 | | | | | | | 100.0 |
| Larson | | 0.6 | 30.1 | | 47.6 | 20.8 | | 0.9 | | | | | 100.0 |
| Chelatna | | | 65.1 | 0.7 | 32.5 | 0.3 | | 1.0 | 0.3 | | | | 100.0 |
| Judd | | | 60.1 | | 27.1 | 12.5 | | | | 0.3 | | | 100.0 |

[a] May not sum to 100 due to rounding.

Appendix A14.–Upper Cook Inlet salmon average weights (in pounds) by area, 2018.

| Fishery | Chinook | Sockeye | Coho | Pink | Chum |
|---|---|---|---|---|---|
| Upper Cook Inlet Total | 13.8 | 5.2 | 6.3 | 3.8 | 8.3 |
| Northern District Total | 8.2 | 4.7 | 6.2 | 3.8 | 7.4 |
| Northern District West | 7.6 | 4.6 | 6.0 | 3.8 | 7.4 |
| Trading Bay: 247-10 | 10.4 | 5.2 | 6.0 | 3.9 | 8.2 |
| Tyonek: 247-20 | 6.9 | 4.8 | 5.7 | 3.1 | 7.7 |
| Beluga: 247-30 | 5.5 | 5.1 | 6.1 | 3.9 | 7.4 |
| Susitna Flat: 247-41 | 5.0 | 4.4 | 5.8 | 3.2 | 7.0 |
| Pt. Mackenzie: 247-42 | 6.9 | 4.2 | 6.3 | 3.6 | 7.3 |
| Fire Island: 247-43 | 7.4 | 4.4 | 6.0 | | 7.8 |
| Northern District East | 9.4 | 4.7 | 6.5 | 3.8 | 7.5 |
| Pt. Possession: 247-70 | 9.1 | 4.7 | 5.9 | 3.7 | 7.7 |
| Birch Hill: 247-80 | 9.7 | 4.6 | 7.0 | 4.0 | 6.8 |
| Number 3 Bay: 247-90 | 9.8 | 4.6 | 6.2 | 3.7 | 6.5 |
| Central District Total | 14.1 | 5.3 | 6.3 | 3.8 | 8.3 |
| East Side Set Total | 15.1 | 4.8 | 6.2 | 4.0 | 7.2 |
| Salamatof/East Foreland | 15.2 | 5.5 | 5.8 | 4.2 | 8.4 |
| Salamatof: 244-41 | 15.2 | 5.6 | 5.7 | 4.4 | 8.5 |
| East Foreland: 244-42 | 14.4 | 5.3 | 5.9 | 4.2 | 8.2 |
| Kalifonsky Beach | 14.0 | 4.5 | 5.0 | 3.9 | - |
| South K. Beach: 244-31 | 14.3 | 4.3 | 4.7 | 3.8 | - |
| North K. Beach: 244-32 | 13.6 | 5.0 | 5.4 | 4.1 | - |
| Kasilof Terminal: 244-25 | 21.7 | 3.8 | 6.9 | 4.2 | 6.1 |
| Cohoe/Ninilchik | 15.6 | 4.7 | 6.1 | 3.8 | 6.8 |
| Cohoe: 244-22 | 14.0 | 4.6 | 5.9 | 4.1 | 6.7 |
| Ninilchik: 244-21 | 17.8 | 4.8 | 6.1 | 3.7 | 6.8 |
| West Side Set Total | 23.0 | 5.0 | 6.4 | 4.1 | 7.1 |
| Little Jack Slough: 245-50 | | 4.6 | 6.3 | 3.1 | 6.8 |
| Tuxedni Bay: 245-30 | 23.0 | 5.1 | 6.4 | 4.1 | 7.1 |
| Kustatan Total | 14.3 | 5.0 | 6.2 | 3.4 | 5.9 |
| Big River: 245-55 | 14.3 | 4.5 | | | |
| West Foreland: 245-60 | | 5.3 | 6.2 | 3.4 | 5.9 |
| Kalgin Island Total | 14.5 | 4.9 | 6.4 | 3.9 | 6.6 |
| West Side: 246-10 | 14.4 | 4.9 | 6.2 | 3.9 | 6.6 |
| East Side: 246-20 | 16.7 | 5.0 | 6.9 | 3.5 | 6.9 |
| Chinitna Bay Total | - | 4.8 | 7.4 | 4.3 | 7.4 |
| Set: 245-10 | - | 5.2 | 6.3 | 4.2 | 7.8 |
| Drift: 245-10 | - | 4.7 | 7.8 | 4.3 | 6.2 |
| Central District Set Total | 15.2 | 4.8 | 6.3 | 4.0 | 7.2 |
| Central District Drift Total | 8.2 | 5.7 | 6.3 | 3.7 | 8.4 |
| Area 1/District-wide: 244-60 | 8.0 | 5.8 | 6.3 | 3.7 | 8.4 |
| Kasilof Corridor: 244-61 | 8.0 | 5.4 | 6.7 | 4.0 | 9.9 |
| Full Regular Corridor: 244-55 | 6.5 | 5.3 | 6.2 | 3.6 | 7.8 |
| Kasilof Terminal: 244-26 | 42.0 | 4.4 | 6.8 | 3.9 | 8.0 |

*Note*: Average weights determined from total pounds of fish divided by numbers of fish reported on fish tickets.

Appendix A15.–Age composition of Chinook salmon harvested in the ESSN fishery, Upper Cook Inlet, Alaska, 1987–2018.

| | Sample | Percent composition by age class (%) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | size | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 0.4 | 1.3 | 2.2 | 1.4 | 2.3 | 1.5 | 2.4 | 2.5 | 1.6 | Total |
| 1987 | 1212 | 0.08 | 2.06 | 0.08 | 14.69 | | | 33.01 | 0.17 | 48.5 | 0.25 | 1.07 | 0.08 | | | 100 |
| 1988 | 870 | | 3.22 | | 10.81 | | 0.23 | 14.25 | 0.35 | 68.5 | 0.12 | 1.83 | 0.69 | | | 100 |
| 1989 | 854 | | 0.94 | | 15.11 | | | 21.08 | 0.23 | 53.28 | | 9.37 | | | | 100 |
| 1990 | 437 | 0.2 | 1.1 | 0.2 | 29.5 | 0.9 | 0.5 | 29.0 | 0.5 | 32.7 | 0.4 | 3.4 | 1.6 | | | 100 |
| 1991 | 446 | 0.2 | 0.7 | | 24.9 | 0.2 | 0.5 | 32.1 | 0.0 | 38.5 | 0.7 | 2.0 | 0.2 | | | 100 |
| 1992 | 688 | | 2.5 | | 15.0 | | | 27.6 | 0.6 | 49.6 | 0.9 | 3.8 | 0.2 | | | 100 |
| 1993 | 992 | | 3.3 | | 14.0 | | | 20.8 | 0.1 | 56.5 | 0.8 | 4.0 | 0.5 | | | 100 |
| 1994 | 1,502 | | 3.5 | | 12.3 | 0.1 | | 14.7 | 0.3 | 61.3 | 0.5 | 5.8 | 1.6 | | 0.1 | 100 |
| 1995 | 1,508 | | 2.7 | | 22.4 | 0.1 | | 32.9 | 0.8 | 35.0 | 0.1 | 5.9 | 0.2 | 0.1 | | 100 |
| 1996 | 2,186 | | 3.3 | | 15.8 | 0.1 | | 34.9 | 0.2 | 42.3 | 1.6 | 1.5 | 0.5 | | | 100 |
| 1997 | 1,691 | | 6.4 | | 13.5 | 0.3 | | 31.1 | 0.3 | 45.6 | 0.7 | 0.7 | 1.4 | | | 100 |
| 1998 | 911 | 0.5 | 11.8 | 0.2 | 23.2 | 0.3 | 0.1 | 21.1 | 1.6 | 38.4 | 0.5 | 1.9 | 0.6 | | | 100 |
| 1999 | 1,818 | 0.1 | 2.3 | | 26.3 | 0.2 | | 24.5 | | 43.5 | 0.4 | 2.8 | | | | 100 |
| 2000 | 991 | | 9.2 | 0.1 | 12.2 | 0.9 | | 38.7 | 0.3 | 37.6 | 0.3 | 0.8 | 0.1 | | | 100 |
| 2001 | 989 | | 11.7 | | 40.0 | | | 14.5 | | 32.5 | | 1.2 | | | | 100 |
| 2002 | 1,224 | | 10.6 | 0.0 | 29.3 | | | 36.7 | | 22.6 | | 0.7 | 0.1 | | | 100 |
| 2003 | 678 | | 3.8 | | 51.8 | | | 23.6 | 0.3 | 18.7 | | 1.8 | | | | 100 |
| 2004 | 1,409 | | 3.5 | | 19.8 | 0.1 | | 48.2 | | 27.6 | 0.0 | 0.7 | | | | 100 |
| 2005 | 482 | 0.2 | 2.9 | | 27.0 | | | 20.1 | 0.4 | 47.5 | | 1.7 | 0.2 | | | 100 |
| 2006 | 560 | | 12.9 | | 35.4 | | | 22.0 | 0.2 | 27.1 | | 2.5 | | | | 100 |
| 2007 | 789 | | 4.8 | | 42.7 | | | 22.4 | 0.1 | 28.5 | | 1.3 | 0.1 | | | 100 |
| 2008 | 380 | | 10.3 | | 19.7 | | | 27.6 | | 40.8 | | 1.6 | | | | 100 |
| 2009 | 487 | | 13.8 | | 51.3 | | | 12.3 | | 22.0 | | 0.6 | | | | 100 |
| 2010 | 743 | | 18.3 | | 24.6 | | | 36.0 | 0.1 | 20.1 | 0.2 | 0.8 | | | | 100 |
| 2011 | 1,187 | | 4.6 | | 33.7 | | | 25.2 | | 35.3 | 0.1 | 1.2 | | | | 100 |
| 2012 | 167 | | 9.6 | | 18.0 | | | 36.6 | | 35.8 | | | | | | 100 |
| 2013 | 668 | | 22.7 | | 43.4 | | | 15.2 | | 18.7 | | | | | | 100 |
| 2014 | 459 | | 17.6 | | 32.3 | | | 29.1 | | 20.9 | | 0.1 | | | | 100 |
| 2015 | 610 | | 14.2 | | 37.4 | | | 24.3 | | 23.8 | | 0.3 | | | | 100 |
| 2016 | 809 | | 6.7 | | 28.5 | | | 36.2 | | 26.7 | | 1.9 | | | | 100 |
| 2017 | 881 | | 3.6 | | 13.3 | | | 43.0 | | 39.7 | | 0.4 | | | | 100 |
| 2018 | 300 | | 13.3 | | 54.5 | | | 12.0 | | 19.8 | | 0.4 | | | | 100 |
| Mean | 904 | 0.04 | 7.43 | 0.02 | 26.64 | 0.10 | 0.04 | 26.89 | 0.20 | 36.23 | 0.23 | 1.94 | 0.25 | 0.00 | 0.00 | 100 |

Appendix A16.–Major buyers and processors of Upper Cook Inlet fishery products, 2018.

| Buyer/processor | Code | Plant site | Contact | Address |
|---|---|---|---|---|
| Icicle Seafoods Inc | F0135 | Seward | Kelly Glidden | 842 Fish Dock Rd.<br>Homer, AK 99603 |
| Pacific Star Seafoods Inc. | F1834 | Kenai | Steve Lee | PO Box 190<br>Kenai Alaska, 99611 |
| Alaska Pacific Seafoods | F10419 | Kenai | Leauri Moore | 4 Nickerson Street<br>Kenai, AK 99611 |
| Copper River Seafoods | F6426 | Anchorage | Nicole Holiday | 1118 E. 5th Ave.<br>Anchorage, AK 99501 |
| Alaska Salmon Purchasers | F4665 | Kenai | Mark Powell | 46655 Kenai Spur Hwy.<br>Kenai, AK 99611 |
| Fishhawk Fisheries | F1540 | Kenai | Steve Fick | PO Box 715<br>Astoria Oregon 97103 |
| Peninsula Processing | F6618 | Soldotna | Tim Berg Jr. | 720 K. Beach Rd.<br>Soldotna, AK 99669 |
| The Fish Factory LLC | F4449 | Homer | Mike McCune | 800 Fish Dock Rd.<br>Homer, AK 99603 |
| Favco Inc. | F0398 | Anchorage | Bill Buck | PO Box 190968<br>Anchorage, AK 99519 |
| Tanner's Fresh Fish Processing | F9070 | Ninilchik | Rory Tanner | 16050 Sterling Hwy<br>Ninilchik, AK 99639 |

Appendix A17.–Number of salmon harvested by gear, area, and species in personal use fisheries, Upper Cook Inlet, 2018.

| | Harvest | | | | | |
|---|---|---|---|---|---|---|
| Fishery | Chinook | Sockeye | Coho | Pink | Chum | Total |
| Kasilof gillnet | 120 | 14,390 | 2 | 22 | 5 | 14,539 |
| Kasilof dip net | 6 | 92,034 | 326 | 3,272 | 326 | 96,311 |
| Kenai dip net | 7 | 165,028 | 529 | 10,435 | 441 | 176,439 |
| Fish Creek dip net | 5 | 18,659 | 1,779 | 880 | 208 | 21,531 |
| Beluga dip net | 0 | 37 | 17 | 0 | 0 | 54 |
| No site reported | 0 | 2,085 | 21 | 209 | 4 | 2,319 |
| Total | 138 | 292,233 | 2,674 | 14,818 | 984 | 311,193 |

*Note*: Harvest numbers are preliminary.

Appendix A18.–Personal use sockeye salmon harvest by day, 2018.

| | Kasilof gillnet | | Kasilof dip net | | Kenai dip net | |
|---|---|---|---|---|---|---|
| Date | Daily | Cumulative | Daily | Cumulative | Daily | Cumulative |
| 15 Jun | 988 | 988 | | | | |
| 16 Jun | 1,146 | 2,134 | | | | |
| 17 Jun | 947 | 3,081 | | | | |
| 18 Jun | 1,242 | 4,323 | | | | |
| 19 Jun | 993 | 5,316 | | | | |
| 20 Jun | 1,455 | 6,771 | | | | |
| 21 Jun | 1,045 | 7,816 | | | | |
| 22 Jun | 1,106 | 8,922 | | | | |
| 23 Jun | 1,678 | 10,600 | | | | |
| 24 Jun | 1,480 | 12,080 | | | | |
| 25 Jun | | | 428 | 428 | | |
| 26 Jun | | | 377 | 805 | | |
| 27 Jun | | | 468 | 1,273 | | |
| 28 Jun | | | 213 | 1,486 | | |
| 29 Jun | | | 346 | 1,832 | | |
| 30 Jun | | | 358 | 2,190 | | |
| 1 Jul | | | 885 | 3,075 | | |
| 2 Jul | | | 834 | 3,909 | | |
| 3 Jul | | | 1,368 | 5,277 | | |
| 4 Jul | | | 780 | 6,057 | | |
| 5 Jul | | | 1,096 | 7,153 | | |
| 6 Jul | | | 1,532 | 8,685 | | |
| 7 Jul | | | 1,251 | 9,936 | | |
| 8 Jul | | | 866 | 10,802 | | |
| 9 Jul | | | 485 | 11,287 | | |
| 10 Jul | | | 1,266 | 12,553 | 627 | 627 |
| 11 Jul | | | 1,749 | 14,302 | 1,429 | 2,056 |
| 12 Jul | | | 1,572 | 15,874 | 2,390 | 4,446 |
| 13 Jul | | | 1,400 | 17,274 | 1,592 | 6,038 |
| 14 Jul | | | 1,836 | 19,110 | 2,149 | 8,187 |
| 15 Jul | | | 1,855 | 20,965 | 2,341 | 10,528 |
| 16 Jul | | | 2,095 | 23,060 | 2,468 | 12,996 |
| 17 Jul | | | 4,577 | 27,637 | 5,072 | 18,068 |
| 18 Jul | | | 4,043 | 31,680 | 10,790 | 28,858 |
| 19 Jul | | | 3,476 | 35,156 | 12,431 | 41,289 |
| 20 Jul | | | 5,262 | 40,418 | 20,536 | 61,825 |
| 21 Jul | | | 3,000 | 43,418 | 11,482 | 73,307 |
| 22 Jul | | | 2,357 | 45,775 | 11,296 | 84,603 |

-continued-

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| | Kasilof gillnet | | Kasilof dip net | | Kenai dip net | |
|---|---|---|---|---|---|---|
| Date | Daily | Cumulative | Daily | Cumulative | Daily | Cumulative |
| 23 Jul | | | 1,223 | 46,998 | 5,977 | 90,580 |
| 24 Jul | | | 1,972 | 48,970 | 5,864 | 96,444 |
| 25 Jul | | | 2,403 | 51,373 | 8,746 | 105,190 |
| 26 Jul | | | 1,434 | 52,807 | 7,687 | 112,877 |
| 27 Jul | | | 2,210 | 55,017 | 7,313 | 120,190 |
| 28 Jul | | | 1,950 | 56,967 | 7,013 | 127,203 |
| 29 Jul | | | 2,089 | 59,056 | 5,826 | 133,029 |
| 30 Jul | | | 2,182 | 61,238 | 672 | 133,701 |
| 31 Jul | | | 1,215 | 62,453 | 159 | 133,860 |
| 1 Aug | | | 1,202 | 63,655 | | |
| 2 Aug | | | 1,281 | 64,936 | | |
| 3 Aug | | | 1,625 | 66,561 | | |
| 4 Aug | | | 2,023 | 68,584 | | |
| 5 Aug | | | 1,583 | 70,167 | | |
| 6 Aug | | | 2,069 | 72,236 | | |
| 7 Aug | | | 854 | 73,090 | | |

*Note*: Data presented are for "known" permits during legal harvest dates.

Appendix A19.–Age, weight, sex, and size distribution of Pacific herring sampled by gillnet in Upper Cook Inlet, 2018.

Sample date = 5/9–11

| | | Number of fish | | | | | | | Weight | | | Length | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample area | Age | Male | Imm. female | Ripe female | Spawned female | Unknown | Total | % of total | Mean (g) | SD | Number weighed | Mean (mm) | SD | Number measured |
| ESSN | 2 | 4 | - | 2 | - | - | 6 | 10 | 78 | 20.3 | 6 | 177 | 13.7 | 6 |
| | 3 | 4 | - | 5 | - | - | 9 | 15 | 122 | 11.9 | 9 | 207 | 7.9 | 9 |
| | 4 | 10 | - | 14 | - | - | 24 | 40 | 133 | 16.1 | 24 | 210 | 7.7 | 24 |
| | 5 | 5 | - | 13 | - | - | 18 | 30 | 148 | 24.1 | 18 | 217 | 9.5 | 18 |
| | 6 | 1 | - | 2 | - | - | 3 | 5 | 174 | 32.6 | 3 | 224 | 6.1 | 3 |
| Sample total | | 24 | 0 | 36 | 0 | 0 | 60 | 100 | 132 | 28.9 | 60 | 209 | 14.0 | 60 |
| Sex composition | | 40% | 0% | 60% | 0% | 0% | | | | | | | | |

Sample date =5/16–18

| | | Number of fish | | | | | | | Weight | | | Length | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample area | Age | Male | Imm. female | Ripe female | Spawned female | Unknown | Total | % of total | Mean (g) | SD | Number weighed | Mean (mm) | SD | Number measured |
| ESSN | 2 | 2 | - | - | - | - | 2 | 4 | 69 | 20.6 | 2 | 168 | 12.0 | 2 |
| | 3 | 3 | - | 7 | - | - | 10 | 20 | 122 | 24.2 | 10 | 204 | 10.9 | 10 |
| | 4 | 10 | - | 13 | - | - | 23 | 46 | 128 | 15.7 | 23 | 208 | 8.8 | 23 |
| | 5 | 7 | - | 4 | - | - | 11 | 22 | 148 | 21.9 | 11 | 214 | 9.3 | 11 |
| | 6 | 1 | - | 3 | - | - | 4 | 8 | 169 | 32.8 | 4 | 224 | 7.5 | 4 |
| Sample total | | 23 | 0 | 27 | 0 | 0 | 50 | 100 | 132 | 27.4 | 50 | 208 | 13.3 | 50 |
| Sex composition | | 46% | 0% | 54% | 0% | 0% | | | | | | | | |

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Sample date = 5/28–6/4

| | | Number of fish | | | | | | | Weight | | | Length | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample area | Age | Male | Imm. female | Ripe female | Spawned female | Unknown | Total | % of total | Mean (g) | SD | Number weighed | Mean (mm) | SD | Number measured |
| ESSN | 2 | 21 | - | 30 | - | - | 51 | 69 | 83 | 14.0 | 51 | 178 | 9.0 | 51 |
| | 3 | 9 | - | 8 | - | - | 17 | 23 | 110 | 24.9 | 17 | 195 | 16.3 | 17 |
| | 4 | 2 | - | 2 | - | - | 4 | 5 | 152 | 16.2 | 4 | 217 | 4.7 | 4 |
| | 6 | - | - | 1 | - | - | 1 | 1 | 178 | - | 1 | 229 | - | 1 |
| | 7 | - | - | 1 | - | - | 1 | 1 | 166 | - | 1 | 228 | - | 1 |
| Sample total | | 32 | 0 | 42 | 0 | 0 | 74 | 100 | 120 | 27.6 | 74 | 185 | 16.8 | 74 |
| Sex composition | | 43% | 0% | 57% | 0% | 0% | | | | | | | | |

Sample date = all 2018

| | | Number of fish | | | | | | | Weight | | | Length | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample area | Age | Male | Imm. female | Ripe female | Spawned female | Unknown | Total | % of total | Mean (g) | SD | Number weighed | Mean (mm) | SD | Number measured |
| ESSN | 2 | 27 | - | 32 | - | - | 59 | 32 | 82 | 14.9 | 59 | 177 | 9.6 | 59 |
| | 3 | 16 | - | 20 | - | - | 36 | 20 | 116 | 22.5 | 36 | 200 | 14.0 | 36 |
| | 4 | 22 | - | 29 | - | - | 51 | 28 | 132 | 16.7 | 51 | 210 | 8.3 | 51 |
| | 5 | 12 | - | 17 | - | - | 29 | 16 | 148 | 22.9 | 29 | 216 | 9.4 | 29 |
| | 6 | 2 | - | 6 | - | - | 8 | 4 | 172 | 27.8 | 8 | 224 | 6.2 | 8 |
| | 7 | - | - | 1 | - | - | 1 | 1 | 166 | - | 1 | 228 | - | 1 |
| Sample total | | 79 | 0 | 105 | 0 | 0 | 184 | 100 | 117 | 33.2 | 184 | 199 | 14.1 | 184 |
| Sex composition | | 43% | 0% | 57% | 0% | 0% | | | | | | | | |

Appendix A20.–Age, sex, and size distribution of eulachon (smelt) from Upper Cook Inlet commercial dip net fishery, 2006–2018.

| 2006 | | | | | 2007 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Age | Sex | Length (mm) | Number sampled | Percent | Age | Sex | Length (mm) | Number sampled | Percent |
| 3 | Male | 185 | 1 | 1% | 3 | Male | 179 | 10 | 9% |
| | Female | - | - | - | | Female | 174 | 5 | 5% |
| 4 | Male | 194 | 46 | 54% | 4 | Male | 188 | 65 | 60% |
| | Female | 186 | 22 | 26% | | Female | 186 | 23 | 21% |
| 5 | Male | 200 | 14 | 16% | 5 | Male | 201 | 4 | 4% |
| | Female | 203 | 2 | 2% | | Female | 192 | 1 | 1% |
| Avg | Male | 196 | 61 | 72% | Avg | Male | 188 | 79 | 73% |
| | Female | 187 | 24 | 28% | | Female | 184 | 29 | 27% |
| Avg - all | | 193 | 85 | 100% | Avg - all | | 187 | 108 | 100% |

| 2008 | | | | | 2009 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Age | Sex | Length (mm) | Number sampled | Percent | Age | Sex | Length (mm) | Number sampled | Percent |
| 3 | Male | 194 | 3 | 3% | 3 | Male | 195 | 12 | 7% |
| | Female | 185 | 10 | 10% | | Female | 191 | 18 | 10% |
| 4 | Male | 201 | 37 | 37% | 4 | Male | 203 | 74 | 41% |
| | Female | 193 | 36 | 36% | | Female | 194 | 58 | 32% |
| 5 | Male | 208 | 12 | 12% | 5 | Male | 203 | 13 | 7% |
| | Female | 206 | 3 | 3% | | Female | 203 | 5 | 3% |
| Avg | Male | 202 | 52 | 51% | Avg | Male | 202 | 99 | 55% |
| | Female | 192 | 49 | 49% | | Female | 194 | 81 | 45% |
| Avg - all | | 197 | 101 | 100% | Avg - all | | 198 | 180 | 100% |

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| 2010 | | | | | 2011 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Age | Sex | Length (mm) | Number sampled | Percent | Age | Sex | Length (mm) | Number sampled | Percent |
| 3 | Male | 189 | 14 | 7% | 3 | Male | 192 | 25 | 13% |
| | Female | 194 | 10 | 5% | | Female | 185 | 47 | 24% |
| 4 | Male | 197 | 61 | 31% | 4 | Male | 205 | 48 | 24% |
| | Female | 204 | 105 | 53% | | Female | 203 | 41 | 21% |
| 5 | Male | 204 | 3 | 2% | 5 | Male | 210 | 28 | 14% |
| | Female | 203 | 6 | 3% | | Female | 208 | 11 | 6% |
| Avg | Male | 196 | 78 | 39% | Avg | Male | 203 | 101 | 51% |
| | Female | 203 | 121 | 61% | | Female | 195 | 99 | 50% |
| Avg - all | | 200 | 199 | 100% | Avg - all | | 199 | 200 | 100% |

| 2012 | | | | | 2013 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Age | Sex | Length (mm) | Number sampled | Percent | Age | Sex | Length (mm) | Number sampled | Percent |
| 3 | Male | 191 | 20 | 11% | 3 | Male | 212 | 7 | 4% |
| | Female | 198 | 19 | 10% | | Female | 216 | 7 | 4% |
| 4 | Male | 204 | 50 | 27% | 4 | Male | 219 | 78 | 50% |
| | Female | 207 | 88 | 47% | | Female | 212 | 37 | 24% |
| 5 | Male | 208 | 2 | 1% | 5 | Male | 224 | 22 | 14% |
| | Female | 215 | 7 | 4% | | Female | 217 | 5 | 3% |
| Avg | Male | 201 | 72 | 39% | Avg | Male | 220 | 107 | 69% |
| | Female | 206 | 114 | 61% | | Female | 213 | 49 | 31% |
| Avg - all | | 204 | 186 | 100% | Avg - all | | 218 | 156 | 100% |

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| 2014 | | | | |
|---|---|---|---|---|
| Age | Sex | Length (mm) | Number sampled | Percent |
| 3 | Male | 196 | 16 | 12% |
| | Female | 194 | 22 | 16% |
| 4 | Male | 211 | 51 | 37% |
| | Female | 209 | 37 | 27% |
| 5 | Male | 219 | 10 | 7% |
| | Female | 218 | 2 | 1% |
| Avg | Male | 209 | 77 | 56% |
| | Female | 202 | 61 | 44% |
| Avg - all | | 207 | 138 | 100% |

| 2015 | | | | |
|---|---|---|---|---|
| Age | Sex | Length (mm) | Number sampled | Percent |
| 3 | Male | 184 | 73 | 30% |
| | Female | 179 | 7 | 3% |
| 4 | Male | 198 | 152 | 63% |
| | Female | 192 | 8 | 3% |
| 5 | Male | 214 | 3 | 1% |
| | Female | 0 | 0 | 0% |
| All | Male | 193 | 228 | 94% |
| | Female | 185 | 15 | 6% |
| Avg - all | | 194 | 243 | 100% |

| 2016 | | | | |
|---|---|---|---|---|
| Age | Sex | Length (mm) | Number sampled | Percent |
| 3 | Male | 183 | 17 | 6% |
| | Female | 179 | 28 | 10% |
| 4 | Male | 193 | 117 | 43% |
| | Female | 190 | 102 | 38% |
| 5 | Male | 203 | 6 | 2% |
| | Female | 0 | 0 | 0% |
| All | Male | 192 | 140 | 52% |
| | Female | 187 | 130 | 48% |
| Avg - all | | 190 | 270 | 100% |

| 2017 | | | | |
|---|---|---|---|---|
| Age | | Length (mm) | Number sampled | Percent |
| 3 | Female | 172 | 2 | 1% |
| | Male | 173 | 69 | 23% |
| 4 | Female | 159 | 1 | 0% |
| | Male | 187 | 232 | 76% |
| All | Male | 167 | 301 | 99% |
| | Female | 184 | 3 | 1% |
| Avg - all | | 183 | 304 | 100% |

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| 2018 | | | | | All Years (2007-2018) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Age | Sex | Length (mm) | Number. sampled | Percent | Age | Sex | Length (mm) | Number sampled | Percent |
| 3 | Male | 159 | 2 | 2% | 3 | Male | 190 | 199 | 11% |
| | Female | 159 | 29 | 26% | | Female | 188 | 202 | 11% |
| 4 | Male | 173 | 28 | 25% | 4 | Male | 201 | 761 | 40% |
| | Female | 168 | 46 | 41% | | Female | 198 | 581 | 31% |
| 5 | Male | 188 | 3 | 3% | 5 | Male | 209 | 103 | 5% |
| | Female | 183 | 4 | 4% | | Female | 166 | 40 | 2% |
| Avg | Male | 173 | 33 | 29% | Avg | Male | 202 | 354 | 56% |
| | Female | 165 | 79 | 71% | | Female | 196 | 274 | 44% |
| Avg - all | | 168 | 112 | 100% | Avg - all | | 199 | 629 | 100% |

Appendix A21.–Seldovia District tide tables, May through August 2018.

MAY

| HIGH TIDES | | | | | | LOW TIDES | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AM | | PM | | | | AM | | PM | |
| Date | Day | Time | Feet | Time | Feet | Date | Day | Time | Feet | Time | Feet |
| 1 | Tue | 3:50 | 19.9 | 4:35 | 18.4 | 1 | Tue | 10:11 | -2.9 | 1:09 | -1.6 |
| 2 | Wed | 4:21 | 19.4 | 5:13 | 17.6 | 2 | Wed | 10:47 | -2.3 | 2:13 | 0.3 |
| 3 | Thu | 4:53 | 18.5 | 5:52 | 16.6 | 3 | Thu | 11:23 | -1.3 | 3:26 | 1.8 |
| 4 | Fri | 5:26 | 17.3 | 6:35 | 15.3 | 4 | Fri | – | -0.1 | 12:00 | 2.3 |
| 5 | Sat | 6:02 | 16.0 | 7:24 | 14.2 | 5 | Sat | 12:11 | 4.2 | 5:51 | 2.4 |
| 6 | Sun | 6:45 | 14.6 | 8:23 | 13.3 | 6 | Sun | 12:57 | 2.9 | 6:44 | 2.2 |
| 7 | Mon | 7:41 | 13.3 | 9:34 | 13.0 | 7 | Mon | 1:57 | 1.4 | 7:27 | 2.0 |
| 8 | Tue | 8:58 | 12.4 | 10:43 | 13.4 | 8 | Tue | 3:14 | 0.2 | 8:04 | 1.1 |
| 9 | Wed | 10:25 | 12.4 | 11:37 | 14.3 | 9 | Wed | 4:36 | -0.9 | 8:38 | 1.1 |
| 10 | Thu | 11:38 | 13.3 | – | – | 10 | Thu | 5:43 | -1.5 | 9:11 | 1.1 |
| 11 | Fri | 12:21 | 15.4 | 12:35 | 14.6 | 11 | Fri | 6:32 | -1.8 | 9:45 | 2.2 |
| 12 | Sat | 12:59 | 16.8 | 1:24 | 16.0 | 12 | Sat | 7:14 | -1.8 | 10:18 | 2.8 |
| 13 | Sun | 1:35 | 18.1 | 2:09 | 17.3 | 13 | Sun | 7:54 | -1.3 | 10:54 | 3.5 |
| 14 | Mon | 2:11 | 19.4 | 2:52 | 18.4 | 14 | Mon | 8:33 | -0.6 | 11:31 | 4.3 |
| 15 | Tue | 2:48 | 20.5 | 3:36 | 19.0 | 15 | Tue | 9:13 | 0.4 | – | – |
| 16 | Wed | 3:27 | 21.1 | 4:21 | 19.2 | 16 | Wed | 9:55 | 5.2 | 12:40 | 1.4 |
| 17 | Thu | 4:08 | 21.2 | 5:07 | 19.0 | 17 | Thu | 10:38 | 6.0 | 1:30 | 2.4 |
| 18 | Fri | 4:51 | 20.7 | 5:57 | 18.3 | 18 | Fri | 11:23 | 6.6 | 2:30 | 3.0 |
| 19 | Sat | 5:38 | 19.6 | 6:51 | 17.4 | 19 | Sat | 12:13 | 6.3 | 3:39 | 3.3 |
| 20 | Sun | 6:32 | 18.0 | 7:52 | 16.5 | 20 | Sun | 12:32 | 5.1 | 4:46 | 3.0 |
| 21 | Mon | 7:35 | 16.4 | 8:59 | 16.0 | 21 | Mon | 1:35 | 3.3 | 5:47 | 2.4 |
| 22 | Tue | 8:52 | 15.0 | 10:09 | 16.0 | 22 | Tue | 2:50 | 1.0 | 6:40 | 1.5 |
| 23 | Wed | 10:17 | 14.5 | 11:14 | 16.5 | 23 | Wed | 4:13 | -1.3 | 7:30 | 0.7 |
| 24 | Thu | 11:36 | 14.7 | – | – | 24 | Thu | 5:29 | -3.5 | 8:17 | 0.0 |
| 25 | Fri | 12:09 | 17.2 | 12:41 | 15.4 | 25 | Fri | 6:30 | -5.1 | 9:03 | -0.3 |
| 26 | Sat | 12:55 | 17.9 | 1:35 | 16.2 | 26 | Sat | 7:19 | -6.0 | 9:49 | -0.3 |
| 27 | Sun | 1:36 | 18.5 | 2:22 | 16.8 | 27 | Sun | 8:02 | -6.1 | 10:37 | 0.3 |
| 28 | Mon | 2:13 | 18.9 | 3:04 | 17.3 | 28 | Mon | 8:40 | -5.4 | 11:26 | 1.2 |
| 29 | Tue | 2:48 | 19.1 | 3:43 | 17.5 | 29 | Tue | 9:17 | -3.1 | – | – |
| 30 | Wed | 3:24 | 19.1 | 4:20 | 17.4 | 30 | Wed | 9:51 | 2.3 | 12:52 | -2.1 |
| 31 | Thu | 3:54 | 18.7 | 4:58 | 17.1 | 31 | Thu | 10:26 | 3.5 | 1:49 | -0.2 |

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| JUNE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HIGH TIDES | | | | | | LOW TIDES | | | | | |
| | | AM | | PM | | | | AM | | PM | |
| Date | Day | Time | Feet | Time | Feet | Date | Day | Time | Feet | Time | Feet |
| 1 | Fri | 4:28 | 18.1 | 17:36 | 16.5 | 1 | Fri | 11:01 | -1.6 | 23:10 | 3.9 |
| 2 | Sat | 5:03 | 17.3 | 18:16 | 15.8 | 2 | Sat | 11:38 | -0.7 | 23:51 | 4.7 |
| 3 | Sun | 5:41 | 16.2 | 18:58 | 15.1 | 3 | Sun | 12:16 | 0.3 | – | – |
| 4 | Mon | 6:23 | 15.0 | 19:46 | 14.4 | 4 | Mon | 0:35 | 5.5 | 12:58 | 1.5 |
| 5 | Tue | 7:13 | 13.8 | 20:38 | 14.1 | 5 | Tue | 1:28 | 6.1 | 13:47 | 2.6 |
| 6 | Wed | 8:16 | 12.9 | 21:35 | 14.1 | 6 | Wed | 2:30 | 6.2 | 14:44 | 3.4 |
| 7 | Thu | 9:31 | 12.5 | 22:29 | 14.7 | 7 | Thu | 3:39 | 5.8 | 15:47 | 3.9 |
| 8 | Fri | 10:47 | 12.9 | 23:20 | 15.6 | 8 | Fri | 4:48 | 4.7 | 16:50 | 3.9 |
| 9 | Sat | 11:55 | 13.8 | – | – | 9 | Sat | 5:47 | 3.0 | 17:48 | 3.6 |
| 10 | Sun | 0:07 | 16.8 | 12:53 | 15.0 | 10 | Sun | 6:38 | 1.1 | 18:40 | 3.0 |
| 11 | Mon | 0:51 | 18.1 | 13:45 | 16.4 | 11 | Mon | 7:25 | -1.0 | 19:29 | 2.3 |
| 12 | Tue | 1:35 | 19.5 | 14:35 | 17.6 | 12 | Tue | 8:10 | -2.9 | 20:16 | 1.7 |
| 13 | Wed | 2:20 | 20.6 | 15:23 | 18.6 | 13 | Wed | 8:55 | -4.4 | 21:03 | 1.2 |
| 14 | Thu | 3:05 | 21.3 | 16:10 | 19.2 | 14 | Thu | 9:39 | -5.4 | 21:49 | 1.0 |
| 15 | Fri | 3:52 | 21.5 | 16:58 | 19.4 | 15 | Fri | 10:25 | -5.6 | 22:37 | 1.1 |
| 16 | Sat | 4:40 | 21.1 | 17:47 | 19.1 | 16 | Sat | 11:11 | -5.2 | 23:28 | 1.6 |
| 17 | Sun | 5:30 | 20.0 | 18:37 | 18.6 | 17 | Sun | 12:00 | -4.0 | – | – |
| 18 | Mon | 6:24 | 18.5 | 19:31 | 17.8 | 18 | Mon | 0:22 | 2.2 | 12:51 | -2.4 |
| 19 | Tue | 7:25 | 16.8 | 20:28 | 17.2 | 19 | Tue | 1:22 | 2.8 | 13:47 | -0.6 |
| 20 | Wed | 8:34 | 15.2 | 21:29 | 16.7 | 20 | Wed | 2:30 | 3.3 | 14:48 | 1.2 |
| 21 | Thu | 9:52 | 14.2 | 22:31 | 16.6 | 21 | Thu | 3:45 | 3.2 | 15:53 | 2.6 |
| 22 | Fri | 11:11 | 13.9 | 23:29 | 16.7 | 22 | Fri | 5:00 | 2.6 | 16:59 | 3.5 |
| 23 | Sat | 12:21 | 14.2 | – | – | 23 | Sat | 6:06 | 1.6 | 18:00 | 3.9 |
| 24 | Sun | 0:20 | 17.0 | 13:20 | 14.8 | 24 | Sun | 7:00 | 0.6 | 18:54 | 4.0 |
| 25 | Mon | 1:05 | 17.4 | 14:09 | 15.5 | 25 | Mon | 7:45 | -0.4 | 19:40 | 3.9 |
| 26 | Tue | 1:46 | 17.8 | 14:52 | 16.1 | 26 | Tue | 8:25 | -1.1 | 20:21 | 3.7 |
| 27 | Wed | 2:23 | 18.1 | 15:30 | 16.6 | 27 | Wed | 9:00 | -1.7 | 21:00 | 3.5 |
| 28 | Thu | 2:59 | 18.3 | 16:06 | 16.9 | 28 | Thu | 9:35 | -2.0 | 21:37 | 3.3 |
| 29 | Fri | 3:35 | 18.3 | 16:41 | 17.0 | 29 | Fri | 10:08 | -2.0 | 22:14 | 3.3 |
| 30 | Sat | 4:10 | 18.1 | 17:16 | 16.9 | 30 | Sat | 10:42 | -1.8 | 22:52 | 3.5 |

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| JULY | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HIGH TIDES | | | | | | LOW TIDES | | | | | |
| | | AM | | PM | | | | AM | | PM | |
| Date | Day | Time | Feet | Time | Feet | Date | Day | Time | Feet | Time | Feet |
| 1 | Sun | 4:46 | 17.6 | 17:51 | 16.6 | 1 | Sun | 11:16 | -1.3 | 23:30 | 3.8 |
| 2 | Mon | 5:23 | 16.8 | 18:27 | 16.2 | 2 | Mon | 11:51 | -0.4 | – | – |
| 3 | Tue | 6:03 | 15.9 | 19:05 | 15.7 | 3 | Tue | 0:11 | 4.2 | 12:28 | 0.6 |
| 4 | Wed | 6:47 | 14.8 | 19:47 | 15.3 | 4 | Wed | 0:56 | 4.6 | 13:09 | 1.7 |
| 5 | Thu | 7:40 | 13.8 | 20:33 | 15.1 | 5 | Thu | 1:47 | 4.8 | 13:55 | 2.8 |
| 6 | Fri | 8:45 | 13.0 | 21:25 | 15.3 | 6 | Fri | 2:46 | 4.8 | 14:50 | 3.8 |
| 7 | Sat | 10:01 | 12.8 | 22:22 | 15.8 | 7 | Sat | 3:54 | 4.2 | 15:54 | 4.5 |
| 8 | Sun | 11:18 | 13.2 | 23:19 | 16.7 | 8 | Sun | 5:02 | 2.9 | 17:01 | 4.6 |
| 9 | Mon | 12:27 | 14.3 | – | – | 9 | Mon | 6:05 | 1.2 | 18:05 | 4.3 |
| 10 | Tue | 0:15 | 17.9 | 13:28 | 15.7 | 10 | Tue | 7:01 | -0.8 | 19:04 | 3.5 |
| 11 | Wed | 1:09 | 19.3 | 14:21 | 17.2 | 11 | Wed | 7:51 | -2.7 | 19:57 | 2.5 |
| 12 | Thu | 2:01 | 20.5 | 15:10 | 18.6 | 12 | Thu | 8:39 | -4.4 | 20:48 | 1.5 |
| 13 | Fri | 2:51 | 21.4 | 15:57 | 19.6 | 13 | Fri | 9:25 | -5.5 | 21:37 | 0.7 |
| 14 | Sat | 3:41 | 21.8 | 16:43 | 20.1 | 14 | Sat | 10:10 | -5.8 | 22:25 | 0.3 |
| 15 | Sun | 4:30 | 21.6 | 17:28 | 20.2 | 15 | Sun | 10:56 | -5.4 | 23:14 | 0.2 |
| 16 | Mon | 5:20 | 20.7 | 18:13 | 19.7 | 16 | Mon | 11:41 | -4.2 | – | – |
| 17 | Tue | 6:12 | 19.2 | 19:00 | 18.9 | 17 | Tue | 0:05 | 0.6 | 12:28 | -2.4 |
| 18 | Wed | 7:07 | 17.4 | 19:50 | 18.0 | 18 | Wed | 1:00 | 1.3 | 13:18 | -0.4 |
| 19 | Thu | 8:08 | 15.5 | 20:44 | 17.0 | 19 | Thu | 2:00 | 2.1 | 14:11 | 1.8 |
| 20 | Fri | 9:20 | 14.0 | 21:43 | 16.2 | 20 | Fri | 3:07 | 2.8 | 15:11 | 3.7 |
| 21 | Sat | 10:41 | 13.2 | 22:45 | 15.8 | 21 | Sat | 4:23 | 2.9 | 16:18 | 5.0 |
| 22 | Sun | 12:01 | 13.3 | 23:46 | 15.9 | 22 | Sun | 5:39 | 2.5 | 17:28 | 5.7 |
| 23 | Mon | 13:06 | 13.9 | – | – | 23 | Mon | 6:41 | 1.7 | 18:30 | 5.7 |
| 24 | Tue | 0:39 | 16.2 | 13:57 | 14.8 | 24 | Tue | 7:30 | 0.8 | 19:22 | 5.3 |
| 25 | Wed | 1:25 | 16.7 | 14:39 | 15.6 | 25 | Wed | 8:10 | 0.0 | 20:05 | 4.6 |
| 26 | Thu | 2:06 | 17.3 | 15:14 | 16.4 | 26 | Thu | 8:45 | -0.8 | 20:44 | 3.9 |
| 27 | Fri | 2:43 | 17.9 | 15:47 | 17.0 | 27 | Fri | 9:17 | -1.4 | 21:20 | 3.2 |
| 28 | Sat | 3:19 | 18.3 | 16:18 | 17.5 | 28 | Sat | 9:48 | -1.7 | 21:56 | 2.7 |
| 29 | Sun | 3:55 | 18.5 | 16:49 | 17.7 | 29 | Sun | 10:20 | -1.8 | 22:31 | 2.4 |
| 30 | Mon | 4:30 | 18.3 | 17:20 | 17.7 | 30 | Mon | 10:51 | -1.5 | 23:06 | 2.4 |
| 31 | Tue | 5:06 | 17.8 | 17:51 | 17.4 | 31 | Tue | 11:24 | -0.8 | 23:43 | 2.5 |

-continued-

Appendix A21.–Page 4 of 4.

| AUGUST | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HIGH TIDES | | | | | | LOW TIDES | | | | | |
| | | AM | | PM | | | | AM | | PM | |
| Date | Day | Time | Feet | Time | Feet | Date | Day | Time | Feet | Time | Feet |
| 1 | Wed | 5:43 | 17.0 | 18:24 | 17.0 | 1 | Wed | 11:58 | 4.2 | – | – |
| 2 | Thu | 6:23 | 16.0 | 18:59 | 16.6 | 2 | Thu | 0:23 | 3.6 | 12:34 | 1.3 |
| 3 | Fri | 7:10 | 14.8 | 19:40 | 16.2 | 3 | Fri | 1:08 | 2.6 | 13:15 | 2.7 |
| 4 | Sat | 8:09 | 13.7 | 20:30 | 15.9 | 4 | Sat | 2:01 | 1.4 | 14:05 | 4.1 |
| 5 | Sun | 9:24 | 13.0 | 21:32 | 15.9 | 5 | Sun | 3:07 | 0.3 | 15:10 | 5.2 |
| 6 | Mon | 10:51 | 13.1 | 22:42 | 16.5 | 6 | Mon | 4:23 | -0.8 | 16:26 | 5.7 |
| 7 | Tue | 12:11 | 14.1 | 23:50 | 17.5 | 7 | Tue | 5:37 | -1.7 | 17:42 | 5.4 |
| 8 | Wed | 13:15 | 15.7 | – | – | 8 | Wed | 6:41 | -2.2 | 18:48 | 4.2 |
| 9 | Thu | 0:53 | 18.9 | 14:07 | 17.4 | 9 | Thu | 7:36 | -2.4 | 19:45 | 2.7 |
| 10 | Fri | 1:49 | 20.3 | 14:54 | 19.0 | 10 | Fri | 8:24 | -2.0 | 20:36 | 1.1 |
| 11 | Sat | 2:42 | 21.4 | 15:38 | 20.2 | 11 | Sat | 9:09 | -1.2 | 21:24 | -0.3 |
| 12 | Sun | 3:31 | 22.0 | 16:20 | 20.9 | 12 | Sun | 9:53 | – | 22:10 | -1.1 |
| 13 | Mon | 4:19 | 21.9 | 17:01 | 21.1 | 13 | Mon | 10:35 | 1.4 | 22:56 | -1.3 |
| 14 | Tue | 5:06 | 21.1 | 17:42 | 20.6 | 14 | Tue | 11:18 | 2.0 | 23:42 | -0.9 |
| 15 | Wed | 5:54 | 19.7 | 18:23 | 19.6 | 15 | Wed | 12:00 | 2.4 | – | – |
| 16 | Thu | 6:43 | 17.8 | 19:07 | 18.3 | 16 | Thu | 0:31 | 2.3 | 12:45 | 0.5 |
| 17 | Fri | 7:38 | 15.7 | 19:54 | 16.9 | 17 | Fri | 1:24 | 1.4 | 13:32 | 2.8 |
| 18 | Sat | 8:44 | 13.9 | 20:49 | 15.6 | 18 | Sat | 2:24 | 0.0 | 14:28 | 4.9 |
| 19 | Sun | 10:08 | 12.9 | 21:57 | 14.8 | 19 | Sun | 3:38 | -1.6 | 15:36 | 6.5 |
| 20 | Mon | 11:39 | 12.9 | 23:12 | 14.6 | 20 | Mon | 5:05 | -2.9 | 16:58 | 7.1 |
| 21 | Tue | 12:50 | 13.7 | – | – | 21 | Tue | 6:19 | -3.7 | 18:14 | 6.8 |
| 22 | Wed | 0:17 | 15.1 | 13:40 | 14.7 | 22 | Wed | 7:12 | -3.9 | 19:09 | 5.9 |
| 23 | Thu | 1:09 | 15.9 | 14:17 | 15.7 | 23 | Thu | 7:51 | -3.5 | 19:51 | 4.7 |
| 24 | Fri | 1:51 | 16.8 | 14:49 | 16.7 | 24 | Fri | 8:24 | -2.5 | 20:27 | 3.5 |
| 25 | Sat | 2:28 | 17.8 | 15:18 | 17.5 | 25 | Sat | 8:54 | -0.9 | 21:01 | 2.4 |
| 26 | Sun | 3:03 | 18.5 | 15:47 | 18.2 | 26 | Sun | 9:23 | – | 21:34 | 1.5 |
| 27 | Mon | 3:37 | 19.0 | 16:15 | 18.6 | 27 | Mon | 9:53 | 1.6 | 22:07 | 0.9 |
| 28 | Tue | 4:12 | 19.1 | 16:44 | 18.8 | 28 | Tue | 10:24 | 3.0 | 22:40 | 0.6 |
| 29 | Wed | 4:46 | 18.8 | 17:13 | 18.7 | 29 | Wed | 10:55 | 4.2 | 23:15 | 0.7 |
| 30 | Thu | 5:23 | 18.0 | 17:43 | 18.3 | 30 | Thu | 11:28 | 4.9 | 23:53 | 1.0 |
| 31 | Fri | 6:02 | 17.0 | 18:17 | 17.8 | 31 | Fri | 12:03 | 4.7 | – | – |

Appendix A22.–Total sockeye salmon harvest from all sources in Upper Cook Inlet, 1996–2018.

| | Commercial | | | | Sport[a,b,c] | | | Personal use | | | | | Subsistence/ educational | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Drift | Set | Test fishery | All | Kenai River | All other UCI | All | Kasilof gillnet | Kasilof dipnet | Kenai dipnet | Other[d] | All | Sub.[e] | Ed.[e] | Total |
| 1996 | 2,205,067 | 1,683,855 | 2,424 | 3,891,346 | 205,959 | 16,863 | 222,822 | 9,506 | 11,197 | 102,821 | 22,021 | 145,545 | 259 | 2,405 | 4,262,377 |
| 1997 | 2,197,961 | 1,979,034 | 2,301 | 4,179,296 | 190,629 | 23,591 | 214,220 | 17,997 | 9,737 | 114,619 | 6,587 | 148,940 | 593 | 3,076 | 4,546,125 |
| 1998 | 599,396 | 620,121 | 5,456 | 1,224,973 | 189,885 | 23,477 | 213,362 | 15,975 | 45,161 | 103,847 | 11,598 | 176,581 | 636 | 3,567 | 1,619,119 |
| 1999 | 1,413,995 | 1,266,523 | 11,766 | 2,692,284 | 233,768 | 26,078 | 259,846 | 12,832 | 37,176 | 149,504 | 9,077 | 208,589 | 599 | 3,037 | 3,164,355 |
| 2000 | 656,427 | 666,055 | 9,450 | 1,331,932 | 261,779 | 32,194 | 293,973 | 14,774 | 23,877 | 98,262 | 12,354 | 149,267 | 442 | 2,933 | 1,778,547 |
| 2001 | 846,275 | 980,576 | 3,381 | 1,830,232 | 219,478 | 30,953 | 250,431 | 17,201 | 37,612 | 150,766 | 13,109 | 218,688 | 686 | 4,633 | 2,304,670 |
| 2002 | 1,367,251 | 1,405,867 | 37,983 | 2,811,101 | 259,733 | 21,770 | 281,503 | 17,980 | 46,769 | 180,028 | 14,846 | 259,623 | 623 | 3,722 | 3,356,572 |
| 2003 | 1,593,638 | 1,882,523 | 13,968 | 3,490,129 | 314,408 | 36,076 | 350,484 | 15,706 | 43,870 | 223,580 | 15,675 | 298,831 | 544 | 5,993 | 4,145,981 |
| 2004 | 2,529,642 | 2,397,442 | 10,677 | 4,937,761 | 317,233 | 28,823 | 346,056 | 25,417 | 48,315 | 262,831 | 13,527 | 350,090 | 484 | 5,237 | 5,639,628 |
| 2005 | 2,520,327 | 2,718,372 | 12,064 | 5,250,763 | 312,835 | 21,826 | 334,661 | 26,609 | 43,151 | 295,496 | 4,520 | 369,776 | 238 | 7,134 | 5,962,572 |
| 2006 | 784,771 | 1,407,959 | 10,698 | 2,203,428 | 203,602 | 24,517 | 228,119 | 28,867 | 56,144 | 127,630 | 3,406 | 216,047 | 408 | 5,444 | 2,653,446 |
| 2007 | 1,823,481 | 1,493,298 | 10,649 | 3,327,428 | 326,325 | 28,504 | 354,829 | 14,943 | 43,293 | 291,270 | 6,729 | 356,235 | 567 | 5,773 | 4,044,832 |
| 2008 | 983,303 | 1,396,832 | 16,957 | 2,397,092 | 254,359 | 30,155 | 284,514 | 23,432 | 54,051 | 234,109 | 6,890 | 318,482 | 450 | 4,761 | 3,005,299 |
| 2009 | 968,075 | 1,077,719 | 13,948 | 2,059,742 | 252,319 | 120,650 | 372,969 | 26,646 | 73,035 | 339,993 | 18,006 | 457,680 | 253 | 7,190 | 2,897,834 |
| 2010 | 1,587,657 | 1,240,685 | 6,670 | 2,835,012 | 304,635 | 55,831 | 360,466 | 21,924 | 70,774 | 389,552 | 32,052 | 514,302 | 865 | 5,652 | 3,716,297 |
| 2011 | 3,201,035 | 2,076,960 | 5,660 | 5,283,655 | 395,840 | 59,498 | 455,338 | 26,780 | 49,766 | 537,765 | 16,068 | 630,379 | 700 | 8,048 | 6,378,120 |
| 2012 | 2,924,144 | 209,695 | 11,839 | 3,145,678 | 455,454 | 50,164 | 505,618 | 15,638 | 73,419 | 526,992 | 13,304 | 629,353 | 441 | 4,418 | 4,285,508 |
| 2013 | 1,662,561 | 1,020,663 | 5,283 | 2,688,507 | 436,988 | 77,833 | 514,821 | 14,439 | 85,528 | 347,222 | 7,126 | 454,315 | 333 | 6,185 | 3,664,161 |
| 2014 | 1,501,678 | 842,356 | 5,648 | 2,349,682 | 360,831 | 89,785 | 450,616 | 22,567 | 88,513 | 379,823 | 15,144 | 506,047 | 587 | 7,724 | 3,314,656 |
| 2015 | 1,012,684 | 1,636,983 | 2,378 | 2,652,045 | 376,422 | 73,876 | 450,298 | 27,567 | 89,000 | 377,532 | 27,951 | 522,050 | 800 | 9,170 | 3,634,363 |
| 2016 | 1,266,696 | 1,130,112 | 2,096 | 2,398,904 | 329,702 | 53,768 | 383,470 | 26,539 | 58,723 | 259,057 | 4,837 | 349,156 | 659 | 7,449 | 3,139,638 |
| 2017 | 880,279 | 968,571 | 2,701 | 1,851,551 | 291,405 | 58,866 | 350,271 | 21,927 | 78,260 | 297,049 | 9,654 | 406,890 | 911 | 10,968 | 2,620,591 |
| 2018 | 400,285 | 417,610 | 1,546 | 819,441 | 250,000 | 20,000 | 270,000 | 14,390 | 92,034 | 165,028 | 2,085 | 292,233 | 622 | 8,581 | 1,390,877 |

[a] Sport harvest in the Kenai River includes late-run stock only; early-run Russian River sockeye salmon harvest is excluded.

[b] Sport harvest is estimated from the annual statewide sportfish harvest survey.

[c] Sport harvest in 2017 is unknown until the statewide harvest survey is finalized; these figures are estimates based on size of 2017 sockeye salmon run.

[d] Area of harvest not identified on returned permits, other than Fish Creek dip net, which was open from 1996–2001, 2009–2010, 2014–2015, 2017, and Beluga dip net (2008–2017).

[e] "Sub." = Subsistence; "Ed." = Educational; see Appendices B15 and B16 for individual fishery harvests.

Appendix A23.–Daily commercial harvest of razor clams, Upper Cook Inlet, 2018.

| Date | Pounds | Number of diggers | Date | Pounds | Number of diggers |
|---|---|---|---|---|---|
| 12 May | 699 | 12 | 28 Jun | 2,628 | 14 |
| 13 May | 1,763 | 14 | 29 Jun | 3,720 | 14 |
| 14 May | 2,800 | 14 | 30 Jun | 3,743 | 14 |
| 15 May | 3,404 | 14 | 1 Jul | 3,368 | 13 |
| 17 May | 2,744 | 12 | 2 Jul | 3,439 | 13 |
| 18 May | 2,675 | 14 | 3 Jul | 2,963 | 12 |
| 19 May | 1,874 | 11 | 4 Jul | 1,451 | 12 |
| 20 May | 1,900 | 10 | 9 Jul | 1,972 | 14 |
| 21 May | 1,604 | 13 | 10 Jul | 3,030 | 13 |
| 22 May | 1,516 | 13 | 11 Jul | 3,937 | 15 |
| 25 May | 619 | 10 | 12 Jul | 3,077 | 13 |
| 26 May | 1,811 | 11 | 13 Jul | 3,949 | 15 |
| 27 May | 3,450 | 13 | 14 Jul | 2,909 | 15 |
| 28 May | 2,800 | 13 | 15 Jul | 3,000 | 15 |
| 29 May | 2,844 | 14 | 16 Jul | 3,023 | 14 |
| 30 May | 2,807 | 12 | 17 Jul | 2,984 | 14 |
| 31 May | 3,705 | 14 | 18 Jul | 2,941 | 14 |
| 1 Jun | 2,776 | 13 | 24 Jul | 2,867 | 13 |
| 2 Jun | 2,770 | 13 | 25 Jul | 2,035 | 13 |
| 3 Jun | 2,698 | 14 | 26 Jul | 3,066 | 13 |
| 4 Jun | 1,699 | 13 | 27 Jul | 3,626 | 14 |
| 5 Jun | 874 | 12 | 28 Jul | 3,930 | 14 |
| 10 Jun | 2,657 | 13 | 29 Jul | 2,967 | 14 |
| 11 Jun | 2,068 | 13 | 30 Jul | 3,085 | 13 |
| 12 Jun | 3,919 | 13 | 31 Jul | 2,468 | 14 |
| 13 Jun | 5,057 | 13 | 1 Aug | 2,728 | 14 |
| 14 Jun | 5,435 | 13 | 2 Aug | 1,387 | 13 |
| 15 Jun | 3,009 | 13 | 7 Aug | 1,953 | 13 |
| 16 Jun | 2,864 | 13 | 8 Aug | 2,570 | 13 |
| 17 Jun | 2,922 | 12 | 9 Aug | 3,034 | 13 |
| 18 Jun | 2,454 | 13 | 10 Aug | 3,925 | 13 |
| 19 Jun | 2,850 | 12 | 11 Aug | 2,908 | 12 |
| 20 Jun | 1,636 | 13 | 12 Aug | 2,957 | 12 |
| 24 Jun | 2,932 | 13 | 13 Aug | 1,061 | 11 |
| 25 Jun | 1,890 | 12 | 14 Aug | 2,432 | 13 |
| 26 Jun | 3,875 | 14 | 15 Aug | 2,556 | 13 |
| 27 Jun | 2,073 | 11 | | | |
| Total for year = 199,162 lb | | | | | |

# APPENDIX B: HISTORICAL DATA

Appendix B1.–Upper Cook Inlet commercial Chinook salmon harvest by gear type and area, 1966–2018.

| | Central District | | | | | | Northern District | | |
|---|---|---|---|---|---|---|---|---|---|
| | Drift gillnet | | ESSN | | Kalgin–west side set | | Set gillnet | | |
| Year | Number[a] | % | Number[a] | % | Number[a] | % | Number[a] | % | Total |
| 1966 | 392 | 4.6 | 7,329 | 85.8 | 401 | 4.7 | 422 | 4.9 | 8,544 |
| 1967 | 489 | 6.2 | 6,686 | 85.1 | 500 | 6.4 | 184 | 2.3 | 7,859 |
| 1968 | 182 | 4.0 | 3,304 | 72.8 | 579 | 12.8 | 471 | 10.4 | 4,536 |
| 1969 | 362 | 2.9 | 5,834 | 47.1 | 3,286 | 26.5 | 2,904 | 23.4 | 12,386 |
| 1970 | 356 | 4.3 | 5,368 | 64.4 | 1,152 | 13.8 | 1,460 | 17.5 | 8,336 |
| 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 | 9,730 | 65.8 | 1,084 | 7.3 | 565 | 3.8 | 14,790 |
| 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 | 15,042 | 72.9 | 3,534 | 17.1 | 933 | 4.5 | 20,634 |
| 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 | 19,826 | 50.5 | 2,108 | 5.4 | 15,488 | 39.5 | 39,256 |
| 1987 | 4,552 | 11.5 | 21,159 | 53.6 | 1,029 | 2.6 | 12,700 | 32.2 | 39,440 |
| 1988 | 2,237 | 7.7 | 12,859 | 44.2 | 1,148 | 3.9 | 12,836 | 44.1 | 29,080 |
| 1989 | 0 | 0.0 | 10,914 | 40.8 | 3,092 | 11.6 | 12,731 | 47.6 | 26,737 |
| 1990 | 621 | 3.9 | 4,139 | 25.7 | 1,763 | 10.9 | 9,582 | 59.5 | 16,105 |
| 1991 | 246 | 1.8 | 4,893 | 36.1 | 1,544 | 11.4 | 6,859 | 50.6 | 13,542 |
| 1992 | 615 | 3.6 | 10,718 | 62.4 | 1,284 | 7.5 | 4,554 | 26.5 | 17,171 |

-continued-

Appendix B1.–Page 2 of 2.

| | Central District | | | | | | Northern District | | |
|---|---|---|---|---|---|---|---|---|---|
| | Drift gillnet | | ESSN | | Kalgin–west side set | | Set gillnet | | |
| Year | Number[a] | % | Number[a] | % | Number[a] | % | Number[a] | % | Total |
| 1993 | 765 | 4.1 | 14,079 | 74.6 | 720 | 3.8 | 3,307 | 17.5 | 18,871 |
| 1994 | 464 | 2.3 | 15,575 | 78.0 | 730 | 3.7 | 3,193 | 16.0 | 19,962 |
| 1995 | 594 | 3.3 | 12,068 | 67.4 | 1,101 | 6.2 | 4,130 | 23.1 | 17,893 |
| 1996 | 389 | 2.7 | 11,564 | 80.8 | 395 | 2.8 | 1,958 | 13.7 | 14,306 |
| 1997 | 627 | 4.7 | 11,325 | 85.2 | 207 | 1.6 | 1,133 | 8.5 | 13,292 |
| 1998 | 335 | 4.1 | 5,087 | 62.6 | 155 | 1.9 | 2,547 | 31.4 | 8,124 |
| 1999 | 575 | 4.0 | 9,463 | 65.8 | 1,533 | 10.7 | 2,812 | 19.6 | 14,383 |
| 2000 | 270 | 3.7 | 3,684 | 50.1 | 1,089 | 14.8 | 2,307 | 31.4 | 7,350 |
| 2001 | 619 | 6.7 | 6,009 | 64.6 | 856 | 9.2 | 1,811 | 19.5 | 9,295 |
| 2002 | 415 | 3.3 | 9,478 | 74.5 | 926 | 7.3 | 1,895 | 14.9 | 12,714 |
| 2003 | 1,240 | 6.7 | 14,810 | 80.0 | 770 | 4.2 | 1,683 | 9.1 | 18,503 |
| 2004 | 1,104 | 4.1 | 21,684 | 80.5 | 2,208 | 8.2 | 1,926 | 7.2 | 26,922 |
| 2005 | 1,958 | 7.1 | 21,597 | 78.1 | 739 | 2.7 | 3,373 | 12.2 | 27,667 |
| 2006 | 2,782 | 15.4 | 9,956 | 55.2 | 1,030 | 5.7 | 4,261 | 23.6 | 18,029 |
| 2007 | 912 | 5.2 | 12,292 | 69.7 | 603 | 3.4 | 3,818 | 21.7 | 17,625 |
| 2008 | 653 | 4.9 | 7,573 | 56.8 | 1,124 | 8.4 | 3,983 | 29.9 | 13,333 |
| 2009 | 859 | 9.8 | 5,588 | 63.9 | 672 | 7.7 | 1,631 | 18.6 | 8,750 |
| 2010 | 538 | 5.4 | 7,059 | 71.3 | 553 | 5.6 | 1,750 | 17.7 | 9,900 |
| 2011 | 593 | 5.3 | 7,697 | 68.4 | 659 | 5.9 | 2,299 | 20.4 | 11,248 |
| 2012 | 218 | 8.6 | 705 | 27.9 | 555 | 22.0 | 1,049 | 41.5 | 2,527 |
| 2013 | 493 | 9.1 | 2,988 | 55.4 | 590 | 10.9 | 1,327 | 24.6 | 5,398 |
| 2014 | 382 | 8.2 | 2,301 | 49.4 | 507 | 10.9 | 1,470 | 31.5 | 4,660 |
| 2015 | 556 | 5.1 | 7,781 | 72.1 | 538 | 5.0 | 1,923 | 17.8 | 10,798 |
| 2016 | 606 | 6.0 | 6,759 | 67.4 | 460 | 4.6 | 2,202 | 22.0 | 10,027 |
| 2017 | 264 | 3.4 | 4,779 | 62.4 | 387 | 5.1 | 2,230 | 29.1 | 7,660 |
| 2018 | 503 | 14.8 | 2,312 | 67.9 | 447 | 13.1 | 143 | 4.2 | 3,405 |
| 1966–2017 Avg[b] | 940 | 6.4 | 9,141 | 65.0 | 1,200 | 9.1 | 3,022 | 19.5 | 14,437 |
| 2008–2017 Avg | 516 | 6.6 | 5,323 | 59.5 | 605 | 8.6 | 1,986 | 25.3 | 8,430 |

[a] Harvest data prior to 2018 reflects minor adjustments to historical catch database.

[b] 1989 not used in average because the drift fleet did not fish due to the Exxon Valdez oil spill; this had an effect on all other fisheries.

Appendix B2.–Upper Cook Inlet commercial sockeye salmon harvest by gear type and area, 1966–2018.

| | Central District | | | | | | Northern District | | |
|---|---|---|---|---|---|---|---|---|---|
| | Drift Gillnet | | ESSN | | Kalgin–west Side Set | | Set gillnet | | |
| Year | Number[a] | % | Number[a] | % | Number[a] | % | Number[a] | % | Total |
| 1966 | 1,103,261 | 59.6 | 485,330 | 26.2 | 132,443 | 7.2 | 131,080 | 7.1 | 1,852,114 |
| 1967 | 890,152 | 64.5 | 305,431 | 22.1 | 66,414 | 4.8 | 118,065 | 8.6 | 1,380,062 |
| 1968 | 561,737 | 50.8 | 317,535 | 28.7 | 85,049 | 7.7 | 140,575 | 12.7 | 1,104,896 |
| 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 | 123,750 | 6.0 | 2,052,291 |
| 1978 | 1,803,479 | 68.8 | 660,797 | 25.2 | 105,767 | 4.0 | 51,378 | 2.0 | 2,621,421 |
| 1979 | 454,707 | 49.2 | 247,359 | 26.8 | 108,422 | 11.7 | 113,918 | 12.3 | 924,406 |
| 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 | 2,837,857 | 59.2 | 1,658,671 | 34.6 | 153,714 | 3.2 | 141,830 | 3.0 | 4,792,072 |
| 1987 | 5,638,916 | 59.5 | 3,457,724 | 36.5 | 208,036 | 2.2 | 164,572 | 1.7 | 9,469,248 |
| 1988 | 4,139,358 | 60.5 | 2,428,385 | 35.5 | 146,377 | 2.1 | 129,713 | 1.9 | 6,843,833 |
| 1989 | 5 | 0.0 | 4,543,492 | 90.7 | 186,828 | 3.7 | 280,801 | 5.6 | 5,011,126 |
| 1990 | 2,305,742 | 64.0 | 1,117,621 | 31.0 | 84,949 | 2.4 | 96,398 | 2.7 | 3,604,710 |
| 1991 | 1,118,138 | 51.3 | 844,603 | 38.8 | 99,855 | 4.6 | 116,201 | 5.3 | 2,178,797 |
| 1992 | 6,069,495 | 66.6 | 2,838,076 | 31.2 | 131,304 | 1.4 | 69,478 | 0.8 | 9,108,353 |

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Appendix B2.–Page 2 of 2.

| | Central District | | | | | | Northern District | | |
|---|---|---|---|---|---|---|---|---|---|
| | Drift gillnet | | ESSN | | Kalgin–west side set | | Set gillnet | | |
| Year | Number[a] | % | Number[a] | % | Number[a] | % | Number[a] | % | Total |
| 1993 | 2,558,732 | 53.8 | 1,941,798 | 40.8 | 108,181 | 2.3 | 146,633 | 3.1 | 4,755,344 |
| 1994 | 1,901,475 | 53.3 | 1,458,162 | 40.9 | 85,830 | 2.4 | 120,142 | 3.4 | 3,565,609 |
| 1995 | 1,773,873 | 60.1 | 961,227 | 32.6 | 107,898 | 3.7 | 109,098 | 3.7 | 2,952,096 |
| 1996 | 2,205,067 | 56.7 | 1,483,008 | 38.1 | 96,719 | 2.5 | 104,128 | 2.7 | 3,888,922 |
| 1997 | 2,197,961 | 52.6 | 1,832,856 | 43.9 | 48,723 | 1.2 | 97,455 | 2.3 | 4,176,995 |
| 1998 | 599,396 | 49.2 | 512,306 | 42.0 | 47,165 | 3.9 | 60,650 | 5.0 | 1,219,517 |
| 1999 | 1,413,995 | 52.8 | 1,092,946 | 40.8 | 114,454 | 4.3 | 59,123 | 2.2 | 2,680,518 |
| 2000 | 656,427 | 49.6 | 529,747 | 40.1 | 92,477 | 7.0 | 43,831 | 3.3 | 1,322,482 |
| 2001 | 846,275 | 46.3 | 870,019 | 47.6 | 59,709 | 3.3 | 50,848 | 2.8 | 1,826,851 |
| 2002 | 1,367,251 | 49.3 | 1,303,158 | 47.0 | 69,609 | 2.5 | 33,100 | 1.2 | 2,773,118 |
| 2003 | 1,593,638 | 45.8 | 1,746,841 | 50.3 | 87,193 | 2.5 | 48,489 | 1.4 | 3,476,161 |
| 2004 | 2,529,642 | 51.3 | 2,235,810 | 45.4 | 134,356 | 2.7 | 27,276 | 0.6 | 4,927,084 |
| 2005 | 2,520,327 | 48.1 | 2,534,345 | 48.4 | 157,612 | 3.0 | 26,415 | 0.5 | 5,238,699 |
| 2006 | 784,771 | 35.8 | 1,301,275 | 59.3 | 94,054 | 4.3 | 12,630 | 0.6 | 2,192,730 |
| 2007 | 1,823,481 | 55.0 | 1,353,407 | 40.8 | 122,424 | 3.7 | 17,467 | 0.5 | 3,316,779 |
| 2008 | 983,303 | 41.3 | 1,303,236 | 54.8 | 67,366 | 2.8 | 26,230 | 1.1 | 2,380,135 |
| 2009 | 968,075 | 47.3 | 905,853 | 44.3 | 131,214 | 6.4 | 40,652 | 2.0 | 2,045,794 |
| 2010 | 1,587,657 | 56.1 | 1,085,789 | 38.4 | 114,719 | 4.1 | 40,177 | 1.4 | 2,828,342 |
| 2011 | 3,201,035 | 60.6 | 1,877,939 | 35.6 | 163,539 | 3.1 | 35,482 | 0.7 | 5,277,995 |
| 2012 | 2,924,144 | 93.3 | 96,675 | 3.1 | 90,440 | 2.9 | 22,580 | 0.7 | 3,133,839 |
| 2013 | 1,662,561 | 62.0 | 921,533 | 34.3 | 75,707 | 2.8 | 23,423 | 0.9 | 2,683,224 |
| 2014 | 1,501,678 | 64.1 | 724,398 | 30.9 | 80,271 | 3.4 | 37,687 | 1.6 | 2,344,034 |
| 2015 | 1,012,684 | 38.2 | 1,481,336 | 55.9 | 99,771 | 3.8 | 55,876 | 2.1 | 2,649,667 |
| 2016 | 1,266,746 | 52.8 | 997,853 | 41.6 | 85,194 | 3.6 | 47,150 | 2.0 | 2,396,943 |
| 2017 | 880,279 | 47.6 | 832,220 | 45.0 | 79,788 | 4.3 | 56,956 | 3.1 | 1,849,243 |
| 2018 | 400,285 | 48.9 | 289,841 | 35.4 | 75,217 | 9.2 | 52,552 | 6.4 | 817,895 |
| 1966–2017 Avg[b] | 1,619,243 | 55.4 | 1,053,583 | 35.4 | 102,257 | 4.8 | 83,360 | 4.3 | 2,858,443 |
| 2008–2017 Avg | 1,598,816 | 56.3 | 1,022,683 | 38.4 | 98,801 | 3.7 | 38,621 | 1.6 | 2,758,922 |

[a] Harvest data prior to 2018 reflects minor adjustments to historical catch database.

[b] 1989 not used in average because the drift fleet did not fish due to the Exxon Valdez oil spill; this had an effect on all other fisheries.

Appendix B3.–Upper Cook Inlet commercial coho salmon harvest by gear type and area, 1966–2018.

| | Central District | | | | | | Northern District | | |
|---|---|---|---|---|---|---|---|---|---|
| | Drift gillnet | | ESSN | | Kalgin–west side set | | Set gillnet | | |
| Year | Number[a] | % | Number[a] | % | Number[a] | % | Number[a] | % | Total |
| 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 | 20,412 | 20.3 | 100,684 |
| 1970 | 110,070 | 40.0 | 30,114 | 10.9 | 52,299 | 19.0 | 82,722 | 30.1 | 275,205 |
| 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 | 39.0 | 46,209 | 20.3 | 59,537 | 26.2 | 33,051 | 14.5 | 227,376 |
| 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 | 46.7 | 36,024 | 7.4 | 88,390 | 18.2 | 133,625 | 27.6 | 484,405 |
| 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 | 506,818 | 66.9 | 76,495 | 10.1 | 85,932 | 11.4 | 88,108 | 11.6 | 757,353 |
| 1987 | 202,506 | 44.8 | 74,981 | 16.6 | 75,201 | 16.6 | 97,062 | 21.9 | 449,750 |
| 1988 | 278,828 | 49.6 | 54,975 | 9.9 | 77,503 | 13.8 | 149,742 | 26.7 | 561,048 |
| 1989 | 856 | 0.2 | 82,333 | 24.1 | 81,004 | 23.9 | 175,738 | 51.8 | 339,931 |
| 1990 | 247,453 | 49.3 | 40,351 | 8.0 | 73,429 | 14.6 | 140,506 | 28.0 | 501,739 |
| 1991 | 176,245 | 41.2 | 30,436 | 7.1 | 87,515 | 20.6 | 132,302 | 31.0 | 426,498 |
| 1992 | 267,300 | 57.0 | 57,078 | 12.2 | 53,419 | 11.4 | 91,133 | 19.4 | 468,930 |

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Appendix B3.–Page 2 of 2.

| | Central District | | | | | | Northern District | | |
|---|---|---|---|---|---|---|---|---|---|
| | Drift gillnet | | ESSN | | Kalgin–west side set | | Set gillnet | | |
| Year | Number[a] | % | Number[a] | % | Number[a] | % | Number[a] | % | Total |
| 1993 | 121,829 | 39.7 | 43,098 | 14.0 | 35,661 | 11.6 | 106,294 | 34.6 | 306,882 |
| 1994 | 310,114 | 52.7 | 68,449 | 11.9 | 61,166 | 10.5 | 144,064 | 24.8 | 583,793 |
| 1995 | 241,473 | 54.0 | 44,751 | 10.0 | 71,606 | 16.0 | 89,300 | 20.0 | 447,130 |
| 1996 | 171,434 | 53.3 | 40,724 | 12.6 | 31,405 | 9.8 | 78,105 | 24.3 | 321,668 |
| 1997 | 78,666 | 51.6 | 19,668 | 12.9 | 16,705 | 11.0 | 37,369 | 24.5 | 152,408 |
| 1998 | 83,338 | 51.9 | 18,677 | 11.6 | 24,286 | 15.1 | 34,387 | 21.4 | 160,688 |
| 1999 | 64,814 | 51.5 | 11,923 | 9.3 | 17,725 | 14.1 | 31,643 | 25.1 | 126,105 |
| 2000 | 131,478 | 55.5 | 11,078 | 4.7 | 22,840 | 9.6 | 71,475 | 30.2 | 236,871 |
| 2001 | 39,418 | 34.8 | 4,246 | 3.7 | 23,719 | 20.9 | 45,928 | 40.5 | 113,311 |
| 2002 | 125,831 | 51.1 | 35,153 | 14.3 | 35,005 | 14.2 | 50,292 | 20.4 | 246,281 |
| 2003 | 52,432 | 51.5 | 10,171 | 10.0 | 15,138 | 14.9 | 24,015 | 23.6 | 101,756 |
| 2004 | 199,587 | 64.2 | 30,154 | 9.7 | 36,498 | 11.7 | 44,819 | 14.4 | 311,058 |
| 2005 | 144,753 | 64.4 | 19,543 | 8.7 | 29,502 | 13.1 | 30,859 | 13.7 | 224,657 |
| 2006 | 98,473 | 55.4 | 22,167 | 12.5 | 36,845 | 20.7 | 20,368 | 11.5 | 177,853 |
| 2007 | 108,703 | 61.3 | 23,610 | 13.3 | 23,495 | 13.2 | 21,531 | 12.1 | 177,339 |
| 2008 | 89,428 | 52.0 | 21,823 | 12.7 | 18,441 | 10.7 | 42,177 | 24.5 | 171,869 |
| 2009 | 82,096 | 53.6 | 11,435 | 7.5 | 22,050 | 14.4 | 37,629 | 24.6 | 153,210 |
| 2010 | 110,275 | 53.2 | 32,683 | 15.8 | 26,281 | 12.7 | 38,111 | 18.4 | 207,350 |
| 2011 | 40,858 | 42.9 | 15,560 | 16.3 | 16,760 | 17.6 | 22,113 | 23.2 | 95,291 |
| 2012 | 74,678 | 69.9 | 6,537 | 6.1 | 12,354 | 11.6 | 13,206 | 12.4 | 106,775 |
| 2013 | 184,771 | 70.8 | 2,266 | 0.9 | 31,513 | 12.1 | 42,413 | 16.3 | 260,963 |
| 2014 | 76,932 | 56.0 | 5,908 | 4.3 | 19,379 | 14.1 | 35,200 | 25.6 | 137,419 |
| 2015 | 130,720 | 60.5 | 17,948 | 8.3 | 20,748 | 9.6 | 46,616 | 21.6 | 216,032 |
| 2016 | 90,242 | 61.2 | 11,606 | 7.9 | 15,171 | 10.3 | 30,476 | 20.7 | 147,495 |
| 2017 | 191,490 | 63.1 | 29,916 | 9.9 | 29,535 | 9.7 | 52,701 | 17.4 | 303,642 |
| 2018 | 108,906 | 46.9 | 4,705 | 2.0 | 51,581 | 22.2 | 67,098 | 28.9 | 232,290 |
| 1966–2017 Avg[b] | 145,728 | 48.8 | 34,242 | 12.5 | 47,429 | 16.7 | 61,722 | 21.9 | 289,120 |
| 2008–2017 Avg | 107,149 | 58.3 | 15,568 | 9.0 | 21,223 | 12.3 | 36,064 | 20.5 | 180,005 |

[a] Harvest data prior to 2018 reflects minor adjustments to historical catch database.

[b] 1989 not used in average because the drift fleet did not fish due to the Exxon Valdez oil spill; this had an effect on all other fisheries.

Appendix B4.–Upper Cook Inlet commercial pink salmon harvest by gear type and area, 1966–2018.

| | Central District | | | | | | Northern District | | |
|---|---|---|---|---|---|---|---|---|---|
| | Drift gillnet | | ESSN | | Kalgin–west side set | | Set gillnet | | |
| Year | Number[a] | % | Number[a] | % | Number[a] | % | Number[a] | % | Total |
| 1966 | 593,654 | 29.6 | 969,624 | 48.3 | 70,507 | 3.5 | 371,960 | 18.5 | 2,005,745 |
| 1967 | 7,475 | 23.2 | 13,038 | 40.5 | 3,256 | 10.1 | 8,460 | 26.2 | 32,229 |
| 1968 | 880,512 | 38.7 | 785,887 | 34.5 | 75,755 | 3.3 | 534,839 | 23.5 | 2,276,993 |
| 1969 | 8,233 | 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 | 615,522 | 47.3 | 530,974 | 40.8 | 15,460 | 1.2 | 139,002 | 10.7 | 1,300,958 |
| 1987 | 38,714 | 35.4 | 47,243 | 43.2 | 5,229 | 4.8 | 18,203 | 16.6 | 109,389 |
| 1988 | 227,885 | 48.4 | 176,043 | 37.4 | 12,942 | 2.7 | 54,210 | 11.5 | 471,080 |
| 1989 | 2 | 0.0 | 37,982 | 56.3 | 5,580 | 8.3 | 23,878 | 35.4 | 67,442 |
| 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 | 4,250 | 0.6 | 23,805 | 3.4 | 695,861 |

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Appendix B4.–Page 2 of 2.

| | Central District | | | | | | Northern District | | |
|---|---|---|---|---|---|---|---|---|---|
| | Drift gillnet | | ESSN | | Kalgin–west side set | | Set gillnet | | |
| Year | Number[a] | % | Number[a] | % | Number[a] | % | Number[a] | % | Total |
| 1993 | 46,463 | 46.0 | 41,690 | 41.3 | 2,313 | 2.3 | 10,468 | 10.4 | 100,934 |
| 1994 | 256,248 | 49.0 | 234,827 | 44.9 | 3,178 | 0.6 | 29,181 | 5.6 | 523,434 |
| 1995 | 64,632 | 48.4 | 53,420 | 40.0 | 3,813 | 2.9 | 11,713 | 8.8 | 133,578 |
| 1996 | 122,728 | 50.5 | 95,717 | 39.4 | 3,792 | 1.6 | 20,674 | 8.5 | 242,911 |
| 1997 | 29,920 | 42.2 | 32,055 | 45.2 | 4,701 | 6.6 | 4,269 | 6.0 | 70,945 |
| 1998 | 200,382 | 36.3 | 332,484 | 60.3 | 7,231 | 1.3 | 11,640 | 2.1 | 551,737 |
| 1999 | 3,552 | 22.0 | 9,357 | 57.8 | 2,674 | 16.5 | 593 | 3.7 | 16,176 |
| 2000 | 90,508 | 61.8 | 23,746 | 16.2 | 11,983 | 8.2 | 20,245 | 13.8 | 146,482 |
| 2001 | 31,219 | 43.0 | 32,998 | 45.5 | 3,988 | 5.5 | 4,355 | 6.0 | 72,560 |
| 2002 | 224,229 | 50.2 | 214,771 | 48.1 | 1,736 | 0.4 | 6,224 | 1.4 | 446,960 |
| 2003 | 30,376 | 62.3 | 16,474 | 33.8 | 375 | 0.8 | 1,564 | 3.2 | 48,789 |
| 2004 | 235,524 | 65.8 | 107,838 | 30.1 | 12,560 | 3.5 | 2,017 | 0.6 | 357,939 |
| 2005 | 31,230 | 64.5 | 13,619 | 28.1 | 2,747 | 5.7 | 823 | 1.7 | 48,419 |
| 2006 | 212,808 | 52.7 | 184,990 | 45.8 | 4,684 | 1.2 | 1,629 | 0.4 | 404,111 |
| 2007 | 67,398 | 45.8 | 69,918 | 47.6 | 6,177 | 4.2 | 3,527 | 2.4 | 147,020 |
| 2008 | 103,867 | 61.3 | 59,620 | 35.2 | 2,357 | 1.4 | 3,524 | 2.1 | 169,368 |
| 2009 | 139,676 | 65.2 | 55,845 | 26.1 | 12,246 | 5.7 | 6,554 | 3.1 | 214,321 |
| 2010 | 164,005 | 56.0 | 121,817 | 41.6 | 3,106 | 1.1 | 3,778 | 1.3 | 292,706 |
| 2011 | 15,333 | 44.9 | 15,527 | 45.5 | 2,424 | 7.1 | 839 | 2.5 | 34,123 |
| 2012 | 303,216 | 64.6 | 159,003 | 33.9 | 3,376 | 0.7 | 4,003 | 0.9 | 469,598 |
| 2013 | 30,605 | 63.4 | 14,671 | 30.4 | 1,014 | 2.1 | 1,985 | 4.1 | 48,275 |
| 2014 | 417,344 | 64.9 | 213,616 | 33.2 | 4,331 | 0.7 | 7,695 | 1.2 | 642,986 |
| 2015 | 21,653 | 45.1 | 22,983 | 47.9 | 1,175 | 2.4 | 2,193 | 4.6 | 48,004 |
| 2016 | 268,908 | 70.3 | 103,503 | 27.1 | 2,089 | 0.5 | 7,968 | 2.1 | 382,468 |
| 2017 | 89,963 | 53.6 | 59,995 | 35.7 | 7,775 | 4.6 | 10,109 | 6.0 | 167,842 |
| 2018 | 83,535 | 65.8 | 21,822 | 17.2 | 8,294 | 6.5 | 13,272 | 10.5 | 126,923 |
| 1966–2017 Avg[b] | 207,703 | 45.8 | 166,390 | 37.1 | 12,096 | 4.1 | 64,825 | 13.0 | 451,014 |
| 2008–2017 Avg | 155,457 | 58.9 | 82,658 | 35.7 | 3,989 | 2.6 | 4,865 | 2.8 | 246,969 |

[a] Harvest data prior to 2018 reflects minor adjustments to historical catch database.

[b] 1989 not used in average because the drift fleet did not fish due to the Exxon Valdez oil spill; this had an effect on all other fisheries.

Appendix B5.–Upper Cook Inlet commercial chum salmon harvest by gear type and area, 1966–2018.

| | Central District | | | | | | Northern District | | |
|---|---|---|---|---|---|---|---|---|---|
| | Drift gillnet | | ESSN | | Kalgin–west side set | | Set gillnet | | |
| Year | Number[a] | % | Number[a] | % | Number[a] | % | Number[a] | % | Total |
| 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 | 1,002,900 | 90.5 | 1,563 | 0.1 | 44,986 | 4.1 | 58,454 | 5.3 | 1,107,903 |
| 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 | 19,782 | 3.2 | 626,414 |
| 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 | 1,012,669 | 89.2 | 7,030 | 0.6 | 39,078 | 3.4 | 76,040 | 6.7 | 1,134,817 |
| 1987 | 211,745 | 60.6 | 16,733 | 4.8 | 53,771 | 15.4 | 66,901 | 19.2 | 349,150 |
| 1988 | 582,699 | 82.0 | 11,763 | 1.7 | 40,425 | 5.7 | 75,728 | 10.7 | 710,615 |
| 1989 | 72 | 0.1 | 12,326 | 10.1 | 27,705 | 22.7 | 81,948 | 67.1 | 122,051 |
| 1990 | 289,521 | 82.4 | 4,611 | 1.3 | 21,355 | 6.1 | 35,710 | 10.2 | 351,197 |
| 1991 | 215,476 | 76.9 | 2,387 | 0.9 | 22,974 | 8.2 | 39,393 | 14.1 | 280,230 |
| 1992 | 232,955 | 84.9 | 2,867 | 1.0 | 13,180 | 4.8 | 25,301 | 9.2 | 274,303 |

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Appendix B5.–Page 2 of 2.

| | Central District | | | | | | Northern District | | |
|---|---|---|---|---|---|---|---|---|---|
| | Drift gillnet | | ESSN | | Kalgin–west side set | | Set gillnet | | |
| Year | Number[a] | % | Number[a] | % | Number[a] | % | Number[a] | % | Total |
| 1993 | 88,826 | 72.4 | 2,977 | 2.4 | 5,566 | 4.5 | 25,401 | 20.7 | 122,770 |
| 1994 | 249,748 | 82.4 | 2,927 | 1.0 | 10,443 | 3.4 | 40,059 | 13.2 | 303,177 |
| 1995 | 468,224 | 88.4 | 3,711 | 0.7 | 13,826 | 2.6 | 43,667 | 8.2 | 529,428 |
| 1996 | 140,987 | 90.1 | 1,448 | 0.9 | 2,314 | 1.5 | 11,771 | 7.5 | 156,520 |
| 1997 | 92,163 | 89.4 | 1,222 | 1.2 | 1,770 | 1.7 | 7,881 | 7.6 | 103,036 |
| 1998 | 88,080 | 92.0 | 688 | 0.7 | 2,953 | 3.1 | 3,983 | 4.2 | 95,704 |
| 1999 | 166,612 | 95.5 | 373 | 0.2 | 3,567 | 2.0 | 4,002 | 2.3 | 174,554 |
| 2000 | 118,074 | 92.9 | 325 | 0.3 | 4,386 | 3.5 | 4,284 | 3.4 | 127,069 |
| 2001 | 75,599 | 89.5 | 248 | 0.3 | 6,445 | 7.6 | 2,202 | 2.6 | 84,494 |
| 2002 | 224,587 | 94.4 | 1,790 | 0.8 | 6,671 | 2.8 | 4,901 | 2.1 | 237,949 |
| 2003 | 106,468 | 88.2 | 1,933 | 1.6 | 7,883 | 6.5 | 4,483 | 3.7 | 120,767 |
| 2004 | 137,041 | 93.8 | 2,019 | 1.4 | 4,957 | 3.4 | 2,148 | 1.5 | 146,165 |
| 2005 | 65,671 | 94.2 | 710 | 1.0 | 2,632 | 3.8 | 727 | 1.0 | 69,740 |
| 2006 | 59,965 | 93.6 | 347 | 0.5 | 3,241 | 5.1 | 480 | 0.7 | 64,033 |
| 2007 | 74,836 | 96.9 | 521 | 0.7 | 1,275 | 1.7 | 608 | 0.8 | 77,240 |
| 2008 | 46,010 | 91.4 | 433 | 0.9 | 2,243 | 4.5 | 1,629 | 3.2 | 50,315 |
| 2009 | 77,073 | 93.1 | 319 | 0.4 | 2,339 | 2.8 | 3,080 | 3.7 | 82,811 |
| 2010 | 216,977 | 94.8 | 3,035 | 1.3 | 4,947 | 2.2 | 3,904 | 1.7 | 228,863 |
| 2011 | 111,082 | 85.8 | 1,612 | 1.2 | 9,995 | 7.7 | 6,718 | 5.2 | 129,407 |
| 2012 | 264,513 | 98.1 | 49 | 0.0 | 2,872 | 1.1 | 2,299 | 0.9 | 269,733 |
| 2013 | 132,172 | 94.8 | 102 | 0.1 | 4,854 | 3.5 | 2,237 | 1.6 | 139,365 |
| 2014 | 108,345 | 93.3 | 548 | 0.5 | 4,828 | 4.2 | 2,406 | 2.1 | 116,127 |
| 2015 | 252,331 | 91.4 | 2,248 | 0.8 | 15,312 | 5.5 | 6,069 | 2.2 | 275,960 |
| 2016 | 113,258 | 91.6 | 1,203 | 1.0 | 6,050 | 4.9 | 3,168 | 2.6 | 123,679 |
| 2017 | 232,501 | 95.4 | 601 | 0.2 | 5,684 | 2.3 | 4,814 | 2.0 | 243,600 |
| 2018 | 108,216 | 93.8 | 78 | 0.1 | 2,924 | 2.5 | 4,148 | 3.6 | 115,366 |
| 1966–2017 Avg[b] | 371,110 | 88.9 | 2,381 | 0.7 | 20,561 | 5.0 | 22,427 | 5.4 | 416,479 |
| 2008–2017 Avg | 155,426 | 93.0 | 1,015 | 0.6 | 5,912 | 3.9 | 3,632 | 2.5 | 165,986 |

[a] Harvest data prior to 2018 reflects minor adjustments to historical catch database.

[b] 1989 not used in average because the drift fleet did not fish due to the Exxon Valdez oil spill; this had an effect on all other fisheries.

Appendix B6.–Upper Cook Inlet commercial salmon harvest by species, 1966–2018.

| Year | Chinook | Sockeye | Coho | Pink | Chum | Total |
|---|---|---|---|---|---|---|
| 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 | 389,675 | 4,034,918 |
| 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 | 39,256 | 4,792,072 | 757,353 | 1,300,958 | 1,134,817 | 8,024,456 |
| 1987 | 39,440 | 9,469,248 | 449,750 | 109,389 | 349,150 | 10,416,977 |
| 1988 | 29,080 | 6,843,833 | 561,048 | 471,080 | 710,615 | 8,615,656 |
| 1989 | 26,738 | 5,011,159 | 339,931 | 67,443 | 122,051 | 5,567,322 |
| 1990 | 16,105 | 3,604,710 | 501,739 | 603,630 | 351,197 | 5,077,381 |
| 1991 | 13,542 | 2,178,797 | 426,498 | 14,663 | 280,230 | 2,913,730 |
| 1992 | 17,171 | 9,108,353 | 468,930 | 695,861 | 274,303 | 10,564,618 |
| 1993 | 18,871 | 4,755,344 | 306,882 | 100,934 | 122,770 | 5,304,801 |
| 1994 | 19,962 | 3,565,609 | 583,793 | 523,434 | 303,177 | 4,995,975 |
| 1995 | 17,893 | 2,952,096 | 447,130 | 133,578 | 529,428 | 4,080,125 |
| 1996 | 14,306 | 3,888,922 | 321,668 | 242,911 | 156,520 | 4,624,327 |
| 1997 | 13,292 | 4,176,995 | 152,408 | 70,945 | 103,036 | 4,516,676 |
| 1998 | 8,124 | 1,219,517 | 160,688 | 551,737 | 95,704 | 2,035,770 |
| 1999 | 14,383 | 2,680,518 | 126,105 | 16,176 | 174,554 | 3,011,736 |
| 2000 | 7,350 | 1,322,482 | 236,871 | 146,482 | 127,069 | 1,840,254 |
| 2001 | 9,295 | 1,826,851 | 113,311 | 72,560 | 84,494 | 2,106,511 |
| 2002 | 12,714 | 2,773,118 | 246,281 | 446,960 | 237,949 | 3,717,022 |

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| Year | Chinook | Sockeye | Coho | Pink | Chum | Total |
|---|---|---|---|---|---|---|
| 2003 | 18,503 | 3,476,161 | 101,756 | 48,789 | 120,767 | 3,765,976 |
| 2004 | 26,922 | 4,927,084 | 311,058 | 357,939 | 146,165 | 5,769,168 |
| 2005 | 27,667 | 5,238,699 | 224,657 | 48,419 | 69,740 | 5,609,182 |
| 2006 | 18,029 | 2,192,730 | 177,853 | 404,111 | 64,033 | 2,856,756 |
| 2007 | 17,625 | 3,316,779 | 177,339 | 147,020 | 77,240 | 3,736,003 |
| 2008 | 13,333 | 2,380,135 | 171,869 | 169,368 | 50,315 | 2,785,020 |
| 2009 | 8,750 | 2,045,794 | 153,210 | 214,321 | 82,811 | 2,504,883 |
| 2010 | 9,900 | 2,828,342 | 207,350 | 292,706 | 228,863 | 3,567,161 |
| 2011 | 11,248 | 5,277,995 | 95,291 | 34,123 | 129,407 | 5,548,064 |
| 2012 | 2,527 | 3,133,839 | 106,775 | 469,598 | 269,733 | 3,982,472 |
| 2013 | 5,398 | 2,683,224 | 260,963 | 48,275 | 139,365 | 3,137,225 |
| 2014 | 4,660 | 2,344,034 | 137,419 | 642,986 | 116,127 | 3,245,226 |
| 2015 | 10,798 | 2,649,667 | 216,032 | 48,004 | 275,960 | 3,200,461 |
| 2016 | 10,027 | 2,396,943 | 147,495 | 382,468 | 123,679 | 3,060,612 |
| 2017 | 7,660 | 1,849,243 | 303,642 | 167,842 | 243,600 | 2,571,987 |
| 2018 | 3,405 | 817,895 | 232,290 | 126,923 | 115,366 | 1,295,879 |
| 1966–2017 Avg [a] | 14,438 | 2,878,636 | 289,200 | 451,059 | 417,493 | 4,030,641 |
| 2008–2017 Avg | 8,430 | 2,758,922 | 180,005 | 246,969 | 165,986 | 3,360,311 |

*Note:* Catch statistics prior to 2018 reflects minor adjustments to historical catch database.

[a] 1989 not used in average because the drift fleet did not fish due to the Exxon Valdez oil spill; this had an effect on all other fisheries.

Appendix B7.–Approximate exvessel value of Upper Cook Inlet commercial salmon harvest by species, 1960–2018.

| 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% | $14,632,021 |
| 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 |

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Appendix B7.–Page 2 of 2.

| Year | Chinook | % | Sockeye | % | Coho | % | Pink | % | Chum | % | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | $181,318 | 2.1% | $7,686,993 | 88.5% | $497,050 | 5.7% | $187,759 | 2.2% | $132,025 | 1.5% | $8,685,145 |
| 1999 | $343,545 | 1.6% | $20,029,356 | 95.5% | $331,342 | 1.6% | $6,011 | 0.0% | $265,460 | 1.3% | $20,975,713 |
| 2000 | $183,400 | 2.3% | $7,104,456 | 87.2% | $626,032 | 7.7% | $47,075 | 0.6% | $186,344 | 2.3% | $8,147,307 |
| 2001 | $169,593 | 2.2% | $7,134,560 | 92.3% | $297,387 | 3.8% | $20,313 | 0.3% | $111,028 | 1.4% | $7,732,881 |
| 2002 | $326,077 | 2.8% | $10,679,780 | 91.7% | $329,198 | 2.8% | $84,859 | 0.7% | $224,011 | 1.9% | $11,643,925 |
| 2003 | $358,886 | 2.8% | $12,275,919 | 95.3% | $132,059 | 1.0% | $8,663 | 0.1% | $99,783 | 0.8% | $12,875,310 |
| 2004 | $673,088 | 3.3% | $19,416,259 | 93.8% | $416,071 | 2.0% | $65,884 | 0.3% | $129,791 | 0.6% | $20,701,093 |
| 2005 | $688,993 | 2.2% | $30,165,827 | 95.2% | $708,620 | 2.2% | $12,796 | 0.0% | $101,106 | 0.3% | $31,677,341 |
| 2006 | $617,278 | 4.4% | $12,311,850 | 88.5% | $679,463 | 4.9% | $174,522 | 1.3% | $121,265 | 0.9% | $13,904,377 |
| 2007 | $629,643 | 2.7% | $21,916,852 | 93.6% | $682,747 | 2.9% | $53,029 | 0.2% | $141,097 | 0.6% | $23,423,367 |
| 2008 | $544,042 | 3.3% | $15,530,144 | 93.0% | $482,298 | 2.9% | $64,466 | 0.4% | $75,766 | 0.5% | $16,696,717 |
| 2009 | $266,548 | 1.8% | $13,720,051 | 94.1% | $399,704 | 2.7% | $71,582 | 0.5% | $115,969 | 0.8% | $14,573,854 |
| 2010 | $359,184 | 1.1% | $30,556,535 | 92.1% | $1,090,191 | 3.3% | $311,199 | 0.9% | $851,004 | 2.6% | $33,168,113 |
| 2011 | $634,836 | 1.2% | $51,363,720 | 96.7% | $406,726 | 0.8% | $27,548 | 0.1% | $688,878 | 1.3% | $53,121,708 |
| 2012 | $121,626 | 0.3% | $32,008,304 | 91.6% | $480,119 | 1.4% | $622,809 | 1.8% | $1,723,098 | 4.9% | $34,955,955 |
| 2013 | $210,638 | 0.5% | $37,787,069 | 93.9% | $1,362,395 | 3.4% | $53,754 | 0.1% | $828,113 | 2.1% | $40,241,970 |
| 2014 | $206,119 | 0.6% | $32,819,090 | 93.6% | $778,672 | 2.2% | $588,409 | 1.7% | $687,214 | 2.0% | $35,079,504 |
| 2015 | $359,903 | 1.5% | $22,285,338 | 92.2% | $753,078 | 3.1% | $39,197 | 0.2% | $726,696 | 3.0% | $24,164,211 |
| 2016 | $491,323 | 2.2% | $20,853,404 | 92.3% | $557,531 | 2.5% | $328,922 | 1.5% | $351,248 | 1.6% | $22,582,429 |
| 2017 | $634,666 | 2.7% | $19,711,471 | 82.7% | $2,168,036 | 9.1% | $89,448 | 0.4% | $1,234,825 | 5.2% | $23,838,446 |
| 2018 | $207,901 | 1.7% | $10,139,195 | 81.8% | $1,367,047 | 11.0% | $115,431 | 0.9% | $569,659 | 4.6% | $12,399,234 |

Appendix B8.–Commercial herring harvest by fishery, Upper Cook Inlet, 1973–2018.

| | Harvest (tons[a]) | | | | |
|---|---|---|---|---|---|
| Year | Upper Subdistrict | Chinitna Bay | Tuxedni Bay | Kalgin Island | 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 | 20.0 | 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 | 159.0 | - | 367.1 |
| 1985 | 136.3 | 46.1 | 215.9 | - | 398.4 |
| 1986 | 142.6 | 111.1 | 191.9 | - | 445.6 |
| 1987 | 126.5 | 65.1 | 152.5 | - | 344.1 |
| 1988 | 50.7 | 23.4 | 14.1 | - | 88.1 |
| 1989 | 55.2 | 122.3 | 34.3 | - | 211.8 |
| 1990 | 55.4 | 55.9 | 16.1 | - | 127.5 |
| 1991 | 13.4 | 15.7 | 1.6 | - | 30.7 |
| 1992 | 24.7 | 10.4 | - | - | 35.2 |
| 1993 | - | - | - | - | - |
| 1994 | - | - | - | - | - |
| 1995 | - | - | - | - | - |
| 1996 | - | - | - | - | - |
| 1997 | - | - | - | - | - |
| 1998 | 19.5 | - | - | - | 19.4 |
| 1999 | 10.4 | - | - | - | 10.4 |
| 2000 | 14.7 | - | - | - | 16.3 |
| 2001 | 9.9 | - | - | - | 10.4 |
| 2002 | 16.2 | 1.9 | 0.0 | - | 18.1 |
| 2003 | 3.7 | 0.0 | 0.0 | - | 3.7 |
| 2004 | 6.7 | 0.1 | 0.0 | - | 6.8 |
| 2005 | 17.1 | 0.2 | 0.0 | 0.0 | 17.3 |
| 2006 | 14.4 | 0.0 | 0.0 | 0.0 | 14.4 |
| 2007 | 12.6 | 0.0 | 0.0 | 0.0 | 12.6 |
| 2008 | 13.5 | 0.0 | 0.0 | 0.0 | 13.5 |
| 2009 | 9.2 | 0.0 | 0.0 | 0.0 | 9.2 |
| 2010 | 16.4 | 0.2 | 0.0 | 0.0 | 16.6 |
| 2011 | 13.7 | 2.5 | 0.0 | 0.0 | 16.2 |
| 2012 | 16.7 | 7.0 | 0.0 | 0.0 | 23.8 |
| 2013 | 29.6 | 6.0 | 0.0 | 0.0 | 35.6 |
| 2014 | 29.0 | 0.0 | 0.0 | 0.0 | 29.0 |
| 2015 | 24.6 | 1.6 | 0.0 | 0.0 | 26.2 |
| 2016 | 22.9 | 0.0 | 0.0 | 0.0 | 22.9 |
| 2017 | 28.2 | 0.1 | 0.0 | 0.0 | 28.2 |
| 2018 | 17.6 | 0.0 | 0.0 | 0.0 | 17.6 |

*Note*: Hyphens represent years when fisheries were closed.

[a] Tons = short tons = 2,000 lb or 907.2 kg.

Appendix B9.–Commercial harvest of razor clams in Upper Cook Inlet, 1919–2018.

| Year | Pounds | Year | Pounds |
|---|---|---|---|
| 1919 | 76,963 | 1969 | 0 |
| 1920 | 11,952 | 1970 | 0 |
| 1921 | 72,000 | 1971 | 14,755 |
| 1922 | 510,432 | 1972 | 31,360 |
| 1923 | 470,280 | 1973 | 34,415 |
| 1924 | 156,768 | 1974 | 0 |
| 1925 | 0 | 1975 | 10,020 |
| 1926 | 0 | 1976 | 0 |
| 1927 | 25,248 | 1977 | 1,762 |
| 1928 | 0 | 1978 | 45,931 |
| 1929 | 0 | 1979 | 144,358 |
| 1930 | 0 | 1980 | 140,420 |
| 1931 | No Record | 1981 | 441,949 |
| 1932 | 93,840 | 1982 | 460,639 |
| 1933 | No Record | 1983 | 269,618 |
| 1934 | No Record | 1984 | 261,742 |
| 1935 | No Record | 1985 | 319,034 |
| 1936 | No Record | 1986 | 258,632 |
| 1937 | 8,328 | 1987 | 312,349 |
| 1938 | No Record | 1988 | 399,376 |
| 1939 | No Record | 1989 | 222,747 |
| 1940 | No Record | 1990 | 323,602 |
| 1941 | 0 | 1991 | 201,320 |
| 1942 | 0 | 1992 | 296,727 |
| 1943 | 0 | 1993 | 310,481 |
| 1944 | 0 | 1994 | 355,165 |
| 1945 | 15,000 | 1995 | 248,358 |
| 1946 | 11,424 | 1996 | 355,448 |
| 1947 | 11,976 | 1997 | 366,532 |
| 1948 | 2,160 | 1998 | 371,877 |
| 1949 | 9,672 | 1999 | 352,910 |
| 1950 | 304,073 | 2000 | 369,397 |
| 1951 | 112,320 | 2001 | 348,917 |
| 1952 | 0 | 2002 | 338,938 |
| 1953 | 0 | 2003 | 411,403 |
| 1954 | 0 | 2004 | 419,697 |
| 1955 | 0 | 2005 | 371,395 |
| 1956 | 0 | 2006 | 368,953 |
| 1957 | 0 | 2007 | 283,085 |
| 1958 | 0 | 2008 | 390,999 |
| 1959 | 0 | 2009 | 361,388 |
| 1960 | 372,872 | 2010 | 379,547 |
| 1961 | 277,830 | 2011 | 189,172 |
| 1962 | 195,650 | 2012 | 307,409 |
| 1963 | 0 | 2013 | 380,912 |
| 1964 | 0 | 2014 | 348,294 |
| 1965 | 0 | 2015 | 318,538 |
| 1966 | 0 | 2016 | 284,800 |
| 1967 | 0 | 2017 | 177,147 |
| 1968 | 0 | 2018 | 199,162 |

Appendix B10.–Assessment goals and counts of sockeye salmon in selected streams of Upper Cook Inlet, 1978–2018.

| | Kenai River | | Kasilof River | | Fish Creek | |
|---|---|---|---|---|---|---|
| Year | Enumeration goal[a,b] | Enumeration estimate[a,c] | Enumeration goal[b,c] | Enumeration estimate[b] | Enumeration goal | Enumeration estimate[c,d] |
| 1978 | 350,000–500,000 | 398,900 | 75,000–150,000 | 116,600 | - | 3,555 |
| 1979 | 350,000–500,000 | 285,020 | 75,000–150,000 | 152,179 | - | 68,739 |
| 1980 | 350,000–500,000 | 464,038 | 75,000–150,000 | 184,260 | - | 62,828 |
| 1981 | 350,000–500,000 | 407,639 | 75,000–150,000 | 256,625 | - | 50,479 |
| 1982 | 350,000–500,000 | 619,831 | 75,000–150,000 | 180,239 | 50,000 | 28,164 |
| 1983 | 350,000–500,000 | 630,340 | 75,000–150,000 | 210,271 | 50,000 | 118,797 |
| 1984 | 350,000–500,000 | 344,571 | 75,000–150,000 | 231,685 | 50,000 | 192,352 |
| 1985 | 350,000–500,000 | 502,820 | 75,000–150,000 | 505,049 | 50,000 | 68,577 |
| 1986 | 350,000–500,000 | 501,157 | 75,000–150,000 | 275,963 | 50,000 | 29,800 |
| 1987 | 400,000–700,000 | 1,596,871 | 150,000–250,000 | 249,250 | 50,000 | 91,215 |
| 1988 | 400,000–700,000 | 1,021,469 | 150,000–250,000 | 204,000[d] | 50,000 | 71,603 |
| 1989 | 400,000–700,000 | 1,599,959 | 150,000–250,000 | 158,206 | 50,000 | 67,224 |
| 1990 | 400,000–700,000 | 659,520 | 150,000–250,000 | 144,289 | 50,000 | 50,000 |
| 1991 | 400,000–700,000 | 647,597 | 150,000–250,000 | 238,269 | 50,000 | 50,500 |
| 1992 | 400,000–700,000 | 994,798 | 150,000–250,000 | 184,178 | 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 | 630,447 | 150,000–250,000 | 204,935 | 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 |
| 1999 | 750,000–950,000 | 803,379 | 150,000–250,000 | 312,587 | 50,000 | 26,667 |
| 2000 | 600,000–850,000 | 624,578 | 150,000–250,000 | 256,053 | 50,000 | 19,533 |
| 2001 | 600,000–850,000 | 650,036 | 150,000–250,000 | 307,570 | 50,000 | 43,469 |
| 2002 | 750,000–950,000 | 957,924 | 150,000–250,000 | 226,682 | 20,000–70,000 | 90,483 |
| 2003 | 750,000–950,000 | 1,181,309 | 150,000–250,000 | 359,633 | 20,000–70,000 | 92,298 |
| 2004 | 850,000–1,100,000 | 1,385,981 | 150,000–250,000 | 577,581 | 20,000–70,000 | 22,157 |
| 2005 | 850,000–1,100,000 | 1,376,452 | 150,000–250,000 | 348,012 | 20,000–70,000 | 14,215 |
| 2006 | 750,000–950,000 | 1,499,692 | 150,000–250,000 | 368,092 | 20,000–70,000 | 32,566 |
| 2007 | 750,000–950,000 | 867,572 | 150,000–250,000 | 336,866 | 20,000–70,000 | 27,948 |
| 2008 | 650,000–850,000 | 614,946 | 150,000–250,000 | 301,469 | 20,000–70,000 | 19,339 |
| 2009 | 650,000–850,000 | 745,170 | 150,000–250,000 | 297,125 | 20,000–70,000 | 83,477 |
| 2010 | 750,000–950,000 | 970,662 | 150,000–250,000 | 267,013 | 20,000–70,000 | 126,829 |
| 2011 | 1,100,000–1,350,000 | 1,599,217 | 160,000–390,000 | 245,721 | 20,000–70,000 | 66,678 |
| 2012 | 1,100,000–1,350,000 | 1,581,555 | 160,000–390,000 | 374,523 | 20,000–70,000 | 18,813 |
| 2013 | 1,000,000–1,200,000 | 1,359,893 | 160,000–390,000 | 489,654 | 20,000–70,000 | 18,912 |
| 2014 | 1,000,000–1,200,000 | 1,520,340 | 160,000–340,000 | 439,977 | 20,000–70,000 | 43,915 |
| 2015 | 1,000,000–1,200,000 | 1,704,767 | 160,000–340,000 | 470,677 | 20,000–70,000 | 102,296 |
| 2016 | 1,100,000–1,350,000 | 1,383,692 | 160,000–340,000 | 239,981 | 20,000–70,000 | 46,202 |
| 2017 | 1,000,000–1,300,000 | 1,308,498 | 160,000–340,000 | 358,724 | 15,000–45,000 | 61,469 |
| 2018 | 900,000–1,100,000 | 1,035,761 | 160,000–340,000 | 394,309 | 15,000–45,000 | 71,556 |

-continued-

Appendix B10.–Page 2 of 2.

| Year | Yentna River | | Crescent River | | Packers Creek | |
|---|---|---|---|---|---|---|
| | Enumeration goal | Enumeration estimate[e] | Enumeration goal | Enumeration estimate[c] | Enumeration goal | Enumeration estimate[c,g] |
| 1980 | 100,000 | - | 50,000 | 90,863 | - | 16,477 |
| 1981 | 100,000 | 139,401 | 50,000 | 41,213 | - | 13,024 |
| 1982 | 100,000 | 113,847 | 50,000 | 58,957 | - | 15,687 |
| 1983 | 100,000 | 104,414 | 50,000 | 92,122 | - | 18,403 |
| 1984 | 100,000 | 149,375 | 50,000 | 118,345 | - | 30,684 |
| 1985 | 100,000 | 107,124 | 50,000 | 128,628 | - | 36,850 |
| 1986 | 100,000–150,000 | 92,076 | 50,000 | 20,385[f] | - | 29,604 |
| 1987 | 100,000–150,000 | 66,054 | 50,000–100,000 | 120,219 | 15,000–25,000 | 35,401 |
| 1988 | 100,000–150,000 | 52,330 | 50,000–100,000 | 57,716 | 15,000–25,000 | 18,607 |
| 1989 | 100,000–150,000 | 96,269 | 50,000–100,000 | 71,064 | 15,000–25,000 | 22,304 |
| 1990 | 100,000–150,000 | 140,290 | 50,000–100,000 | 52,238 | 15,000–25,000 | 31,868 |
| 1991 | 100,000–150,000 | 109,632 | 50,000–100,000 | 44,578 | 15,000–25,000 | 41,275 |
| 1992 | 100,000–150,000 | 66,054 | 50,000–100,000 | 58,229 | 15,000–25,000 | 28,361 |
| 1993 | 100,000–150,000 | 141,694 | 50,000–100,000 | 37,556 | 15,000–25,000 | 40,869 |
| 1994 | 100,000–150,000 | 128,032 | 50,000–100,000 | 30,355 | 15,000–25,000 | 30,788 |
| 1995 | 100,000–150,000 | 121,479 | 50,000–100,000 | 52,311 | 15,000–25,000 | 29,473 |
| 1996 | 100,000–150,000 | 90,781 | 50,000–100,000 | 28,729 | 15,000–25,000 | 19,095 |
| 1997 | 100,000–150,000 | 157,822 | 50,000–100,000 | 70,768 | 15,000–25,000 | 33,846 |
| 1998 | 100,000–150,000 | 119,623 | 50,000–100,000 | 62,257 | 15,000–25,000 | 17,732 |
| 1999 | 100,000–150,000 | 99,029 | 25,000–50,000 | 66,519 | 15,000–25,000 | 25,648 |
| 2000 | 100,000–150,000 | 133,094 | 25,000–50,000 | 56,599 | 15,000–25,000 | 20,151 |
| 2001 | 100,000–150,000 | 83,532 | 25,000–50,000 | 78,081 | 15,000–25,000 | - |
| 2002 | 90,000–160,000 | 78,591 | 25,000–50,000 | 62,833 | 15,000–30,000 | - |
| 2003 | 90,000–160,000 | 180,813 | 25,000–50,000 | 122,457 | 15,000–30,000 | - |
| 2004 | 90,000–160,000 | 71,281 | 25,000–50,000 | 103,201 | 15,000–30,000 | - |
| 2005 | 75,000–180,000 | 36,921 | 30,000–70,000 | 125,623 | - | 22,000[h] |
| 2006 | 90,000–160,000 | 92,896 | 30,000–70,000 | 92,533 | - | - |
| 2007 | 90,000–160,000 | 79,901 | 30,000–70,000 | 79,406 | 15,000–30,000 | 46,637 |
| 2008 | 90,000–160,000 | 90,146 | 30,000–70,000 | 90,684 | 15,000–30,000 | 25,247 |
| 2009 | -[e] | -[e] | 30,000–70,000 | - | 15,000–30,000 | 16,473[h] |
| 2010 | -[e] | -[e] | 30,000–70,000 | 86,333 | 15,000–30,000 | - |
| 2011 | -[e] | -[e] | 30,000–70,000 | 81,952 | 15,000–30,000 | - |
| 2012 | -[e] | -[e] | 30,000–70,000 | 58,838 | 15,000–30,000 | - |
| 2013 | -[e] | -[e] | 30,000–70,000 | ND | 15,000–30,000 | - |
| 2014 | -[e] | -[e] | 30,000–70,000 | ND | 15,000–30,000 | 19,242[h] |
| 2015 | -[e] | -[e] | 30,000–70,000 | ND | 15,000–30,000 | 28,072[h] |
| 2016 | -[e] | -[e] | 30,000–70,000 | ND | 15,000–30,000 | - |
| 2017 | -[e] | -[e] | 30,000–70,000 | ND | 15,000–30,000 | 17,106[h] |
| 2018 | -[e] | -[e] | 30,000–70,000 | ND | 15,000–30,000 | 16,247[h] |

[a] Inriver goal.

[b] From 1978 to 2010, enumeration estimates and goals prior were in BENDIX units; 2011 through 2018 are in DIDSON units.

[c] Enumeration estimates prior to 2018 reflect minor adjustments to the escapement database.

[d] Weir counts.

[e] Yentna River SEG replaced with lake goals at Judd, Chelatna, and Larson Lakes.

[f] Combined counts from weirs on Bear and Glacier Flat Creeks and surveys of spawning streams; sonar count was 151,856.

[g] Escapement estimates via remote camera; an unknown number of salmon passed into the lake after the camera was removed.

[h] Partial count only; an unknown number of salmon passed into the lake while the camera did not have power.

Appendix B11.–Average price per pound for commercially harvested salmon, Upper Cook Inlet, 1975–2018.

| Year | Chinook | Sockeye | Coho | Pink | Chum |
|---|---|---|---|---|---|
| 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 |
| 1999 | 1.00 | 1.30 | 0.45 | 0.12 | 0.19 |
| 2000 | 1.10 | 0.85 | 0.40 | 0.09 | 0.19 |
| 2001 | 1.00 | 0.65 | 0.40 | 0.08 | 0.19 |
| 2002 | 1.15 | 0.60 | 0.20 | 0.05 | 0.12 |
| 2003 | 0.95 | 0.60 | 0.20 | 0.05 | 0.12 |
| 2004 | 1.00 | 0.65 | 0.20 | 0.05 | 0.12 |
| 2005 | 1.00 | 0.95 | 0.50 | 0.08 | 0.20 |
| 2006 | 1.75 | 1.10 | 0.60 | 0.10 | 0.25 |
| 2007 | 1.75 | 1.05 | 0.60 | 0.10 | 0.25 |
| 2008 | 1.75 | 1.10 | 0.40 | 0.10 | 0.20 |
| 2009 | 1.75 | 1.10 | 0.40 | 0.10 | 0.20 |
| 2010 | 1.75 | 1.75 | 0.80 | 0.25 | 0.55 |
| 2011 | 2.80 | 1.50 | 0.75 | 0.25 | 0.80 |
| 2012 | 2.80 | 1.50 | 0.75 | 0.35 | 0.80 |
| 2013 | 2.80 | 2.25 | 0.85 | 0.35 | 0.80 |
| 2014 | 2.80 | 2.25 | 0.90 | 0.25 | 0.80 |
| 2015 | 2.00 | 1.60 | 0.60 | 0.25 | 0.40 |
| 2016 | 2.50 | 1.50 | 0.60 | 0.20 | 0.40 |
| 2017 | 3.78 | 1.86 | 1.14 | 0.15 | 0.62 |
| 2018 | 3.27 | 2.04 | 0.94 | 0.25 | 0.68 |

*Note*: Price expressed as dollars per pound. Data source for 1969–1983: Commercial Fisheries Entry Commission; 1984–2017: random fish ticket averages, which do not include bonuses or postseason adjustments.

Appendix B12.–Average weight (pounds) of commercially harvested salmon, Upper Cook Inlet, 1975–2018.

| Year | Chinook | Sockeye | Coho | Pink | Chum |
|---|---|---|---|---|---|
| 1975 | 24.8 | 6.1 | 6.8 | 3.6 | 7.1 |
| 1976 | 27.4 | 6.9 | 6.4 | 4.0 | 8.1 |
| 1977 | 28.1 | 7.6 | 6.7 | 3.7 | 8.0 |
| 1978 | 33.0 | 7.6 | 6.4 | 3.8 | 7.6 |
| 1979 | 27.5 | 6.2 | 6.3 | 3.3 | 7.3 |
| 1980 | 26.1 | 5.9 | 5.8 | 3.5 | 7.3 |
| 1981 | 23.8 | 6.4 | 6.5 | 3.5 | 7.7 |
| 1982 | 28.8 | 7.0 | 7.1 | 3.9 | 8.2 |
| 1983 | 29.5 | 6.4 | 6.9 | 3.3 | 7.8 |
| 1984 | 28.6 | 5.9 | 7.1 | 4.0 | 7.6 |
| 1985 | 27.7 | 5.6 | 7.2 | 3.3 | 7.6 |
| 1986 | 25.9 | 5.8 | 6.4 | 3.7 | 7.4 |
| 1987 | 29.0 | 6.7 | 6.6 | 3.5 | 7.1 |
| 1988 | 29.7 | 6.6 | 7.0 | 3.7 | 7.7 |
| 1989 | 24.1 | 6.6 | 6.6 | 3.2 | 7.2 |
| 1990 | 22.6 | 6.4 | 6.4 | 3.4 | 7.1 |
| 1991 | 21.5 | 5.6 | 6.1 | 3.1 | 6.6 |
| 1992 | 23.6 | 6.6 | 6.4 | 3.9 | 6.7 |
| 1993 | 25.8 | 5.9 | 5.9 | 3.0 | 5.7 |
| 1994 | 31.6 | 5.7 | 7.1 | 3.9 | 6.9 |
| 1995 | 25.5 | 5.6 | 6.4 | 3.3 | 7.2 |
| 1996 | 28.3 | 6.3 | 6.2 | 3.7 | 7.6 |
| 1997 | 27.6 | 6.5 | 6.3 | 3.4 | 7.3 |
| 1998 | 22.8 | 5.5 | 6.9 | 3.8 | 7.3 |
| 1999 | 23.9 | 5.7 | 5.8 | 3.1 | 8.0 |
| 2000 | 22.7 | 6.3 | 6.6 | 3.6 | 7.7 |
| 2001 | 18.2 | 6.0 | 6.6 | 3.5 | 6.9 |
| 2002 | 22.3 | 6.4 | 6.7 | 3.8 | 7.8 |
| 2003 | 20.4 | 5.9 | 6.5 | 3.6 | 6.9 |
| 2004 | 25.0 | 6.1 | 6.7 | 3.7 | 7.4 |
| 2005 | 24.9 | 6.1 | 6.3 | 3.3 | 7.2 |
| 2006 | 19.6 | 5.1 | 6.4 | 4.3 | 7.6 |
| 2007 | 20.4 | 6.3 | 6.4 | 3.6 | 7.3 |
| 2008 | 23.3 | 5.9 | 7.0 | 3.8 | 7.5 |
| 2009 | 17.4 | 6.1 | 6.5 | 3.3 | 7.0 |
| 2010 | 20.7 | 6.2 | 6.6 | 4.3 | 6.8 |
| 2011 | 20.2 | 6.5 | 5.7 | 3.2 | 6.7 |
| 2012 | 17.2 | 6.8 | 6.0 | 3.8 | 8.0 |
| 2013 | 13.9 | 6.3 | 6.1 | 3.2 | 7.4 |
| 2014 | 15.8 | 6.2 | 6.3 | 3.7 | 7.4 |
| 2015 | 16.7 | 5.3 | 5.8 | 3.3 | 6.6 |
| 2016 | 19.6 | 5.8 | 6.3 | 4.3 | 7.1 |
| 2017 | 21.9 | 5.7 | 6.3 | 3.6 | 8.2 |
| 2008–2017 Avg | 18.7 | 6.1 | 6.3 | 3.6 | 7.3 |
| 1975–2017 Avg | 23.9 | 6.2 | 6.5 | 3.6 | 7.3 |
| 2018 | 13.8 | 5.2 | 6.3 | 3.8 | 8.3 |

*Note*: Average weights are total poundage divided by numbers of fish from fish ticket totals.

Appendix B13.–Registered active units of gillnet fishing effort by gear type in Cook Inlet, 1975–2018.

| | DRIFT GILLNET | | | SET GILLNET | | | |
|---|---|---|---|---|---|---|---|
| Year | Resident | Nonresident | Subtotal | Resident | Nonresident | Subtotal | Total |
| 1975 | 539 | 245 | 784 | 695 | 63 | 758 | 1,542 |
| 1976 | 410 | 186 | 596 | 675 | 44 | 719 | 1,315 |
| 1977 | 387 | 188 | 575 | 690 | 43 | 733 | 1,308 |
| 1978 | 401 | 190 | 591 | 701 | 46 | 747 | 1,338 |
| 1979 | 410 | 189 | 599 | 705 | 44 | 749 | 1,348 |
| 1980 | 407 | 190 | 597 | 699 | 48 | 747 | 1,344 |
| 1981 | 412 | 186 | 598 | 687 | 60 | 747 | 1,345 |
| 1982 | 413 | 178 | 591 | 695 | 53 | 748 | 1,339 |
| 1983 | 415 | 172 | 587 | 684 | 61 | 745 | 1,332 |
| 1984 | 423 | 165 | 588 | 670 | 74 | 744 | 1,332 |
| 1985 | 418 | 173 | 591 | 669 | 76 | 745 | 1,336 |
| 1986 | 412 | 176 | 588 | 665 | 78 | 743 | 1,331 |
| 1987 | 415 | 171 | 586 | 662 | 81 | 743 | 1,329 |
| 1988 | 421 | 164 | 585 | 660 | 83 | 743 | 1,328 |
| 1989 | 415 | 170 | 585 | 645 | 98 | 743 | 1,328 |
| 1990 | 412 | 173 | 585 | 644 | 99 | 743 | 1,328 |
| 1991 | 412 | 172 | 584 | 642 | 103 | 745 | 1,329 |
| 1992 | 404 | 179 | 583 | 636 | 109 | 745 | 1,328 |
| 1993 | 398 | 185 | 583 | 633 | 112 | 745 | 1,328 |
| 1994 | 395 | 187 | 582 | 628 | 117 | 745 | 1,327 |
| 1995 | 393 | 189 | 582 | 622 | 123 | 745 | 1,327 |
| 1996 | 392 | 190 | 582 | 621 | 124 | 745 | 1,327 |
| 1997 | 392 | 189 | 581 | 621 | 124 | 745 | 1,326 |
| 1998 | 393 | 186 | 579 | 621 | 124 | 745 | 1,324 |
| 1999 | 390 | 185 | 575 | 621 | 124 | 745 | 1,320 |
| 2000 | 394 | 182 | 576 | 621 | 124 | 745 | 1,321 |
| 2001 | 395 | 179 | 574 | 625 | 119 | 744 | 1,318 |
| 2002 | 396 | 176 | 572 | 620 | 123 | 743 | 1,315 |
| 2003 | 400 | 172 | 572 | 617 | 125 | 742 | 1,314 |
| 2004 | 402 | 169 | 571 | 616 | 123 | 739 | 1,310 |
| 2005 | 404 | 167 | 571 | 609 | 128 | 737 | 1,308 |
| 2006 | 400 | 169 | 570 | 614 | 124 | 738 | 1,308 |
| 2007 | 400 | 171 | 571 | 609 | 129 | 738 | 1,309 |
| 2008 | 405 | 166 | 571 | 613 | 125 | 738 | 1,309 |
| 2009 | 401 | 169 | 570 | 608 | 130 | 738 | 1,308 |
| 2010 | 407 | 162 | 569 | 604 | 132 | 736 | 1,305 |
| 2011 | 409 | 160 | 569 | 609 | 127 | 736 | 1,305 |
| 2012 | 410 | 159 | 569 | 620 | 116 | 736 | 1,305 |
| 2013 | 409 | 160 | 569 | 624 | 112 | 736 | 1,305 |
| 2014 | 414 | 155 | 569 | 623 | 112 | 735 | 1,304 |
| 2015 | 408 | 160 | 568 | 624 | 110 | 734 | 1,302 |
| 2016 | 409 | 159 | 568 | 613 | 122 | 735 | 1,303 |
| 2017 | 417 | 152 | 569 | 619 | 116 | 735 | 1,304 |
| 2018 | 421 | 147 | 568 | 614 | 121 | 735 | 1,303 |

*Source*: http://www.cfec.state.ak.us/pstatus/14052016.htm 1960–1974 ADF&G unpublished reports, 1975–2016 Commercial Fisheries Entry Commission (CFEC).

*Note*: Active Permits are defined by the CFEC as follows: all permanent permits, regardless of whether they have been renewed, and interim-use and interim-entry permits that have been issued. Excluded from Active Permits are any permits that have been cancelled and interim permits that have not been issued (renewed) for the given year.

Appendix B14.–Forecast and projected commercial harvests of salmon by species, Upper Cook Inlet, 1990–2018.

| | Sockeye | | | Coho | | | Pink | | Chum | | Chinook | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Forecast[a] | Actual[b,c] | Error | Projected[d] | Actual[c] | Error | Projected[d] | Actual[c] | Projected[d] | Actual[c,] | Projected[d] | Actual[c] | Error |
| 1990 | 4,300,000 | 3,822,864 | -12% | 250,000 | 501,739 | 50% | 600,000 | 603,630 | 400,000 | 351,197 | 25,000 | 16,105 | -55% |
| 1991 | 3,200,000 | 2,472,589 | -29% | 400,000 | 426,498 | 6% | 90,000 | 14,663 | 500,000 | 280,230 | 20,000 | 13,542 | -48% |
| 1992 | 3,600,000 | 9,502,392 | 62% | 400,000 | 468,930 | 15% | 400,000 | 695,861 | 350,000 | 274,303 | 20,000 | 17,171 | -16% |
| 1993 | 2,500,000 | 5,042,799 | 50% | 450,000 | 306,882 | -47% | 25,000 | 100,934 | 350,000 | 122,770 | 15,000 | 18,871 | 21% |
| 1994 | 2,000,000 | 3,826,508 | 48% | 400,000 | 583,793 | 31% | 600,000 | 523,434 | 250,000 | 303,177 | 15,000 | 19,962 | 25% |
| 1995 | 2,700,000 | 3,224,087 | 16% | 400,000 | 447,130 | 11% | 100,000 | 133,578 | 250,000 | 529,428 | 15,000 | 17,893 | 16% |
| 1996 | 3,300,000 | 4,262,377 | 23% | 400,000 | 321,668 | -24% | 600,000 | 242,911 | 350,000 | 156,520 | 15,000 | 14,306 | -5% |
| 1997 | 5,300,000 | 4,546,125 | -17% | 400,000 | 152,408 | -162% | 100,000 | 70,945 | 250,000 | 103,036 | 15,000 | 13,292 | -13% |
| 1998 | 2,500,000 | 1,619,119 | -54% | 300,000 | 160,688 | -87% | 300,000 | 551,737 | 200,000 | 95,704 | 17,000 | 8,124 | -109% |
| 1999 | 2,000,000 | 3,164,355 | 37% | 300,000 | 126,105 | -138% | 75,000 | 16,176 | 200,000 | 174,554 | 16,000 | 14,383 | -11% |
| 2000 | 3,000,000 | 1,778,547 | -69% | 150,000 | 236,871 | 37% | 500,000 | 146,482 | 200,000 | 127,069 | 15,000 | 7,350 | -104% |
| 2001 | 2,700,000 | 2,304,670 | -17% | 300,000 | 113,311 | -165% | 50,000 | 72,560 | 250,000 | 84,494 | 13,000 | 9,295 | -40% |
| 2002 | 2,200,000 | 3,356,572 | 34% | 160,000 | 246,281 | 35% | 170,000 | 446,960 | 120,000 | 237,949 | 10,000 | 12,714 | 21% |
| 2003 | 2,400,000 | 4,145,981 | 42% | 170,000 | 101,756 | -67% | 80,000 | 48,789 | 140,000 | 120,767 | 10,000 | 18,503 | 46% |
| 2004 | 3,700,000 | 5,639,628 | 34% | 160,000 | 311,058 | 49% | 380,000 | 357,939 | 150,000 | 146,165 | 10,000 | 26,922 | 63% |
| 2005 | 4,100,000 | 5,962,572 | 31% | 200,000 | 224,657 | 11% | 70,000 | 48,419 | 140,000 | 69,740 | 10,000 | 27,667 | 64% |
| 2006 | 2,100,000 | 2,653,446 | 21% | 200,000 | 177,853 | -12% | 350,000 | 404,111 | 140,000 | 64,033 | 20,000 | 18,029 | -11% |
| 2007 | 3,300,000 | 4,044,832 | 18% | 210,000 | 177,339 | -18% | 50,000 | 147,020 | 130,000 | 77,240 | 20,000 | 17,625 | -13% |
| 2008 | 3,900,000 | 3,005,299 | -30% | 200,000 | 171,869 | -16% | 380,000 | 169,368 | 100,000 | 50,315 | 20,000 | 13,333 | -50% |
| 2009 | 3,000,000 | 2,842,335 | -6% | 210,000 | 153,210 | -37% | 70,000 | 214,321 | 80,000 | 82,808 | 20,000 | 8,750 | -129% |
| 2010 | 2,300,000 | 3,695,633 | 38% | 179,000 | 207,350 | 14% | 305,000 | 292,706 | 70,000 | 228,863 | 17,000 | 9,900 | -72% |
| 2011 | 4,600,000 | 6,359,116 | 28% | 178,000 | 95,291 | -87% | 106,000 | 34,123 | 101,000 | 129,407 | 14,000 | 11,248 | -24% |
| 2012 | 4,400,000 | 4,271,018 | -3% | 159,000 | 106,775 | -49% | 334,000 | 469,598 | 113,000 | 269,733 | 12,000 | 2,527 | -375% |
| 2013 | 4,900,000 | 3,639,862 | -35% | 147,000 | 260,963 | 44% | 99,000 | 48,275 | 152,000 | 139,365 | 9,000 | 5,398 | -67% |
| 2014 | 4,300,000 | 3,329,970 | -29% | 165,000 | 137,376 | -20% | 338,000 | 642,879 | 170,000 | 116,093 | 7,600 | 4,660 | -63% |
| 2015 | 3,700,000 | 3,685,160 | 0% | 161,000 | 216,032 | 25% | 98,000 | 48,004 | 176,000 | 275,960 | 6,700 | 10,798 | 38% |
| 2016 | 5,300,000 | 3,342,183 | -59% | 160,000 | 147,469 | -8% | 393,000 | 382,436 | 184,000 | 123,711 | 6,700 | 10,027 | 33% |
| 2017 | 2,600,000 | 2,622,292 | 1% | 167,000 | 303,642 | 45% | 98,000 | 167,842 | 184,000 | 243,600 | 6,300 | 7,660 | 18% |
| 2018 | 2,600,000 | 1,116,107 | -133% | 203,000 | 232,290 | 13% | 389,000 | 126,923 | 177,000 | 115,366 | 7,400 | 3,405 | -117% |
| Avg. | 3,327,586 | 3,768,222 | 12% | 247,552 | 245,422 | -1% | 246,552 | 249,056 | 202,655 | 175,641 | 14,059 | 13,085 | -7% |

[a] 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.

[b] Sockeye salmon harvest estimates include commercial, sport, personal use, educational, and subsistence fisheries.

[c] Actual harvests prior to 2017 reflect minor adjustments to the harvest database.

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

Appendix B15.–Upper Cook Inlet state subsistence fisheries salmon harvest, 1980–2018.

| Tyonek Subsistence Fishery | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Number of Permits | | | | | | | |
| Year | Issued | Returned | Chinook | Sockeye | Coho | Pink | Chum | Total |
| 1980 | 67 | 67 | 1,936 | 262 | 0 | 0 | 0 | 2,198 |
| 1981 | 70 | 70 | 2,002 | 269 | 64 | 32 | 15 | 2,382 |
| 1982 | 69 | 69 | 1,590 | 310 | 113 | 4 | 14 | 2,031 |
| 1983 | 73 | 73 | 2,755 | 251 | 78 | 6 | 0 | 3,090 |
| 1984 | 70 | 70 | 2,364 | 310 | 66 | 23 | 3 | 2,766 |
| 1985 | 176 | ND | 1,967 | 163 | 91 | 10 | 0 | 2,231 |
| 1986 | 101 | ND | 1,674 | 198 | 210 | 44 | 45 | 2,171 |
| 1987 | 64 | 61 | 1,689 | 174 | 156 | 25 | 10 | 2,055 |
| 1988 | 47 | 42 | 1,776 | 102 | 283 | 13 | 9 | 2,183 |
| 1989 | 49 | 47 | 1,303 | 89 | 120 | 1 | 0 | 1,513 |
| 1990 | 42 | 37 | 886 | 75 | 400 | 14 | 23 | 1,397 |
| 1991 | 57 | 54 | 925 | 20 | 69 | 0 | 0 | 1,014 |
| 1992 | 57 | 44 | 1,170 | 96 | 294 | 24 | 9 | 1,594 |
| 1993 | 62 | 54 | 1,566 | 68 | 88 | 25 | 23 | 1,769 |
| 1994 | 58 | 49 | 905 | 101 | 122 | 27 | 0 | 1,154 |
| 1995 | 70 | 55 | 1,632 | 54 | 186 | 18 | 0 | 1,891 |
| 1996 | 73 | 49 | 1,615 | 88 | 177 | 9 | 27 | 1,917 |
| 1997 | 70 | 42 | 1,051 | 200 | 241 | 13 | 0 | 1,505 |
| 1998 | 74 | 49 | 1,430 | 251 | 97 | 3 | 2 | 1,783 |
| 1999 | 77 | 54 | 1,620 | 247 | 175 | 20 | 66 | 2,127 |
| 2000 | 60 | 47 | 1,461 | 78 | 103 | 0 | 8 | 1,649 |
| 2001 | 84 | 58 | 1,450 | 254 | 72 | 9 | 6 | 1,790 |
| 2002 | 101 | 71 | 1,609 | 314 | 162 | 6 | 14 | 2,106 |
| 2003 | 87 | 74 | 1,384 | 136 | 54 | 12 | 9 | 1,595 |
| 2004 | 97 | 75 | 1,751 | 121 | 168 | 0 | 0 | 2,040 |
| 2005 | 78 | 67 | 1,183 | 65 | 159 | 2 | 0 | 1,409 |
| 2006 | 82 | 55 | 1,366 | 32 | 23 | 1 | 0 | 1,422 |
| 2007 | 84 | 67 | 1,526 | 249 | 164 | 3 | 4 | 1,946 |
| 2008 | 94 | 77 | 1,492 | 146 | 227 | 11 | 16 | 1,892 |
| 2009 | 89 | 69 | 817 | 229 | 320 | 2 | 1 | 1,369 |
| 2010 | 105 | 77 | 1,116 | 281 | 223 | 3 | 3 | 1,626 |
| 2011 | 114 | 63 | 851 | 202 | 34 | 10 | 10 | 1,107 |
| 2012 | 89 | 69 | 1,102 | 223 | 174 | 3 | 5 | 1,507 |
| 2013 | 82 | 48 | 1,352 | 278 | 311 | 0 | 32 | 1,973 |
| 2014 | 92 | 73 | 896 | 487 | 575 | 15 | 5 | 1,978 |
| 2015 | 83 | 72 | 1,070 | 505 | 568 | 16 | 6 | 2,165 |
| 2016 | 74 | 64 | 1,030 | 188 | 225 | 8 | 12 | 1,462 |
| 2017 | 74 | 47 | 1,284 | 457 | 265 | 32 | 6 | 2,045 |
| 2018 | 65 | 22 | 1,413 | 217 | 154 | 10 | 11 | 1,805 |

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| Yentna Subsistence Fishery | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Number of Permits | | | | | | | |
| Year | Issued | Returned | Chinook | Sockeye | Coho | Pink | Chum | Total |
| Personal Use | | | | | | | | |
| 1996 | 17 | 14 | 0 | 242 | 46 | 115 | 51 | 454 |
| 1997 | 24 | 21 | 0 | 549 | 83 | 30 | 10 | 672 |
| Subsistence | | | | | | | | |
| 1998 | 21 | 18 | 0 | 495 | 113 | 30 | 15 | 653 |
| 1999 | 18 | 16 | 0 | 516 | 48 | 18 | 13 | 595 |
| 2000 | 19 | 19 | 0 | 379 | 92 | 4 | 7 | 482 |
| 2001 | 16 | 15 | 0 | 545 | 50 | 10 | 4 | 609 |
| 2002 | 25 | 22 | 0 | 454 | 133 | 14 | 31 | 632 |
| 2003 | 19 | 15 | 0 | 553 | 67 | 2 | 8 | 630 |
| 2004 | 21 | 19 | 0 | 441 | 146 | 36 | 3 | 626 |
| 2005 | 18 | 17 | 0 | 177 | 42 | 24 | 25 | 268 |
| 2006 | 22 | 22 | 0 | 368 | 175 | 14 | 26 | 583 |
| 2007 | 22 | 22 | 0 | 367 | 66 | 17 | 18 | 468 |
| 2008 | 16 | 16 | 0 | 310 | 57 | 23 | 7 | 397 |
| 2009 | 17 | 17 | 0 | 253 | 14 | 0 | 6 | 273 |
| 2010 | 32 | 32 | 0 | 642 | 50 | 38 | 18 | 748 |
| 2011 | 25 | 25 | 0 | 598 | 90 | 337 | 21 | 1,046 |
| 2012 | 21 | 21 | 0 | 279 | 24 | 21 | 19 | 343 |
| 2013 | 22 | 19 | 0 | 160 | 92 | 128 | 32 | 412 |
| 2014 | 20 | 18 | 0 | 328 | 84 | 17 | 32 | 461 |
| 2015 | 29 | 27 | 0 | 578 | 151 | 47 | 69 | 845 |
| 2016 | 26 | 25 | 0 | 514 | 204 | 36 | 37 | 791 |
| 2017 | 26 | 26 | 0 | 454 | 185 | 47 | 10 | 696 |
| 2018 | 29 | 29 | 16 | 405 | 167 | 8 | 10 | 606 |

*Note:* Harvest estimated from returned permits only, not expanded for non-returned permits.

Appendix B16.–Upper Cook Inlet educational fisheries salmon harvest, 2018.

| Fishery[a] | Chinook | Sockeye | Coho | Pink | Chum | Total |
|---|---|---|---|---|---|---|
| Kenaitze | 3 | 6,155 | 887 | 259 | 0 | 7,304 |
| NTC | 5 | 169 | 219 | 110 | 0 | 503 |
| NND | 6 | 23 | 85 | 15 | 0 | 129 |
| NES | 0 | 6 | 0 | 0 | 0 | 6 |
| APVFW | 0 | 28 | 21 | 20 | 0 | 69 |
| Sons of American Legion | 0 | 35 | 27 | 0 | 0 | 62 |
| Kasilof Regional HA | 0 | 10 | 37 | 0 | 0 | 47 |
| SCF | 0 | 14 | 17 | 0 | 2 | 33 |
| Knik | 0 | 100 | 50 | 0 | 12 | 162 |
| Eklutna | 0 | 77 | 48 | 0 | 11 | 136 |
| Territorial Homestead Lodge | 4 | 82 | 31 | 6 | 7 | 130 |
| Chickaloon Native Village | - | - | - | - | - | - |
| Total | 18 | 6,699 | 1,422 | 410 | 32 | 8,581 |

*Note:* Harvest data include both early- and late-run Kenai River Chinook and sockeye salmon.

[a] Kenaitze = Kenaitze Tribal Group; NTC = Ninilchik Traditional Council; NND = Ninilchik Native Descendants; NES = Ninilchik Emergency Services; APVFW = Anchor Point Veterans of Foreign Wars; Sons of American Legion = Homer Sons of the American Legion Post 16; Kasilof Regional HA = Kasilof Regional Historical Association; SCF = Southcentral Foundation; Knik = Knik Tribal Council; Eklutna = Native Village of Eklutna; Territorial Homestead Lodge = Alaska's Territorial Homestead Lodge, operated by Tim O'Brien.

Appendix B17.–Effort and harvest in Upper Cook Inlet personal use salmon fisheries, 1996–2018.

Kasilof River gillnet

| | Days | Days fished | | Sockeye | | Chinook | | Coho | | Pink | | Chum | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | open | Est. | SE | Est. | SE | Est. | SE | Est. | SE | Est. | SE | Est. | SE | Est. | SE |
| 1996 | 5 | 582 | 16 | 9,506 | 156 | 46 | 3 | 0 | 0 | 8 | 0 | 1 | 0 | 9,561 | 157 |
| 1997 | 5 | 815 | 26 | 17,997 | 231 | 65 | 2 | 1 | 0 | 102 | 7 | 3 | 1 | 18,168 | 233 |
| 1998 | 5 | 1,075 | 24 | 15,975 | 425 | 126 | 7 | 0 | 0 | 15 | 4 | 12 | 10 | 16,128 | 426 |
| 1999 | 10 | 1,287 | 39 | 12,832 | 371 | 442 | 27 | 25 | 2 | 10 | 0 | 10 | 0 | 13,319 | 374 |
| 2000 | 13 | 1,252 | 23 | 14,774 | 275 | 514 | 15 | 9 | 0 | 17 | 2 | 10 | 0 | 15,324 | 276 |
| 2001 | 8 | 1,001 | 20 | 17,201 | 394 | 174 | 6 | 6 | 0 | 11 | 0 | 7 | 5 | 17,399 | 397 |
| 2002 | 10 | 1,025 | 16 | 17,980 | 274 | 192 | 5 | 12 | 0 | 30 | 2 | 13 | 4 | 18,227 | 277 |
| 2003 | 10 | 1,206 | 17 | 15,706 | 277 | 400 | 13 | 107 | 0 | 9 | 0 | 4 | 0 | 16,226 | 284 |
| 2004 | 10 | 1,272 | 10 | 25,417 | 203 | 163 | 4 | 58 | 13 | 6 | 1 | 0 | 0 | 25,644 | 205 |
| 2005 | 11 | 1,506 | 6 | 26,609 | 104 | 87 | 1 | 326 | 5 | 16 | 1 | 1 | 0 | 27,039 | 104 |
| 2006 | 10 | 1,724 | 5 | 28,867 | 91 | 287 | 2 | 420 | 16 | 11 | 0 | 6 | 0 | 29,591 | 94 |
| 2007 | 10 | 1,570 | 7 | 14,943 | 66 | 343 | 3 | 68 | 4 | 2 | 0 | 0 | 0 | 15,356 | 66 |
| 2008 | 10 | 1,534 | 7 | 23,432 | 107 | 151 | 2 | 65 | 3 | 35 | 4 | 23 | 3 | 23,706 | 107 |
| 2009 | 10 | 1,761 | 9 | 26,646 | 167 | 127 | 2 | 165 | 0 | 14 | 1 | 11 | 2 | 26,963 | 167 |
| 2010 | 10 | 1,855 | 13 | 21,924 | 170 | 136 | 3 | 23 | 5 | 23 | 5 | 1 | 0 | 22,106 | 170 |
| 2011 | 10 | 1,846 | 16 | 26,780 | 244 | 167 | 4 | 47 | 10 | 23 | 1 | 3 | 0 | 27,020 | 244 |
| 2012 | 10 | 1,696 | 21 | 15,638 | 197 | 103 | 3 | 161 | 19 | 53 | 19 | 15 | 1 | 15,969 | 199 |
| 2013 | 5 | 1,082 | 13 | 14,439 | 187 | 46 | 2 | 129 | 32 | 3 | 0 | 5 | 1 | 14,621 | 187 |
| 2014 | 10 | 1,386 | 17 | 22,567 | 302 | 50 | 2 | 30 | 10 | 105 | 44 | 18 | 0 | 22,770 | 306 |
| 2015 | 10 | 1,741 | 22 | 27,567 | 339 | 61 | 3 | 191 | 41 | 20 | 5 | 2 | 1 | 27,841 | 341 |
| 2016 | 10 | 1,963 | 23 | 26,539 | 342 | 141 | 3 | 23 | 0 | 5 | 0 | 23 | 1 | 26,731 | 342 |
| 2017 | 10 | 1,874 | 27 | 21,927 | 309 | 118 | 4 | 5 | 1 | 48 | 8 | 43 | 9 | 22,141 | 309 |
| 2018 | 10 | 1,616 | 51 | 14,390 | 485 | 120 | 10 | 2 | 0 | 22 | 13 | 5 | 0 | 14,539 | 485 |
| Mean | 9 | 1,420 | | 19,985 | | 176 | | 81 | | 26 | | 9 | | 20,278 | |
| Max. | 13 | 1,963 | | 28,867 | | 514 | | 420 | | 105 | | 43 | | 29,591 | |

Kasilof River dip net

| | Days | Days fished | | Sockeye | | Chinook | | Coho | | Pink | | Chum | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | open | Est. | SE | Est. | SE | Est. | SE | Est. | SE | Est. | SE | Est. | SE | Est. | SE |
| 1996 | 27 | 1,300 | 23 | 11,197 | 127 | 50 | 1 | 334 | 18 | 103 | 2 | 17 | 0 | 11,701 | 130 |
| 1997 | 27 | 1,091 | 32 | 9,737 | 150 | 35 | 2 | 90 | 3 | 19 | 2 | 19 | 1 | 9,900 | 153 |
| 1998 | 27 | 3,421 | 33 | 45,161 | 525 | 134 | 3 | 731 | 18 | 610 | 25 | 74 | 32 | 46,710 | 528 |
| 1999 | 27 | 3,611 | 43 | 37,176 | 507 | 127 | 5 | 286 | 50 | 264 | 12 | 52 | 8 | 37,905 | 511 |
| 2000 | 27 | 2,622 | 36 | 23,877 | 403 | 134 | 7 | 1,004 | 16 | 841 | 39 | 34 | 0 | 25,890 | 407 |
| 2001 | 27 | 3,382 | 37 | 37,612 | 505 | 138 | 6 | 766 | 25 | 307 | 14 | 23 | 0 | 38,846 | 511 |
| 2002 | 44 | 4,020 | 38 | 46,769 | 530 | 106 | 6 | 1,197 | 59 | 1,862 | 73 | 139 | 7 | 50,073 | 553 |
| 2003 | 44 | 3,874 | 28 | 43,870 | 440 | 57 | 4 | 592 | 49 | 286 | 21 | 30 | 1 | 44,835 | 447 |
| 2004 | 44 | 4,432 | 19 | 48,315 | 259 | 44 | 3 | 668 | 21 | 396 | 15 | 90 | 5 | 49,513 | 263 |
| 2005 | 44 | 4,500 | 9 | 43,151 | 100 | 16 | 1 | 538 | 16 | 658 | 12 | 102 | 2 | 44,465 | 103 |
| 2006 | 44 | 5,763 | 10 | 56,144 | 113 | 55 | 1 | 1,057 | 15 | 992 | 8 | 105 | 4 | 58,353 | 117 |
| 2007 | 44 | 4,627 | 9 | 43,293 | 105 | 35 | 1 | 487 | 8 | 383 | 6 | 136 | 2 | 44,334 | 106 |
| 2008 | 44 | 5,552 | 14 | 54,051 | 153 | 46 | 3 | 509 | 11 | 787 | 10 | 143 | 4 | 55,536 | 154 |
| 2009 | 44 | 7,650 | 21 | 73,035 | 246 | 34 | 1 | 1,441 | 30 | 1,274 | 19 | 173 | 3 | 75,957 | 248 |
| 2010 | 44 | 7,588 | 27 | 70,774 | 303 | 31 | 2 | 1,768 | 45 | 974 | 24 | 279 | 9 | 73,826 | 307 |
| 2011 | 44 | 6,571 | 35 | 49,766 | 351 | 24 | 3 | 977 | 39 | 652 | 40 | 144 | 14 | 51,562 | 355 |
| 2012 | 44 | 6,536 | 32 | 73,419 | 448 | 16 | 1 | 1,170 | 42 | 896 | 38 | 147 | 11 | 75,649 | 452 |
| 2013 | 44 | 8,556 | 36 | 85,528 | 473 | 18 | 1 | 1,666 | 84 | 683 | 19 | 339 | 15 | 88,233 | 481 |
| 2014 | 44 | 10,236 | 51 | 88,513 | 547 | 0 | 0 | 2,606 | 106 | 2,769 | 66 | 342 | 15 | 94,230 | 561 |
| 2015 | 44 | 10,346 | 52 | 89,000 | 566 | 0 | 0 | 2,723 | 95 | 1,607 | 74 | 597 | 31 | 93,927 | 579 |
| 2016 | 44 | 9,334 | 50 | 58,273 | 414 | 26 | 2 | 1,255 | 57 | 1,733 | 46 | 329 | 23 | 61,618 | 421 |
| 2017 | 44 | 9,458 | 63 | 78,260 | 621 | 14 | 2 | 605 | 30 | 2,850 | 80 | 969 | 72 | 82,698 | 631 |
| 2018 | 44 | 9,377 | 132 | 92,034 | 1477 | 6 | 0 | 326 | 16 | 3,272 | 188 | 326 | 31 | 96,311 | 1,489 |
| Mean | 40 | 5,819 | | 54,737 | | 50 | | 991 | | 1,053 | | 200 | | 57,047 | |
| Max. | 44 | 10,346 | | 92,034 | | 138 | | 2,723 | | 3,272 | | 969 | | 96,311 | |

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Kenai River dip net

| Year | Days open | Days fished Est. | SE | Sockeye Est. | SE | Chinook Est. | SE | Coho Est. | SE | Pink Est. | Chum Est. | Total Est. | SE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1996 | 27 | 10,503 | 60 | 102,821 | 367 | 295 | 5 | 1,932 | 29 | 2,404 | 175 | 107,627 | 375 |
| 1997 | 22 | 11,023 | 87 | 114,619 | 439 | 364 | 13 | 559 | 21 | 619 | 58 | 116,219 | 448 |
| 1998 | 18 | 10,802 | 59 | 103,847 | 716 | 254 | 10 | 1,011 | 62 | 1,032 | 85 | 106,229 | 724 |
| 1999 | 22 | 13,738 | 79 | 149,504 | 1,084 | 488 | 13 | 1,009 | 108 | 1,666 | 102 | 152,769 | 1,094 |
| 2000 | 22 | 12,354 | 69 | 98,262 | 752 | 410 | 18 | 1,449 | 62 | 1,457 | 193 | 101,771 | 762 |
| 2001 | 22 | 14,772 | 66 | 150,766 | 909 | 638 | 15 | 1,555 | 105 | 1,326 | 155 | 154,440 | 926 |
| 2002 | 22 | 14,840 | 56 | 180,028 | 844 | 606 | 11 | 1,721 | 64 | 5,662 | 551 | 188,568 | 874 |
| 2003 | 22 | 15,263 | 50 | 223,580 | 891 | 1,016 | 18 | 1,332 | 68 | 1,647 | 249 | 227,824 | 905 |
| 2004 | 22 | 18,513 | 35 | 262,831 | 583 | 792 | 7 | 2,661 | 66 | 2,103 | 387 | 268,774 | 905 |
| 2005 | 22 | 20,977 | 18 | 295,496 | 273 | 997 | 3 | 2,512 | 24 | 1,806 | 321 | 301,132 | 275 |
| 2006 | 20 | 12,685 | 16 | 127,630 | 183 | 1,034 | 3 | 2,235 | 15 | 11,127 | 551 | 142,577 | 203 |
| 2007 | 22 | 21,908 | 23 | 291,270 | 335 | 1,509 | 4 | 2,111 | 24 | 1,939 | 472 | 297,301 | 337 |
| 2008 | 22 | 20,772 | 27 | 234,109 | 338 | 1,362 | 10 | 2,609 | 21 | 10,631 | 504 | 249,215 | 343 |
| 2009 | 22 | 26,171 | 35 | 339,993 | 524 | 1,189 | 7 | 2,401 | 29 | 5,482 | 285 | 349,350 | 525 |
| 2010 | 22 | 28,342 | 44 | 389,552 | 702 | 865 | 7 | 2,870 | 56 | 3,655 | 508 | 397,451 | 705 |
| 2011 | 22 | 32,818 | 60 | 537,765 | 1,105 | 1,243 | 10 | 4,745 | 107 | 3,914 | 915 | 548,583 | 1,115 |
| 2012 | 22 | 34,374 | 61 | 526,992 | 1,109 | 40 | 3 | 4,008 | 117 | 3,770 | 424.824 | 535,236 | 1,120 |
| 2013 | 22 | 33,193 | 63 | 347,222 | 822 | 11 | 1 | 3,169 | 74 | 3,625 | 701 | 354,727 | 827 |
| 2014 | 22 | 36,380 | 81 | 379,823 | 1,023 | 0 | 0 | 4,710 | 157 | 19,140 | 1,194 | 404,866 | 1,053 |
| 2015 | 22 | 31,487 | 75 | 377,532 | 1,088 | 66 | 2 | 4,150 | 130 | 4,147 | 957 | 386,853 | 1,101 |
| 2016 | 22 | 30,745 | 75 | 259,057 | 817 | 638 | 8 | 3,277 | 106 | 7,834 | 717 | 271,524 | 830 |
| 2017 | 22 | 27,775 | 87 | 297,049 | 1,103 | 1,194 | 14 | 732 | 41 | 7,962 | 886 | 307,824 | 1,112 |
| 2018 | 20 | 20,170 | 164 | 165,028 | 1,567 | 7 | 4 | 529 | 35 | 10,435 | 441 | 176,439 | 1,607 |
| Mean | 22 | 21,722 | | 258,903 | | 653 | | 2,317 | | 4,930 | 471 | 267,274 | |
| Max. | 27 | 36,380 | | 537,765 | | 1,509 | | 4,745 | | 19,140 | 1,194 | 548,583 | |

Unknown fishery[a]

| Year | Days open | Days fished Est. | SE | Sockeye Est. | SE | Chinook Est. | SE | Coho Est. | SE | Pink Est. | Chum Est. | Total Est. | SE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1996 | - | 472 | 33 | 4,761 | 463 | 24 | 7 | 131 | 37 | 127 | 4 | 5,047 | 467 |
| 1997 | - | 1,003 | 50 | 3,310 | 276 | 0 | 0 | 64 | 14 | 51 | 4 | 3,429 | 282 |
| 1998 | - | 921 | 39 | 7,562 | 287 | 34 | 5 | 294 | 77 | 196 | 20 | 8,106 | 301 |
| 1999 | - | 684 | 20 | 7,994 | 352 | 51 | 5 | 76 | 7 | 126 | 4 | 8,251 | 353 |
| 2000 | - | 648 | 23 | 5,429 | 274 | 44 | 13 | 218 | 60 | 84 | 24 | 5,799 | 282 |
| 2001 | - | 1,339 | 34 | 12,673 | 380 | 188 | 17 | 292 | 30 | 175 | 90 | 13,418 | 394 |
| 2002 | - | 1,339 | 26 | 14,846 | 353 | 166 | 10 | 341 | 25 | 916 | 54 | 16,323 | 380 |
| 2003 | - | 1,325 | 21 | 15,675 | 247 | 238 | 25 | 219 | 14 | 140 | 88 | 16,360 | 254 |
| 2004 | - | 1,143 | 13 | 13,527 | 179 | 99 | 3 | 366 | 25 | 210 | 25 | 14,227 | 185 |
| 2005 | - | 270 | 2 | 4,520 | 38 | 32 | 1 | 39 | 1 | 40 | 4 | 4,635 | 38 |
| 2006 | - | 371 | 2 | 3,406 | 34 | 29 | 1 | 47 | 2 | 304 | 84 | 3,870 | 41 |
| 2007 | - | 534 | 3 | 6,729 | 52 | 37 | 1 | 61 | 3 | 28 | 6 | 6,861 | 52 |
| 2008 | - | 622 | 4 | 6,890 | 63 | 41 | 2 | 66 | 3 | 412 | 58 | 7,467 | 64 |
| 2009 | - | 719 | 7 | 7,968 | 84 | 25 | 1 | 144 | 10 | 133 | 57 | 8,327 | 85 |
| 2010 | - | 760 | 8 | 8,300 | 125 | 15 | 1 | 168 | 7 | 109 | 12 | 8,605 | 125 |
| 2011 | - | 836 | 11 | 10,695 | 136 | 17 | 1 | 80 | 5 | 135 | 72 | 10,962 | 137 |
| 2012 | - | 937 | 14 | 13,295 | 219 | 4 | 1 | 173 | 25 | 127 | 36 | 13,635 | 221 |
| 2013 | - | 867 | 15 | 7,126 | 154 | 9 | 2 | 155 | 17 | 113 | 8 | 7,411 | 154 |
| 2014 | - | 1,022 | 14 | 9,315 | 131 | 0 | 0 | 129 | 18 | 563 | 78 | 10,085 | 135 |
| 2015 | - | 820 | 14 | 8,626 | 183 | 0 | 0 | 263 | 19 | 153 | 41 | 9,084 | 184 |
| 2016 | - | 645 | 14 | 4,837 | 155 | 15 | 1 | 34 | 7 | 233 | 81 | 5,200 | 158 |
| 2017 | - | 543 | 16 | 4,760 | 147 | 19 | 2 | 41 | 4 | 107 | 10 | 4,937 | 148 |
| 2018 | - | 352 | 27 | 2,085 | 152 | 0 | 0 | 21 | 4 | 209 | 4 | 2,319 | 157 |
| Mean | | 790 | | 8,014 | | 47 | | 149 | | 204 | 38 | 8,450 | |
| Max. | | 1,339 | | 15,675 | | 238 | | 366 | | 916 | 90 | 16,360 | |

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Fish Creek dip net

| Year | Days open | Days fished Est. | Days fished SE | Sockeye Est. | Sockeye SE | Chinook Est. | Chinook SE | Coho Est. | Coho SE | Pink Est. | Pink SE | Chum Est. | Chum SE | Total Est. | Total SE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1996 | 22 | 3,749 | 41 | 17,260 | 161 | 37 | 8 | 2,414 | 25 | 331 | 9 | 153 | 5 | 20,195 | 168 |
| 1997 | 13 | 991 | 34 | 3,277 | 76 | 0 | 0 | 63 | 5 | 53 | 7 | 4 | 1 | 3,397 | 84 |
| 1998 | 15 | 1,141 | 21 | 4,036 | 113 | 1 | 0 | 649 | 19 | 80 | 10 | 29 | 2 | 4,795 | 117 |
| 1999 | 16 | 432 | 16 | 1,083 | 138 | 0 | 0 | 17 | 3 | 12 | 7 | 0 | 0 | 1,112 | 139 |
| 2000 | 16 | 1,054 | 25 | 6,925 | 211 | 0 | 0 | 958 | 72 | 83 | 12 | 29 | 3 | 7,995 | 225 |
| 2001 | 3 | 131 | 7 | 436 | 40 | 0 | 0 | 18 | 7 | 2 | 0 | 1 | 0 | 457 | 41 |
| 2009 | 7 | 1,436 | 8 | 9,898 | 73 | 10 | 0 | 53 | 6 | 66 | 3 | 33 | 5 | 10,060 | 73 |
| 2010 | 8 | 2,843 | 14 | 23,705 | 161 | 12 | 2 | 3,576 | 84 | 1,721 | 28 | 290 | 9 | 29,303 | 184 |
| 2011 | 3 | 1,379 | 14 | 5,236 | 86 | 2 | 0 | 905 | 29 | 155 | 10 | 72 | 7 | 6,371 | 92 |
| 2014 | 7 | 1,792 | 22 | 5,829 | 113 | 0 | 0 | 1,895 | 48 | 4,218 | 74 | 227 | 8 | 12,170 | 144 |
| 2015 | 8 | 2,303 | 22 | 19,260 | 280 | 0 | 0 | 3,321 | 87 | 1,329 | 48 | 329 | 27 | 24,239 | 298 |
| 2017 | 6 | 1,311 | 20 | 4,894 | 125 | 1 | 0 | 281 | 21 | 273 | 22 | 54 | 4 | 5,502 | 128 |
| 2018 | 8 | 2,324 | 62 | 18,569 | 683 | 5 | 0 | 1,779 | 91 | 880 | 118 | 208 | 59 | 21,531 | 702 |
| Mean | 10 | 1,607 | | 9,262 | | 5 | | 1,225 | | 708 | | 110 | | 11,317 | |
| Max. | 22 | 3,749 | | 23,705 | | 37 | | 3,576 | | 4,218 | | 329 | | 29,303 | |

Beluga River dip net

| Year | Days open | Days fished Est. | Days fished SE | Sockeye Est. | Sockeye SE | Chinook Est. | Chinook SE | Coho Est. | Coho SE | Pink Est. | Pink SE | Chum Est. | Chum SE | Total Est. | Total SE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 43 | | | 31 | | 0 | | 35 | | 0 | | 0 | | 66 | |
| 2009 | 43 | | | 140 | | 0 | | 78 | | 7 | | 0 | | 225 | |
| 2010 | 43 | | | 47 | | 0 | | 1 | | 0 | | 5 | | 53 | |
| 2011 | 43 | | | 137 | | 0 | | 17 | | 0 | | 5 | | 159 | |
| 2012 | 43 | | | 9 | | 0 | | 7 | | 0 | | 0 | | 16 | |
| 2013 | 43 | | | 30 | | 0 | | 55 | | 2 | | 1 | | 88 | |
| 2014 | 43 | | | 32 | | 0 | | 12 | | 1 | | 1 | | 46 | |
| 2015 | 43 | | | 65 | | 0 | | 17 | | 0 | | 0 | | 82 | |
| 2016 | 43 | | | 52 | | 0 | | 45 | | 2 | | 2 | | 102 | |
| 2017 | 43 | | | 26 | | 0 | | 36 | | 4 | | 0 | | 66 | |
| Mean | 43 | | | 60 | | 0 | | 30 | | 1 | | 2 | | 93 | |
| Max. | 43 | | | 140 | | 0 | | 78 | | 7 | | 5 | | 225 | |

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Upper Cook Inlet personal use fisheries total[b]

| | Days fished | | Sockeye | | Chinook | | Coho | | Pink | | Chum | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Est. | SE | Est. | SE | Est. | SE | Est. | SE | Est. | SE | Est. | SE | Est. | SE |
| 1996 | 16,606 | 85 | 145,545 | 644 | 452 | 12 | 4,811 | 56 | 2,973 | 50 | 350 | 12 | 154,131 | 655 |
| 1997 | 14,923 | 114 | 148,940 | 592 | 464 | 13 | 777 | 26 | 844 | 27 | 88 | 6 | 151,113 | 604 |
| 1998 | 17,360 | 84 | 176,581 | 1,032 | 549 | 14 | 2,685 | 102 | 1,933 | 70 | 220 | 34 | 181,968 | 1,043 |
| 1999 | 19,752 | 101 | 208,589 | 1,309 | 1,108 | 31 | 1,413 | 119 | 2,078 | 66 | 168 | 15 | 213,356 | 1,320 |
| 2000 | 17,930 | 88 | 149,267 | 961 | 1,102 | 28 | 3,638 | 114 | 2,482 | 86 | 290 | 35 | 156,779 | 976 |
| 2001 | 20,625 | 86 | 218,688 | 1,176 | 1,138 | 24 | 2,637 | 112 | 1,821 | 46 | 276 | 39 | 224,560 | 1,197 |
| 2002 | 21,224 | 74 | 259,623 | 1,092 | 1,070 | 17 | 3,271 | 91 | 8,470 | 149 | 757 | 38 | 273,191 | 1,136 |
| 2003 | 21,668 | 63 | 298,831 | 1,061 | 1,711 | 34 | 2,250 | 85 | 2,082 | 101 | 371 | 24 | 305,245 | 1,079 |
| 2004 | 25,360 | 43 | 350,091 | 678 | 1,098 | 9 | 3,754 | 75 | 2,715 | 32 | 502 | 14 | 358,158 | 689 |
| 2005 | 27,253 | 21 | 369,776 | 311 | 1,132 | 3 | 3,415 | 29 | 2,520 | 17 | 428 | 3 | 377,271 | 314 |
| 2006 | 20,543 | 20 | 216,047 | 236 | 1,405 | 4 | 3,759 | 27 | 12,434 | 41 | 746 | 10 | 234,391 | 242 |
| 2007 | 28,677 | 29 | 356,717 | 386 | 1,924 | 5 | 2,727 | 26 | 2,352 | 24 | 614 | 17 | 364,334 | 388 |
| 2008 | 28,491 | 34 | 318,594 | 412 | 1,601 | 11 | 3,249 | 24 | 11,869 | 52 | 727 | 10 | 336,040 | 416 |
| 2009 | 37,754 | 46 | 457,539 | 629 | 1,384 | 7 | 4,204 | 45 | 6,969 | 34 | 559 | 13 | 470,655 | 631 |
| 2010 | 41,387 | 56 | 514,254 | 808 | 1,059 | 8 | 8,405 | 113 | 6,482 | 47 | 1,091 | 20 | 531,291 | 818 |
| 2011 | 43,450 | 72 | 630,242 | 1,176 | 1,453 | 11 | 6,754 | 122 | 4,880 | 100 | 1,169 | 50 | 644,498 | 1,187 |
| 2012 | 43,543 | 74 | 629,344 | 1,232 | 163 | 5 | 5,512 | 128 | 4,846 | 111 | 623 | 19 | 640,489 | 1,244 |
| 2013 | 43,698 | 73 | 454,314 | 958 | 83 | 3 | 5,119 | 122 | 4,423 | 53 | 1,052 | 35 | 464,993 | 968 |
| 2014 | 50,819 | 94 | 506,047 | 1,164 | 50 | 2 | 9,370 | 199 | 26,795 | 217 | 1,859 | 56 | 544,121 | 1,202 |
| 2015 | 46,697 | 91 | 521,985 | 1,256 | 127 | 4 | 10,648 | 191 | 7,257 | 137 | 1,927 | 62 | 541,943 | 1,279 |
| 2016 | 42,687 | 90 | 348,707 | 958 | 820 | 10 | 4,590 | 122 | 9,805 | 105 | 1,150 | 45 | 365,072 | 972 |
| 2017 | 40,961 | 105 | 406,889 | 1,247 | 1,346 | 15 | 1,665 | 55 | 11,241 | 144 | 1,962 | 105 | 423,102 | 665 |
| 2018 | 33,839 | 199 | 292,196 | 2,138 | 137 | 12 | 3,003 | 99 | 14,818 | 435 | 984 | 85 | 311,139 | 2,186 |
| Mean | 30,663 | | 346,905 | | 929 | | 4,246 | | 6,613 | | 779 | | 359,471 | |
| Max. | 50,819 | | 630,242 | | 1,924 | | 10,648 | | 26,795 | | 1,962 | | 644,498 | |

*Note*: Fish Creek personal use fishery not open 2002–2008, and 2012–2013, 2016.

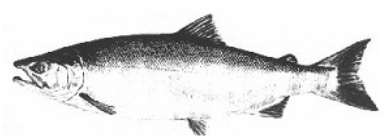
[a] Unknown fishery includes harvest recorded on a UCI personal use permit but without a location specified.

[b] Total does not include harvest from the Beluga River dip net fishery.

# APPENDIX C: SALMON OUTLOOK AND FORECAST

# ALASKA DEPARTMENT OF FISH AND GAME
# DIVISION OF COMMERCIAL FISHERIES
# NEWS RELEASE





Contact:
Pat Shields, Regional Management Coordinator
Alyssa Frothingham, Assistant Area Mngt Biologist
Phone: (907) 262-9368
Fax: (907) 262-4709

Soldotna ADF&G
43961 Kalifornsky Beach Rd.
Suite B
Soldotna, AK 99669
Date Issued: April 27, 2018

## UPPER COOK INLET
## 2018 OUTLOOK FOR COMMERCIAL SALMON FISHING

### SOCKEYE SALMON

A run of approximately 4.6 million sockeye salmon is forecasted to return to Upper Cook Inlet (UCI) in 2018, with an expected harvest by all user groups of 2.6 million. The commercial fishery harvest in 2018 is estimated to be approximately 1.9 million sockeye salmon, which is 900,000 fish less than the most recent 10-year average annual commercial sockeye salmon harvest of 2.8 million fish.

The run forecast for the Kenai River is approximately 2.5 million, which is 1.1 million less than the 20-year average run of 3.6 million. In 2018, the predominant age classes are projected to be age 1.3 (47%), age 1.2 (17%), age 2.2 (5%) and age 2.3 (29%). The 10-year mean absolute percent error (MAPE) for the set of models used for the 2018 Kenai River sockeye salmon forecast is 14%.

The Kasilof River sockeye salmon run forecast is 866,000 fish, which is 11% less than the 20-year average of 971,000. The predominant age classes in the run forecast are age 1.2 (29%), age 1.3 (34%), age 2.2 (26%), and age 2.3 (9%). The 10-year MAPE for the set of models used for the 2018 Kasilof sockeye salmon run forecast is 21%.

The Susitna River sockeye salmon run forecast is 329,000, which is 18% less than the 10-year average of 398,000. This forecast was derived using mean return per spawner by age class and mark-recapture estimates of spawner abundance for brood years 2006–2014. Sonar estimates of spawner abundance were not used, because mark-recapture studies have shown that the Yentna

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sonar project underestimated sockeye salmon escapement causing estimates of adult returns to also be underestimated. The 5-year MAPE for this forecast method is 17%. The predominant age classes in the 2018 Susitna sockeye salmon run forecast are age 1.2 (20%) and age 1.3 (57%).

The Fish Creek sockeye salmon run forecast is 211,000, which is 276% greater than the 20-year average run of 76,000. The predominant age classes in the 2017 Fish Creek run forecast are age 1.2 (78%) and age 1.3 (11%). The 10-year MAPE for the Fish Creek sockeye salmon run forecast is 69%.

Forecast runs to individual freshwater systems are as follows:

| System | Run | Goals[a] |
|---|---|---|
| Kenai River [b,c] | 2,485,000 | 1,000,000–1,300,000 |
| Kasilof River [b,d] | 866,000 | 160,000–340,000 |
| Susitna River | 329,000 | |
| Larson Lake | N/A | 15,000–35,000[e] |
| Chelatna Lake | N/A | 20,000–45,000[e] |
| Judd Lake | N/A | 15,000–40,000[e] |
| Fish Creek | 211,000 | 15,000–45,000[e] |
| Unmonitored Systems [f] | 665,000 | N/A |
| Total | 4,556,000 | |

[a] Goals listed here are as follows: Kenai River: Inriver; Kasilof River: Biological Escapement Goal (BEG); Susitna River: SEG (weir goals); and Fish Creek: Sustainable Escapement Goal (SEG).

[b] Kenai and Kasilof river escapement goals are now DIDSON-based.

[c] Kenai River sustainable escapement goal is 700,000–1,200,000 sockeye salmon.

[d] Kasilof River optimal escapement goal (OEG) is 160,000–390,000 sockeye salmon.

[e] These goals were modified at the 2017 Alaska Board of Fisheries meeting; original goals were: Fish Creek (20,000–70,000); Larson Lake (15,000–50,000); Chelatna Lake (20,000–65,000); and Judd Lake (25,000–55,000).

[f] Unmonitored systems are estimated to be 15% of monitored systems.

## 2018 FISHING STRATEGY

### Northern District Set Gillnet

- Since 2011, management actions in the Northern District directed Chinook salmon set gillnet fishery have included area closures, time restrictions, and/or regularly scheduled fishing period closures in order to reduce the harvest of northern Cook Inlet Chinook salmon. However, even with restrictions in sport and commercial fisheries in 2017, the Deshka River failed to achieve its Chinook salmon escapement goal. In fact, only 2 of 15 Chinook salmon escapement objectives were achieved in 2017 in Northern Cook Inlet Management Area waters. The 2018 Deshka River preseason forecast suggests a total run that may not provide enough fish for the SEG to be achieved. Based on this information,

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the Division of Sport Fish issued an Emergency Order (EO) restricting sport fishing for Chinook salmon in the Deshka River and Yentna River drainages to catch-and-release and prohibited fishing for Chinook salmon in the remainder of the Susitna River drainage. In response to the poor Deshka River Chinook salmon forecast, and considering the restrictive actions taken in the Susitna River drainage Chinook salmon sport fisheries, the Division of Commercial Fisheries released an EO closing the Northern District directed Chinook salmon commercial fishery for the 2018 season. The fishing periods affected by this closure are May 28, and June 4, 11, and 18. Escapement of Chinook salmon in the Deshka and Little Susitna rivers will be closely monitored during the 2018 season. If runs are better than expected and the Deshka River SEG is projected to be achieved with moderate levels of harvest, reopening the directed Chinook salmon commercial fishery would be considered.

- Beginning Monday, June 25, the Northern District set gillnet fishery will be managed per provisions found in the *Northern District Salmon Management Plan*. This plan provides for two 12-hour weekly fishing periods with a full complement of gear and a normal separation between nets of at least 600 feet.
- Susitna River sockeye salmon remain a stock of yield concern. As a result of this designation, restrictive actions to fisheries that harvest this stock were retained in regulation at the 2017 Alaska Board of Fisheries (board) meeting. According to the *Northern District Salmon Management Plan,* the department may reduce the legal complement of gear in the Northern District set gillnet fishery to either one or 2 nets per permit from July 20 through August 6 to conserve Susitna River sockeye salmon. However, in that portion of the General Subdistrict south of the Susitna River, restrictive options for gear reduction are limited to 2 nets per permit after July 30. In 2018, five different fishing periods could be affected by a reduction of gear. All areas in the Northern District will return to a full complement of gear beginning on Thursday, August 9.

## Central District Fisheries

### Upper Subdistrict Set Gillnet Fishery – Overview

The 2018 Kenai River late-run Chinook salmon forecast projects a total run of approximately 21,500 "large" (>75cm mid-eye to tail fork) fish. The SEG for Kenai River late-run Chinook salmon is 13,500–27,000 large fish. If realized, this run would rank as the 3rd lowest measured run in 31 out of the last 33 years and would be approximately 30% less than the 2017 preliminary estimated run of 30,520 large fish. If harvest rates are average in both sport and commercial fisheries for a run of this size, this should provide enough fish in escapement to achieve the Kenai River late-run Chinook salmon large fish SEG, but likely at the lower end of the goal range. Thus, to begin the season, fishing time allowed in the Upper Subdistrict will be based on inseason assessment of sockeye salmon abundance, while ensuring adequate Chinook salmon escapement relative to the SEG.

According to 5 AAC 21.360 (b) *Kenai River Late-Run Sockeye Salmon Management Plan*, the Kenai River late-run sockeye salmon commercial, sport, and personal use fisheries shall be managed to:

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(1) meet a sustainable escapement goal (SEG) range of 700,000–1,200,000 late-run sockeye salmon;

(2) achieve inriver goals as established by the board and measured at the Kenai River sonar counter located at river mile 19; and

(3) distribute the escapement of sockeye salmon evenly within the SEG range, in proportion to the size of the run.

All 3 of these management objectives are complementary to each other. Because the harvest of sockeye salmon by inriver users (sport and federal subsistence) above the sonar counter is not known inseason (although it is estimated for total run projection purposes), the primary inseason management objectives are the abundance-based sockeye salmon inriver goals in the Kenai River and the BEG/OEG in the Kasilof River. The Kenai River sockeye salmon SEG will be assessed after inriver sport and federal subsistence harvests above the sonar counter are accounted for. Achievement of the inriver goal ranges should result in meeting the SEG and distributing the escapement of sockeye salmon evenly within the SEG range, in proportion to the size of the run.

## Upper Subdistrict Set Gillnet Fishery – Management

### Kasilof Section Prior to July 8

- The Kasilof Section opens on the first regular period on or after June 25, unless the department estimates that 50,000 sockeye salmon are in the Kasilof River prior to that date, at which time the commissioner may open the fishery by emergency order (EO), however, the fishery may not open earlier than June 20. From the beginning of the season through July 7, this fishery will be open for regular 12-hour periods on Mondays and Thursdays and must close for 36 consecutive hours per week, which is to begin between 7:00 p.m. Thursday and 7:00 a.m. Friday. Additionally, the department may allow up to 48 hours of additional fishing time per week (Sunday through Saturday).

### Kasilof, Kenai and East Foreland Sections

- The Kenai and East Foreland sections fishing season opens on or after July 8.
- Management of the Kasilof, Kenai and East Foreland sections (Upper Subdistrict) set gillnet fishery will be based on the projected run size of Kenai River sockeye salmon and passage levels of sockeye salmon in both the Kenai and Kasilof rivers, as well as the abundance of Kenai River late-run Chinook salmon. From July 1–31, if the run of Kenai River late-run Chinook salmon is projected to meet or exceed the minimum SEG, then management of the Upper Subdistrict set gillnet fishery is to follow provisions in the *Kenai River Late-Run Sockeye Salmon Management Plan*. For the 2018 season, the Kenai River sockeye salmon run projection is 2.5 million fish. Therefore, the season will be managed following guidelines outlined for run strengths between 2.3 and 4.6 million fish, which includes an inriver goal range of 1,000,000– 1,300,000 fish. The Kenai River sockeye salmon run will be reassessed after July 20 to determine inseason run strength.

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- For **run strengths between 2.3 and 4.6 million Kenai River sockeye salmon**, the Upper Subdistrict set gillnet fishery will be open for regular Monday and Thursday 12-hour fishing periods. The fishery will be closed for one continuous 36-hour period per week between 7:00 p.m. Thursday and 7:00 a.m. Friday and for one continuous 24-hour period per week beginning between 7:00 p.m. Monday and 7:00 a.m. Wednesday. The department may allow no more than 51 hours of additional fishing time per week. From July 1–31, if the Kenai River late-run Chinook salmon sport fishery is restricted to no bait or to no bait and no retention of Chinook salmon in order to meet the SEG, management actions in the Upper Subdistrict set gillnet fishery will be "paired" as described in *Kenai River Late-Run King Salmon Management Plan*. However, in 2017 the board modified the management plan exempting the East Foreland Section set gillnet fishery from the "paired" restrictive provisions in the plan.

  From August 1–15, management of the Upper Subdistrict set gillnet fishery is based upon meeting Kenai and Kasilof River sockeye salmon escapement objectives as well as achieving the Kenai River late-run Chinook salmon SEG. If the Chinook salmon SEG is projected to be met, the Upper Subdistrict set gillnet fishery will follow the same provisions in August that applied in July. According to the *Kenai River Late-Run Sockeye Salmon Management Plan,* the set gillnet fishery closes no later than August 15, but from August 11–15, only Monday and Thursday regular 12-hour fishing periods are allowed. However, the season may close any time after August 7 if during 2 consecutive fishing periods the sockeye salmon harvest is less than one-percent of the season total. The one-percent rule applies separately to the Kasilof Section and the Kenai/East Foreland sections, which means one of the areas could close under the one-percent rule, while the other area remains open.
- From August 11–15, provisions found in 5 AAC 31.354. *Cook Inlet Pink Salmon Management Plan* (see specifics on page 6 of this document) allow for up to 2 additional 12-hour fishing periods during the August 11–15 time frame.

**Central District Drift Gillnet Fishery – Overview**

The department manages the UCI drift gillnet fleet primarily under the guidance of 5 AAC 21.353. *Central District Drift Gillnet Fishery Management Plan*. The purpose of this management plan is to ensure adequate escapement of salmon into Northern Cook Inlet drainages and to provide the department with management guidelines.

**Central District Drift Gillnet Fishery – Management**

- The drift gillnet fishery opens the third Monday in June or June 19, whichever is later.
- From July 9 through July 15:
  a. Drift gillnet fishing is restricted for both regular fishing periods to the Expanded Kenai and Expanded Kasilof sections (Figures 1), and Drift Gillnet Area 1 (Figure 2).
  b. One additional 12-hour fishing period may be allowed in the Expanded Kenai and Expanded Kasilof sections, and Drift Gillnet Area 1.
  c. All additional fishing time is allowed only in the Expanded Kenai and Expanded Kasilof sections.

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- From July 16 through July 31:
  a. For runs between 2.3 and 4.6 million Kenai River sockeye salmon, fishing during one regular 12-hour fishing period per week will be restricted to one or more of the following sections: the Expanded Kenai or Expanded Kasilof sections of the Upper Subdistrict, the Anchor Point Section of the Lower Subdistrict, or Drift Gillnet Area 1. The remaining weekly 12-hour fishing period and all additional fishing time outside regular fishing periods is allowed only in one or more of the following: the Expanded Kenai Section, the Expanded Kasilof Section, or the Anchor Point Section.
  b. One regular 12-hour fishing period during this time period may be fished in all waters of the Central District instead of in Drift Gillnet Area 1.
- From August 1 through August 15:
  a. Fishing is open in all waters of the Central District for Monday and Thursday regular 12-hour fishing periods. Additional fishing time outside regular fishing periods and the areas fished will be dependent upon meeting Chinook, sockeye, and coho salmon escapement objectives.
  b. Two one-percent rules apply during this time period, the Upper Subdistrict set gillnet one-percent rule and the Central District drift gillnet one-percent rule (see 5 AAC 21.310(b)(2)(C)(iii) and 5 AAC 21.353(e)). If either one-percent rule is triggered, regular drift fishing periods will be restricted to Drift Areas 3 and 4 (Figure 3
- From August 16 until closed by EO:
  a. Drift Areas 3 and 4 are open for regular periods.
  c. Chinitna Bay may be opened by EO if chum salmon escapement objectives are achieved in Clearwater Creek.

**5 AAC 31.354. *Cook Inlet Pink Salmon Management Plan*:** This plan was modified at the 2017 UCI board meeting. From August 6–10, in even years only, if 25,000 or more pink salmon are harvested by Upper Subdistrict set gillnetters during a regular fishing period, or 50,000 or more pink salmon are harvested from 2 regular periods combined, a pink salmon fishery may be opened for up to 2 fishing periods from August 11–15. This fishery is open to setnetters in the Upper Subdistrict and to drift gillnetters in the Kenai Section (narrow Kenai corridor). The second fishing period may only be opened if more than 25,000 pink salmon and less than 2,500 coho salmon were harvested by setnetters during the first fishing period. Both set and drift gillnets are limited to a mesh size no larger than 4¾ inches during pink salmon fishing periods.

## SEASON OPENING DATES

Season opening dates in 2018 for the various fisheries around the inlet are as follows:

- *Northern District Chinook Salmon Fishery:* Closed. As explained earlier in this document, because the preseason projection of the Deshka River Chinook salmon run is much below average, the Division of Commercial Fisheries released an EO closing the Northern District directed Chinook salmon commercial fishery for the 2018 season

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- *Big River Fishery:* June 1 and continuing through June 24, unless the 1,000 Chinook salmon harvest limit is reached prior to that date. Weekly fishing periods are Mondays, Wednesdays, and Friday from 7:00 a.m. to 7:00 p.m.
- *Western Subdistrict Set Gillnet Fishery:* June 18.
- *Drift Gillnet Fishery*: June 21.
- *All remaining set gillnet fisheries, except the Upper Subdistrict:* June 25.
- *Upper Subdistrict Set Gillnet Fishery:* June 25 for the Kasilof Section (that portion south of the Blanchard Line), unless opened earlier by EO (based on an inriver estimate of 50,000 sockeye salmon in the Kasilof River before the June 25 opener) but will not open before June 20. The Kenai and East Foreland sections (that portion of the Upper Subdistrict north of the Blanchard Line) will open on Monday, July 9. All Sections of the Upper Subdistrict will close for the season on or before August 15.

## SETNET REGISTRATION AND BUOY STICKERS

All Cook Inlet setnet fishermen are required to register prior to fishing for one of 3 areas of Cook Inlet: 1) the Upper Subdistrict of the Central District; 2) the Northern District; or, 3) all remaining areas of Cook Inlet (Greater Cook Inlet). Once registered for one of these 3 areas, fishermen may fish only in the area for which they are registered for the remainder of the year. No transfers will be permitted. Set gillnet permit holders fishing in the Northern District or the Greater Cook Inlet area can register at ADF&G offices in Soldotna, Homer, or Anchorage or by mail. Forms are available at area offices or on the department's homepage at: http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareauci.salmon#/management.

Fishermen wishing to register in person for the Upper Subdistrict must register in the **Soldotna ADF&G office only** and must purchase buoy stickers at the time of registering. Electronic registration with the option to pay for buoy stickers online may be accessed at http://www.adfg.alaska.gov/uciera/. Electronic registration is available for all 3 set gillnet fishing areas in UCI.

## GENERAL INFORMATION

The UCI commercial fisheries information line will again be available by calling 262-9611. The most recent EO announcement is always available on the recorded message line and catch, escapement and test fishing information is included whenever possible. The same recording may be accessed at http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareauci.main and clicking on the UCI Commercial Fisheries Information Recording player.

All EO announcements are also faxed or emailed to processors as quickly as possible and posted at http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareauci.salmon. For very general information, we invite you to visit the Commercial Fisheries web page on the Internet at http://www.adfg.alaska.gov/index.cfm?adfg=fishingCommercial.main.

If, during the summer, fishermen have information or questions concerning the commercial fishery, the Soldotna Division of Commercial Fisheries staff can be reached by phone at 262-9368, by fax at 262-4709, or by mail at 43961 Kalifornsky Beach Road, Suite B, Soldotna, 99669.

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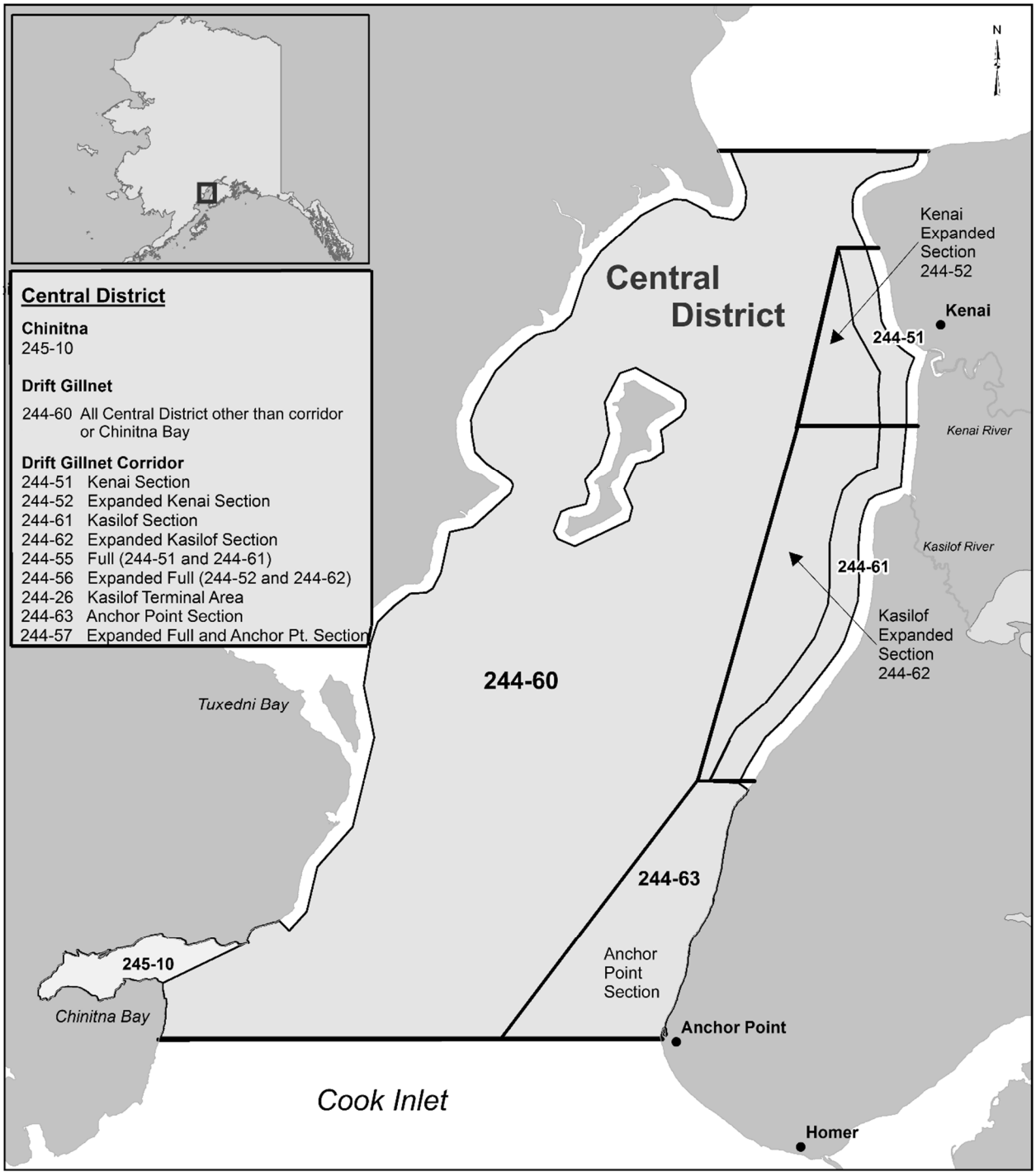


Figure 1.–Map of drift gillnet statistical areas.

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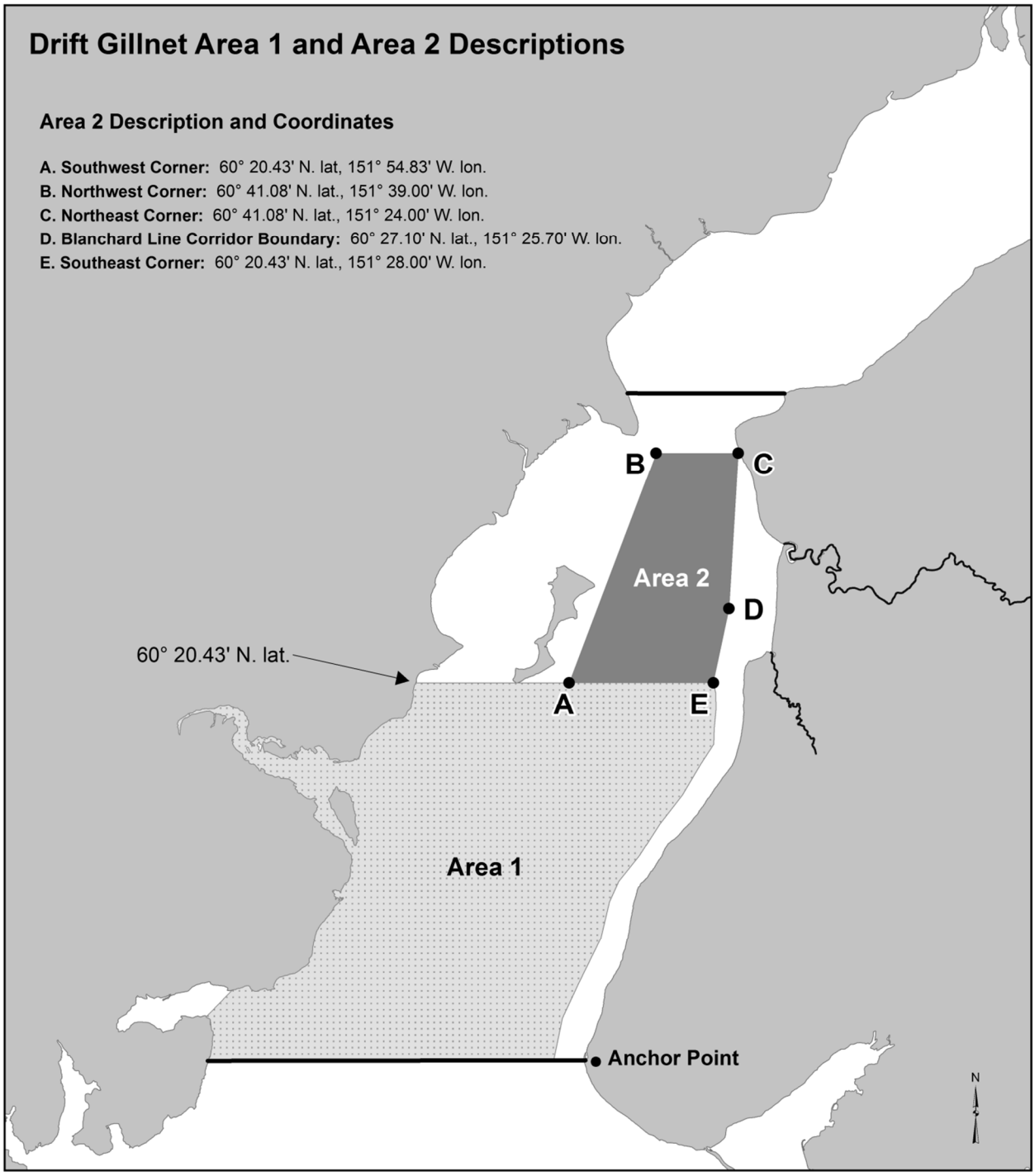


*Note*: Latitude and Longitude are based on the North American Datum of 1983 (NAD 83), equivalent to the World Geodetic System 1984 (WGS 84).

Figure 2.–Map of drift gillnet areas 1 and 2.

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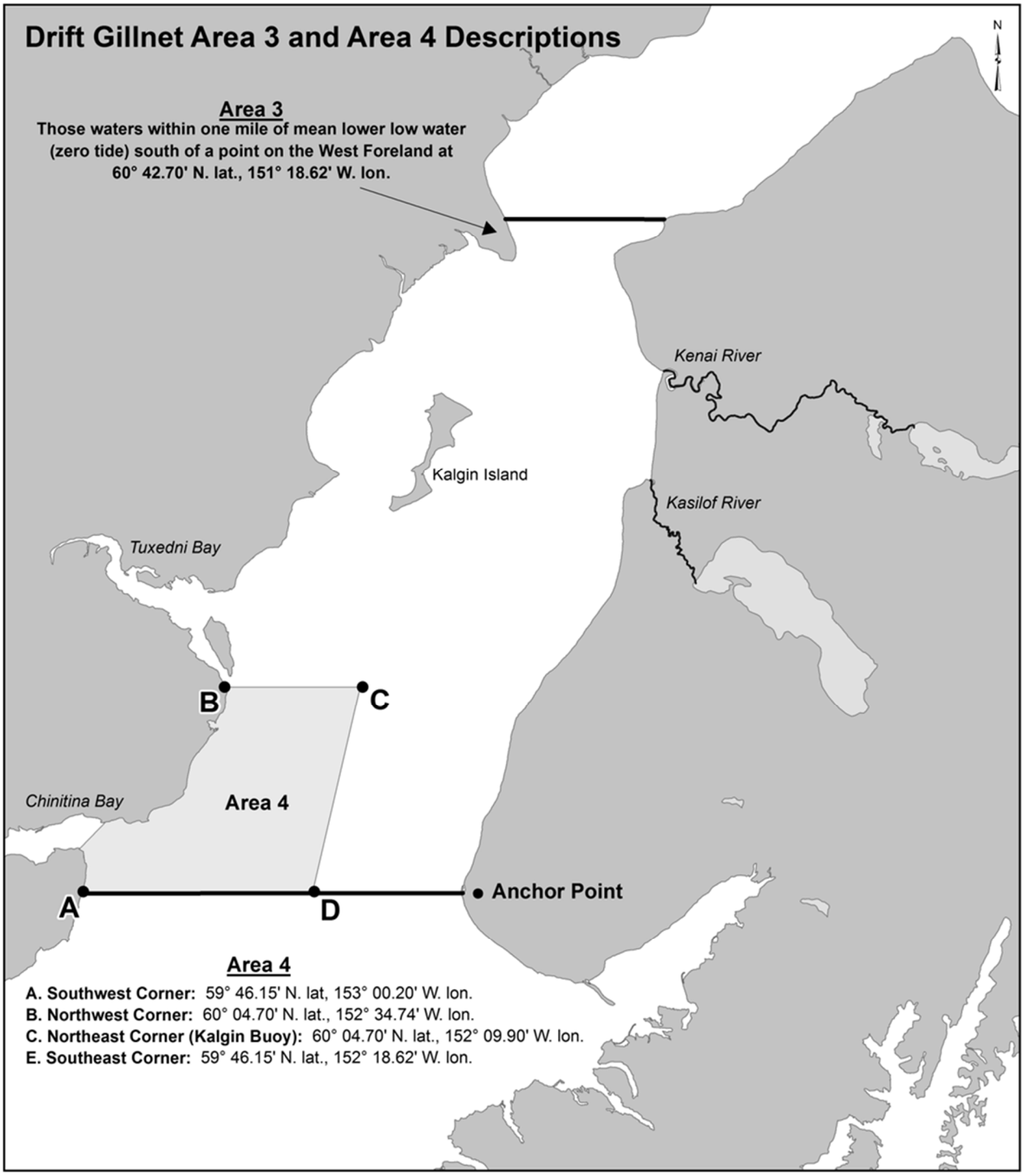


*Note*: Latitude and Longitude are based on the North American Datum of 1983 (NAD 83), equivalent to the World Geodetic System 1984 (WGS 84).

Figure 3.–Map of the drift gillnet areas 3 and 4; open after August 15.

# ALASKA DEPARTMENT OF FISH AND GAME
# DIVISION OF COMMERCIAL FISHERIES
## NEWS RELEASE

*Douglas Vincent-Lang, Acting Commissioner*
*Forrest R. Bowers, Acting Director*

Contact: Bob DeCino, Acting Research Project Leader; Brian Marston, Area Mgmt. Biologist
43961 Kalifornsky Beach Rd, Suite B Soldotna, AK 99669
Phone: (907) 262-9368 Fax: (907) 262-4709
Date Issued: January 04, 2019 Time: 4:00 p.m.

### 2019 UPPER COOK INLET SOCKEYE SALMON FORECAST

The forecasts of the 2019 Upper Cook Inlet sockeye salmon run and harvests are as follows:

| | Forecast estimate (millions) | Forecast range (millions) |
|---|---|---|
| TOTAL PRODUCTION: | | |
| Total run | 6.0 | 4.8–7.3 |
| Escapement | 2.0 | |
| UCI commercial harvest | 3.0 | |
| Other UCI harvests | 1.0 | |

**Forecast Methods**

The major sockeye salmon systems in Upper Cook Inlet (UCI) are the Kenai, Kasilof, and Susitna rivers, and Fish Creek. Available escapement (spawner abundance), return, sibling, fry, and smolt data were examined for each system. To forecast the total return of sockeye salmon to UCI in 2019, up to four models were used to evaluate each stock and major age class: (1) the relationship between adult returns and spawners, (2) the relationship between adult returns and fall fry, (3) the relationship between adult returns and emigrating smolt, and (4) the relationship between sibling adult returns. Several forecast models were evaluated for each stock and age class. Models providing the smallest mean absolute percent error (MAPE) between the forecast and actual runs over the past 10 years were selected. Forecast model predictions were compared to evaluate uncertainty.

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The return of age-1.3 Kenai River sockeye salmon in 2019 was forecasted using a fry model. The fry-model prediction of the return of age-1.3 salmon is based on the abundance estimates of age-0 sockeye salmon fry that reared in Kenai and Skilak lakes in 2015. A spawner-recruit model was used to predict the age-1.2 salmon return based upon the spawning escapement in 2015. The Kenai River return of age-2.2 salmon was forecasted using a sibling model based upon the abundance of age-2.1 salmon that returned in 2018, and the return of age-2.3 salmon was forecasted using a sibling model based upon the abundance of age-2.2 salmon that returned in 2018.

The returns of age-1.2, -1.3, -2.2, and -2.3 Kasilof River sockeye salmon in 2019 were all forecasted using sibling models based upon returns of age-1.1, -1.2, -2.1, and -2.2 salmon in 2018.

The returns of age-0.3, -1.2, -1.3, -2.2 and -2.3 Susitna River sockeye salmon were forecasted using mean return per spawner by age class for brood years 2006–2015. Mark-recapture estimates of inriver run and genetic estimates of commercial harvest were available for these brood years.

The sockeye salmon forecast for unmonitored systems in UCI was estimated as 17% of the aggregate forecast for the four monitored stocks. Unmonitored stocks include Crescent River, Big River, McArthur River, Chilligan River, Coal Creek, Cottonwood Creek, Wasilla Creek, Eagle River, and many other smaller systems in the area. The fraction of the total run destined for unmonitored systems was estimated using genetic estimates of the stock composition of offshore test fishery harvests.

The total potential harvest by all user groups was estimated by subtracting the aggregate escapement from the total run forecast for all stocks. Aggregate escapement was estimated from the sum of the midpoints of the escapement goal ranges for each of the monitored sockeye salmon-producing systems and the escapement into unmonitored systems, which was estimated as 17% of the escapement into monitored systems. Commercial harvest was estimated from the average fraction (2011–2015) of total harvest taken in the commercial fishery. The harvest by all other user groups (sport, personal use, and subsistence) was estimated by subtracting commercial harvest from total harvest.

The 2019 total UCI run forecast range was calculated by multiplying the forecast by the MAPE of the actual UCI runs from published UCI run forecasts from 2009–2018. The run forecast ranges for Kenai, Kasilof, and Susitna rivers and Fish Creek were calculated by multiplying each system's forecast by the 10-year (2009–2018) MAPE for that watershed (Table 1).

**2018 Run and Forecast**

In 2018, the estimated total run was 1.7 million to the Kenai River; 697,000 to the Kasilof River; 250,000 to the Susitna River; and 106,000 to Fish Creek. The 2018 total run forecast was 2.5 million to the Kenai River; 866,000 to the Kasilof River; 329,000 to the Susitna River; and 211,000 to Fish Creek. In 2018, the commercial harvest of sockeye salmon in UCI (0.8 million) was 1.1 million less than the preseason forecast of 1.9 million. Overall, the 2018 sockeye

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salmon run of 3.1 million was approximately 1.5 million below the mid-point forecast of 4.6 million (range 3.6–5.5 million).

**Forecast Discussion**

In 2019, a total run of approximately 6.0 million sockeye salmon (range 4.8–7.3 million) is forecast to return to UCI with a potential commercial harvest of 3.0 million. The forecasted commercial harvest in 2019 is 200,000 more than the 20-year average harvest.

The run forecast for the Kenai River is approximately 3.8 million sockeye salmon (range 3.1–4.5 million), which is approximately 200,000 fish greater than the 20-year average run of 3.6 million. A fry model based upon the age-0 fry rearing in Kenai and Skilak lakes in 2015 (22.2 million compared to the 20-year average of 18.2 million) and the average weight of age-0 fall fry rearing in Skilak Lake (1.0 grams compared to the 20-year average of 1.1 grams) predicts a return of 2.7 million age-1.3 salmon in 2019. In contrast, a sibling model from the return of age-1.2 salmon in 2018 predicted a return of 3.1 million age-1.3 salmon. The fry-model was selected for this forecast because the 10-year MAPE was lower for the fry model (27%) compared to the sibling model (29%). A sibling model based upon the return of age-2.2 salmon in 2018 (202,000 vs. 20-year average of 247,000) predicted a return of 442,000 age-2.3 fish. A fry model based upon the abundance of age-1 fry rearing in Skilak and Kenai lakes in the fall of 2015 (996,000 vs. 20-year average of 2.1 million) predicted a return of 345,000 age-2.3 fish. The sibling model was selected for the forecast because the 10-year MAPE was lower for this method (82%) compared to the fry model (124%). The predominant age classes in the 2019 run forecast are age-1.2 (10%), age-1.3 (71%) and age-2.3 (12%). The 10-year MAPE for the set of models used for the 2019 Kenai sockeye salmon run forecast is 19%.

The Kasilof River sockeye salmon run forecast is approximately 873,000 (range 0.7–1.0 million), which is 11% less than the 20-year average of 979,000. A sibling model based upon the return of age-1.2 salmon in 2018 (355,000 vs. 20-year average of 321,000) was used to forecast a return of 320,000 age-1.3 salmon in 2019 with a corresponding MAPE of 56%. A sibling model based upon the return of age-1.1 salmon in 2018 was selected to forecast a return of 237,000 age-1.2 salmon in 2019; in contrast, a spawner-recruit model based upon spawner abundance in 2015 forecasted a return of 329,000 age-1.2 salmon in 2019. The sibling model was selected for this forecast because the 10-year MAPE was lower for the sibling (44%) than the spawner-recruit model (61%). A sibling model based upon the return of age-2.1 salmon in 2018 was used to forecast a return of 200,000 age-2.2 salmon in 2019. A spawner-recruit model forecast for age-2.2 salmon was 255,000. The sibling model was selected for this forecast, because the 10-year MAPE was lower for the sibling model (14%) compared to the spawner-recruit model (20%). The predominant age classes in the 2019 run forecast are age 1.2 (27%), age 1.3 (37%), and age 2.2 (30%). The 10-year MAPE for the set of models used for the 2019 Kasilof sockeye salmon run forecast is 19%.

The Susitna River sockeye salmon run forecast is approximately 343,000 (range 233,000–422,000) fish, which is 16% less than the 20-year average of 409,000. This forecast was derived using mean return per spawner by age class and mark-recapture estimates of spawner abundance for brood

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years 2006–2014. The 10-year MAPE for this forecast method is 32%. The predominant age classes in the 2019 Susitna sockeye salmon run forecast are age-1.2 (45%) and age-1.3 (40%).

The Fish Creek sockeye salmon run forecast is 124,000 (range 38,000–210,000) fish, which is 50% greater than the 20-year average run of 83,000. A sibling model based upon the return of age-1.1 salmon in 2018 (4,000 vs. 20-year average of 3,000) was used to forecast a return of 72,000 age-1.2 salmon. A spawner-recruit model forecasted a return of 98,000 age-1.2 salmon. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling (64%) than the spawner-recruit model (106%). Sibling models were also used to forecast the returns of age-1.3, -2.2 and -2.3 salmon. The predominant age classes in the 2019 Fish Creek run forecast are age 1.2 (57%) and age 1.3 (30%). The 10-year MAPE for the Fish Creek sockeye salmon run forecast is 69%.

Table 1.—Sockeye salmon run forecasts, 20-year average runs and escapement goals (in thousands of fish) to individual freshwater systems in Upper Cook Inlet.

| System | | Major age classes 1.2 | 1.3 | 2.2 | 2.3 | Total run[a] | Total run range | Escapement goals[b] |
|---|---|---|---|---|---|---|---|---|
| **Kenai River** | **Forecast** | **382** | **2,691** | **231** | **442** | **3,814** | **3,089 – 4,539** | **1,000 – 1,300[c]** |
| | 20-yr average | 402 | 2,064 | 247 | 759 | 3,545 | | |
| **Kasilof River** | **Forecast** | **237** | **320** | **200** | **97** | **873** | **707 – 1,039** | **160 – 340** |
| | 20-yr average | 321 | 308 | 250 | 81 | 979 | | |
| **Susitna River** | **Forecast** | **154** | **137** | **17** | **19** | **343** | **233 – 422** | **Lake goals[d]** |
| | 20-yr average | 91 | 179 | 26 | 37 | 377 | | |
| **Fish Creek** | **Forecast** | **72** | **27** | **11** | **2** | **124** | **38 – 210** | **15 – 45** |
| | 20-yr average | 47 | 19 | 6 | 2 | 83 | | |
| **Unmonitored** | **Forecast** | **144** | **543** | **79** | **96** | **881** | | **No goal** |
| | 20-yr average | 147 | 439 | 90 | 150 | 852 | | |
| **Total run** | **Forecast** | **989** | **3,718** | **538** | **656** | **6,035** | | |
| | 20-yr average | 1,008 | 3,009 | 619 | 1,029 | 5,821 | | |

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*Note*: BEG = Biological Escapement Goal, SEG = Sustainable Escapement Goal.

[a] Total run includes all age classes.

[b] Goals listed here are as follows, Kenai River: Inriver; Kasilof River: BEG; Susitna River: SEG (weir goals); and Fish Creek: SEG.

[c] This is the inriver sockeye salmon goal for runs between 2.3 and 4.6 million measured using sonar at river mile 19 on the Kenai River.

[d] Susitna sockeye salmon are managed to achieve escapement goals at Larson, Chelatna and Judd lakes weirs. Current escapement goals for these lakes are: Larson (15,000–35,000), Chelatna (20,000–45,000) and Judd (15,000–40,000).

## OTHER SALMON SPECIES

The forecast of the 2019 commercial harvest of other salmon species is as follows:

| | Commercial harvest forecasts |
|---|---|
| Pink salmon | 103,000 |
| Chum salmon | 175,000 |
| Coho salmon | 207,000 |
| Chinook salmon | 7,300 |

### Forecast Methods

The recent 5-year average commercial harvest was used to forecast the harvest of chum, coho, and Chinook salmon in 2019. The forecast for pink salmon is based upon the average harvest during the previous 5 odd-numbered years.

### Forecast Discussion

The recent 5-year average commercial harvest was used in the forecast, because harvests in these years likely best represent harvests under current regulations.

For more information contact Bob DeCino or Brian Marston at the Soldotna ADF&G office at (907) 262-9368.

# APPENDIX D: COMMERCIAL SMELT AND HERRING

# ALASKA DEPARTMENT OF FISH AND GAME
# DIVISION OF COMMERCIAL FISHERIES
## NEWS RELEASE

*Sam Cotten, Commissioner*
*Scott Kelley, Director*

Contact: Pat Shields, Reg. Mngt. Coordinator; Alyssa Frothingham, Asst. Area Mgmt. Biologist
43961 Kalifornsky Beach Rd, Suite B Soldotna, AK 99669
Phone: (907) 262-9368 Fax: (907) 262-4709
Date Issued: April 9, 2018 Time: 10:00 a.m.

**2018 UCI COMMERCIAL SMELT (HOOLIGAN) & HERRING FISHING SEASONS**
**EMERGENCY ORDER 2H-01-18**

The *Central District Herring Management Plan* (5 AAC 27.409) states that a commercial herring fishery may occur by emergency order in the Central District of Upper Cook Inlet, but only in the waters of the Kalgin Island, Upper, Western, and Chinitna Bay subdistricts, as described in 5 AAC 21.200(b)(2), (b)(3), (b)(5), and (b)(6). The legal gillnet mesh size can be no smaller than 2.0 inches or no greater than 2.5 inches. The season is open from April 20 to May 31, with one fishing period per week that runs from 6:00 a.m. on Mondays until 6:00 p.m. on Fridays. A fishing period may extend beyond May 31 if the fishing period began before May 31. In 2018, commercial fishing for herring will open at 12:01 a.m. on Friday, April 20, and close at 6:00 p.m. on Friday, June 1, unless closed earlier by emergency order in any area where the guideline harvest range is met. In the Upper Subdistrict, the guideline harvest range is 0–40 tons and fishing for herring is not allowed any closer than 600 feet of the mean high tide mark on the Kenai Peninsula. In the Chinitna Bay Subdistrict, the department is to manage for a guideline harvest range of 0–40 tons; in the Western Subdistrict, the guideline harvest range is 0–50 tons, and in the Kalgin Island Subdistrict, the guideline harvest range is 0–20 tons.

In the Central District, herring may be taken only by gillnet, as defined in 5 AAC 27.431, except that in the Chinitna Bay and Kalgin Island Subdistricts, herring may only be taken by set gillnets (5 AAC 27.430 (b)). Prior to fishing, all participants are required to register at the department's Soldotna office. Fishermen are also required to report fishing time and the amount of smelt and herring harvested, whether sold or retained for personal use, to the Soldotna office by 12:00 noon of the next day for each day fished. Fishermen are also reminded that fish tickets are to be filled out and either mailed or dropped off at the Soldotna ADF&G office within seven days of the time of landing (5 AAC 39.130 (c)). If you intend to sell your catch to members of the public, you must first obtain a catcher-seller permit from ADF&G http://www.adfg.alaska.gov/index.cfm?adfg=fishlicense.sellers.

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5AAC 21.505. *Cook Inlet Smelt Fishery Management Plan* allows for a small commercial fishery for smelt in the Northern District of Upper Cook Inlet (Figure 1) taken under the conditions of a commissioner's permit. This fishery occurs in the marine waters of Cook Inlet in that portion of the General Subdistrict of the Northern District northeast of the Chuit River and southwest of the Little Susitna River. In 2018, the season will open at 12:01 a.m. on Tuesday, May, 1 and close no later than 11:59 p.m. on Saturday, June 30. The total harvest may not exceed 200 tons; the season will close immediately by emergency order if this level of harvest is reached. Legal gear for the fishery is a hand-operated dip net, as defined in 5 AAC 39.105. Any salmon caught must be released immediately and returned to the water unharmed. To participate in this fishery, a miscellaneous finfish permit (M99B) is required, as well as a commissioner's permit, which can be obtained from the Alaska Department of Fish and Game (ADF&G) office in Soldotna. The commissioner's permit must be obtained prior to applying for the miscellaneous finfish permit.

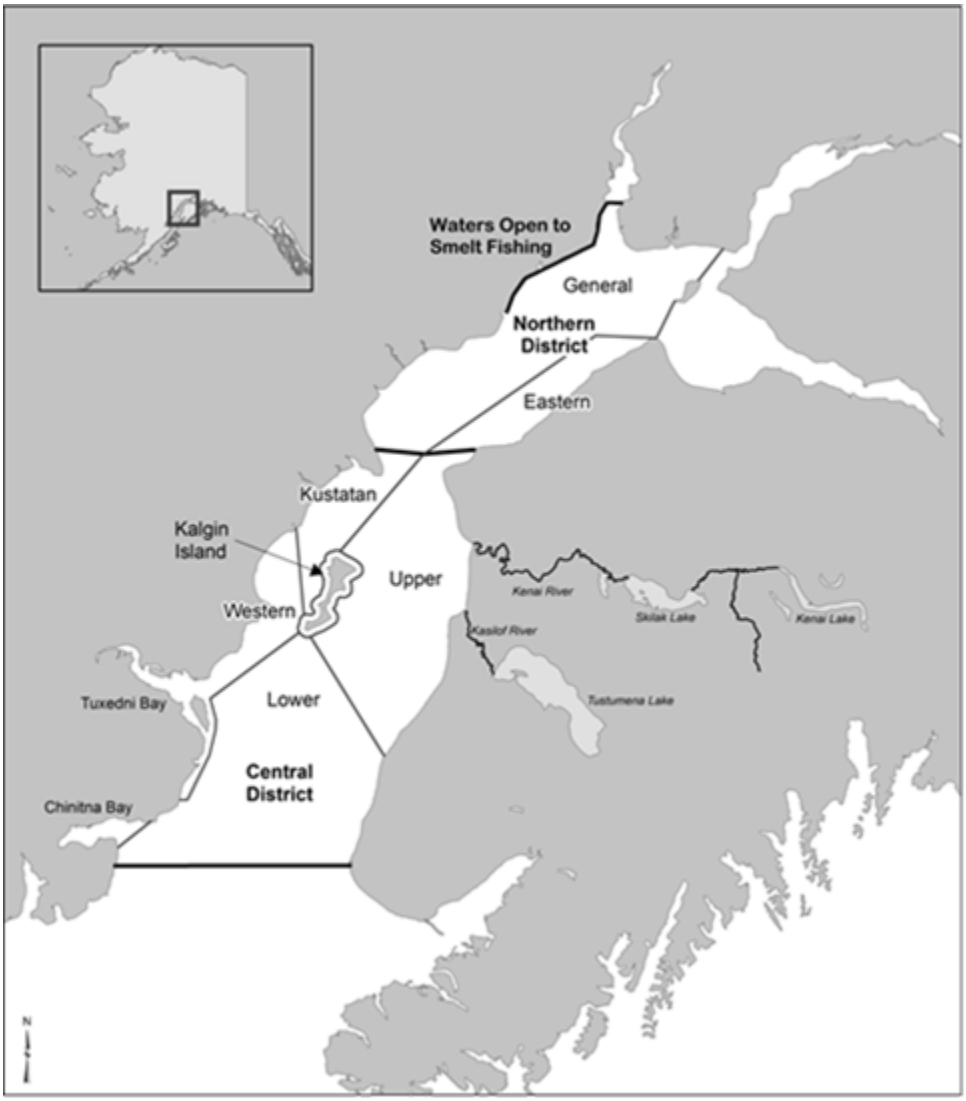


Figure 1.–Upper Cook Inlet commercial fisheries Subdistrict fishing boundaries.