Fishery Management Report No. 18-10

Upper Cook Inlet Commercial Fisheries Annual Management Report, 2017

by

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and

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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, χ^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

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by
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The Fishery Management Reports series was established in 1989 by the Division of Sport Fish for the publication of an overview of management activities and goals in a specific geographic area, and became a joint divisional series in 2004 with the Division of Commercial Fisheries. Fishery Management Reports are intended for fishery and other technical professionals, as well as lay persons. Fishery Management Reports are available through the Alaska State Library and on the Internet: http://www.adfg.alaska.gov/sf/publications/. This publication has undergone regional peer review.

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ABSTRACT

The 2017 Upper Cook Inlet (UCI) area management report describes commercial fishing activities monitored by the Alaska Department of Fish and Game, Division of Commercial Fisheries, in Soldotna. The UCI management area consists of that portion of Cook Inlet north of the latitude of Anchor Point and is divided into the Central and Northern districts. The Central District includes 6 subdistricts, and the Northern District includes 2 subdistricts. At present, 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 or smelt (*Thaleichthys pacificus*) are subject to commercial harvest in UCI. The total sockeye salmon run estimate to UCI in 2017 of 4.6 million fish was 15% above the preseason forecast of 4.0 million. The commercial harvest of 2.6 million salmon was approximately 37% less than the 1966–2017 average annual harvest of 4.1 million fish, and the commercial sockeye salmon harvest of 1.8 million fish was 37% less than the 1966–2016 average annual harvest of 2.9 million fish. The 2017 estimated exvessel value of the commercial harvest of all salmon was $23.8 million, which was 24% less than 2007–2016 average annual exvessel value of $31.3 million, and approximately 52% less than the 1966–2016 average annual exvessel value of $50.0 million. In 2017, 4 of 7 sockeye salmon enumeration estimates fell within established goal ranges, and 3 of 7 exceeded goal ranges. The timing of the 2017 UCI sockeye salmon run was estimated to be 4 days late.

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 consists of that portion of Cook Inlet north of the latitude of the Anchor Point Light (59°46.15′ N lat) 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. At present, 5 species of Pacific salmon (*Oncorhynchus* spp.), razor clams (*Siliqua patula*), Pacific herring (*Clupea pallasii*), and eulachon or smelt (*Thaleichthys pacificus*) are subject to commercial harvest in UCI. Harvest statistics are gathered and reported by 5-digit statistical areas and subareas (Figures 3 and 4).

SALMON

Since the inception of a commercial fishery in 1878[1], many gear types, including fish traps, gillnets, and seines have been employed with varying degrees of success to harvest salmon in UCI. Currently, set (fixed) gillnets are the only gear permitted in the Northern District, and both set and drift gillnets are used in the Central District. The use of seine gear is restricted to the Chinitna Bay Subdistrict, where it may be operated via emergency order (EO) only. Seine gear was last fished in Chinitna Bay in 1982. 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.

Detailed commercial salmon harvest statistics for UCI specific to gear type and area are available only back to 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

[1] http://library.alaska.gov/hist/hist_docs/docs/asl_ms39_4_4.pdf

be referred to as king salmon in regulation), 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. However, from 2007 to 2016, the proportion of the total annual coho, pink, and chum salmon harvest taken by drift gillnets has increased, but the average annual drift gillnet harvest (proportion of the total harvest) of sockeye salmon has not changed. Chinook salmon average annual harvest during the last 10 years has remained fairly stable between commercial gear types. 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) with 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, significant decreases in herring abundance were observed in Tuxedni Bay, as well as a shift towards older herring, resulting in 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 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 passed and became regulation for the 1993 season, 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.

In 1998, the Upper Subdistrict of the Central District and the Eastern Subdistrict of the Northern District were opened to commercial herring fishing to assess status of the herring population. The 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.

The proposals were passed in the form of a management plan, 5 AAC 27.409. *Central District Herring Recovery Management Plan*, 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 at the 2002 meeting, to extend the closing date for the fishery from May 20 to May 31.

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 the Chinitna Bay and Western Subdistrict. The management plan allows for a very conservative harvest quota, not to exceed 40 short tons 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, and 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 has departed from the standard techniques employed in the more traditional herring fisheries. In the Central District, herring may be taken only by gillnets, except that in the Chinitna Bay and Kalgin Island Subdistricts herring may only be taken by set gillnets. Herring in UCI have been harvested exclusively by set gillnets. This gear type is 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 either the Western Subdistrict (Tuxedni Bay), Chinitna Bay, or Kalgin Island subdistricts.

SMELT

Smelt return to many of the larger river systems in UCI, with 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 and are not targeted because of the small run size.

Prior to adoption of 5 AAC 39.212. *Forage Fish Management Plan* in 1999, 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). Prior to 1998, fishermen were mistakenly advised that gillnets were the only legal gear for the harvest of smelt. Because primary markets at the time required undamaged fish for bait or marine mammal food, this harvest method was unacceptable. When the interpretation of the regulation was reviewed in 1998, and subsequently changed to allow dip nets to be used, the 1999 harvest increased to 100,000 lb, which was the harvest cap at the time. All harvests occurred in salt water near the Susitna River.

Very little quantitative data are available about Susitna River smelt. The Alaska Energy Authority contracted HDR Alaska, Inc. and LGL Alaska Research Associates, Inc. to evaluate life history, run timing, abundance, distribution, and habitat of eulachon as part of Susitna-Watana Hydro 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 watershed[2]. 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 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. The simulation model results indicated the most probable total smelt biomass in 2016 was 48,000 metric tons (tonnes).

At the 1998 BOF meeting, the commercial smelt fishery was closed, but the regulation did not take effect until after the 1999 season. In 2000, as part of its draft *Forage Fish Management Plan*, ADF&G recommended that smelt fishing be restricted to the General Subdistrict of the Northern District. Legal gear would be dip nets only, which had the benefit of eliminating the harvest of non-target species. The area opened to fishing was designed to target Susitna River smelt stocks. In this draft policy, ADF&G recommended that active forage fish fisheries be allowed to take place in a tightly controlled and closely monitored manner through the use of a commissioner's permit, while not allowing any "new" fisheries to develop. The intent was to allow an active, low-level fishery to continue. However, when the BOF adopted the *Forage Fish Management Plan*, they chose to close the entire commercial smelt fishery. 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. *Cook Inlet Smelt Fishery Management Plan* (Appendix D1). This fishery is allowed in salt water only, from May 1 to June 30, specifically in that area of Cook Inlet from the Chuitna River to the Little Susitna River and in the Susitna River south of 61°21.50′ N lat. Legal gear for the fishery is limited to a hand-operated dip net, as defined in 5 AAC 39.105, with total harvest not to exceed 100 tons of smelt. At the 2017 BOF meeting, the harvest cap was increased to 200 tons of smelt, based in part on the 2016 preliminary total biomass estimate of 48,000 tonnes. 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.

RAZOR CLAMS

Commercial harvest of razor clams from UCI beaches dates back to 1919 (Appendix B9). Harvest levels have fluctuated from no fishery to production 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, with broken-shelled clams required to be dyed prior to being sold as bait clams. 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

[2] http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2016-2017/uci/AR12.pdf

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.

2017 COMMERCIAL SALMON FISHERY

The 2017 UCI commercial harvest of 2.6 million salmon was approximately 37% less than the 1966–2016 average annual harvest of 4.1 million fish (Appendix B6). The 2017 sockeye salmon harvest estimate of 1.8 million fish was 36% less than the 1966–2016 average annual harvest of 2.9 million fish. Sockeye salmon harvested in test and cost recovery fisheries are not included in commercial harvest statistics; other sources of sockeye salmon harvest occur in sport, personal use, educational, and subsistence fisheries (Appendix A22). The estimated exvessel value of the 2017 UCI commercial fishery of $23.8 million was approximately 20% less than the 2007–2016 average annual exvessel value of $29.8 million, and approximately 9% less than the average annual exvessel value of $26.1 million from 1966 to 2016 (Appendix B7).

Estimating average annual price paid per pound (Appendix B11) for UCI salmon is challenging because an increasing number of fishermen are selling some or all of their harvest to niche markets, where they often receive higher prices. In addition, early-season pricing for 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 2017 was estimated to be $1.86, which was nearly 20% more than the average price of $1.56 from the previous 10 years (2007–2016).

Table 1.–Upper Cook Inlet sockeye salmon escapement goals and passage estimates, 2017.

System	2017 estimate	Goal type	Lower goal	Upper goal
Fish Creek	61,469	SEG	15,000	45,000
Kasilof River	358,724 [a,b]	BEG	160,000	340,000[c]
		OEG	160,000	390,000
Kenai River	1,308,498[a]	Inriver	1,000,000	1,300,000
		SEG	700,000	1,200,000
Larson Lake	31,866	SEG	15,000	35,000
Chelatna Lake	26,986	SEG	20,000	45,000
Judd Lake	35,731	SEG	15,000	40,000
Packers Creek	17,164[c]	SEG	15,000	30,000

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

[a] Sonar estimate at river mile 8 on Kasilof River and river mile 19 on Kenai River; not escapement. Harvest upstream of sonar must be subtracted to estimate escapement. Sport harvest estimated from the Statewide Harvest Survey.

[b] The Kasilof River goal in 2017 was a biological escapement goal (BEG) of 160,000–340,000.

[c] Incomplete count due to power failure on recording unit.

Currently, there are 7 sockeye salmon systems with escapement and/or inriver goals that are monitored in UCI (Table 1; Appendix A2, and Appendix B10). In 2017, 4 of 7 enumeration estimates fell within established goal ranges, and 3 of 7 enumeration estimates exceeded goal ranges. After harvest of sockeye salmon above the sonar site is accounted for in the Kenai River, it is expected spawning escapement will fall within the sustainable escapement goal (SEG) for

this system. This marked the ninth 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 watershed. Sockeye salmon escapement was monitored at Packers Lake on Kalgin Island using a remote video system, but the solar panels and wind generator did not provide ample power for a full season of enumeration.

UCI commercial harvest statistics refined to gear type, area, and date are available back to 1966 (Appendices B1–B6). All commercially-harvested salmon, whether sold or kept for personal home use, are legally required to be recorded on fish tickets (5 AAC 39.130), which are then entered into the statewide fish ticket database. The 2017 commercial harvest by species, gear type, area, and date can be found in Appendices A3–A7. Total harvest by statistical area and average catch-per-permit are reported in Appendices A8 and A9. A summary of EOs issued in 2017 can be found in Appendix A10, and a summary of fishing periods by gear type and area can be found in Appendix A11.

REGULATORY CHANGES

The BOF met in Anchorage from February 23–March 8, 2017 to deliberate UCI finfish proposals during their scheduled triennial meeting for this area. Several regulatory changes were made at these meetings, which are summarized below. For a complete listing of regulations for the UCI area, please see Chapter 21 of the Alaska Administrative Code.

Upper Subdistrict Set Gillnet

- **One-percent rule**: In the Upper Subdistrict set gillnet fishery, the calculation to determine if less than one-percent of the total sockeye salmon harvest has occurred for 2 consecutive periods now begins after August 7 instead of after July 31.
- **Kasilof River Special Harvest Area (KRSHA)**: When this area is open to commercial fishing, dual set gillnet permit holders may now fish with one net per permit, or 2 nets total. The provision limiting how much gear vessels may have on board while fishing in the KRSHA was repealed; however, the limit on the amount of gear that may be fished in the KRSHA was not changed, which is one 35-fathom set gillnet per permit holder and no more than 50 fathoms per drift gillnet vessel. Drifters are reminded that 5 AAC 21.331 and 5 AAC 39.240 are still in effect, limiting the amount of drift gillnet gear that may be aboard to no more than 150 fathoms for single permit vessels or no more than 200 fathoms for dual permit vessels. Except for nets which may not be in the water after the close of a fishing period, set gillnet gear, including running lines, shore leads, anchors, and buoys must be removed from the water and the beach prior to the first opening of the KRSHA, no more than 4 hours after any closure of the KRSHA, and may not be placed back in the water or on the beach prior to the next opening of the KRSHA. The boundaries of the KRSHA, including the areas open exclusively to either set or drift gillnetting, are composed of a series of waypoints that have now been placed into regulation (Appendix C1; Figure 1).
- **Closed waters at the Kasilof and Kenai rivers:** waters not open to commercial fishing, i.e., closed waters, at the mouths of the Kasilof (Appendix C1; Figure 2) and Kenai rivers (Appendix C1; Figure 3) are now described by a series of waypoints.

- ***Kasilof River Salmon Management Plan*:** Set gillnetting in the Kasilof Section may be limited to fishing within 600 feet of mean high tide in lieu of fishing in the KRSHA or in combination with the KRSHA. When the fishery is open in this area, hours fished will not count toward the restrictive hourly provisions in either the *Kenai River Late-Run King Salmon Management Plan* or the *Kenai River Late-Run Sockeye Salmon Management Plan*.
- ***Kenai River Late-Run Sockeye Salmon Management Plan*:** Kenai River sockeye salmon are to be managed to meet abundance-based inriver goals and to achieve the SEG of 700,000–1,200,000 spawners. The OEG was removed from the management plan. Inriver goal ranges were modified as follows: for runs less than 2.3 million sockeye salmon, the inriver goal range is 900,000–1,100,000 fish; for runs between 2.3 million and 4.6 million fish, the inriver goal range is 1,000,000–1,300,000 fish; and for runs greater than 4.6 million fish, the inriver goal range is 1,100,000–1,500,000 fish.
- **Kenai Section (North of Blanchard Line and South of Kenai River mouth):** On or after July 8, any time the Kasilof Section is open, but the Kenai and East Foreland sections are closed, set gillnetting may be allowed within 600 feet of the mean high tide mark in statistical area 244-32, which is that portion of the Kenai Section north of the Blanchard Line and south of the Kenai River mouth.
- ***Kenai River Late-Run King Salmon Management Plan***: Beginning with the 2017 season, Kenai River late-run Chinook salmon will be managed to meet a sustainable escapement goal (SEG) of 13,500–27,000 large (>75 cm mid eye to tail fork) fish. From July 1–31, in order to achieve the SEG, if the sport fishery is restricted to fishing with no bait, then the Upper Subdistrict set gillnet fishery will be managed with the following provisions:
  a. No Monday/Thursday regular fishing periods.
  b. No more than 48 hours of fishing time per week with a 36-hour Friday window.
  c. The following gear modifications are options for ADF&G to consider:
     - gear restrictions where fishermen would be allowed to fish up to 4 set gillnets that are each not more than 35 fathoms in length and 29 meshes in depth and 105 fathoms in the aggregate, or 2 set gillnets that are each not more than 35 fathoms in length and 45 meshes in depth;
     - gear restrictions where fishermen would be allowed to fish 2 set gillnets that are each not more than 35 fathoms in length and 29 meshes in depth or one set gillnet that is not more than 35 fathoms in length and 45 meshes in depth;
  d. If the sport fishery is restricted to no bait and no retention of Chinook salmon, then the Upper Subdistrict set gillnet fishery is open for no more than 24 hours per week in July, with a 36-hour "Friday" window. No additional restrictions on gear would occur during this time period.
  e. The East Foreland Section set gillnet fishery is now exempt from the "paired" restrictive provisions in the *Kenai River Late-Run King Salmon Management Plan*.
  f. In August, the Upper Subdistrict set gillnet fishery will be managed to achieve the Kenai River late-run Chinook salmon SEG and Kenai and Kasilof river sockeye salmon goals. Weekly EO hour limitations and no-fishing "windows" will follow the provisions found in the *Kenai River Late-Run Sockeye Salmon Management Plan*.

Central District Drift Gillnet

- ***Drift Gillnet Fishery Management Plan***: From July 16 to July 31, at run strengths of 2.3 million to 4.6 million Kenai River sockeye salmon, fishing during one 12-hour regular fishing period may be fished districtwide instead of in Drift Gillnet Area 1.
- **Dual drift fishing**: One person may now own 2 CFEC limited entry drift gillnet permits (S03H) and operate 50 fathoms of additional drift gillnet gear when fishing as a dual-permit holder. The option for 2 different permit holders operating together from one vessel was retained in regulation.
- **Kasilof River Special Harvest Area (KRSHA**): Dual-permit drift vessels may now fish in the KRSHA with the standard limit of 50 fathoms of gear while having up to 200 fathoms of gear on board.
- **Regular and Expanded Kasilof Section boundary change:** The SW corner of the Expanded Kasilof Section was moved 1.2 nautical miles west to match the NW corner of the Anchor Point Section. The coordinates of the SW corner of the Expanded Kasilof Section are now 60°04.02′N lat; 151°49.00′W long (Figure 5).

General Provisions

- ***Pink Salmon Management Plan***: The harvest triggers needed to open the fishery were reduced. Based upon the number of pink salmon that are harvested by the Upper Subdistrict set gillnet fishery from August 6–10, a pink salmon fishery may be opened in even years only for up to 2 fishing periods from August 11–15. The first pink salmon commercial fishing period will occur only if, during the regular fishing periods from August 6–10, the daily harvest of pink salmon in the Upper Subdistrict set gillnet fishery exceeds 25,000 fish (changed from 50,000 fish) or the cumulative harvest is 50,000 (changed from 100,000 fish) or more pink salmon. The second pink salmon commercial fishing period will occur only if 25,000 (changed from 50,000 fish) or more pink salmon and no more than 2,500 coho salmon are harvested in the Upper Subdistrict set gillnet fishery during the first pink salmon commercial fishing period. The gear restriction limiting nets to a mesh size no larger than 4.75-inch remains for both set and drift gillnets while operating under the provisions of the *Pink Salmon Management Plan.*

CHINOOK SALMON

The 2017 UCI harvest of 7,660 Chinook salmon was the 9th smallest since 1966 (52 years) and was approximately 19% less than the previous 10-year (2007–2016) average annual harvest of 9,427 fish (Appendices A3, B1, and B6). Exvessel value for UCI Chinook salmon in 2017 was estimated at $635,000, which represented approximately 2.7% of the total exvessel value for all salmon (Appendix B7).

Chinook salmon harvests are concentrated in 2 different fisheries in UCI: 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 UCI, but also related to restrictions placed upon commercial fisheries for the conservation of this species.

Northern District

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 remains open for all 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 for 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 is allowed to 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. 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, resulting 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*, 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 Northern District watersheds in recent years, sport fish restrictions were relaxed in the Deshka and Little Susitna rivers. In response to the sport fishing changes, the Northern District directed Chinook salmon commercial fishery started with regularly scheduled 12-hour fishing periods in 2017.

The Deshka River is the primary system in northern Cook Inlet where Chinook salmon escapement has been monitored inseason with 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 estimated Chinook salmon cumulative passage at the Deshka River weir through Saturday, June 17, was approximately 6,400 fish. Based on daily passage estimates during the previous 14 days, the projected final escapement into the Deshka River had declined each day. In order to reduce harvest of Deshka River Chinook salmon, EO No. 2 reduced hours open in the commercial fishery from 12 hours to 6 hours for the final fishing period on Monday, June 19. The total 2017 Deshka River Chinook salmon escapement estimate of 11,356 fish was below the SEG, and the estimated Chinook salmon escapement in the Little Susitna River of 2,525 was within the SEG range.

Forty-four commercial permit holders participated in the 2017 Northern District Chinook salmon fishery, with an estimated harvest of 2,031 fish (Table 2 and Appendix A3). This was the 13th smallest harvest in the 32 year history of the fishery, but 6% above the previous 10-year average annual harvest of 1,925 fish. The number of permit holders participating in this fishery declined precipitously beginning in 1993, which was the year that set gillnet fishermen were required to register (prior to fishing) to fish in 1 of 3 areas (Northern District, Upper Subdistrict, or Greater Cook Inlet) 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.

Table 2.–Chinook salmon harvest during the directed fishery in the Northern District, 1986–2017.

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

Upper Subdistrict

Approximately 62% of the UCI Chinook salmon commercial harvest in 2017 occurred in the Upper Subdistrict set gillnet fishery (Appendix B1). The 2017 estimated harvest of 4,779 Chinook salmon was 21% less than the previous 10-year average annual harvest and approximately 49% less than the 1966–2016 average annual harvest in this fishery of 9,365 fish.

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 enumerated with 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 with the 2014 season (Shields and Dupuis 2015). At the 2017 BOF meeting, a significant 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, enumerated with Adaptive Resolution Imaging Sonar (ARIS) units.

The preseason outlook for early-run Chinook salmon to the Kenai River anticipated a total run of approximately 6,526 large fish[3], which was above the new large-fish SEG of 2,800–5,600 fish; the large-fish OEG for this stock is 3,900–6,600 fish. The preliminary 2017 escapement estimate was 6,561 fish and approximately 676 fish (harvest and catch-and-release mortality) were taken above the sonar. This was the second year in a row that the early-run sport fishery in the Kenai River was allowed to harvest Chinook salmon.

The 2017 preseason forecast for Kenai River late-run Chinook salmon was for a total run of approximately 33,600 large fish[4]. Based on average harvest rates of large fish in both commercial and sport fisheries, the forecasted run would provide for the new large-fish SEG to be met (13,500–27,000 Chinook salmon). Therefore, the Kenai River Chinook salmon sport fishery below the Slikok Creek was prosecuted with bait and single hooks and allowed for any size fish to be harvested. In response to this action, the Upper Subdistrict set gillnet fishery was managed without mandatory restrictions based on Chinook salmon abundance. Using mean run-timing and projected sport harvest, the projected final escapement of Kenai River late-run Chinook salmon was approximately 19,869 large fish, or about the middle of the new SEG range (Robert Begich, Division of Sport Fish Biologist, ADF&G, Soldotna; personal communication). The total run of large Chinook salmon was estimated to be 30,500 fish[5], which was less than the preseason forecast.

During the month of July, the Kasilof Section set gillnet fishery was open on 13 different days, and the Kenai and East Foreland sections were open on 8 different days, because this area did not begin fishing by regulation until Monday, July 10. The Kasilof River Special Harvest Area (KRSHA) was not opened in 2017. In August, the Kasilof Section was open on 6 different days, and the Kenai and East Foreland sections were open on 5 different days.

Of the 4,779 Chinook salmon harvested in the Upper Subdistrict set gillnet fishery, approximately 3,801 (80%) were estimated to be large fish of all stocks. The harvest of Kenai River late-run large fish in the Upper Subdistrict setnet fishery was estimated to be 2,998 fish, or 66% of the harvest (Robert Begich, Division of Sport Fish Biologist, ADF&G, Soldotna; personal communication).

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: offshore test fishing (OTF); passage and escapement enumeration 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. 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. GSI data describing the UCI sockeye salmon catch allocation are available for the years 2005–2016 (Barclay 2017).

As part of the OTF project, a State of Alaska vessel (RV *Solstice*) fished 6 fixed stations along a transect across Cook Inlet from Anchor Point to the Red River delta (Dupuis and Willette 2016).

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[3] http://www.adfg.alaska.gov/sf/EONR/index.cfm?ADFG=region.NR&Year=2017&NRID=2399
[4] http://www.adfg.alaska.gov/sf/EONR/index.cfm?ADFG=region.NR&Year=2017&NRID=2452
[5] http://www.adfg.alaska.gov/static-sf/fishing_reports/PDFs/2018_kenai_laterun_outlook.pdf

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) (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; which in turn provided an inseason estimate of the total run of sockeye salmon to UCI. The timing of the 2017 sockeye salmon run was estimated to be approximately 4 days late.

Hydroacoustic technology is used to quantify sockeye salmon escapement into glacial rivers and was first employed 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 biased 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 (20,000–65,000 fish) and Judd lakes (25,000–55,000 fish) in the Yentna River drainage, and at Larson Lake (15,000–50,000 fish) 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 Crescent River sonar project, which had been operational since 1979, was discontinued in 2013 due to a lack of funding.

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 2017. However, in 2006, an electronic malfunction did not allow for a complete census of the escapement. From 2010 to 2013, and in 2016–2017, technical difficulties prevented retrieval of all the data. A complete enumeration of the escapement into Packers Lake was obtained in 2014 and 2015.

Inseason analyses of the age composition of sockeye salmon escapement into the principal watersheds of UCI provided 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). Age composition of adult sockeye salmon returning to certain systems are monitored (Appendix A13).

In 2017, approximately 4.0 million sockeye salmon were expected to return to UCI (Table 3; Appendix C1). The actual run estimate totaled about 4.6 million fish, which was 14% greater than the preseason forecast. The 2017 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 4.0 million sockeye salmon, approximately 1.4 million fish were expected to escape all fisheries, leaving 2.6 million sockeye salmon available for harvest to all users. Assuming that sport and personal use harvests in 2017 would be similar in proportion to previous runs of this size, the commercial catch in 2017 was projected to be approximately 1.7 million sockeye salmon. The actual commercial sockeye salmon harvest of 1.8 million fish (Appendices

A4 and B2) was very close to preseason expectations. Drift gillnet fishermen accounted for approximately 48% of the 2017 commercial sockeye salmon harvest, or 880,000 fish and set gillnet fishermen caught 52% of the commercial harvest, or 970,000 fish (Appendix B2). The 2017 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 2017 commercial harvest and will be analyzed at a later date. The last reported commercial fishing activity in any area of UCI in 2017 was September 19.

Table 3.–2017 Upper Cook Inlet sockeye salmon forecast and actual run.

System	Forecast	Actual	Difference
Kenai River	2,164	2,890	34%
Kasilof River	825	816	-1%
Susitna River	366	305	-17%
Fish Creek	75	98	31%
Minor Systems	586	499	-15%
Overall Total	4,016	4,608	15%

[a] These results are preliminary and will change when GSI information are available.

In 2017, the total sockeye salmon harvest from commercial, sport, personal use, subsistence, and educational fisheries was estimated at 2.5 million fish (Appendix A22). This amount was approximately 31% less than the 1996–2016 average annual harvest of 3.7 million fish (for the Kenai River, these data include late-run sockeye salmon only) and 7% less than preseason expectations (Appendix B14). The 2017 sport harvest was estimated based on harvest from similar sized runs. The 2017 personal use harvest estimate of approximately 406,000 sockeye salmon was 17% greater than the average annual harvest of 347,000 fish from 1996 to 2016. For more details on 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 2017 salmon fishery was approximately $23.8 million (Appendix B7). Using an average price of $1.86/lb (Appendix B11), the exvessel value for sockeye salmon was estimated to be $19.7 million, which was 29% less than the previous 10-year (2007–2016) value of $27.9 million. In addition, sockeye salmon made up only 82.7% of the 2017 total exvessel value, which was the lowest percentage since 1991, when sockeye comprised 80.4% of the total value.

Big River

The first commercial sockeye salmon fishery to open in UCI in 2017 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 to 1,800 feet; which was 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, average annual sockeye salmon harvest has been 15,254 fish. The 2017 fishery began on Friday, June 2, with harvests reported from 10 different days, yielding a total harvest of 14,667 sockeye and 300 Chinook salmon (Appendices A3 and A4). Of the total 2017 harvest, 68% of the Chinook and 76% of the sockeye salmon were caught in the Kalgin Island west side waters, which is Statistical Area 246-10 (Figure 3). There were 30 permit holders that reported participating in the fishery, which was equivalent to the previous 2 years of effort, but less than the peak number of 41 permit holders in 1992.

Western Subdistrict

The next commercial fishery to open in 2017 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 the Crescent River from exceeding the escapement goal range of 30,000–70,000 fish. In 2017, the Western Subdistrict set gillnet fishery opened for the season on Monday, June 19, and remained open for all regular Monday and Thursday fishing periods through Thursday, July 6. 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. 11 was issued on July 8, 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 Monday, July 10. This fishing schedule remained in place until 10:00 PM on Monday, August 7, when EO No. 26 was issued, returning the fishery to its regular schedule of 2 fishing periods per week beginning on Thursday, August 10. In 2017, approximately 31,000 sockeye salmon were harvested by 20 permit holders fishing in the Western Subdistrict set gillnet fishery, which was 29% less than the average annual harvest of approximately 43,000 fish during the previous 10-year period (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 5 AAC 21.358. *Northern District Salmon Management Plan* (NDSMP) 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 Northern District 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 enumeration 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 2017, 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 conserve Susitna River sockeye salmon. Emergency Order No. 16 was issued on July 19, reducing legal gear in the General Subdistrict to 1 set gillnet per permit, measuring no more than 35 fathoms in length, and gear was reduced in the Eastern Subdistrict to no more than 2 set gillnets per permit, with each set gillnet measuring no more than 35 fathoms in length, with the aggregate net length not to exceed 70 fathoms per permit. These gear restrictions were in place during the regularly scheduled fishing periods on July 20, 24, and 27. On Sunday, July 30, EO No. 21 was released, which modified EO No. 18 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, with either net measuring no more than 35 fathoms in length. That portion of the General Subdistrict east of the Susitna River remained limited to no more than 1 set gillnet per permit, measuring no more than 35 fathoms in length. Fishing periods affected by this EO were from 7:00 AM until 7:00 PM on July 31 and August 3. On Monday, August 7, gear restrictions imposed by the NDSMP and the SSSAP expired and a full complement of gear became legal for the remainder of the season. Additional EOs impacting commercial fishing in the Northern District were issued later in August for coho salmon conservation. In 2017, approximately 57,000 sockeye salmon were harvested by 78 permit holders in the Northern District set gillnet fishery (Appendices A4 and B2). This harvest was approximately 64% greater than the previous 10-year average annual harvest of 34,672 sockeye salmon and was also the highest harvest in the Northern District since 1999 (Appendix B2).

Upper Subdistrict Set Gillnet and Central District Drift Gillnet

At the 2014 BOF meeting, numerous changes to management of the Upper Subdistrict set gillnet fishery during years of low Kenai River Chinook salmon abundance were adopted, which can have a significant impact on sockeye salmon harvest (Shields and Dupuis 2017). Management of this fishery is now guided by 5 AAC 21.365. *Kasilof River Salmon Management Plan* (KRSMP),

5 AAC 21.360. *Kenai River Late-Run Sockeye Salmon Management Plan* (KRLSSMP), and 5 AAC 21.359. *Kenai River Late-Run King Salmon Management Plan* (KRLKSMP). In addition, the BOF also made fairly substantive changes to 5 AAC 21.353. *Central District Drift Gillnet Fishery Management Plan* (CDDGFMP) in an attempt to pass more coho salmon to streams in northern Cook Inlet. 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 Upper Subdistrict set gillnet 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. *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 Forelands Sections are open from July 8 through August 15. Beginning July 8, the Kasilof Section is managed in concert with the Kenai and East Forelands sections per the KRLSSMP. Drifting in UCI opens on the third Monday in June, or June 19, whichever is later.

The 2017 regular season for drift gillnetting began on Monday, June 19, as provided for in the CDDGFMP. The drift fleet harvest of approximately 2,000 sockeye salmon was below average for early in the season, yet the CPUE of 43 fish/boat was very close the to the previous 10-year average of 45 fish/boat. Drifting was open for 2 regular periods on June 19 and June 22 and 1 additional period in the Kasilof Section (Figure 6) on Saturday, June 24. The cumulative harvest after the first 3 periods of about 5,900 sockeye salmon was below average (Appendix A4). By early morning on June 23, approximately 45,000 sockeye salmon had passed the Kasilof River sonar counter, with the previous 2 days of passage estimates producing nearly 9,500 fish. Thus, based on an assessment that 50,000 sockeye salmon would be in the Kasilof River prior to June 25, the Kasilof Section season was opened to set gillnetting beginning on Friday, June 23, for a 13-hour fishing period (Table 4). Sockeye salmon passage in the Kasilof River through midnight on June 24 was 50,500 fish (Appendix A2). Approximately 13,000 sockeye salmon were harvested in the setnet fishery during the first fishing period (Appendix A4).

During the management week of June 25 to July 1, the drift gillnet fleet fished the regularly scheduled 12-hour districtwide fishing periods on June 26 (this period extended until 9:00 PM) and June 29, as well as 2 additional days in the Kasilof Section, which were a 9-hour period on June 28 and a 17-hour period on July 1. The Kasilof Section set gillnet fishery was opened for the same schedule during the week as the drift gillnet fishery. Because the Kenai River late-run Chinook salmon sport fishery began the season on July 1 with no restrictions, the set gillnet fishery did not come under the mandatory "paired-restriction" provisions of the KRLKSMP. For

the week, a total of 52 hours of fishing time was used, with two 12-hour regular periods and 28 additional hours (Table 4; Figure 7). The 36-hour "Friday" no fishing window was fulfilled per the KRLSSMP. Sockeye salmon passage into the Kasilof River through July 1 had reached 73,139 fish. Typically, passage into the Kasilof River through July 1 is about 26% complete, which projected a final passage of approximately 279,000 fish. The Kenai River sockeye salmon sonar project began enumeration activities on July 1 with a first day passage estimate of 2,924 fish. For the week, drifters harvested approximately 21,000 sockeye salmon, and Kasilof Section setnetters garnered 59,000 sockeye salmon.

Table 4.–Upper Subdistrict set gillnet fishing hours and mandatory closures, 2017.

	Kasilof Section				Kenai & East Forelands Sections			
Week	Hours in plan	Hours used	Window hours in plan	Window hours observed	Hours in plan	Hours used	Window hours in plan	Window hours observed
Jun 18–24	48	13	36	36	Closed	Closed	Closed	Closed
Jun 25–Jul 1	48	28	36	36	Closed	Closed	Closed	Closed
Jul 2–8	48	28	36	36	Closed	Closed	Closed	Closed
Jul 9–15	24	24	0	NA	24	24	0	NA
Jul 16–22	24	0	0	NA	24	0	0	NA
Jul 23–29	24	14	0	NA	24	14	0	NA
Jul 30–Aug 5[a]	51	0	60	60	51	0	60	60
Aug 6–12	51	15	60	60	51	15	60	60
Aug 13–15	51	17	60	60	51	0	60	60
Totals	369	139	288	288	225	53	180	180

Note: Regular Monday/Thursday fishing period hours are not included.

[a] Hours switched from 24 to 51 due to run size increase.

During the management week of July 2–8, the drift and set gillnet fisheries were both open for 12-hour districtwide periods on Monday and Thursday, with the period on Monday, July 3 extended for 2 hours in the Kasilof Section. Both fisheries were open on July 5 for 9 hours and on July 8 for 17 hours. Similar to the previous week, the total number of hours fished was 52; in addition, the 36-hour no-fishing weekly "window" was implemented. For the week, drifters harvested approximately 108,000 sockeye salmon and setnetters took about 97,000 fish. Sockeye salmon passage in the Kasilof River through July 8 was estimated to be approximately 102,000 fish, which projected a final passage total of 292,000 fish based on average run timing. The Kenai River sockeye salmon passage estimate through July 8 was 57,000 fish, with the run typically only 5% complete through this date.

The week of July 9–15 marked the first time the set gillnet fishery in the Kenai and East Foreland sections was open. This management week also lined up exactly 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 10 and July 13 were restricted to Drift Area 1 and the Expanded Kenai and Expanded Kasilof sections (Figures 5 and 8). Because the preseason forecast for Kenai River sockeye salmon (Appendix C1) anticipated a total run of less than 2.3 million fish, the KRLSSMP allowed no more than 24 hours of additional fishing time during the week in the Upper Subdistrict setnet fishery. Both the drift and set gillnet fisheries were open on Wednesday, July 12, for 10 hours

and on Saturday, July 15, for 11 hours. The regular period on July 13 was extended for 3 hours in both fisheries. All additional fishing time during the week for the drift fishery was confined to the Expanded Kenai and Expanded Kasilof sections. Thus, the total additional fishing time during the week outside of the 2 regular periods was 24 hours. For the smallest run size tier in the KRLSSMP, there is no mandatory no-fishing window due to a maximum of only 24 hours of additional fishing time. The estimated sockeye salmon harvest in the drift fishery for the week was 430,000 fish, and the setnet fishery captured approximately 182,000 fish. In the Kasilof River, the estimated total sockeye salmon passage through July 15 was 130,000 fish, which projected a final passage estimate of 265,000 fish based on average run timing. Sockeye salmon passage in the Kenai River had reached 140,000 fish through July 15, projecting a season final passage of 905,000 fish based on average run timing.

The following management week of July 16–22 presented some challenges to commercial fishery management, driven primarily by subdued sockeye salmon passage into the Kenai River. The regularly scheduled 12-hour fishing periods on July 17 and July 20 were both open, with the drift fleet restricted to the Expanded Kenai and Expanded Kasilof sections, as required by the CDDGFMP. However, no additional time was provided to either fishery as staff closely monitored sockeye salmon passage into the Kenai River. By the end of the week, the estimated passage of sockeye salmon into the Kasilof River was 184,000 fish and projected a total passage for the year of 256,000 fish based on average run timing and approximately 291,000 fish based on a 3-day late run. Both of these estimates were well within the BEG range of 160,000–340,000 fish for this system. But, in the Kenai River, the estimated sockeye salmon passage through July 22 was only 306,000 fish, which projected a total passage of 641,000–845,000 fish for on-time runs to 3-day late runs. The inriver goal for Kenai River sockeye salmon for runs less than 2.3 million fish was 900,000–1.1 million. For the week, the drift fishery harvested 144,000 sockeye salmon, and the setnet fishery took 217,000 fish. The total sockeye salmon commercial harvest through July 22 was 1.64 million fish, which was very close to the preseason commercial harvest forecast of 1.70 million sockeye salmon.

The primary objective of the July 23–29 management week was to increase sockeye salmon passage into the Kenai River, while also ensuring that Kasilof River sockeye salmon passage did not increase to a point when final passage projections were outside the BEG range. During the week, the regularly scheduled fishing periods (those on July 24 and July 27) were closed in both the set and drift gillnet fisheries. In fact, neither fishery was open from July 21 to July 28, which resulted in increased sockeye salmon passage in both the Kenai and Kasilof rivers. The estimated passage in the Kenai River through Friday, July 28, had reached 635,000 fish, which now projected a final passage of 955,000–1.1 million fish for on-time runs to 3-day late runs. Passage in the Kasilof River through July 28 was 255,000 fish, projecting 297,000–323,000 fish for on-time to 3-day late runs. On July 28, UCI Commercial Fisheries staff conducted an inseason assessment of the sockeye salmon run to date and estimated the Kenai River sockeye salmon run would exceed 2.3 million fish and would probably be 1 to 3 days late in run timing. Based on this assessment, the Upper Subdistrict set gillnet and Central District drift gillnet commercial fisheries changed to management plan provisions for runs between 2.3 million to 4.6 million Kenai River sockeye salmon. Changes in management also included an increase in the Kenai River inriver goal from 900,000–1,100,000 fish to 1,000,000–1,300,000 fish. The Upper Subdistrict set gillnet fishery could now be open for up to 51 additional hours per week beyond the 12-hour regular periods on Monday and Thursday. In addition, in the setnet fishery there were now 2 no-fishing windows each week, 1 for 24 consecutive hours beginning between 7:00 PM on Monday and 7:00 AM on

Wednesday, and 1 for 36 consecutive hours beginning between 7:00 AM on Thursday and 7:00 AM on Friday. Due to increased passage of sockeye salmon into the Kenai and Kasilof rivers, a 14-hour fishing period was provided in both the set and drift gillnet fisheries on Saturday, July 29. During this fishing period, drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict and in the Anchor Point Section of the Lower Subdistrict. For the week, drifters harvested 33,000 sockeye salmon for a season total of 742,000 fish, and setnetters captured 69,000 sockeye salmon for a season total of 637,000 fish.

During the week of July 30–August 5, the set and drift gillnet fisheries were only open for the 12-hour regular periods on July 31 and August 3. This was because of fewer than expected sockeye salmon passage in the Kenai River. By the end of the week, the cumulative passage in the Kenai River was 851,000 fish which projected a final passage of 1.0–1.1 million fish. In the Kasilof River, passage through August 5 was 301,000 fish, which projected a final passage of 316,000–326,000 fish. Thus, sockeye salmon passage projections were within the bounds of the Kenai River inriver goal and the Kasilof River BEG, even for runs 3 days late. The increased run-size estimate for Kenai River sockeye salmon announced on July 28 allowed the regular drift gillnet fishing period on Monday, July 31, to be fished in one or more of the following areas: Expanded Kasilof Section, Expanded Kenai Section, Anchor Point Section, Drift Area 1, or all waters of the Central District. Because little to no additional fishing time was anticipated outside of regular fishing periods, the July 31 regular period for drift gillnetting was open in all waters of the Central District. By management plan, regular fishing periods in August (through August 15) are open in all waters of the Central District. During these 2 weekly fishing periods the drift fleet captured approximately 66,000 sockeye salmon and setnetters took 91,000 fish.

The final full management week of the 2017 season was August 6–12. The set and drift gillnet fisheries were both open for the regular 12-hour Monday and Thursday fishing periods. However, during these fishing periods, drift gillnetting was restricted to Drift Gillnet Area 1 and the Expanded Kenai and Expanded Kasilof sections due to concerns about coho salmon passage in the Little Susitna River (see the coho salmon section later in this report for more details). Thursday's August 10 fishing period was extended until 10:00 PM for both gear types, with the drift extension only in the Expanded corridors and Anchor Point section. Both fisheries were also open for a 15-hour period on Wednesday, August 9, with the drift fleet limited by regulation to the Expanded corridors and the Anchor Point Section. Drifting was also open in these same waters on Saturday, August 12, for 12 hours. Set gillnetting was not open on August 12 because 5 AAC 21.310 allows for regular periods only to be fished August 11–15. For the week, set gillnetting was opened for a total of 24 regular period fishing hours and 18 additional hours. Both the 24-hour and 36-hour "windows" were implemented. The August 6–12 management week produced a drift harvest of approximately 61,000 sockeye salmon, and setnetters took about 82,000 fish. By August 12, sockeye salmon passage in the Kenai River had reached 1.024 million fish, projecting a season total of 1.086–1.132 million for on-time to 3-day late runs. In the Kasilof River, the cumulative sockeye salmon passage through August 12 was 333,000 fish, projecting a season total of 335,000–340,000 fish, also for runs that were on-time to 3-days late.

By regulation, the set gillnet fishery in the Upper Subdistrict closes no later than August 15, and the drift gillnet fishery is open for Monday/Thursday fishing periods in Drift Gillnet Areas 3 and 4 (Figure 9) after August 15. Thus, the regularly scheduled fishing period on Monday, August 14, was the last regular period of the year for the set gillnet fishery and for drifting in all waters of the Central District. The August 14 drift opener was the third consecutive regular fishing

period when the fleet was restricted to Drift Area 1 and the Expanded corridors. The fishing period was extended until 11:00 PM for set gillnetting in the Kasilof Section only, and only within one-half mile of the mean high tide mark, and the drift extension was limited to waters in the Expanded corridors and the Anchor Point section. The Kasilof Section one-half mile set gillnet fishery was also open on Tuesday, August 15, from 6:00 AM until 7:00 AM. The justification for fishing the Kasilof Section one-half mile fishery was because the BEG for this system was now projected to be exceeded. 5 AAC 21.363(e) states that "notwithstanding any other provision of this chapter, it is the intent of the BOF that, although in most circumstances ADF&G will adhere to the management plans in this chapter, no provision within a specific management plan is intended to limit the commissioner's use of emergency order authority under AS 16.05.060 to achieve established escapement goals for the management plans as the primary management objective." Therefore, in an attempt to keep Kasilof River sockeye salmon escapement within the BEG range, additional fishing time was provided. For the August 14 and August 15 fishing periods, the set gillnet fishery harvested approximately 22,000 sockeye salmon for a season total of 832,000 fish. The drift period on August 14 produced a harvest of 5,600 sockeye salmon, bringing the season total to 875,000 fish.

The drift fleet was restricted to Drift Areas 3 and 4 beginning on Thursday, August 17. An aerial survey of Chinitna River/Clearwater Creek conducted on August 14, 2017, produced an estimate of approximately 7,000 chum salmon resident in those streams. The chum salmon peak aerial survey SEG for Chinitna River/Clearwater Creek is 3,500–8,000 fish. Because the chum salmon SEG had been achieved, Chinitna Bay was open to set and drift gillnetting on Tuesdays and Fridays from 7:00 AM until 7:00 PM, beginning at 7:00 AM on Friday, August 18. The drift fleet harvested an additional 4,700 sockeye salmon in Drift Areas 3 and 4 and approximately 1,000 sockeye salmon in Chinitna Bay for the remainder of the 2017 season.

The 2017 total sockeye salmon harvest for drift gillnetters was approximately 880,000 fish, which represented 48% of the UCI total harvest (Appendix B2). This was the lowest harvest in the drift fleet since 2006, and more than 800,000 fish less than the recent (2007–2016) average of nearly 1.7 million fish. The Upper Subdistrict set gillnet fishery total sockeye salmon harvest was approximately 832,000 fish, or 45% of the UCI total harvest. This harvest was about 243,000 fish less than the most recent 10-year average of 1.07 million fish. For the second consecutive year, the KRSHA was not open to commercial fishing.

In 2017, sockeye salmon passage was monitored in the Kasilof River through August 20, producing a final estimate of 358,724 fish, with 5 of the previous 10 years passage estimates higher than this value and 5 lower (Appendix B10). The BEG for Kasilof River sockeye salmon of 160,000–340,000 was therefore exceeded by nearly 20,000 fish. The Kenai River sonar was operational through August 24, producing a final passage estimate of 1,308,498 fish. The upper end of the Kenai River sockeye salmon inriver goal of 1.3 million fish was exceeded by about 8,500 fish. Although the inriver goal was just exceed, once sport fishing harvest above the sonar was subtracted, it was very likely that the SEG of 700,000–1,200,000 fish would have been met.

The midpoint of the 2017 sockeye salmon run measured at the Anchor Point offshore test fishery transect occurred on July 20, which was 4 days later than the historical average date of July 16. At the Kasilof River sonar site, 50% of the 2017 sockeye salmon passage was reached on July 22, which was 6 days later than the previous 10-year average date of July 16. In the Kenai River, 50% of the total 2017 sockeye salmon enumeration had passed the sonar on July 29, which also was 6 days later than the previous 10-year average 50% date of July 23.

Kalgin Island Subdistrict

The total sockeye salmon harvest in the Kalgin Island Subdistrict in 2017 was estimated to be 44,795 fish. Approximately 11,000 fish, or 25% of the season total, was taken 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 2017 Kalgin Island Subdistrict sockeye salmon harvest was 21% less than the average annual harvest of approximately 57,000 fish from the previous 10 years (2007–2016). In 2017, a remote video system was once again used to estimate sockeye salmon escapement into Packers Lake. The video system operated from June 15 through August 24, producing a sockeye salmon escapement estimate of 17,106 fish. Similar issues to those experienced in previous years affected the enumeration effort at Packers Lake, resulting in an incomplete enumeration of the escapement. First, beaver dams completely blocked salmon passage in Packers Creek early in the season. The dams were "notched" to allow salmon passage, but this remedy lasted only a couple of days. Therefore, in order to allow salmon to escape into Packers Lake, a Nuisance Beaver Permit was obtained that authorized the removal of beavers in the area where the largest huts had been built. Second, the solar panels and wind generator that were installed to keep the batteries charged so the recording unit could remain operational failed to supply enough power, which resulted in an incomplete count for the season. Much of this was the result of a very cloudy month of August when there was measurable precipitation on 27 of the 31 days of the month. Although the enumeration of the escapement was incomplete, there was enough data collected to determine that the sockeye salmon SEG for Packers Lake of 15,000–30,000 fish was achieved. However, no additional fishing time was provided in the Kalgin Island Subdistrict in 2017 beyond regular periods.

COHO SALMON

The 2017 UCI commercial coho salmon harvest of 304,000 fish was approximately 81% greater than the recent 10-year (2007–2016) average annual harvest of approximately 167,000 fish, but only 5% greater than the 1966–2016 average annual harvest of 289,000 coho salmon (Appendix B3).

The largest harvest of UCI coho salmon occurs in the UCI drift fishery, where 191,000 were taken in 2017, which were 94% greater than the previous 10-year (2007–2016) average annual harvest of 99,000 fish and 32% greater than the 1966–2016 average annual harvest of 145,000 fish. The 2017 UCI coho salmon run timing was numerous days late; by Saturday, August 5, only 1,833 fish had passed through the Little Susitna River weir, a number that indicated the SEG of 10,100–17,700 fish would not be achieved without a reduction in harvest. Therefore, on Friday, August 4, the Division of Sport Fish released Emergency Order No. 2-SS-2-35-17, prohibiting the use of bait in the Little Susitna River, effective 12:01 AM Sunday, August 6. This announcement prompted restrictive actions in both the Central District drift and Northern District set gillnet fisheries in order to reduce the harvest of Little Susitna River coho salmon. Although coho salmon escapement was lagging in some northern Cook Inlet streams, catches in the OTF fishery and late-July drift catches indicated the 2017 coho salmon run was likely quite strong, but just late in run timing. These data were later corroborated not only by continued strong commercial harvest of coho salmon, but eventually even in escapement monitoring. Coho salmon escapement objectives were exceeded in the Little Susitna River (17,781), Deshka River (36,869), and at Fish Creek (7,794), and the postseason foot survey SEG at Jim Creek of 607 fish, was well within the SEG of 450–700 for this system. In the commercial drift harvest, coho

salmon catches on July 31, and August 3, 7, 10, and 14 were all the highest catches ever recorded for each of these dates.

Chinitna Bay was opened to drift gillnetting on Tuesdays and Fridays, beginning on Friday, August 18. The estimated coho salmon harvest by drifters in Chinitna Bay was approximately 24,177 fish (Appendix A5), which represented the largest coho salmon harvest ever taken in Chinitna Bay. In fact, this harvest was more than 1,000% greater than the previous 10-year average of 2,137 fish. The record harvest in 2017 can be attributed to 2 factors. First, the 2017 coho salmon run was strong and multiple days late in run timing, which allowed for above average late-season harvests. More important, however, was the very poor sockeye salmon harvest in the drift fleet, which resulted in more vessels fishing longer into the year in an attempt to economically salvage their season. In the previous 10 years, the average annual number of vessels reporting harvest in Chinitna Bay was 8, with a peak of 16. In 2017, however, 41 vessels reported harvest. When the coho salmon harvest is evaluated on a catch per vessel (CPUE) basis, the 2017 CPUE of 590 fish per vessel was only 68% greater than the previous 10-year CPUE average of 350 coho salmon per vessel. Finally, it should be noted that dual-permit drift fishing was not allowed in Chinitna Bay; therefore the above average harvest cannot be attributed to additional gear onboard dual permit vessels.

The exvessel value of coho salmon from the 2017 UCI commercial fishery was $2.17 million, or 9.1% of the total exvessel value (Appendix B7). This represents the highest exvessel amount for coho salmon since 1994. The average price paid for coho salmon was estimated at $1.14/lb (Appendix B11), which was the highest price since 1988. Typically, the price paid for coho salmon in August and September is higher than July pricing, therefore the late-run of coho salmon in 2017 contributed to an increase in the average price paid per pound.

PINK SALMON

Pink salmon runs in UCI are even-year dominant, with odd-year average annual harvests typically about 15% of even-year harvests (Appendices A6 and B4). The 2017 UCI commercial pink salmon harvest of 168,000 fish was 124% more than the average annual harvest of 75,000 fish from the previous 10 years of odd-year harvests and was also the second largest odd-year harvest since 1977. Considering that the drift fishery was closed for 8 days (July 21–28) for sockeye salmon conservation, and they were also restricted by management plan to the Expanded corridors on the July 17 and July 20 fishing periods, the 2017 pink salmon run to UCI can be characterized as very strong for an odd-year run. Based on an average weight of 3.5 lb/fish (Appendix B12) and an average price of $0.15 a pound (Appendix B11), the estimated exvessel value for the 2017 pink salmon harvest was $89,000 or 0.4% of the total exvessel value (Appendix B7).

CHUM SALMON

A total of 244,000 chum salmon were harvested by UCI commercial fishermen in 2017, which was 63% greater than the previous 10-year average annual harvest of 149,000 fish (Appendix B5). Similar to pink salmon, the above average harvest of chum salmon in 2017 should be viewed in light of the greatly diminished fishing time by the drift fleet in middle of the inlet in the latter half of July. Drifters are the largest harvesters of chum salmon, capturing 94% of the total chum salmon harvest in the past 10 years. Thus, the 2017 chum salmon run was likely well above average, at least for recent years. Chinitna Bay was opened to both set and drift

gillnetting on Tuesdays and Fridays from 7:00 AM until 7:00 PM, beginning at 7:00 AM on Friday, August 18. This action was taken in response to an aerial survey estimate of 7,000 chum salmon in the Chinitna River/Clearwater Creek that showed the chum salmon SEG of 3,500–8,000 fish had been achieved. For the 2017 season, the drift fleet harvested 5,067 chum salmon (Appendix A7) in Chinitna Bay, which was more than 11 times the average annual harvest of 395 fish from the previous 10 years. Again, the above-average harvest can be somewhat explained by the increased number of vessels fishing in 2017. When viewed on a CPUE basis, the 2017 harvest of 124 chum salmon per vessel was only 2.5 times the average annual harvest of 49 chum salmon per vessel from the previous 10 years. The 2017 exvessel value for chum salmon was $1.23 million, or 5.2% of the overall exvessel value of the 2017 fishery (Appendix B7). The average price paid for chum salmon in 2017 was estimated to be $0.62 per pound (Appendix B11), which was about $0.10 a pound more than the previous 10-year average.

PRICE, AVERAGE WEIGHT, AND PARTICIPATION

The estimated average price per pound paid to UCI commercial fishermen for their harvest in 2017 was higher than the previous 10-year average for all species, other than pink salmon (Appendix B11). The estimate of $1.86 per pound for sockeye salmon was $0.36 more than the $1.50 a pound paid in 2016, and $0.30 more the average annual price of $1.56 from the previous 10 years. 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. It is unknown whether this occurred to any significant degree for fish harvested in 2017.

Harvest statistics from the 2017 UCI commercial harvest showed a sockeye salmon average weight of 5.7 lb, which was the second smallest average in the last 10 years (Appendix B12). Conversely, the 21.8 lb average weight of Chinook salmon was the second highest in the last 10 years, and the average weight of 8.2 lb for chum salmon was the largest average in the last 10 years. As noted in Shields and Dupuis (2017), the small size of commercially harvested Chinook salmon in recent years was most likely due to the age of the fish in the harvest. For example, from 2001 to 2016, the age composition of Chinook salmon taken in the Upper Subdistrict set gillnet fishery averaged 44% for fish that had spent 2 years or less in salt water. This was twice the 1987–2000 annual average of 22% for these age classes (Figure 10; Appendix A15). Surprisingly, Chinook salmon sizes in 2017 increased dramatically, again, related to the age of the fish in the return. In 2017, only 17% of the fish harvested in the Upper Subdistrict setnet fishery had spent 2 years or less in salt water. The average pink salmon size of 3.6 lb and average size of 6.3 lb for coho salmon were equal to the previous 10-year averages.

The Commercial Fisheries Entry Commission (CFEC) reported that 569 active drift gillnet permits were issued in 2017, with 417 (73%) issued to Alaskan residents (Appendix B13). In the setnet fishery, CFEC reported that 735 permits were issued, with 619 (84%) issued to Alaskan residents. In 2017, 470 drift gillnet permits and 498 set gillnet permits were reported as fishing in UCI (Appendix A8). In the drift fishery, 69 vessels and 135 different permits were reported fishing as part of a dual-permit operation. For detailed information about dual-permit fishing operations in the Cook Inlet drift gillnet fishery, please see the CFEC report *Dual-permit fishing operations in the Cook Inlet Salmon Drift Gillnet Fishery* (Farrington et al. 2014).

A total of 21 shore-based processors purchased UCI fishery products in 2017, as well as 16 direct marketing vessels, 1 catcher-exporter, 4 buyer-exporters, and 43 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 taken 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. For more information, please visit http://www.adfg.alaska.gov/index.cfm?adfg=fishlicense.marketers. A list of the major fishery processors that purchased salmon in UCI in 2017 can be found in Appendix A16.

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 located 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. Trail Lakes hatchery has functioned primarily to produce sockeye salmon, with minor production of coho and Chinook salmon. Most of the production from this facility benefits 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 enumeration project at Fish Creek, the stream that runs out of Big Lake. After CIAA terminated their involvement in the smolt enumeration project, ADF&G was able to secure funding to operate smolt enumeration studies from 2011 to 2015. The Big Lake sockeye salmon smolt enumeration 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 enumerated approximately 254,883 sockeye salmon smolt emigrating Hidden Lake, of which approximately 55.3% were estimated to be of hatchery origin, with 93% of the emigrants being 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 enumerated 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 2.2 (12%) (Wizik 2018).

Table 5.–Production of sockeye salmon in Big Lake, 1997–2017.

Year	Total run	Weir	Spawners	Spring fry release	Fall fry release	Smolt release	Smolt emigration	
							Age-1	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

STOCK STATUS AND OUTLOOK

Overall, the status of UCI monitored salmon stocks is positive; however, some stocks warrant additional review. These stocks include Susitna River and Fish Creek (Big Lake) sockeye salmon and 7 Northern District Chinook salmon stocks.

Sockeye Salmon

Susitna River

The Susitna River sockeye salmon run forecast for 2017 of 366,000 fish was 5% less than the 10-year average of 387,000. This forecast was derived using mean return per spawner by age class and mark–recapture estimates of spawner abundance for brood years 2006–2012. 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 4-year MAPE for this forecast method is 17%. The predominant age classes in the 2017 Susitna sockeye salmon run forecast were age 1.2 (20%), age 1.3 (53%) and age 2.3 (12%).

The 2017 sockeye salmon actual run to the Susitna River was estimated at 305,000 fish (using the escapement and the mean harvest rate estimated from genetic stock composition of the commercial harvest in 2007–2010; Table 6). The 2017 run was about 17% less than the

preseason forecast (Table 3). Weirs operated at Chelatna, Judd, and Larson lakes. At Chelatna Lake, 26,986 fish were enumerated (SEG: 20,000–45,000; Table 1); at Judd Lake the enumeration estimate was 35,731 (SEG: 15,000–40,000), and the weir estimate at Larson Lake was 31,866 (SEG: 15,000–35,000). Thus, even though the total sockeye salmon run to the Susitna River was 17% less than the preseason forecast, all 3 SEGs were met.

Table 6.–Upper Cook Inlet sockeye salmon run, 2017.

System	Commercial harvest	Escapement	Other harvests	Total
Fish Creek	25,152	61,310	11,819	98,000
Kasilof River	346,472	358,699	110,392	816,000
Kenai River	1,205,361	1,020,458	666,716	2,890,000
Susitna River	96,100	202,761	5,860	305,000
All Others	165,327	332,506	647	499,000
Total	1,838,412	1,975,734	795,434	4,608,000

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 the Yentna River sockeye salmon SEG be eliminated and replaced with 3 lake SEGs. 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, the following 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 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 impacts on the production of salmonids in the Matanuska-Susitna (Mat-Su) basin (Hughes[6]). Potential impacts

[6] Hughes, D. W. 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: January 2014).

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 impacts 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 impacts 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 Kyle 1989), has experienced a significant 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 (PKD) 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 pike were removed from Shell Lake, with an additional 784 pike taken out in 2017. 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 pike suppression at Hewitt and Whiskey lakes and ADF&G has 2 years remaining on AKSSF project no. 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 likely 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 (Wendy Gist, Commercial Fisheries Biologist, ADF&G, Soldotna; personal communication). No smolt emigration enumeration was conducted at Fish Creek in 2017.

The 2017 total run forecast for Fish Creek sockeye salmon was 75,000 fish (Table 3; Appendix C1), but the actual run was approximately 98,000 fish (Tables 5 and 6), or 31% above forecast. The 2017 escapement estimate of 61,469 fish was 37% 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 26–31. 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 2017, approximately 25,000 Fish Creek sockeye salmon were estimated to have been harvested commercially, which represented a harvest rate of 26% 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[7]; the 2017 estimated escapement was more than 61,000 fish. In summary, from 1982 to 2017 (36 years), the escapement goal at Fish Creek has been met or exceeded 27 times, or 75% of the time. The 2018 run forecast for Fish Creek sockeye salmon is 211,000 fish (Appendix C2). If this stock is harvested at the commercial average of 34%, then approximately 140,000 fish could enter the stream. If the run returns as forecast, then nearly 95,000 fish will need to be harvested in the dip net fishery in order to not exceed the SEG.

2017 Sockeye Salmon Outlook

The 2017 UCI preseason forecast projected a total run of approximately 4.0 million sockeye salmon, with a total harvest estimate by all users of 2.6 million fish and a commercial fisheries harvest of approximately 1.7 million fish (Appendix C2). The forecasted commercial harvest in 2017 was 1.2 million less than the 20-year average harvest.

The run forecast for the Kenai River was approximately 4.7 million, which was 1.0 million greater than the 20-year average annual run of 3.7 million. A sibling model based upon the return of age-1.2 salmon in 2015 (534,000; 404,000 20-year average) predicted a return of 3.1 million age-1.3 salmon. A smolt model based upon the abundance of age-2 smolt emigrating from the Kenai River in spring 2013 (5.6 million) predicted a return of 1.0 million age-2.3 salmon. The

[7] http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2016-2017/uci/OR03.pdf

predominant age classes in the 2016 run forecast were age 1.3 (65%), age 1.2 (8%), and age 2.3 (21%). The 10-year MAPE for the set of models used for the 2016 Kenai sockeye salmon run forecast was 20% (Appendix C2).

The Kasilof River sockeye salmon run forecast was 861,000 fish, which was 13% less than the 20-year average of 987,000. Sibling models were used to forecast the major age-classes of the 2016 run because the MAPE for the sibling models were lower than all other models. The sibling model considered the abundance of age-1.2 salmon in 2015 to project a return of 215,000 age-1.3 salmon in 2016. The sibling model also forecasted a return of 262,000 age-1.2 salmon in 2016 based upon the abundance of age 1.1 salmon in 2015. The sibling model used the abundance of age-2.1 salmon in 2015 to project a return of 256,000 age-2.2 salmon in 2016. The predominant age classes in the 2016 run forecast were age 1.2 (31%), age 1.3 (25%), and age 2.2 (30%). The 10-year MAPE for the set of models used for the 2016 Kasilof sockeye salmon run forecast was 17% (Appendix C2).

The Susitna River sockeye salmon run forecast was 372,000 fish, which was 12% less than the 10-year average of 421,000. This forecast was derived using mean return per spawner by age class for brood years 2006–2011 and mark–recapture estimates of spawner abundance in 2010–2012. 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 3-year MAPE for this forecast method was 21%. The predominant age classes in the 2016 Susitna sockeye salmon run forecast were age 1.2 (11%) and age 1.3 (67%) (Appendix C2).

The Fish Creek sockeye salmon run forecast was 110,000 fish, which was 31% greater than the 20-year average of 84,000. Sibling models were used to forecast the returns of age-1.2, -1.3, -2.2 and -2.3 salmon in 2016. The predominant age classes in the 2016 Fish Creek run forecast were age 1.2 (57%) and age 1.3 (29%). The 10-year MAPE for the Fish Creek sockeye salmon run forecast was 62% (Appendix C2).

Pink Salmon

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

Pink salmon are generally harvested in significant quantities in UCI beginning in late July and early August. The 2017 UCI commercial harvest of pink salmon was estimated to be approximately 168,000 fish which was nearly 125% greater than average annual harvest of 75,000 fish from the previous 10-years of odd-year harvests (Table 7). It also was the second largest odd-year harvest since 1977 (Appendix B4).

Prior to 2009, a weir on the Deshka River enumerated 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 enumerate 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 enumeration 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%, with a point estimate of 2%, indicating pink salmon were harvested at very low rates in UCI.

Table 7.–Upper Cook Inlet pink salmon commercial harvest and Deshka River escapement, 1998–2017.

	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

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

Chum Salmon

Chum salmon runs to UCI are concentrated predominately in the western and northern watersheds, with the most significant harvest coming from the Central District drift gillnet fishery. The 2017 harvest of 244,000 chum salmon was approximately 63% greater than the previous 10-year (2007–2016) average annual harvest of 149,000 fish (Appendix B5). An evaluation of UCI chum salmon stocks is made difficult because of a lack of information other than commercial harvest data and very limited escapement data. Chum salmon are no longer enumerated 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 16 years. As a result, drift gillnetting has been opened by EO in Chinitna Bay each of the last 10 years per 5 AAC 21.320(c)(1). An aerial survey of Clearwater Creek/Chinitna River on August 14, 2017, estimated 7,040 fish had escaped the fishery, which meant the SEG had been achieved. Therefore, EO No. 31 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 18.

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 1) significant 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 District; 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., the run was below average, average, or above average). It appears the 2017 chum salmon run was probably above average in abundance, with the harvest of 244,000 fish nearly 100,000 fish more than the previous 10-year average annual harvest (Appendix B5). Based on the 2002 tagging study, which estimated the commercial fishing harvest rate on chum salmon at approximately 6% and considering that escapement objective in Chinitna Bay have been consistently achieved, these limited data reveal no concerns for chum salmon stocks in UCI.

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 set gillnet fishery in the Upper Subdistrict 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. At the same time, however, coho salmon runs in 2000 and 2001 were much improved, with the 2002 run being exceptional; perhaps even a record run (Lafferty et al 2007). Therefore, at the 2005 BOF meeting, restrictions on commercial fishing in August in the Upper Subdistrict set gillnet fishery and Central District drift gillnet fishery were relaxed. Both fisheries' closing dates were changed to no later than August 10, with the set gillnet fishery to be managed under the same set of weekly guidelines in August that were applicable in July. In 2008, the BOF extended the Upper Subdistrict set gillnet 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 Upper Subdistrict set gillnet 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 (Sam 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 32.5. This provided managers with timelier inseason information of coho salmon passage.

Table 8.–Coho salmon escapement and enumeration, 1996–2017.

Year	Fish Creek	L. Susitna River	Jim Creek[c]	Deshka River	OTF CPUE[e]
1996		15,803			534
1997	2,578[a]	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[a]	40,199	4,652	62,940	785
2005	3,836[a]	16,839[b]	1,464	47,887	367
2006	5,723[a]	8,786[b]	2,389	59,419	1,034
2007	9,618[a]	17,573	725	10,575	482
2008	9,603[a]	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[a]	4,826	261	7,326	264
2012	1,237	6,770	213	6,825	154
2013	7,593	13,583[b]	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	331
2017	8,966	17,781	5,646	36,869[d]	537

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

[b] Weir washed out, count incomplete.

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

[d] A new SEG of 10,200–24,100 was established in 2017.

[e] OTF CPUE (offshore test fishery catch per unit of effort) represents the number of fish caught in 100 fathoms of gillnet in 1 hour in the southern offshore test fishery.

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 37,000 coho salmon were enumerated at the Deshka River weir in 2017.

When coho salmon runs are viewed over a long period of time in Northern Cook Inlet, there are no significant concerns about the sustainability of these stocks. The Little Susitna River coho salmon escapement goal was first established in 1990, and since that time (28 years), the escapement goal has been met or exceeded 22 years, or 79% of the time. The coho salmon escapement goal at Fish Creek has been achieved or exceeded 20 years out of the 23 years (87%) it has been in existence, including every year for the past 18 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 13 times (72%) with the 2017 count being the highest ever observed. Finally, the new coho salmon SEG at the Deshka River was exceeded by nearly 14,000 fish in 2017.

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. At this time, there are no known conservation concerns for Kenai River coho salmon.

Chinook Salmon

Northern District

The Northern District has approximately 345 streams and rivers where Chinook salmon are present, with an estimated total annual run in the Susitna River drainage between 100,000 and 200,000 fish (http://www.adfg.alaska.gov/static-sf/Region2/pdfpubs/MatSuKingSalmon.pdf). 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 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 only, 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) 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).

Deshka River

After experiencing a marked decline in abundance in the early to mid-1990s, Northern District Chinook salmon stocks rebounded, with exceptional runs measured at the Deshka River weir, the only site where Chinook salmon are totally enumerated in the Northern District (Table 9). From 1999 through 2006, the upper end of the Deshka River BEG of 13,000–28,000 fish (Fair et al. 2007) was exceeded. 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 projected to be smaller than average, were both poor runs, resulting 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 achieved in 19 of the past 23 years. However, in recent years, restrictive actions in both commercial and sport fisheries have been enacted to ensure escapement objectives were met.

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		

Note: BEG = 13,000–28,000; in 2011 the BEG was changed to an SEG with the same escapement range.

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 sonar (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 along with 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 RM9 and RM14), 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 Upper Subdistrict set gillnet 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, resulting 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 impacted prosecution of sport and commercial fisheries from 2014 to 2016 (Shields and Dupuis 2015). During each of these 3 years, restrictive actions to the Upper Subdistrict set gillnet 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, with assessment now being based on sonar estimates of abundance 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 for 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 goals were in place for the 2017 season; both large-fish SEGs were achieved.

In summary, the Kenai River Chinook salmon late-run stock have never failed to achieve its minimum escapement objective since enumeration 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 2017 UCI herring fishery produced a harvest of 28.2 short tons[8], with all of the harvest coming from the Upper Subdistrict (Appendix B8). This was the third largest herring harvest in UCI since the fishery reopened in 1998. A total of 9 permit holders reported fishing, which was slightly less than the average annual number of 11 participants per year from the previous 10 years (2007–2016). Although open to both set and drift gillnets, all of the harvest was taken by set gillnets. Samples of the harvest were obtained annually to assess age, weight, size and sex distribution (Appendix A19). In the Upper Subdistrict, 4 age classes dominated the population in 2017, comprising 82% of the 270 samples collected from 4 sample dates. The average by age-class was age 4 (9%), age 5 (28%), age 6 (23%), age 7 (19%), age 8 (12%), age 9 (7%) and age 10 (1%). 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 22.9 short tons, the estimated exvessel value of the 2017 commercial herring fishery was approximately $56,000.

COMMERCIAL SMELT FISHERY

From 1978 to 2017, commercial smelt harvests in UCI have ranged from 0.2 tons to 107 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. *Cook Inlet Smelt Fishery Management Plan*. In 2017, the total smelt harvest in UCI was only 9.3 tons, even though the harvest cap on the fishery had increased from 100 tons to 200 tons at the 2017 BOF meeting. It appears that much of the smelt run may have migrated up the Susitna River prior to harvesters arriving. 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 18,685 pounds, the estimated exvessel value was approximately $19,000.

Age-composition analyses (determined from otoliths) of samples collected from the 2006 to 2017 harvests show that age-4 smelt were the most abundant age class, ranging from 45% to 84% of the population (Appendix A20). The average fork length from the 2017 harvest of 183 mm was smaller than the average fork length of 199 mm from 2006 to 2016. Moreover, in 2017, of the 304 smelt sampled for age and length data, only 3 fish (<1%) were females. This was significantly less than the average of 41% females from all previous years (Appendix A20). It

[8] The Alaska Board of Fisheries requires that inseason catch and aerial survey biomass estimates be calculated and reported in short tons. The English short ton equals 2,000 lb or 907.2 kg.

should be noted that samples collected for age and size data are typically taken from a single date and therefore do not reflect temporal changes in these parameters. It is possible that the sample obtained in 2017 was temporally near the end of the smelt run, and thus the disparate sex and size discrepancies compared to other years.

Table 10.–Commercial smelt harvest, 1978, 1980, 1998–1999, and 2006–2017.

Year	Pounds	Tons	Permits
1978	300	0.2	NA
1980	4,000	2	NA
1998	18,610	9.3	<3
1999	100,000	50	NA
2006	90,783	45.4	8
2007	125,044	62.5	11
2008	127,365	63.7	6
2009	78,258	39.1	6
2010	126,135	63.1	3
2011	201,570	100.8	5
2012	195,910	98.0	4
2013	190,830	95.4	4
2014	198,814	99.4	4
2015	213,934	107.0	4
2016	191,536	95.8	4
2017	18,685	9.3	<3

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

The 2017 commercial razor clam harvest, taken primarily from the Polly Creek/Crescent River area, was approximately 177,000 lb in the shell (Appendices A23 and B9). A total of 16 diggers participated in the fishery. Harvest was reported from 62 different days from May 8 to July 28.

Diggers were paid an average of $0.66/lb for their harvest, resulting in an exvessel value for this fishery of approximately $117,000. The average clam size from the 2016 harvest was 129 mm, or 5.1 inches (Figure 12). The 2017 summer tide schedule can be found in Appendix A21.

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 for the personal consumptive needs of state residents not able to meet their needs in other fisheries. Since their creation, numerous changes have occurred in the personal use and subsistence fisheries in Cook Inlet, with many of the changes coming 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, with a separate permit 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 additional member. 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 2017 harvest in the Tyonek subsistence salmon fishery included 1,284 Chinook, 457 sockeye, 265 coho, 32 pink, and 6 chum salmon taken by 47 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 Non-Subsistence 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 occurs from July 15 through July 31 from 4:00 AM to 8:00 PM each Monday, Wednesday, and Friday during this timeframe. The 2017 Yentna River subsistence fisheries harvest included 454 sockeye, 185 coho, 47 pink, and 10 chum salmon taken by 26 permit holders (Appendix B15).

EDUCATIONAL FISHERIES

Educational fisheries first began in UCI in 1989 with the federal court-ordered subsistence fishery for the Kenaitze Indian Tribe (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 2017 was 12,639 fish. The average annual harvest from 1994 through 2016 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, Ninilchik Native Descendants, Ninilchik Emergency Services, Anchor Point 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 2017, the Kenaitze Tribe harvested 22 Chinook, 9,372 sockeye, 285 coho, and 90 pink salmon, for a total of 9,769 salmon (Appendix B16). From 1994 through 2016, the average annual harvest of all salmon by the Kenaitze Indian Tribe was 4,955 fish. The total fish harvest quota for this group is 10,000 fish.

In 1993, the Ninilchik Traditional Council (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 Ninilchik Native Descendants (NND), and requested a separate permit with similar goals of passing on traditional knowledge and providing food for needy 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 2017, the NTC harvested 48 Chinook, 873 sockeye, 482 coho, and 224 pink salmon. The NND reported a harvest of 31 Chinook, 220 sockeye, 55 coho, and 39 pink salmon (Appendix B16).

In 2003, another group from Ninilchik, the Ninilchik Emergency Services (NES), applied for and was granted an educational fishery. In 2017, the NES harvested 16 Chinook, 110 sockeye, 34 coho, and 20 pink salmon (Appendix B16).

The Anchor Point VFW applied for and was granted an educational fishery permit in 2007. They reported the following harvest from their 2017 fishing activities: 4 sockeye, 9 coho, and 7 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 7 sockeye, 58 coho, and 10 pink salmon in 2017 (Appendix B16).

The Kasilof Regional Historical Association applied for an educational permit beginning with the 2008 season. In 2017, they reported the following harvest: 27 sockeye and 42 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 2017 was 54 sockeye, 15 coho, and 12 pink salmon (Appendix B16).

NORTHERN DISTRICT EDUCATIONAL FISHERIES

In the Northern District of UCI, 5 groups have received permits for educational fisheries, these being 1) the Knik Tribal Council, 2) Big Lake Cultural Outreach, 3) Native Village of Eklutna, 4) Alaska's Territorial Homestead Lodge, operated by Tim O'Brien, and 6) Chickaloon Native Village (Appendix B16).

The Knik Tribal Council began an educational fishery in 1994 (Sweet et al. 2004). Its harvest in 2017 totaled 48 sockeye, 22 coho, 17 pink, and 12 chum salmon for an all species total of 99 fish. The peak harvest from this group of 823 fish occurred in 2003 (Appendix B16).

In 2017, Big Lake Cultural Outreach group, which first received a permit in 2004, reported harvesting 2 Chinook, 19 sockeye, 14 coho, 1 pink, and 13 chum salmon (Appendix B16).

The Native Village of Eklutna was also issued an educational fisheries permit beginning in 1994. They reported a harvest in 2017 of 128 sockeye, 3 coho, 9 pink, and 26 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 2017, the harvest from this fishery was 3 Chinook, 106 sockeye, 23 coho, 21 pink, and 6 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 2017.

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, along with a valid 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, with an additional 10 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.

The 2017 personal use harvest data can be found in Appendices A17 and A18, and all UCI personal use salmon harvests since 1996 are summarized in Appendix B17.

KASILOF RIVER GILLNET

The personal use fishery using gillnets at the mouth of the Kasilof River was opened from 6:00 AM on Thursday, June 15, until 11:00 PM on Saturday, June 24. For the second consecutive year, this fishery was prosecuted without any restrictions. For the 2017 season, 118 Chinook, 21,900 sockeye, 5 coho, 48 pink, and 43 chum salmon were harvested in this fishery. The average annual Chinook salmon harvest during the previous 10 years (2007 to 2016) was 133 fish, and the average annual sockeye salmon harvest during this time period was 22,048 fish (Appendix B17).

KASILOF RIVER DIP NET

The Kasilof River dip net fishery was open 24 hours per day from June 25 through August 7, 2017 (44 days), producing an estimated harvest of 78,260 sockeye salmon (Appendix A17). The previous 10-year (2007–2016) average annual harvest of sockeye salmon was 68,565 fish (Appendix B17). For the second consecutive year, the area open to dip netting at the Kasilof River was not expanded upstream to the highway bridge. Expansion of the area open to dip netting 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 2017 was estimated to be 297,000 fish (Appendix A17), which was the second smallest harvest since 2008 when 234,000 fish were harvested. The entry pattern of sockeye salmon into the Kenai River in 2017 was not conducive to large dip net harvests, as significant passage events took place late in the dip net season (Appendix A2; Appendix A18). The largest daily estimate of sockeye salmon passage in the Kenai River during the 2017 season was 71,904 fish on July 26 which occurred mid-week. 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 mid-week days. The average annual sockeye salmon harvest from the previous 10-year (2007–2016) was approximately 368,332 fish (Appendix B17).

UNKNOWN FISHERY

Households that failed to indicate which fishery they participated in were estimated as "unknown fishery" (Dunker 2016). In 2017, the total sockeye salmon harvest from all personal use fisheries categorized as "unknown" was 4,760. 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), *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 2017 season, the Division of Sport Fish issued an EO opening the Fish Creek personal use dip net fishery from July 26 to July 31. As stated in the EO, more than 16,770 sockeye salmon had passed through the Fish Creek weir as of July 23. Based on that weir count, a total escapement of more than 35,000 sockeye salmon was projected. The estimated harvest in 2017 was 4,894 sockeye salmon. By the end of the season, approximately 61,400 sockeye salmon were estimated to have escaped Big Lake in 2017 (Table 1; Appendix B10).

BELUGA RIVER SENIOR CITIZEN DIP NET FISHERY

Nine permit holders participated in the 2017 Beluga River senior citizen dip net fishery. The total harvest was 66 salmon (26 sockeye salmon, 36 coho salmon, and 4 pink salmon; Appendix A17).

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FIGURES

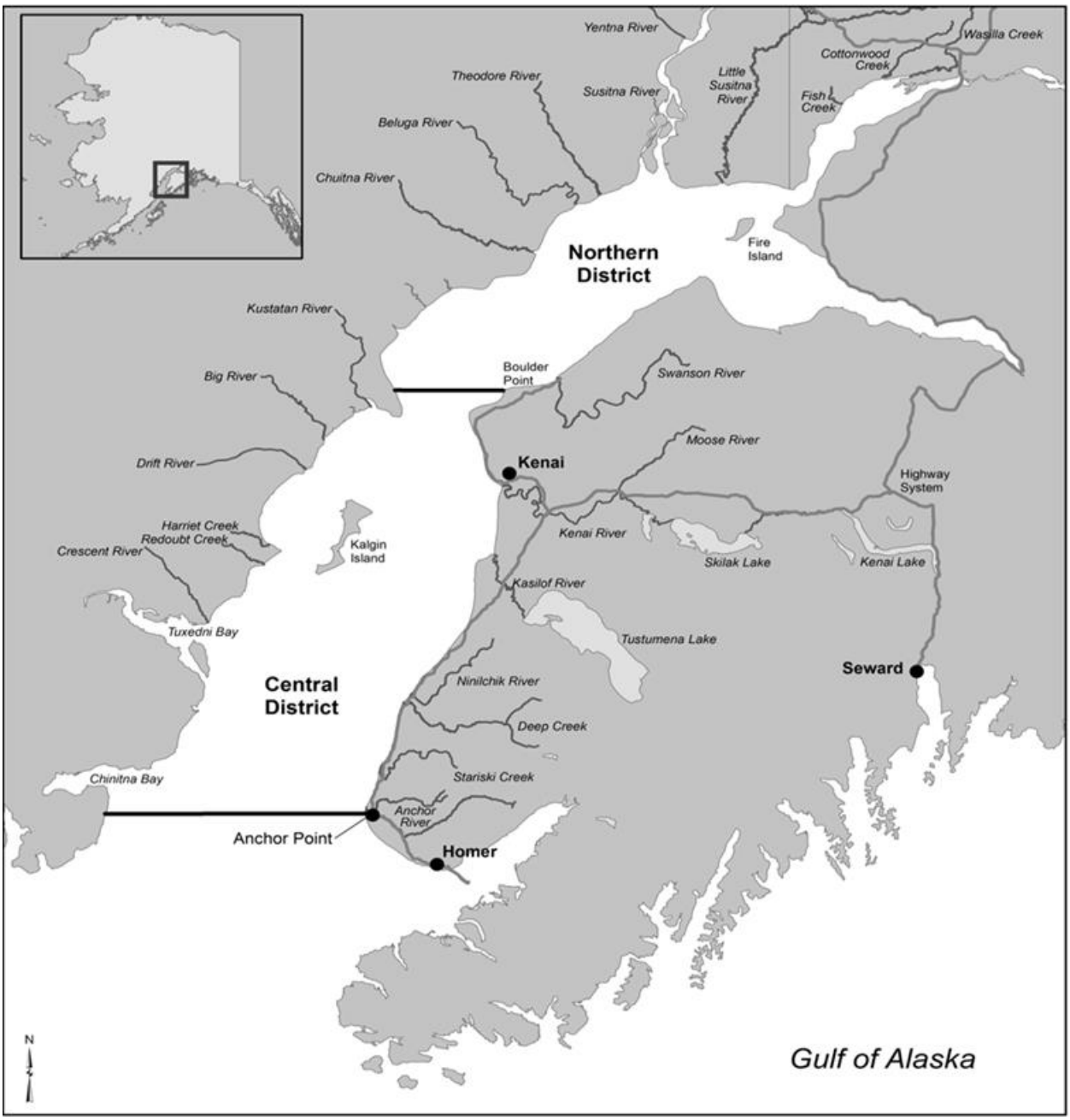


Figure 1.–Major tributaries of the Cook Inlet basin.

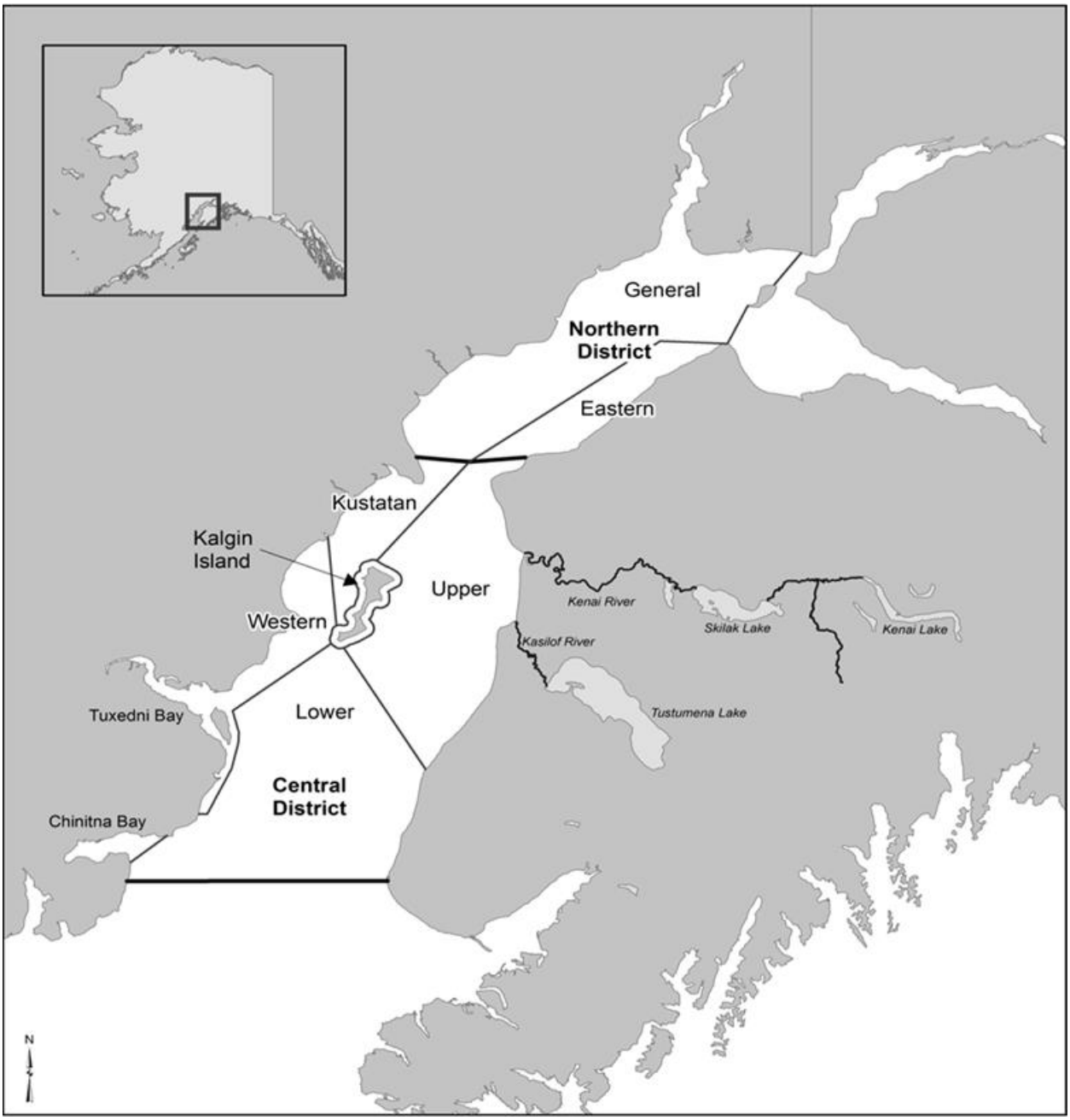


Figure 2.–Upper Cook Inlet commercial fisheries subdistrict fishing boundaries.

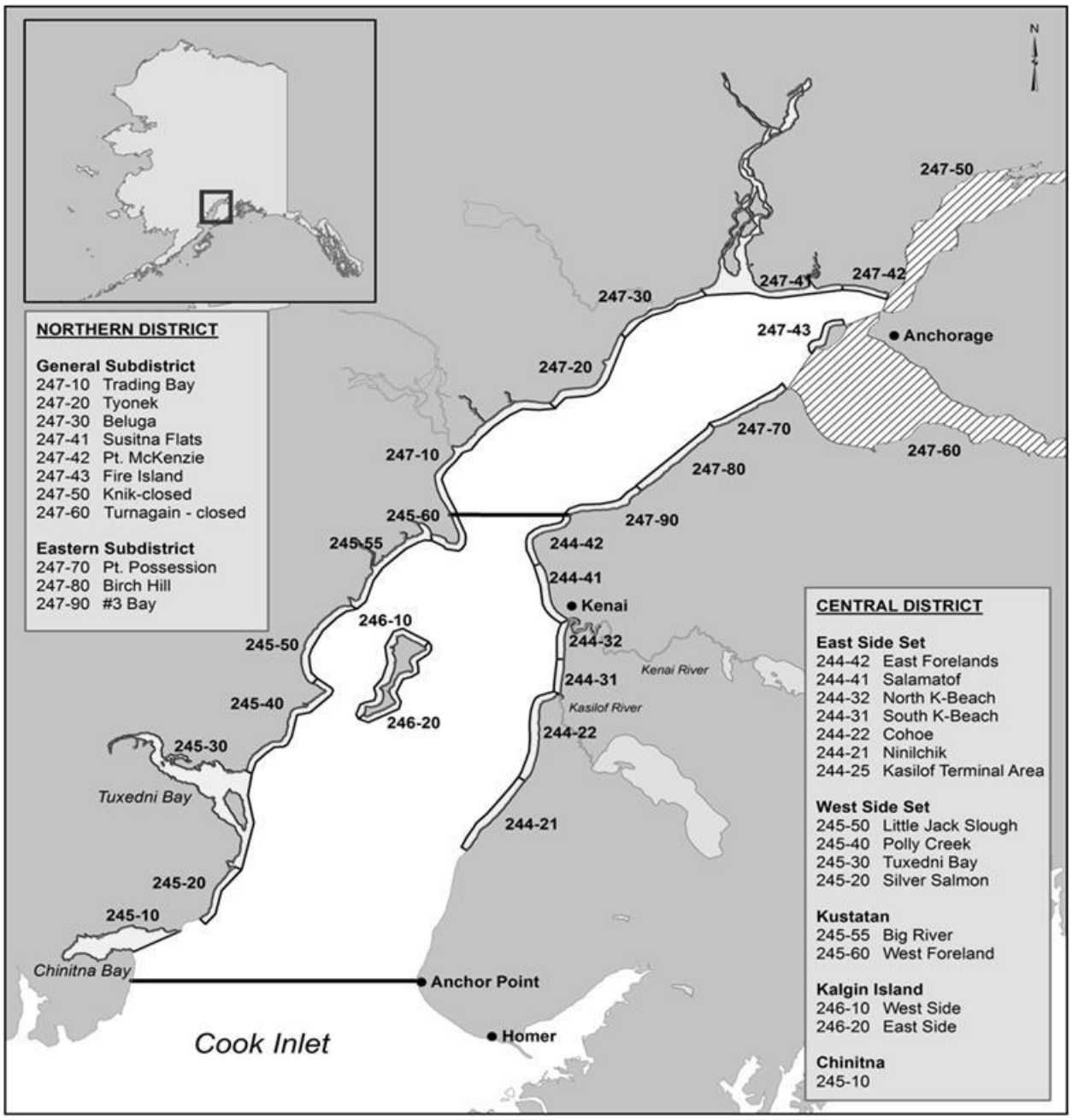


Figure 3.–Upper Cook Inlet commercial set gillnet statistical areas.

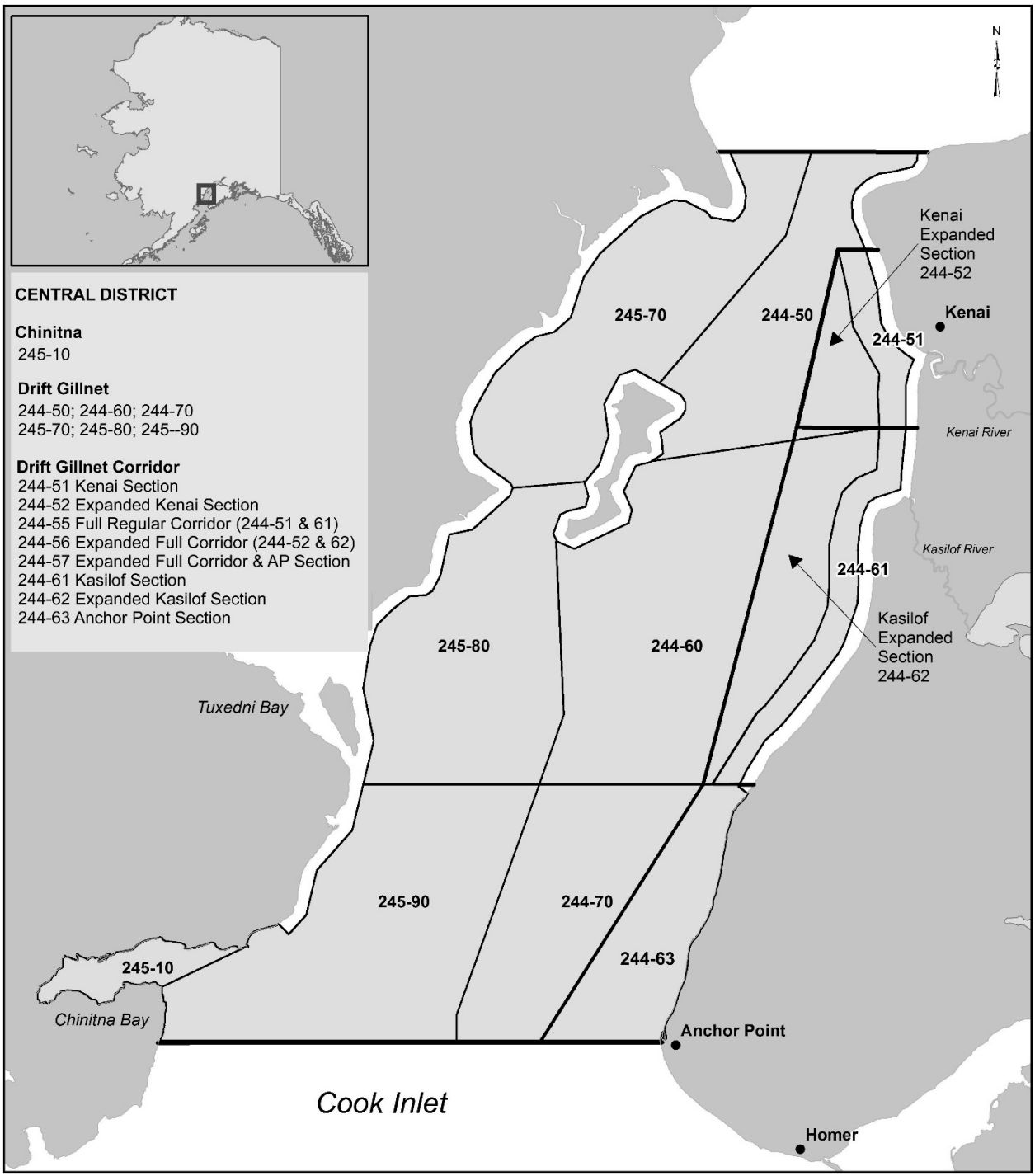


Figure 4.–Upper Cook Inlet commercial drift gillnet statistical areas.

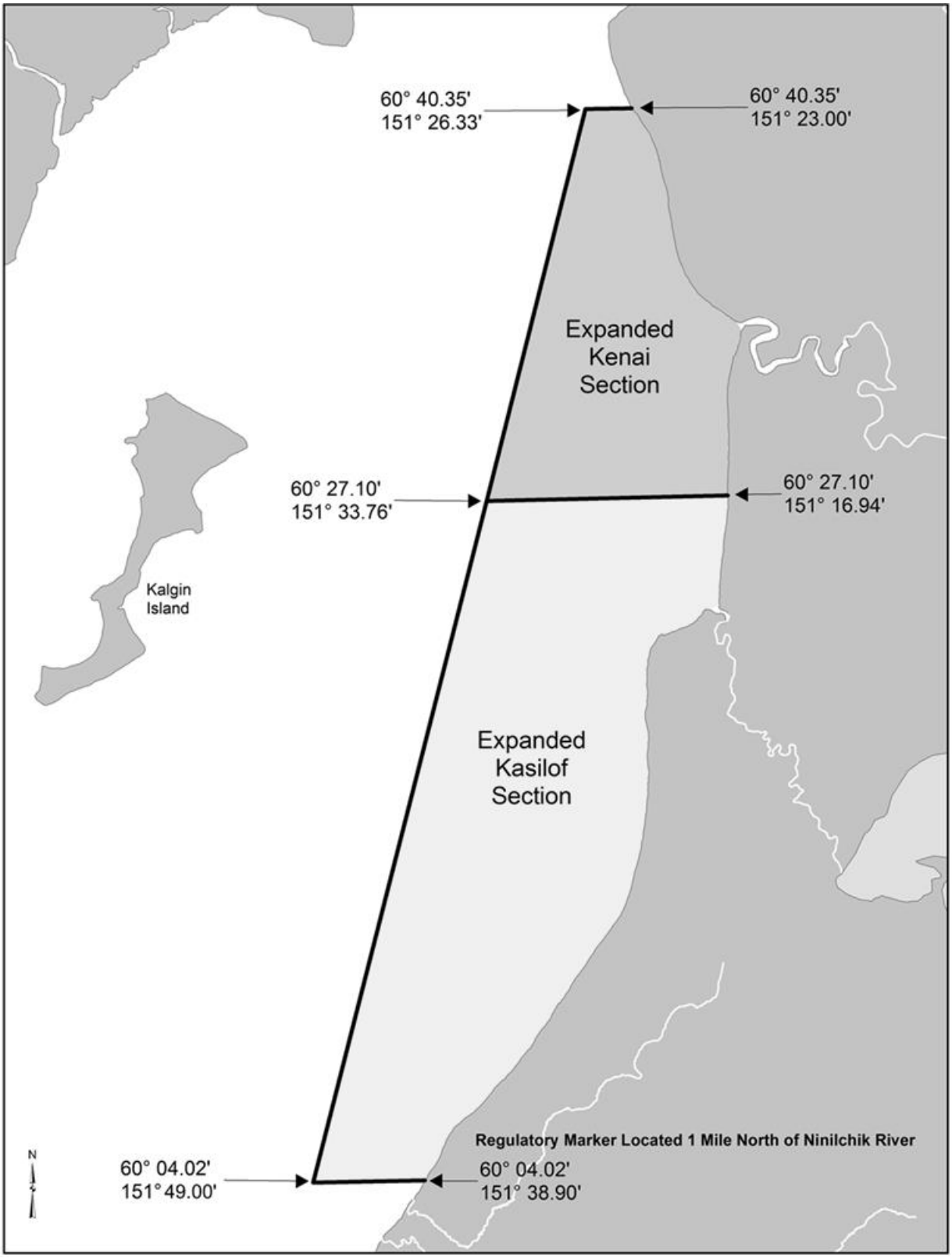


Figure 5.–Map of the Expanded Kenai and Expanded Kasilof sections with waypoint descriptions.

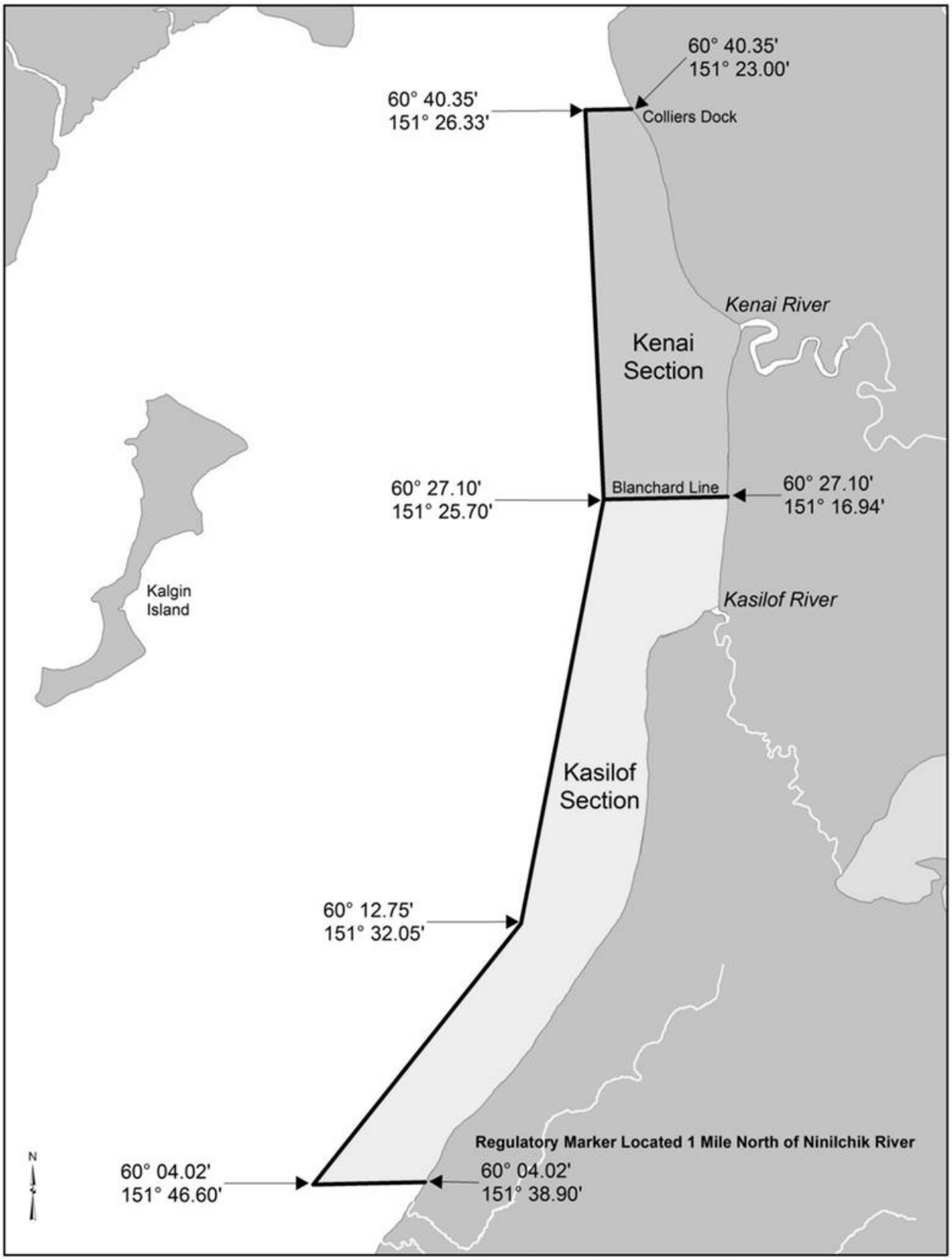


Figure 6.–Map of the Kenai and Kasilof Sections with waypoint descriptions.

	Week of June 18–24						
	Sun 18	Mon 19	Tue 20	Wed 21	Thu 22	Fri 23	Sat 24
Midnight							
1							
2							
3							
4							
5							
6							
7							**EO #3**
8							
9							
10							
11							
Noon							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							

EO #3 Kasilof Section from 7AM to 8PM on June 24

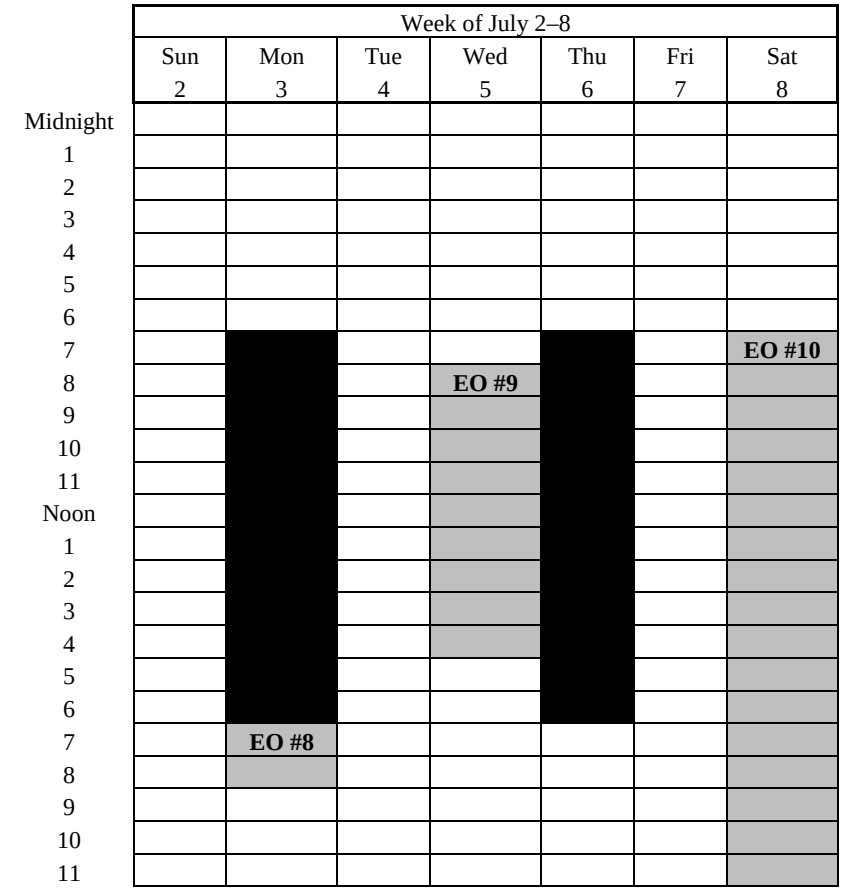
Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

	Week of June 25–July 1						
	Sun 25	Mon 26	Tue 27	Wed 28	Thu 29	Fri 30	Sat 1
Midnight							
1							
2							
3							
4							
5							
6							
7				**EO #5**			**EO #6**
8							
9							
10							
11							
Noon							
1							
2							
3							
4							
5							
6							
7		**EO #4**					**EO #7**
8							
9							
10							
11							

EO #4 Kasilof Section from 5AM to 2PM on June 29
EO #5 Kasilof Section from 7AM to 4PM on June 28
EO #6 Kasilof Section from 7AM to 7PM on July 1
EO #7 Kasilof Section from 7PM to 9PM on July 1

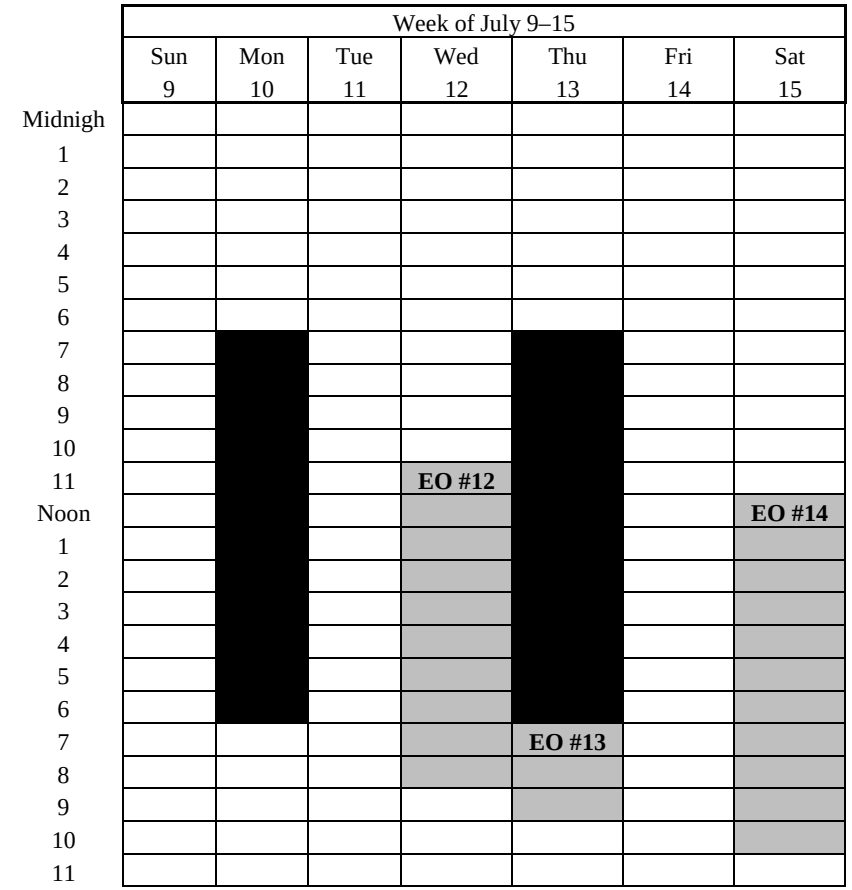
Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

Figure 7.–Hours fished in the Upper Subdistrict set gillnet fishery, 2017.



EO #8 Kasilof Section from 7PM to 9PM on July 3
EO #9 Kasilof Section from 8AM to 5PM on July 5
EO #10 Kasilof Section from 7AM to 12PM on July 8

Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing



EO #12 Ken/Kas/EF from 11AM to 9PM on July 12
EO #13 Ken/Kas/EF from 7PM to 10PM on July 13
EO #14 Ken/Kas/EF from 12noon to 11PM on July 15

Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

Figure 7.–Page 2 of 5.

	Week of July 16–22						
	Sun 16	Mon 17	Tue 18	Wed 19	Thu 20	Fri 21	Sat 22
Midnight							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
Noon							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							

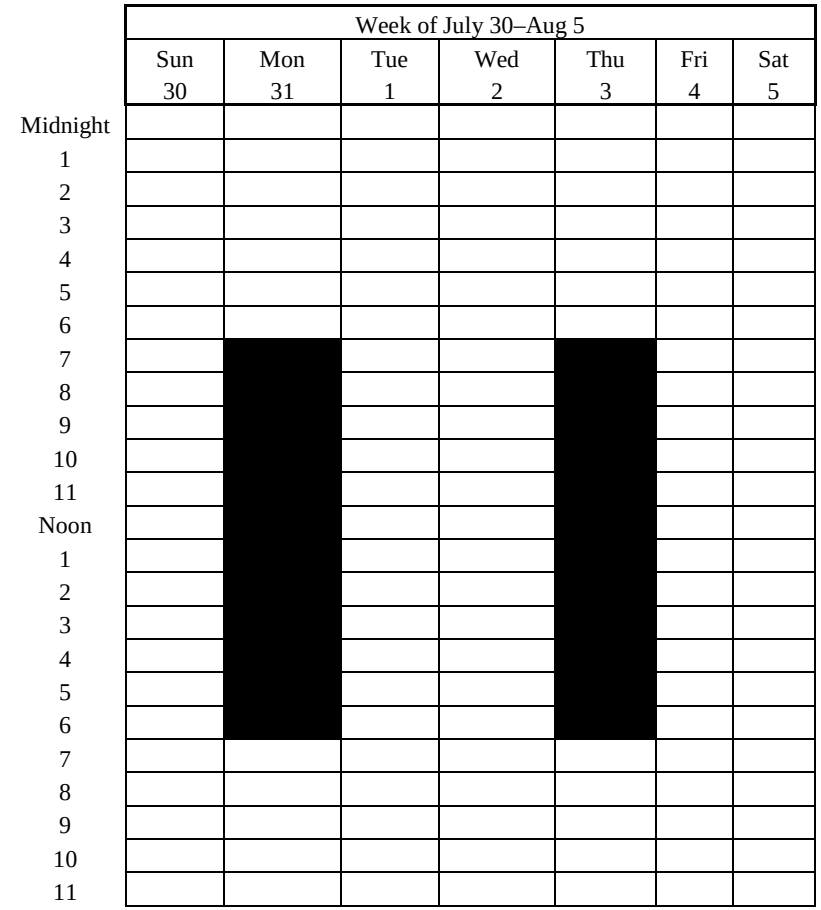
Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

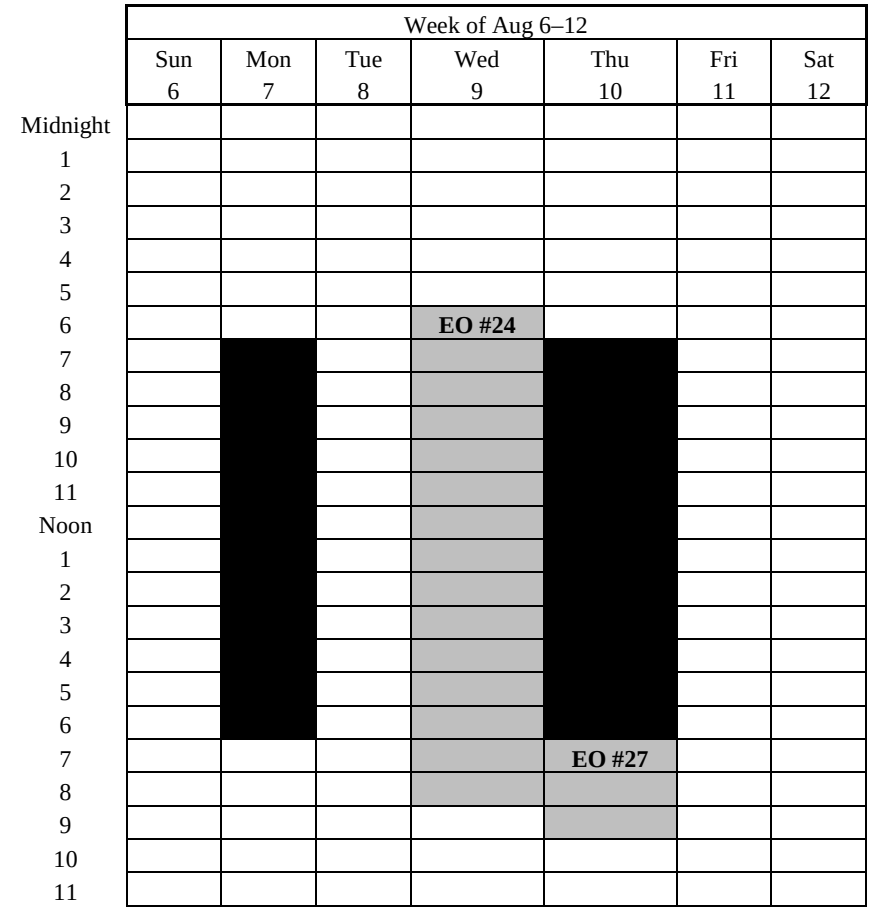
	Week of July 23–29						
	Sun 23	Mon 24	Tue 25	Wed 26	Thu 27	Fri 28	Sat 29
Midnight							
1							
2							
3							
4							
5							
6							
7							
8							
9							**EO #20**
10							
11							
Noon							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							

EO #20 Ken/Kas/EF from 9AM to 11PM on July 29

Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

Figure 7.–Page 3 of 5.





EO #24 Ken/Kas/EF from 6AM to 9PM on Aug 9
EO #27 Ken/Kas/EF from 7PM to 10PM on Aug 10

Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

Figure 7.–Page 4 of 5.

	Week of Aug 13–19						
	Sun 13	Mon 14	Tue 15	Wed 16	Thu 17	Fri 18	Sat 19
Midnight							
1							
2							
3							
4							
5							
6			**EO #30**				
7							
8							
9							
10							
11							
Noon							
1							
2							
3							
4							
5							
6							
7		**EO #30**					
8							
9							
10							
11							

EO #30 Kasilof Section 1/2 mile from 7PM to 11PM on Aug 14

EO #24 Kasilof Section 1/2 mile from 6AM to 7PM on Aug 15

Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

Figure 7.–Page 5 of 5.

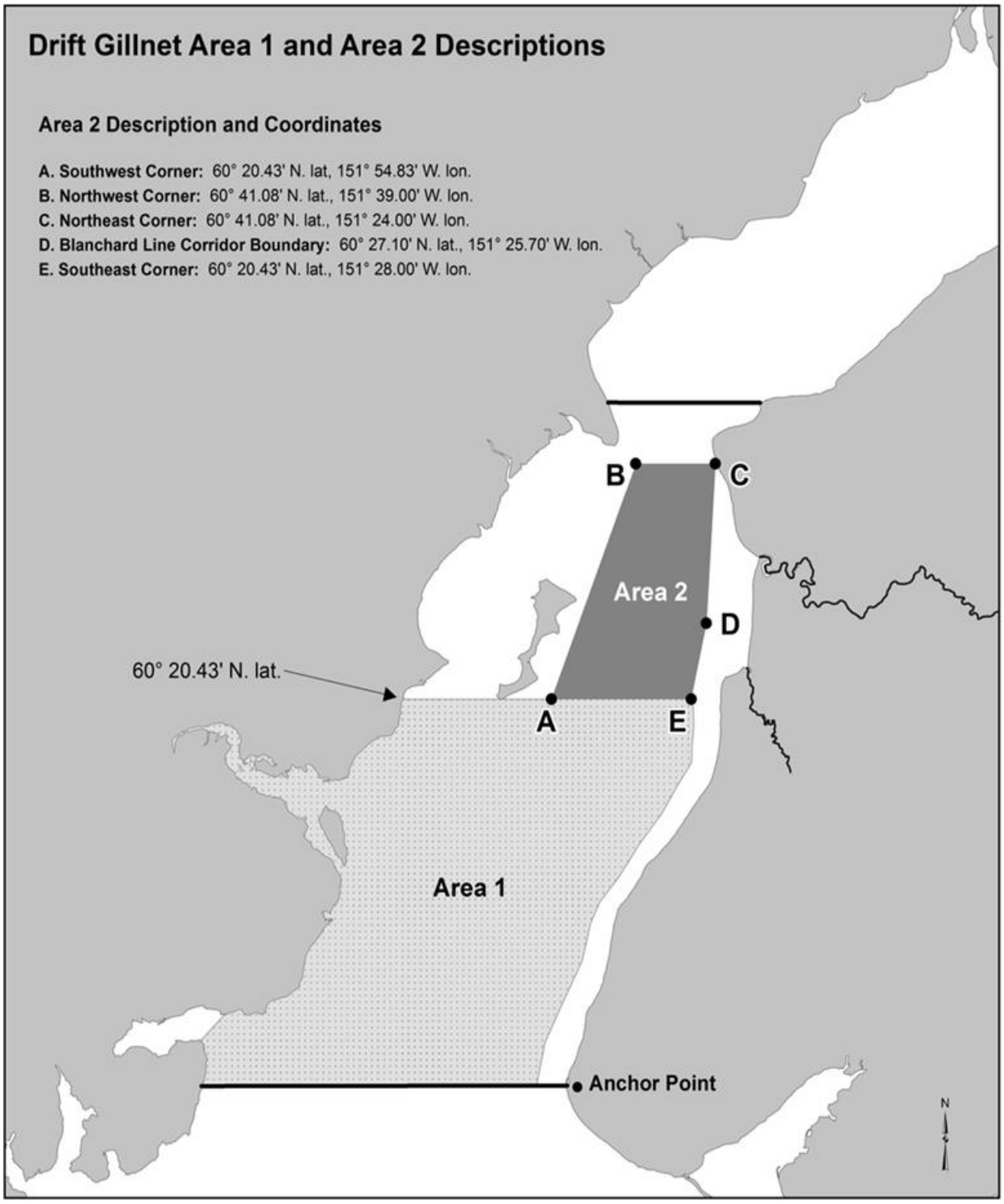


Figure 8.–Drift gillnet boundaries for fishing Areas 1 and 2.

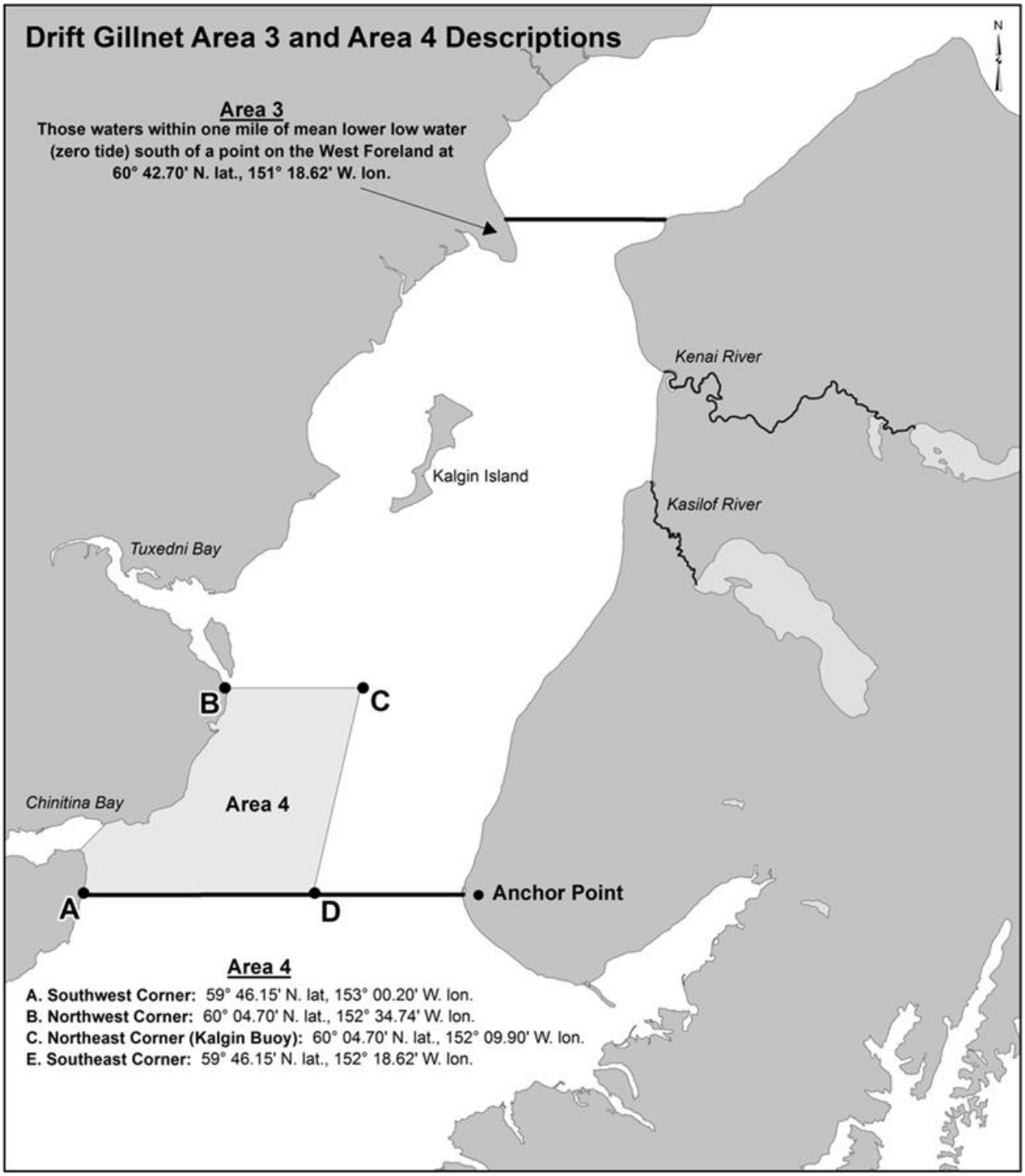


Figure 9.–Map of drift gillnet Areas 3 and 4.

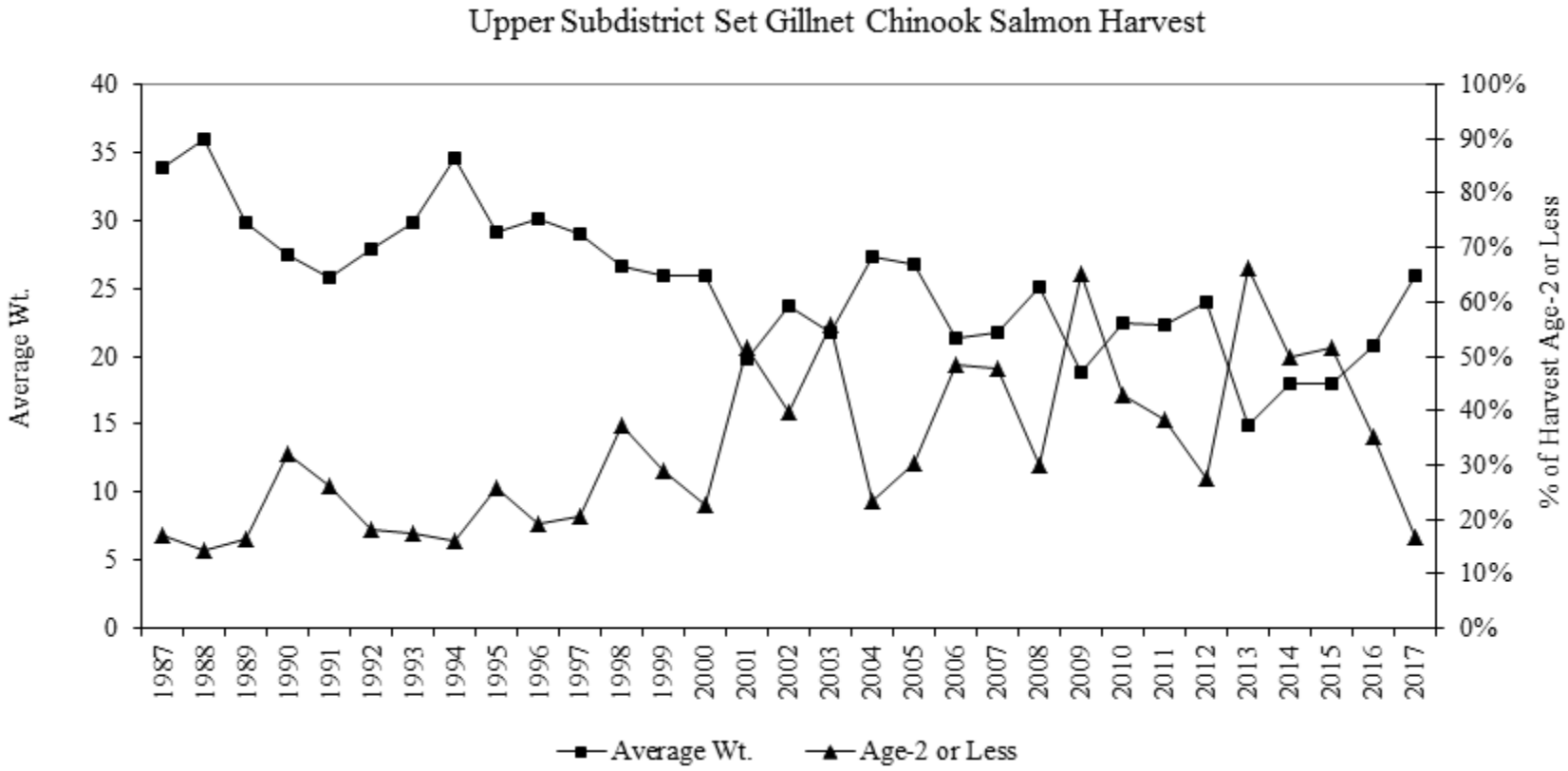


Figure 10.–Chinook salmon average weight (all fish) and percentage of the harvest composed of ocean-age-2 or less fish in the Upper Subdistrict set gillnet commercial fishery, 1987–2017.

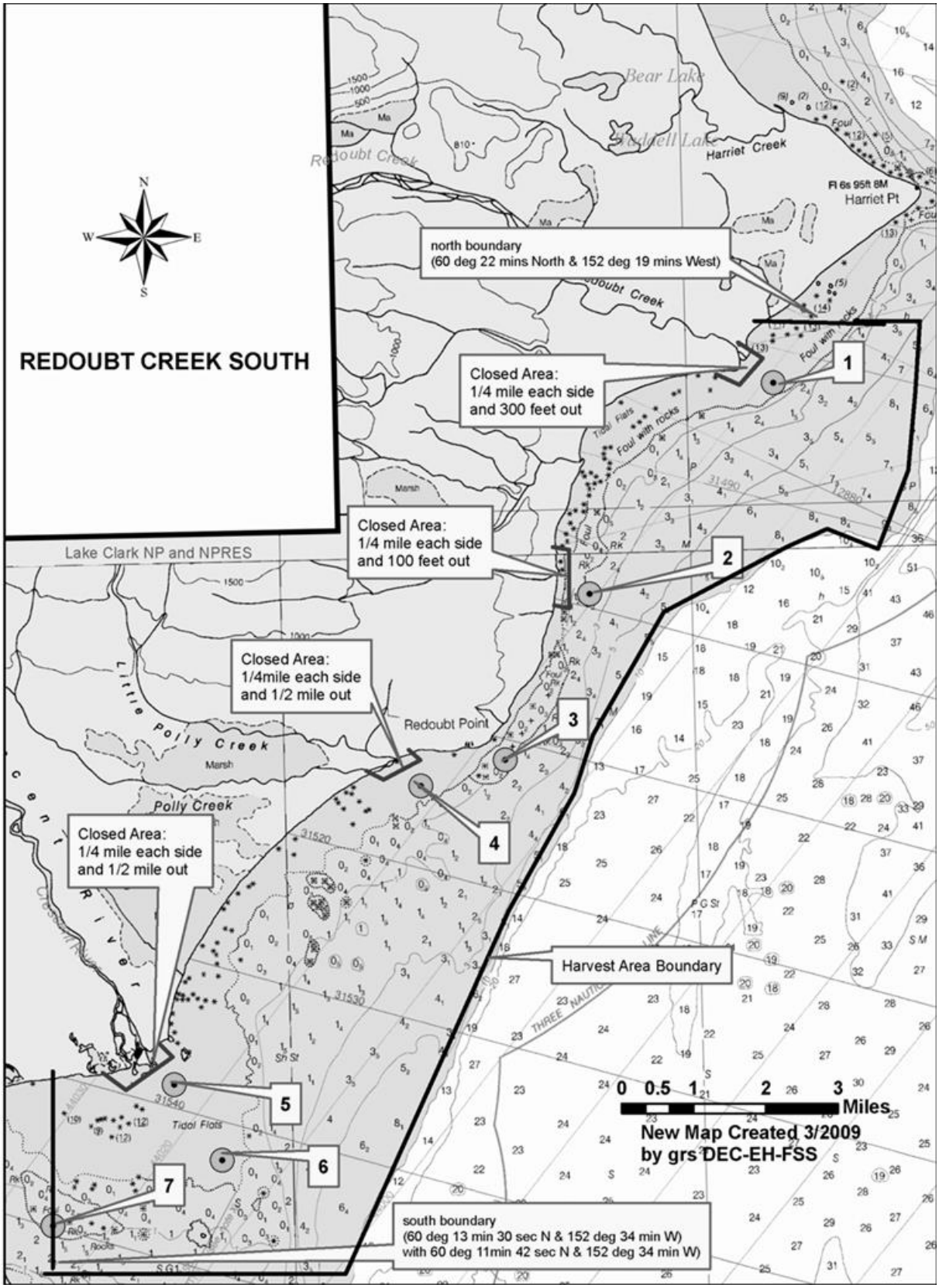


Figure 11.–Area open to the commercial razor clam fishery on the west side of Cook Inlet, Alaska.

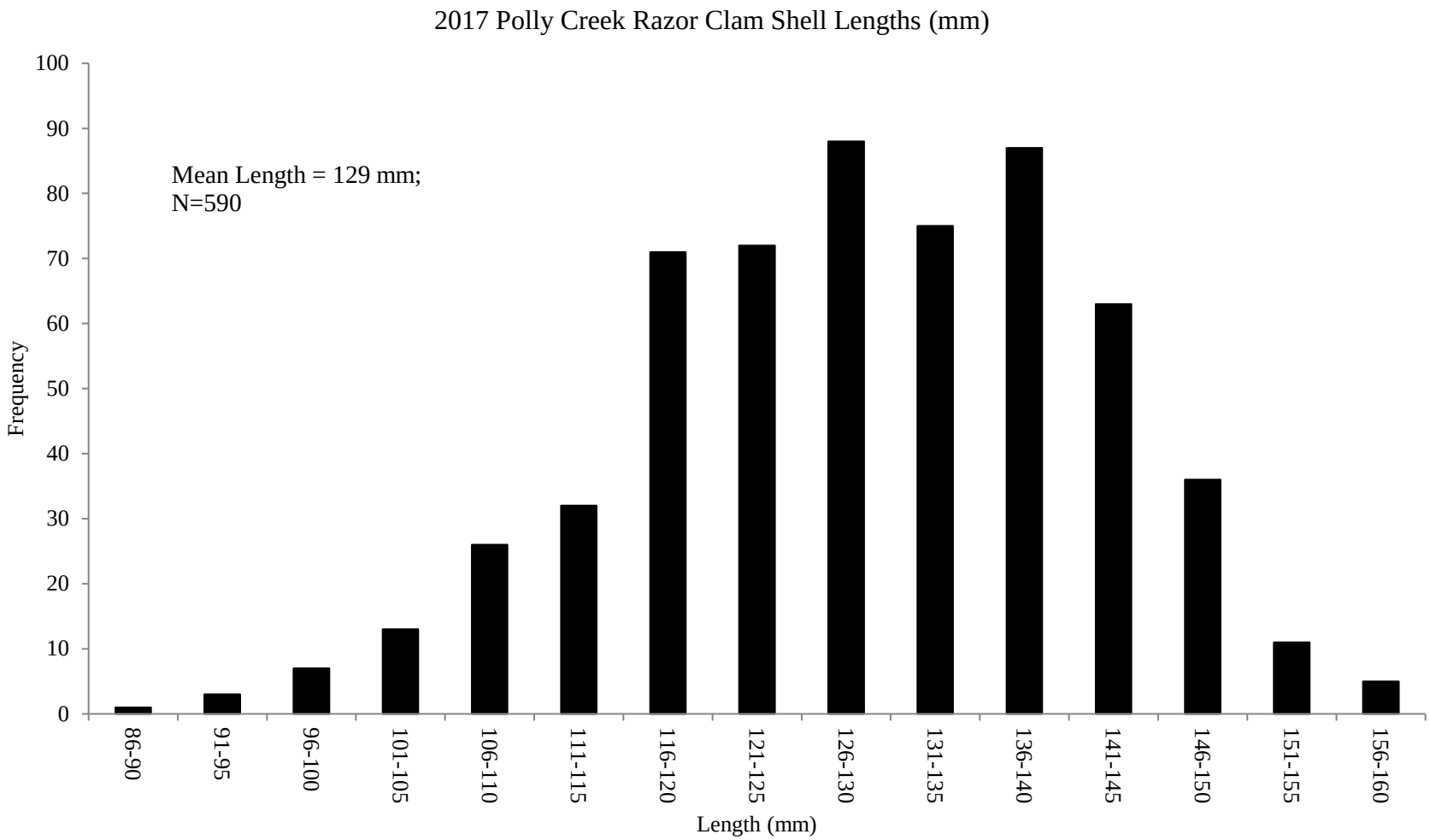


Figure 12.–Length frequency of razor clam shells sampled from the 2017 Polly Creek commercial razor clam fishery.

APPENDIX A: 2017 SEASON DATA

Appendix A1.–Offshore test fishery sockeye salmon catch results and environmental data, 2017.

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
7/1	6	222.0	37	37	28	28	530	9.2	14.6	31.4	0	–	0	–
7/2	6	221.0	74	111	57	85	547	9.1	12.2	31.0	5	SE	5	SE
7/3	6	216.0	29	140	24	110	528	9.4	14.3	30.6	0	–	9	SW
7/4	6	207.5	46	186	37	147	545	9.5	13.3	30.1	10	SW	0	–
7/5	6	224.0	69	255	55	201	544	10.0	16.0	31.7	0	–	0	–
7/6	6	228.5	64	319	49	251	547	9.6	13.5	30.4	SW	N	0	–
7/7	6	226.0	95	414	71	321	540	9.9	15.1	31.6	10	NW	10	SE
7/8	5[b]	187.0	55	469	40	361	547	9.9	13.5	30.4	–	–	10	NW
7/9	6	238.5	313	782	210	571	561	9.7	13.1	31.3	10	NE	5	NE
7/10	6	224.5	91	873	69	640	554	9.8	12.9	30.8	12	NE	0	–
7/11	6	248.5	328	1,201	216	856	562	10.2	15.8	30.7	12	SE	5	SW
7/12	4[b]	186.5	134	1,335	115	971	551	10.2	13.6	30.2	–	–	–	–
7/13	0[b]	0.0	0	1,335	68	1,038	–	–	–	–	–	–	–	–
7/14	6	229.0	61	1,396	45	1,083	558	10.3	12.8	30.3	18	SW	12	S
7/15	6	234.0	170	1,566	102	1,185	560	10.5	13.2	30.3	18	SW	12	SW
7/16	6	220.5	44	1,610	34	1,219	561	10.3	13.9	30.7	5	S	8	S
7/17	6	228.0	94	1,704	67	1,286	538	10.4	13.0	30.4	15	SW	3	W
7/18	5[b]	190.0	58	1,762	44	1,330	553	10.3	12.4	30.3	15	NE	–	–
7/19	0[b]	0.0	0	1,762	50	1,379	–	–	–	–	–	–	–	–
7/20	5[b]	191.5	73	1,835	55	1,435	548	10.0	14.2	30.7	–	–	12	NW
7/21	6	217.5	25	1,860	20	1,455	546	10.3	13.9	30.7	0	–	10	S
7/22	6	234.5	94	1,954	70	1,525	558	10.4	16.1	31.0	0	–	0	–
7/23	5[b]	164.0	100	2,054	98	1,623	554	10.4	13.8	29.6	15	SW	25	SW
7/24	0[b]	0.0	0	2,054	100	1,723	–	–	–	–	–	–	–	–
7/25	0[b]	0.0	0	2,054	100	1,823	–	–	–	–	–	–	–	–
7/26	6	227.0	127	2,181	94	1,916	546	10.5	12.2	30.7	17	SE	15	S
7/27	6	260.5	207	2,388	130	2,047	548	11.0	15.2	30.6	5	S	12	S
7/28	6	214.5	37	2,425	30	2,077	548	11.2	14.1	29.9	5	W	9	SW
7/29	6	228.0	84	2,509	61	2,138	550	10.7	13.9	30.5	10	NW	10	N
7/30	6	227.5	36	2,545	27	2,164	540	11.5	16.2	30.1	4	S	18	SW
7/31	6	227.5	41	2,586	30	2,194	547	11.5	16.4	29.7	15	SW	0	–

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

[b] Sockeye salmon indices were interpolated for days with missing statements.

Appendix A2.–Upper Cook Inlet sockeye salmon enumeration by watershed and date, 2017.

	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
15 Jun			5,586	5,586								
16 Jun			3,384	8,970								
17 Jun			6642	15,612								
18 Jun			7,770	23,382								
19 Jun			6,270	29,652								
20 Jun			4,648	34,300								
21 Jun			5,400	39,700								
22 Jun			4,100	43,800								
23 Jun			3,651	47,451								
24 Jun			3,074	50,525								
25 Jun			942	51,467								
26 Jun			3,185	54,652								
27 Jun			3,162	57,814								
28 Jun			3,210	61,024								
29 Jun			2,167	63,191								
30 Jun			3,876	67,067								
1 Jul	2,924	2,924	6,072	73,139								
2 Jul	4,088	7,012	1,770	74,909								
3 Jul	4,880	11,892	5,310	80,219								
4 Jul	8,652	20,544	3,444	83,663								
5 Jul	8,833	29,377	5,539	89,202								
6 Jul	5,676	35,053	2,436	91,638								
7 Jul	9,688	44,741	5,160	96,798	167	167					2	2
8 Jul	12,138	56,879	5,616	102,414	3	170					0	2
9 Jul	17,946	74,825	3,574	105,988	903	1,073					0	2
10 Jul	19,932	94,757	5,852	111,840	687	1,760					0	2
11 Jul	9,390	104,147	2,922	114,762	469	2,229					0	2
12 Jul	11,330	115,477	5,412	120,174	849	3,078					0	2
13 Jul	8,346	123,823	3,383	123,557	1,082	4,160					0	2
14 Jul	6,565	130,388	2,332	125,889	594	4,754					0	2
15 Jul	9,180	139,568	4,275	130,164	1,127	5,881					0	2

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	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	10,185	149,753	4,618	134,782	939	6,820					0	2
17 Jul	30,081	179,834	11,156	145,938	1,254	8,074	12	12			0	2
18 Jul	30,486	210,320	6,780	152,718	1,646	9,720	28	40			0	2
19 Jul	24,480	234,800	11,916	164,634	1,547	11,267	47	87			46	48
20 Jul	29,730	264,530	9,372	174,006	1,667	12,934	86	173			125	173
21 Jul	27,450	291,980	4,677	178,683	1,707	14,641	117	290			140	313
22 Jul	14,280	306,260	5,478	184,161	944	15,585	100	390			45	358
23 Jul	27,864	334,124	5,982	190,143	1,162	16,747	229	619			243	601
24 Jul	48,467	382,591	7,674	197,817	253	17,000	461	1,080			95	696
25 Jul	59,951	442,542	10,656	208,473	433	17,433	311	1,391			222	918
26 Jul	71,904	514,446	14,316	222,789	975	18,408	455	1,846			1,285	2,203
27 Jul	66,624	581,070	15,521	238,310	527	18,935	639	2,485	1	1	889	3,092
28 Jul	53,887	634,957	16,480	254,790	724	19,659	682	3,167	132	133	608	3,700
29 Jul	56,765	691,722	6,924	261,714	169	19,828	1,005	4,172	694	827	279	3,979
30 Jul	25,104	716,826	3,985	265,699	12	19,840	1,624	5,796	593	1,420	1,227	5,206
31 Jul	30,523	747,349	7,506	273,205	3	19,843	1,272	7,068	1,057	2,477	1,215	6,421
1 Aug	30,222	777,571	3,912	277,117	3,160	23,003	1,045	8,113	1,022	3,499	1,014	7,435
2 Aug	13,064	790,635	5,358	282,475	5,049	28,052	1,219	9,332	916	4,415	480	7,915
3 Aug	23,180	813,815	5,760	288,235	7,918	35,970	1,503	10,835	1,083	5,498	2,260	10,175
4 Aug	20,405	834,220	5,502	293,737	5,083	41,053	1415	12,250	1,198	6,696	858	11,033
5 Aug	17,137	851,357	7,008	300,745	1,753	42,806	787	13,037	848	7,544	1,053	12,086
6 Aug	32,544	883,901	7,248	307,993	849	43,655	1,010	14,047	2,380	9,924	2,058	14,144
7 Aug	56,283	940,184	6,420	314,413	2,774	46,429	972	15,019	2,133	12,057	983	15,127
8 Aug	30,678	970,862	3,323	317,736	1,772	48,201	1045	16,064	1,509	13,566	1,217	16,344
9 Aug	13,072	983,934	3,876	321,612	1,181	49,382	1406	17,470	1,259	14,825	1,333	17,677
10 Aug	8,620	992,554	3,210	324,822	1,013	50,395	1263	18,733	2,225	17,050	892	18,569
11 Aug	13,168	1,005,722	3,296	328,118	978	51,373	832	19,565	1,223	18,273	1,124	19,693
12 Aug	18,558	1,024,280	4,554	332,672	553	51,926	895	20,460	1,485	19,758	1,019	20,712
13 Aug	30,833	1,055,113	3,642	336,314	1,103	53,029	739	21,199	1,109	20,867	845	21,557
14 Aug	35,256	1,090,369	3,894	340,208	2,001	55,030	978	22,177	1,553	22,420	476	22,033
15 Aug	21,046	1,111,415	2,349	342,557	1,314	56,344	863	23,040	1,176	23,596	988	23,021

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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	16,629	1,128,044	2,982	345,539	1,266	57,610	643	23,683	1,037	24,633	1,529	24,550
17 Aug	30,362	1,158,406	4,193	349,732	675	58,285	603	24,286	1,002	25,635	698	25,248
18 Aug	33,151	1,191,557	3,894	353,626	682	58,967	403	24,689	959	26,594	950	26,198
19 Aug	32,187	1,223,744	3,179	356,805	331	59,298	436	25,125	2,122	28,716	709	26,907
20 Aug	23,203	1,246,947	1,919	358,724	471	59,769	424	25,549	879	29,595	812	27,719
21 Aug	20,586	1,267,533			331	60,100	485	26,034	1,310	30,905	719	28,438
22 Aug	12,087	1,279,620			179	60,279	452	26,486	1,220	32,125	817	29,255
23 Aug	12,268	1,291,888			98	60,377	240	26,726	541	32,666	681	29,936
24 Aug	16,610	1,308,498			167	60,544	260	26,986	1,174	33,840	431	30,367
25 Aug					112	60,656			596	34,436	293	30,660
26 Aug					93	60,749			379	34,815	458	31,118
27 Aug					145	60,894			300	35,115	399	31,517
28 Aug					89	60,983			305	35,420	265	31,782
29 Aug					73	61,056			311	35,731	84	31,866
30 Aug					115	61,171						
31 Aug					64	61,235						
1 Sep					44	61,279						
2 Sep					27	61,306						
3 Sep					49	61,355						
4 Sep					42	61,397						
5 Sep					21	61,418						
6 Sep					14	61,432						
7 Sep					10	61,442						
8 Sep					6	61,448						
9 Sep					3	61,451						
10 Sep					3	61,454						
11 Sep					2	61,456						
12 Sep					3	61,459						
13 Sep					3	61,462						
14 Sep					3	61,465						
15 Sep					1	61,466						
16 Sep					3	61,469						

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, 2017.

Upper Subdistrict Set Gillnet														
	244-21 Ninilchik		244-22 Cohoe		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
24 Jun	21	21	20	20	13	13							54	54
26 Jun	26	47	22	42	18	31							66	120
28 Jun	7	54	15	57	9	40							31	151
29 Jun	16	70	13	70	16	56							45	196
1 Jul	16	86	20	90	29	85							65	261
3 Jul	44	130	45	135	27	112							116	377
5 Jul	27	157	21	156	15	127							63	440
6 Jul	56	213	32	188	21	148							109	549
8 Jul	66	279	64	252	43	191							173	722
10 Jul	106	385	27	279	23	214	39	39	122	122	5	5	322	1,044
12 Jul	51	436	43	322	44	258	42	81	125	247	1	6	306	1,350
13 Jul	99	535	67	389	57	315	65	146	226	473	6	12	520	1,870
15 Jul	80	615	45	434	53	368	60	206	170	643	3	15	411	2,281
17 Jul	73	688	62	496	78	446	61	267	188	831	7	22	469	2,750
20 Jul	27	715	64	560	99	545	122	389	172	1,003	8	30	492	3,242
29 Jul	27	742	35	595	86	631	67	456	341	1,344	16	46	572	3,814
31 Jul	28	770	24	619	65	696	62	518	178	1,522		46	357	4,171
3 Aug	37	807	11	630	43	739	59	577	99	1,621	1	47	250	4,421
7 Aug	6	813	19	649	17	756	22	599	76	1,697	1	48	141	4,562
9 Aug	9	822	13	662	17	773	15	614	54	1,751	1	49	109	4,671
10 Aug	10	832	15	677	12	785	16	630	26	1,777	1	50	80	4,751
14 Aug	2	834	6	683	4	789	2	632	5	1,782	1	51	20	4,771
15 Aug	3	837		683	5	794		632		1,782		51	8	4,779

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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		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
2 Jun											25	25			12	12			37	37
5 Jun											7	32			46	58			53	90
7 Jun											26	58			50	108			76	166
9 Jun											20	78			43	151			63	229
12 Jun											10	88			19	170			29	258
14 Jun											8	96			6	176			14	272
16 Jun															4	180			4	276
19 Jun					6	6									13	193			19	295
21 Jun															6	199			6	301
22 Jun					4	10													4	305
23 Jun															5	204			5	310
26 Jun					4	14									2	206			6	316
29 Jun					2	16													2	318
3 Jul					21	37			1	1					2	208			24	342
6 Jul					6	43									2	210			8	350
10 Jul					6	49									6	216			12	362
13 Jul					8	57									1	217			9	371
15 Jul					3	60													3	374
17 Jul					3	63									1	218			4	378
20 Jul					2	65									5	223	1	1	8	386
27 Jul															1	224			1	387

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Northern District Set Gillnet

Date	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 Total	
	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
29 May	36	36	81	81			4	4	23	23	62	62	35	35	13	13	3	3	257	257
5 Jun	291	327	97	178			7	11	80	103	111	173	151	186	25	38	4	7	766	1,023
12 Jun	160	487	287	465			28	39	33	136	99	272	88	274	24	62	17	24	736	1,759
19 Jun	37	524	107	572			14	53	37	173	43	315	27	301	3	65	4	28	272	2,031
26 Jun	6	530	56	628							3	318	8	309	2	67	1	29	76	2,107
29 Jun	13	543	17	645	2	2					1	319	9	318	3	70	1	30	46	2,153
3 Jul			1	646	4	6			3	176	1	320	13	331			3	33	25	2,178
6 Jul	2	545	8	654	1	7	1	54					1	332	1	71	2	35	16	2,194
10 Jul			5	659					2	178	2	322	1	333					10	2,204
13 Jul			9	668											1	72			10	2,214
17 Jul			1	669			1	55	1	179			3	336					6	2,220
20 Jul																				2,220
24 Jul			1	670													1	36	2	2,222
27 Jul															1	73			1	2,223
31 Jul									1	180							1	37	2	2,225
1 Aug																				2,225
2 Aug																				2,225
3 Aug																	1	38	1	2,226
7 Aug															1	74			1	2,227
10 Aug															1	75			1	2,228
14 Aug																				2,228
17 Aug																				2,228
21 Aug																	1	39	1	2,229
24 Aug																				2,229
28 Aug							1	56											1	2,230

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Central District Drift Gillnet

		244-56 Exp. Ken/Kas		244-57 Exp. Ken/Kas & A.P.		244-60 District Wide		244-61 Kas. Section		245-10 Chinitna Bay		Total	
Date	Deliveries	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
06/19	46					4	4					4	4
06/22	89					11	15					11	15
06/24	10							2	2			2	17
06/26	123					16	31					16	33
06/29	90					12	43					12	45
07/01	54							3	5			3	48
07/03	306					18	61					18	66
07/05	38							2	7			2	68
07/06	346					38	99					38	106
07/08	95							13	20			13	119
07/10	376					7	106					7	126
07/12	191	23	23									23	149
07/13	380					19	125					19	168
07/15	352	16	39									16	184
07/17	382	19	58									19	203
07/20	370	26	84									26	229
07/29	341			15	15							15	244
07/31	328					4	129					4	248
08/03	283					4	133					4	252
08/07	229					1	134					1	253
08/09	117			6	21							6	259
08/14	74					1	135					1	260
08/18	18									1	1	1	261
08/21	17					1	136					1	262
08/24	19					1	137					1	263
09/07	8					1	138					1	264

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

Appendix A4.–Commercial sockeye salmon harvest by area and date, Upper Cook Inlet, 2017.

Upper Subdistrict - Set Gillnet														
	244-21 Ninilchik		244-22 Cohoe		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
24 Jun	7,437	7,437	2,572	2,572	3,040	3,040							13,049	13,049
26 Jun	9,964	17,401	5,799	8,371	5,290	8,330							21,053	34,102
28 Jun	3,250	20,651	2,097	10,468	2,533	10,863							7,880	41,982
29 Jun	5,250	25,901	2,053	12,521	1,738	12,601							9,041	51,023
1 Jul	9,930	35,831	3,829	16,350	7,282	19,883							21,041	72,064
3 Jul	12,152	47,983	7,121	23,471	6,567	26,450							25,840	97,904
5 Jul	10,434	58,417	2,760	26,231	2,929	29,379							16,123	114,027
6 Jul	13,637	72,054	4,840	31,071	2,865	32,244							21,342	135,369
8 Jul	17,396	89,450	10,250	41,321	6,184	38,428							33,830	169,199
10 Jul	22,021	111,471	8,395	49,716	3,150	41,578	3,139	3,139	6,165	6,165	1,700	1,700	44,570	213,769
12 Jul	23,649	135,120	8,321	58,037	2,973	44,551	2,432	5,571	4,172	10,337	949	2,649	42,496	256,265
13 Jul	20,070	155,190	8,658	66,695	2,393	46,944	2,679	8,250	3,991	14,328	987	3,636	38,778	295,043
15 Jul	24,599	179,789	14,298	80,993	4,406	51,350	4,397	12,647	6,947	21,275	1,314	4,950	55,961	351,004
17 Jul	36,513	216,302	16,824	97,817	14,643	65,993	15,689	28,336	39,023	60,298	5,944	10,894	128,636	479,640
20 Jul	20,662	236,964	12,589	110,406	8,897	74,890	9,590	37,926	30,803	91,101	5,911	16,805	88,452	568,092
29 Jul	17,731	254,695	13,408	123,814	5,018	79,908	5,052	42,978	24,324	115,425	3,599	20,404	69,132	637,224
31 Jul	9,100	263,795	4,977	128,791	4,188	84,096	5,721	48,699	16,151	131,576	3,169	23,573	43,306	680,530
3 Aug	16,383	280,178	8,255	137,046	5,731	89,827	5,429	54,128	8,040	139,616	3,756	27,329	47,594	728,124
7 Aug	5,943	286,121	5,884	142,930	3,291	93,118	4,117	58,245	13,813	153,429	4,772	32,101	37,820	765,944
9 Aug	4,118	290,239	3,713	146,643	2,303	95,421	2,365	60,610	3,099	156,528	1,178	33,279	16,776	782,720
10 Aug	6,369	296,608	6,499	153,142	3,253	98,674	4,270	64,880	5,148	161,676	1,792	35,071	27,331	810,051
14 Aug	2,563	299,171	2,981	156,123	1,223	99,897	2,463	67,343	6,300	167,976	1,728	36,799	17,258	827,309
15 Aug	1,852	301,023	1,562	157,685	1,497	101,394							4,911	832,220

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Central District - West Side Set Gillnet

	245-10 Chinitna Bay		245-30 Tuxedni Bay		245-50 L. J. Slough		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
2 Jun							530	530			976	976			1,506	1,506
5 Jun							537	1,067			791	1,767			1,328	2,834
7 Jun							666	1,733			1,195	2,962			1,861	4,695
9 Jun							613	2,346			3,039	6,001			3,652	8,347
12 Jun							360	2,706			1,538	7,539			1,898	10,245
14 Jun							265	2,971			469	8,008			734	10,979
16 Jun											775	8,783			775	11,754
19 Jun			1,022	1,022	45	45	269	3,240			1,301	10,084			2,637	14,391
21 Jun							184	3,424			783	10,867			967	15,358
22 Jun			452	1,474											452	15,810
23 Jun							75	3,499			301	11,168			376	16,186
26 Jun			455	1,929			52	3,551			479	11,647	108	108	1,094	17,280
29 Jun			343	2,272							253	11,900	22	130	618	17,898
3 Jul			1,518	3,790	26	71					488	12,388	212	342	2,244	20,142
6 Jul			1,508	5,298	94	165					1,539	13,927	354	696	3,495	23,637
10 Jul			2,307	7,605	215	380					1,604	15,531	309	1,005	4,435	28,072
13 Jul			2,313	9,918	320	700					1,575	17,106	330	1,335	4,538	32,610
15 Jul			3,323	13,241											3,323	35,933

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Central District - West Side Set Gillnet

	245-10 Chinitna Bay		245-30 Tuxedni Bay		245-50 L. J. Slough		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
17 Jul			2,795	16,036	451	1,151	125	3,676	69	69	2,790	19,896	819	2,154	7,049	42,982
20 Jul			1,241	17,277	127	1,278	94	3,770	193	262	2,623	22,519	396	2,550	4,674	47,656
22 Jul			1,402	18,679											1,402	49,058
24 Jul			879	19,558	183	1,461					709	23,228			1,771	50,829
27 Jul	2	2	1,749	21,307	456	1,917			90	352	2,729	25,957	1,072	3,622	6,098	56,927
29 Jul			1,744	23,051											1,744	58,671
31 Jul			968	24,019	423	2,340			28	380	1,330	27,287	389	4,011	3,138	61,809
3 Aug			577	24,596	377	2,717			15	395	960	28,247	748	4,759	2,677	64,486
5 Aug			1,464	26,060											1,464	65,950
7 Aug			778	26,838	475	3,192					2,387	30,634	1,233	5,992	4,873	70,823
10 Aug			54	26,892	419	3,611					3,327	33,961	1,178	7,170	4,978	75,801
14 Aug			69	26,961	254	3,865					1,424	35,385	221	7,391	1,968	77,769
17 Aug											1,447	36,832	230	7,621	1,677	79,446
21 Aug													214	7,835	214	79,660
24 Aug													128	7,963	128	79,788

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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
29 May			3	3					4	4	15	15	113	113	63	63	103	103	301	301
5 Jun	89	89	6	9			10	10	44	48	46	61	1,110	1,223	803	866	427	530	2,535	2,836
12 Jun	138	227	7	16			12	22	15	63	57	118	325	1,548	268	1,134	403	933	1,225	4,061
19 Jun	18	245	25	41			5	27	4	67	9	127	221	1,769	30	1,164	120	1,053	432	4,493
26 Jun	22	267	139	180			4	31			1	128	144	1,913	106	1,270	361	1,414	777	5,270
29 Jun	32	299	43	223							5	133	76	1,989	87	1,357	100	1,514	343	5,613
3 Jul	60	359	670	893	10	10			38	105	42	175	813	2,802	485	1,842	1233	2,747	3,351	8,964
6 Jul	51	410	888	1,781	28	38	102	133	69	174	24	199	841	3,643	567	2,409	517	3,264	3,087	12,051
10 Jul	105	515	1,876	3,657	15	53	137	270	325	499	389	588	981	4,624	552	2,961	442	3,706	4,822	16,873
13 Jul	62	577	1,134	4,791	36	89	270	540	380	879	159	747	457	5,081	312	3,273	289	3,995	3,099	19,972
17 Jul	19	596	2,659	7,450	656	745	538	1,078	254	1,133	209	956	1,113	6,194	955	4,228	1459	5,454	7,862	27,834
20 Jul	13	609	851	8,301	350	1,095	659	1,737	687	1,820	175	1,131	871	7,065	894	5,122	490	5,944	4,990	32,824
24 Jul	6	615	82	8,383	39	1,134	89	1,826	543	2,363	248	1,379	218	7,283	58	5,180	488	6,432	1,771	34,595
27 Jul	63	678	950	9,333	411	1,545	313	2,139	762	3,125	347	1,726	951	8,234	992	6,172	965	7,397	5,754	40,349
31 Jul	23	701	904	10,237	38	1,583	244	2,383	611	3,736	227	1,953	528	8,762	929	7,101	472	7,869	3,976	44,325
3 Aug			432	10,669	8	1,591	170	2,553	378	4,114	79	2,032	707	9,469	638	7,739	302	8,171	2,714	47,039
7 Aug	6	707	673	11,342	14	1,605	128	2,681	328	4,442	159	2,191	600	10,069	432	8,171	221	8,392	2,561	49,600
10 Aug	7	714	216	11,558	10	1,615	88	2,769	232	4,674	40	2,231	190	10,259	287	8,458	87	8,479	1,157	50,757
14 Aug	5	719	107	11,665	43	1,658	5	2,774	102	4,776	165	2,396	845	11,104	251	8,709	564	9,043	2,087	52,844
17 Aug	361	1,080	68	11,733			51	2,825	217	4,993	10	2,406	352	11,456	673	9,382	930	9,973	2,662	55,506
21 Aug	1	1,081	1	11,734	7	1,665	5	2,830	22	5,015	17	2,423	17	11,473	118	9,500	137	10,110	325	55,831
24 Aug		1,081	1	11,735					40	5,055	20	2,443	146	11,619	56	9,556	130	10,240	393	56,224
28 Aug		1,081		11,735			11	2,841	25	5,080	15	2,458	180	11,799	203	9,759	47	10,287	481	56,705
31 Aug		1,081		11,735					12	5,092			56	11,855	80	9,839	12	10,299	160	56,865
4 Sep		1,081		11,735									5	11,860	18	9,857	5	10,304	28	56,893
7 Sep													4	11,864	2	9,859	24	10,328	30	56,923
11 Sep		1,081		11,735									9	11,873	6	9,865	15	10,343	30	56,953
14 Sep																9,865	3	10,346	3	56,956
18 Sep																			0	56,956

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Central District Drift Gillnet

		244-56 Exp. Ken/Kas		244-57 Exp. Ken/Kas & A.P.		244-60 Districtwide		244-61 Kas. Section		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
06/19	46					1,980	1,980					1,980	1,980
06/22	89					3,643	5,623					3,643	5,623
06/24	10							273	273			273	5,896
06/26	123					6,929	12,552					6,929	12,825
06/28	16							265	538			265	13,090
06/29	90					12,478	25,030					12,478	25,568
07/01	54							1,821	2,359			1,821	27,389
07/03	306					33,171	58,201					33,171	60,560
07/05	38							1,100	3,459			1,100	61,660
07/06	346					66,723	124,924					66,723	128,383
07/08	95							7,384	10,843			7,384	135,767
07/10	376					140,520	265,444					140,520	276,287
07/12	191	14,745	14,745									14,745	291,032
07/13	380					178,990	444,434					178,990	470,022
07/15	352	95,360	110,105									95,360	565,382
07/17	381	89,532	199,637									89,532	654,914
07/20	370	54,313	253,950									54,313	709,227
07/29	340			32,860	32,860							32,860	742,087
07/31	328					32,969	477,403					32,969	775,056
08/03	283					32,991	510,394					32,991	808,047
08/07	229					21,235	531,629					21,235	829,282

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Central District Drift Gillnet													
		244-56 Exp. Ken/Kas		244-57 Exp. Ken/Kas & A.P.		244-60 Districtwide		244-61 Kas Section		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
08/09	117			9,817	42,677							9,817	839,099
08/10	161					22,789	554,418					22,789	861,888
08/12	106			7,049	49,726							7,049	868,937
08/14	74					5,600	560,018					5,600	874,537
08/17	49					2,762	562,780					2,762	877,299
08/18	15									626	626	626	877,925
08/21	16					807	563,587					807	878,732
08/22	14									177	803	177	878,909
08/24	19					1,035	564,622					1,035	879,944
08/25	8									21	824	21	879,965
08/28	5					25	564,647					25	879,990
08/29	3									24	848	24	880,014
08/31	6					31	564,678					31	880,045
09/01	11									86	934	86	880,131
09/04	<3					15	564,693					15	880,146
09/05	11									49	983	49	880,195
09/07	4					28	564,721					28	880,223
09/08	9									42	1,025	42	880,265
09/11	<3					3	564,724					3	880,268
09/15	<3									2	1,027	2	880,270
09/18	<3					9	564,733					9	880,279

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

Appendix A5.–Commercial coho salmon harvest by area and date, Upper Cook Inlet, 2017.

Upper Subdistrict - Set Gillnet														
	244-21 Ninilchik		244-22 Cohoe		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
3 Jul			1	1									1	1
5 Jul				1	1	1							1	2
6 Jul	1	1	2	3	2	3							5	7
8 Jul	3	4	1	4	4	7							8	15
10 Jul	12	16	8	12	7	14	2	2	19	19	4	4	52	67
12 Jul	6	22	7	19	2	16	4	6	23	42	10	14	52	119
13 Jul	23	45	20	39	11	27	24	30	108	150	37	51	223	342
15 Jul	49	94	14	53	20	47	17	47	92	242	88	139	280	622
17 Jul	79	173	41	94	17	64	28	75	192	434	95	234	452	1,074
20 Jul	93	266	22	116	20	84	24	99	173	607	113	347	445	1,519
29 Jul	325	591	228	344	69	153	49	148	761	1,368	764	1,111	2,196	3,715
31 Jul	151	742	118	462	26	179	63	211	650	2,018	423	1,534	1,431	5,146
3 Aug	1,451	2,193	582	1,044	120	299	212	423	1,851	3,869	1,007	2,541	5,223	10,369
7 Aug	1,007	3,200	605	1,649	156	455	308	731	1,507	5,376	960	3,501	4,543	14,912
9 Aug	1,000	4,200	541	2,190	291	746	360	1,091	877	6,253	529	4,030	3,598	18,510
10 Aug	999	5,199	1,140	3,330	214	960	403	1,494	1,638	7,891	690	4,720	5,084	23,594
14 Aug	934	6,133	985	4,315	171	1,131	503	1,997	1,658	9,549	788	5,508	5,039	28,633
15 Aug	681	6,814	439	4,754	163	1,294							1,283	29,916

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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		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
26 Jun																	1	1	1	1
29 Jun																				
3 Jul															2	2			2	3
6 Jul					1	1									2	4			3	6
10 Jul					46	47									87	91	10	11	143	149
13 Jul					56	103			1	1					301	392	59	70	417	566
15 Jul					92	195													92	658
17 Jul					81	276			10	11	67	67	43	43	464	856	125	195	790	1,448
20 Jul					172	448			6	17	115	182	97	140	1,439	2,295	265	460	2,094	3,542
22 Jul					173	621													173	3,715
24 Jul					144	765			5	22					248	2,543			397	4,112
27 Jul	2	2			457	1,222			70	92			198	338	2,416	4,959	472	932	3,615	7,727
29 Jul					1,433	2,655													1,433	9,160
31 Jul					799	3,454			91	183			318	656	1,644	6,603	209	1,141	3,061	12,221
3 Aug					905	4,359			229	412			295	951	952	7,555	737	1,878	3,118	15,339
5 Aug					1,479	5,838													1,479	16,818
7 Aug					473	6,311			1,074	1,486					2,131	9,686	534	2,412	4,212	21,030
10 Aug					83	6,394			1,032	2,518					3,307	12,993	752	3,164	5,174	26,204
14 Aug					70	6,464			986	3,504					1,244	14,237	92	3,256	2,392	28,596
17 Aug															859	15,096	31	3,287	890	29,486
21 Aug																	40	3,327	40	29,526
24 Aug																	9	3,336	9	29,535

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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		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
9 Jul					27	60													27	172
11 Jul					50	110			11	12					432	536	94	101	587	759
14 Jul					50	160	3	3	6	18					96	632	18	119	173	932
16 Jul					56	216													56	988
18 Jul					26	242		3	124	142			10	10	491	1,123	37	156	688	1,676
21 Jul					68	310	36	39	37	179	200	200	64	74	1,202	2,325	243	399	1,850	3,526
23 Jul					102	412													102	3,628
25 Jul					244	656	7	46	13	192	215	415	135	209	1,640	3,965	351	750	2,605	6,233
28 Jul					506	1,162	85	131	48	240	228	643	66	275	987	4,952	268	1,018	2,188	8,421
30 Jul					222	1,384													222	8,643
1 Aug					477	1,861	215	346	163	403					880	5,832	113	1,131	1,848	10,491
4 Aug					450	2,311	164	510	48	451					1,109	6,941	122	1,253	1,893	12,384
6 Aug					217	2,528													217	12,601
8 Aug					43	2,571	124	634							1,054	7,995	78	1,331	1,299	13,900
11 Aug	180	180			37	2,608	71	705	48	499					250	8,245	70	1,401	656	14,556
15 Aug					129	2,737			279	778					187	8,432	20	1,421	615	15,171

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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
3 Jul	3	3	2	2									5	5			3	3	13	13
6 Jul	2	5	13	15	1	1							3	8			2	5	21	34
10 Jul	16	21	226	241					9	9	3	3	14	22					268	302
13 Jul	23	44	441	682	3	4	13	13	4	13	14	17	7	29	7	7	2	7	514	816
17 Jul	31	75	849	1,531	189	193	130	143	24	37	83	100	130	159	74	81	38	45	1,548	2,364
20 Jul	62	137	1,406	2,937	401	594	172	315	72	109	48	148	337	496	163	244	34	79	2,695	5,059
24 Jul	17	154	60	2,997	75	669	108	423	192	301	223	371	116	612	4	248	121	200	916	5,975
27 Jul	177	331	1,263	4,260	806	1,475	338	761	334	635	514	885	730	1,342	424	672	306	506	4,892	10,867
31 Jul	73	404	2,070	6,330	973	2,448	354	1,115	360	995	531	1,416	685	2,027	208	880	65	571	5,319	16,186
3 Aug	152	556	1,701	8,031	149	2,597	200	1,315	270	1,265	383	1,799	1,017	3,044	573	1,453	146	717	4,591	20,777
7 Aug	46	602	612	8,643	170	2,767	286	1,601	768	2,033	650	2,449	450	3,494	442	1,895	41	758	3,465	24,242
10 Aug	64	666	2,094	10,737	109	2,876	180	1,781	340	2,373	135	2,584	633	4,127	382	2,277	83	841	4,020	28,262
14 Aug	151	817	1,907	12,644	292	3,168	19	1,800	170	2,543	523	3,107	1,603	5,730	1,018	3,295	460	1,301	6,143	34,405
17 Aug	314	1,131	1,534	14,178			180	1,980	289	2,832	235	3,342	807	6,537	1,884	5,179	950	2,251	6,193	40,598
21 Aug	59	1,190	528	14,706	44	3,212	18	1,998	57	2,889	61	3,403	70	6,607	423	5,602	315	2,566	1,575	42,173
24 Aug	55	1,245	874	15,580					58	2,947	93	3,496	367	6,974	584	6,186	163	2,729	2,194	44,367
28 Aug	64	1,309	457	16,037			37	2,035	70	3,017	62	3,558	545	7,519	1,001	7,187	335	3,064	2,571	46,938
31 Aug	17	1,326	422	16,459					36	3,053			334	7,853	553	7,740	90	3,154	1,452	48,390
4 Sep	24	1,350	305	16,764	5	3,217	1	2,036					96	7,949	370	8,110	204	3,358	1,005	49,395
7 Sep			167	16,931									29	7,978	678	8,788	683	4,041	1,557	50,952
11 Sep	11	1,361	82	17,013									144	8,122	492	9,280	252	4,293	981	51,933
14 Sep			132	17,145											355	9,635	265	4,558	752	52,685
18 Sep			16	17161															16	52,701

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Central District - Drift Gillnet

		244-56 Exp. Ken/Kas		244-57 Exp. Ken/Kas & A.P.		244-60 District Wide		244-61 Kas. Section		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
06/19	46					1	1					1	1
06/22	89					5	6					5	6
06/26	123					9	15					9	15
06/29	90					10	25					10	25
07/03	306					75	100					75	100
07/05	38							1	1			1	101
07/06	346					314	414		1			314	415
07/08	95							12	13			12	427
07/10	376					1,198	1,612					1,198	1,625
07/12	191	82	82				1,612					82	1,707
07/13	380					2,364	3,976					2,364	4,071
07/15	352	607	689									607	4,678
07/17	382	1,081	1,770									1,081	5,759
07/20	370	2,524	4,294									2,524	8,283
07/29	341			7,107	7,107							7,107	15,390
07/31	328					39,621	43,597					39,621	55,011
08/03	283					45,808	89,405					45,808	100,819
08/07	229					18,201	107,606					18,201	119,020
08/09	117			3,334	10,441							3,334	122,354
08/10	161					13,216	120,822					13,216	135,570
08/12	106			3,015	13,456							3,015	138,585

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Central District - Drift Gillnet

		244-56 Exp. Ken/Kas		244-57 Exp. Ken/Kas & A.P.		244-60 District Wide		244-61 Kas Section		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
08/14	74					9,700	130,522					9,700	148,285
08/17	49					5,711	136,233					5,711	153,996
08/18	18									3,063	3,063	3,063	157,059
08/21	17					2,919	139,152					2,919	159,978
08/22	31									4,885	7,948	4,885	164,863
08/24	19					5,893	145,045					5,893	170,756
08/25	17									1,820	9,768	1,820	172,576
08/28	8					484	145,529					484	173,060
08/29	3									1,559	11,327	1,559	174,619
08/31	11					2,244	147,773					2,244	176,863
09/01	17									6,732	18,059	6,732	183,595
09/04	4					390	148,163					390	183,985
09/05	16									2,451	20,510	2,451	186,436
09/07	8					806	148,969					806	187,242
09/08	17									2,997	23,507	2,997	190,239
09/11	<3					190	149,159					190	190,429
09/12	<3									119	23,626	119	190,548
09/14	<3					265	149,424					265	190,813
09/15	3									502	24,128	502	191,315
09/18	3					126	149,550					126	191,441
09/19	<3									49	24,177	49	191,490

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

Appendix A6.–Commercial pink salmon harvest by area and date, Upper Cook Inlet, 2017.

Upper Subdistrict Set Gillnet														
	244-21 Ninilchik		244-22 Cohoe		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
23 Jun	11	11	3	3	1	1							15	15
25 Jun	40	51	7	10	1	2							48	63
27 Jun	19	70	9	19	1	3							29	92
29 Jun	19	89	5	24	2	5							26	118
30 Jun	63	152	47	71	13	18							123	241
2 Jul	137	289	75	146	29	47							241	482
4 Jul	163	452	72	218	36	83							271	753
6 Jul	264	716	143	361	26	109							433	1,186
7 Jul	578	1,294	331	692	52	161							961	2,147
9 Jul	1,690	2,984	837	1,529	164	325	152	152	423	423	219	219	3,485	5,632
11 Jul	2,177	5,161	1,382	2,911	228	553	149	301	509	932	331	550	4,776	10,408
13 Jul	3,469	8,630	1,962	4,873	361	914	308	609	748	1,680	436	986	7,284	17,692
14 Jul	5,736	14,366	2,783	7,656	482	1,396	288	897	887	2,567	933	1,919	11,109	28,801
16 Jul	3,597	17,963	2,502	10,158	557	1,953	399	1,296	1,906	4,473	1,943	3,862	10,904	39,705
17 Jul	1,790	19,753	896	11,054	116	2,069	101	1,397	787	5,260	1,078	4,940	4,768	44,473
18 Jul	2,127	21,880	1,782	12,836	326	2,395	241	1,638	1,164	6,424	1,964	6,904	7,604	52,077
19 Jul	675	22,555	378	13,214	69	2,464	55	1,693	971	7,395	723	7,627	2,871	54,948
21 Jul	799	23,354	550	13,764	111	2,575	88	1,781	732	8,127	821	8,448	3,101	58,049
23 Jul	285	23,639	172	13,936	51	2,626	42	1,823	148	8,275	163	8,611	861	58,910
24 Jul	187	23,826	140	14,076	28	2,654	19	1,842	57	8,332	84	8,695	515	59,425
25 Jul	106	23,932	90	14,166	35	2,689	46	1,888	73	8,405	34	8,729	384	59,809
28 Jul	50	23,982	27	14,193	11	2,700	3	1,891	25	8,430	15	8,744	131	59,940
1 Aug	32	24,014	12	14,205	11	2,711							55	59,995

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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		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
2 Jun																			0	0
5 Jun																			0	0
7 Jun																			0	0
9 Jun																			0	0
12 Jun																			0	0
14 Jun																			0	0
16 Jun																			0	0
19 Jun					11	11									1	1			12	12
21 Jun															1	2			1	13
22 Jun					4	15													4	17
23 Jun															2	4			2	19
26 Jun					6	21					1	1			4	8	1	1	12	31
29 Jun					3	24													3	34
3 Jul					59	83			1	1					8	16			68	102
6 Jul					191	274			22	23					83	99	20	21	316	418
10 Jul					598	872			80	103					371	470	47	68	1,096	1,514

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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		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
13 Jul					322	1,194			60	163					816	1,286	147	215	1,345	2,859
15 Jul					322	1,516													322	3,181
17 Jul					367	1,883			86	249			19	19	410	1,696	207	422	1,089	4,270
20 Jul					104	1,987			24	273			55	74	557	2,253	58	480	798	5,068
22 Jul					133	2,120													133	5,201
24 Jul					34	2,154			9	282					95	2,348			138	5,339
27 Jul	7	7			110	2,264			87	369			33	107	811	3,159	156	636	1,204	6,543
29 Jul					224	2,488													224	6,767
31 Jul					126	2,614			59	428	39	40	3	110	162	3,321			389	7,156
3 Aug					90	2,704			98	526	15	55	4	114	66	3,387			273	7,429
5 Aug					134	2,838													134	7,563
7 Aug					32	2,870			40	566					52	3,439	12	648	136	7,699
10 Aug					3	2,873									60	3,499	1	649	64	7,763
14 Aug									8	574									8	7,771
17 Aug															4	3,503			4	7,775

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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
26 Jun													1	1					1	1
29 Jun															1	1			1	2
3 Jul			1	1					2	2			61	62	15	16	7	7	86	88
6 Jul			6	7			1	1					74	136	28	44	25	32	134	222
10 Jul			10	17			2	3	5	7			85	221	50	94	43	75	195	417
13 Jul	2	2	180	197	3	3	14	17	21	28	22	22	591	812	164	258	63	138	1,060	1,477
17 Jul			766	963	24	27	97	114	86	114			862	1,674	621	879	529	667	2,985	4,462
20 Jul	4	6			10	37	104	218	40	154			823	2,497	236	1,115	156	823	1,373	5,835
24 Jul							6	224	76	230			89	2,586	25	1,140	81	904	277	6,112
27 Jul	8	14	355	1,318			79	303	90	320			682	3,268	289	1,429	727	1,631	2,230	8,342
31 Jul			21	1,339			31	334	92	412			378	3,646	112	1,541	111	1,742	745	9,087
3 Aug			4	1,343			33	367	70	482			238	3,884	206	1,747	64	1,806	615	9,702
7 Aug							48	415	55	537			60	3,944	55	1,802	3	1,809	221	9,923
10 Aug							15	430	28	565			11	3,955	22	1,824	5	1,814	81	10,004
14 Aug							1	431	10	575			5	3,960	6	1,830	14	1,828	36	10,040
17 Aug	2	16					3	434	5	580					24	1,854	15	1,843	49	10,089
21 Aug															7	1,861	3	1,846	10	10,099
24 Aug															6	1,867	1	1,847	7	10,106
28 Aug															1	1,868	1	1,848	2	10,108
31 Aug									1	581									1	10,109

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Central District - Drift Gillnet

		244-56 Exp. Ken/Kas		244-57 Exp. Ken/Kas & A.P.		244-60 Districtwide		244-61 Kas. Section		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
06/19	46					82	82					82	82
06/22	89					336	418					336	418
06/24	10							13	13			13	431
06/26	123					325	743					325	756
06/28	16							5	18			5	761
06/29	90					980	1,723					980	1,741
07/01	54							68	86			68	1,809
07/03	306					1,314	3,037					1,314	3,123
07/05	38							60	146			60	3,183
07/06	346					1,932	4,969					1,932	5,115
07/08	95							769	915			769	5,884
07/10	376					6,984	11,953					6,984	12,868
07/12	191	1,955	1,955									1,955	14,823
07/13	380					10,842	22,795					10,842	25,665
07/15	352	8,526	10,481									8,526	34,191
07/17	381	14,795	25,276									14,795	48,986
07/20	370	17,976	43,252									17,976	66,962
07/29	340			7,894	7,894							7,894	74,856
07/31	328					8,430	31,225					8,430	83,286
08/03	283					3,711	34,936					3,711	86,997

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Central District - Drift Gillnet

		244-56 Exp. Ken/Kas		244-57 Exp. Ken/Kas & A.P.		244-60 Districtwide		244-61 Kas Section		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
08/07	229					895	35,831					895	87,892
08/09	117			166	8,060							166	88,058
08/10	161					628	36,459					628	88,686
08/12	106			85	8,145							85	88,771
08/14	74					208	36,667					208	88,979
08/17	49					220	36,887					220	89,199
08/18	15									242	242	242	89,441
08/21	16					73	36,960					73	89,514
08/22	14									230	472	230	89,744
08/24	19					33	36,993					33	89,777
08/25	8									42	514	42	89,819
08/28	5					4	36,997					4	89,823
08/29	3									9	523	9	89,832
08/31	6					6	37,003					6	89,838
09/01	11									42	565	42	89,880
09/04	<3					7	37,010					7	89,887
09/05	11									19	584	19	89,906
09/07	4					14	37,024					14	89,920
09/08	9									43	627	43	89,963

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

Appendix A7.–Commercial chum salmon harvest by area and date, Upper Cook Inlet, 2017.

Upper Subdistrict Set Gillnet														
	244 21 Ninilchik		244 22 Cohoe		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
23 Jun	1	1											1	1
25 Jun		1											0	1
27 Jun		1											0	1
29 Jun	1	2											1	2
30 Jun	2	4											2	4
2 Jul	3	7			1	1							4	8
4 Jul	1	8	1	1									2	10
6 Jul	3	11	4	5									7	17
7 Jul	2	13	1	6									3	20
9 Jul	1	14			8	9							9	29
11 Jul	1	15	1	7	1	10	1	1	2	2	10	10	16	45
13 Jul			1	8					5	7			6	51
14 Jul	2	17	3	11			3	4	1	8			9	60
16 Jul	2	19	39	50					3	11	3	13	47	107
17 Jul	2	21	6	56	10	20	3	7	2	13	12	25	35	142
18 Jul	8	29	2	58	1	21			14	27	13	38	38	180
19 Jul	5	34	6	64					2	29	1	39	14	194
21 Jul	8	42	34	98	2	23	1	8	20	49	18	57	83	277
23 Jul	3	45	3	101	1	24	1	9	5	54	3	60	16	293
24 Jul	7	52	3	104	1	25	3	12	8	62	3	63	25	318
25 Jul	6	58	12	116			1	13	13	75	16	79	48	366
28 Jul	19	77	23	139	1	26	1	14	10	85	10	89	64	430
1 Aug	82	159	34	173			1	15	12	97	14	103	143	573
3 Aug	29	188	14	187	1	27	2	17	16	113	10	113	72	645
5 Aug	108	296	85	272	2	29	5	22	53	166	35	148	288	933
7 Aug	102	398	104	376	3	32	1	23	36	202	18	166	264	1,197
9 Aug	12	410	5	381	1	33	5	28	5	207	10	176	38	1,235

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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		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
19 Jun					1	1													1	1
29 Jun					2	3													2	3
3 Jul					8	11													8	11
6 Jul					9	20									1	1			10	21
10 Jul					50	70													50	71
13 Jul					89	159			1	1					57	58			147	218
15 Jul					181	340													181	399
17 Jul					278	618			3	4					99	157			380	779
20 Jul					177	795			2	6					459	616			638	1,417
22 Jul					189	984													189	1,606
24 Jul					67	1,051									96	712			163	1,769
27 Jul	158	158			277	1,328			19	25			2	2	87	799			543	2,312
29 Jul					652	1,980													652	2,964
31 Jul					571	2,551			34	59			1	3	121	920	5	5	732	3,696
3 Aug					458	3,009			49	108					23	943	29	34	559	4,255
5 Aug					596	3,605													596	4,851
7 Aug					177	3,782			21	129					71	1,014	7	41	276	5,127
10 Aug					34	3,816			82	211					62	1,076	4	45	182	5,309
14 Aug					38	3,854			11	222					230	1,306			279	5,588
17 Aug															95	1,401	1	46	96	5,684

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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
3 Jul			2	2															2	2
6 Jul													1	1					1	3
10 Jul			101	103	2	2			6	6	16	16	17	18	2	2			144	147
13 Jul	1	1	453	556	7	9	13	13	4	10	20	36	33	51	9	11			540	687
17 Jul			303	859	144	153	177	190	56	66	28	64	237	288	24	35			969	1,656
20 Jul	1	2	60	919	31	184	213	403	34	100	14	78	48	336	14	49			415	2,071
24 Jul			1	920	8	192	19	422	242	342	161	239	6	342					437	2,508
27 Jul	1	3	70	990	26	218	381	803	208	550	154	393	30	372	3	52	3	3	876	3,384
31 Jul			1	991	4	222	41	844	65	615	86	479	82	454	2	54	1	4	282	3,666
3 Aug			8	999	13	235	87	931	10	625	83	562	70	524	19	73	4	8	294	3,960
7 Aug					24	259	117	1,048	104	729	67	629	15	539	6	79	3	11	336	4,296
10 Aug					6	265	97	1,145	103	832			8	547	2	81	3	14	219	4,515
14 Aug			4	1,003	12	277	2	1,147	16	848	24	653	31	578	7	88	9	23	105	4,620
17 Aug	9	12	5	1,008			21	1,168	19	867			17	595	8	96	7	30	86	4,706
21 Aug					2	279	2	1,170			2	655	1	596	4	100			11	4,717
24 Aug									10	877	5	660	5	601			2	32	22	4,739
28 Aug							7	1,177	8	885	4	664	17	618	7	107	3	35	46	4,785
31 Aug									2	887			5	623	7	114			14	4,799
4 Sep							1	1,178							1	115			2	4,801
7 Sep																	3	38	3	4,804
11 Sep															2	117			2	4,806
14 Sep															6	123	2	40	8	4,814

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Central District Drift Gillnet

		244-56 Exp. Ken/Kas		244-57 Exp. Ken/Kas & A.P.		244-60 Districtwide		244-61 Kas. Section		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
06/19	46					37	37					37	37
06/22	89					108	145					108	145
06/24	10							2	2			2	147
06/26	123					431	431					431	578
06/29	90					1,172	1,603					1,172	1,750
07/01	54							2	4			2	1,752
07/03	306					4,129	5,732					4,129	5,881
07/05	38							71	75			71	5,952
07/06	346					12,208	17,940					12,208	18,160
07/08	95							24	99			24	18,184
07/10	376					32,035	49,975					32,035	50,219
07/12	191	1,578	1,578									1,578	51,797
07/13	380					35,633	85,608					35,633	87,430
07/15	352	11,252	12,830									11,252	98,682
07/17	382	9,458	22,288									9,458	108,140
07/20	370	18,525	40,813									18,525	126,665
07/29	341			14,098	14,098							14,098	140,763
07/31	328							22,842	22,941			22,842	163,605
08/03	283							37,687	60,628			37,687	201,292
08/07	229							8,412	69,040			8,412	209,704
08/09	117			4,345	18,443							4,345	214,049

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Central District - Drift Gillnet

		244-56 Exp. Ken/Kas		244-57 Exp. Ken/Kas & A.P.		244-60 Districtwide		244-61 Kas Section		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
08/10	161							7,004	76,044			7,004	221,053
08/12	106			1,981	20,424							1,981	223,034
08/14	74							2,824	2,824			2,824	225,858
08/17	49							1,186	4,010			1,186	227,044
08/18	18									2,734	2,734	2,734	229,778
08/21	17							174	4,184			174	229,952
08/22	31									1,726	4,460	1,726	231,678
08/24	19							130	4,314			130	231,808
08/25	17									150	4,610	150	231,958
08/28	8							20	4,334			20	231,978
08/29	3									21	4,631	21	231,999
08/31	11							22	4,356			22	232,021
09/01	17									293	4,924	293	232,314
09/04	4							9	4,365			9	232,323
09/05	16									71	4,995	71	232,394
09/07	8							32	4,397			32	232,426
09/08	17									65	5,060	65	232,491
09/11	<3							1	4,398			1	232,492
09/15	3									7	5,067	7	232,499
09/18	3							2	4,400			2	232,501

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

Appendix A8.–Commercial salmon harvest by gear, statistical area and species, Upper Cook Inlet, 2017.

Gear	District	Subdistrict	Stat Area	Permits[a]	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	451	264	880,259	191,490	89,961	232,501	1,394,475
Setnet	Central	Upper	24421	97	837	300,828	6,813	23,923	218	332,619
			24422	74	683	157,685	4,754	14,205	73	177,400
			24431	64	794	101,394	1,294	2,711	5	106,198
			24432	54	628	67,343	1,997	1,891	11	71,870
			24441	60	1,782	167,976	9,549	8,430	128	187,865
			24442	28	51	36,799	5,508	8,744	166	51,268
			All	365	4,775	832,025	29,915	59,904	601	927,220
		Kalgin Is.	24610	25	224	36,832	15,096	3,503	1,401	57,056
			24620	3	1	7,963	3,336	649	46	11,995
			All	28	225	44,795	18,432	4,152	1,447	69,051
		Chinitna	24510	<4	0	2	2	7	158	169
		Western	24520	0	0	0	0	0	0	0
			24530	15	65	26,961	6,464	2,873	3,854	40,217
			24540	0	0	0	0	0	0	0
			24550	5	1	3,865	3,504	574	222	8,166
			All	20	66	30,826	9,968	3,447	4,076	48,383
		Kustatan	24555	9	96	3,770	182	55	0	4,103
			24560	<4	0	395	951	114	3	1,463
			All	10	96	4,165	1,133	169	3	5,566
		All	All	419	5,162	911,813	59,450	67,679	6,285	1,050,389
	Northern	General	24710	7	545	1081	1361	16	12	3,015
			24720	14	670	11735	17,161	1343	1008	31,917
			24730	6	7	1,665	3,217	37	279	5,205
			24741	8	56	2,841	2,036	434	1178	6,545
			24742	7	180	5,092	3,053	581	887	9,793
			24743	6	322	2,458	3,558	22	664	7,024
			All	47	1,780	24,872	30,386	2,433	4,028	63,499
		Eastern	24770	13	336	11,873	8,122	3960	623	24,914
			24780	13	75	9865	9,635	1868	123	21,566
			24790	9	39	10,346	4,558	1848	40	16,831
			All	33	450	32,084	22,315	7,676	786	63,311
		All	All	80	2,230	56,956	52,701	10,109	4,814	126,810
	All	All	All	498	7,392	968,769	112,151	77,788	11,099	1,177,199
Seine	All	All	All	0	0	0	0	0	0	0
All	All	All	All	949	7,656	1,849,028	303,641	167,749	243,600	2,571,674

[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, 2017.

Gear	District	Subdistrict	Stat Area	Permits[a]	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	451	1	1,952	425	199	516	3,092
Set	Central	Upper	24421	97	9	3,101	70	247	2	3,429
			24422	74	9	2,131	64	192	1	2,397
			24431	64	12	1,584	20	42	0	1,659
			24432	54	12	1,247	37	35	0	1,331
			24441	60	30	2,800	159	141	2	3,131
			24442	28	2	1,314	197	312	6	1,831
			All	365	13	2,280	82	164	2	2,540
		Kalgin Is.	24610	25	9	1,473	604	140	56	2,282
			24620	3	0	2,654	1,112	216	15	3,998
			All	28	8	1,600	658	148	52	2,466
		Chinitna	24510	<4	NA	NA	NA	NA	NA	NA
		Western	24520	0	0	0	0	0	0	0
			24530	15	4	1,797	431	192	257	2,681
			24540	0	0	0	0	0	0	0
			24550	5	0.2	773	701	115	44	1,633
			All	20	3	1,541	498	172	204	2,419
		Kustatan	24555	9	11	419	20	6	0	456
			24560	<4	NA	NA	NA	NA	NA	NA
			All	10	10	417	113	17	0	557
		All	All	419	12	2,176	142	162	15	2,507
	Northern	General	24710	7	78	154	194	2	2	431
			24720	14	48	838	1,226	96	72	2,280
			24730	6	1	278	536	6	47	868
			24741	8	7	355	255	54	147	818
			24742	7	26	727	436	83	127	1,399
			24743	6	54	410	593	4	111	1,171
			All	47	38	529	647	52	86	1,351
		Eastern	24770	13	26	913	625	305	48	1,916
			24780	13	6	759	741	144	9	1,659
			24790	9	4	1,150	506	205	4	1,870
			All	33	14	972	676	233	24	1,919
		All	All	80	28	712	659	126	60	1,585
	All	All	All	498	15	1,945	225	156	22	2,364
Seine	All	All	All	-	-	-	-	-	-	-
All	All	All	All	949	8	1,948	320	177	257	2,710

[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 2017 Upper Cook Inlet fishing season.

Emergency Order No.	Effective Date	Action	Reason
2S-01-17	29-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 2017 directed Chinook salmon fishery. The fishing periods affected by this announcement were May 29, June 5, June 12, and June 19, 2017.	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. Chinook Salmon Mngt. Plan, required a closure of the commercial fishery from the wood chip dock to the Susitna River.
2S-02-17	19-Jun	Reduced the open fishing time in the Northern District directed Chinook salmon commercial set gillnet fishery from 12 hours to 6 hours on Monday, June, 19, 2017.	To reduce the harvest of Northern District Chinook salmon stocks
2S-03-17	24-Jun	Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 7:00 AM until 8:00 PM on Saturday, June 24, 2017. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 AM until 8:00 PM on Saturday, June 24, 2017.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-04-17	26-Jun	Extended commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 7:00 PM until 9:00 PM on Monday, June 26, 2017. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 PM until 9:00 PM on Monday, June 26, 2017.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-05-17	28-Jun	Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 7:00 AM until 4:00 PM on Wednesday, June 28, 2017. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 AM until 4:00 PM on Wednesday, June 28, 2017.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-06-17	1-Jul	Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 7:00 AM until 7:00 PM on Saturday, July 1, 2017. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 AM until 7:00 PM on Saturday, July 1, 2017.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-07-17	1-Jul	Extended commercial salmon fishing with set gillnets and opened commercial salmon fishing with drift gillnets in the Kasilof Section of the Upper Subdistrict from 7:00 PM until 12:00 midnight on Saturday, July 1, 2017.	To reduce the escapement rate of Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
2S-08-17	3-Jul	Extended commercial salmon fishing with set gillnets and opened commercial salmon fishing with drift gillnets in the Kasilof Section of the Upper Subdistrict from 7:00 PM until 9:00 PM on Monday, July 3, 2017.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-09-17	5-Jul	Opened commercial salmon fishing with set and drift gillnets in the Kasilof section of the Upper Subdistrict from 8:00 AM until 5:00 PM on Wednesday, July 5, 2017.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-10-17	8-Jul	Opened commercial salmon fishing with set and drift gillnets in the Kasilof section of the Upper Subdistrict from 7:00 AM until 12:00 midnight on Saturday, July 8, 2017.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-11-17	10-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 AM until 10:00 PM on Mondays; from 6:00 AM until 10:00 PM on Thursdays; and from 6:00 AM until 10:00 PM on Saturdays each week until further notice, effective beginning at 6:00 AM on Monday, July 10, 2017	To reduce the escapement rate of Crescent River sockeye salmon.
2S-12-17	12-Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 11:00 AM until 9:00 PM on Wednesday, July 12, 2017. Opened commercial fishing with drift gillnets in the Expanded Kenai and Kasilof sections of the Upper Subdistrict from 11:00 AM until 9:00 PM on July 12, 2017	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-13-17	13-Jul	Extended commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 7:00 PM until 10:00 PM on Thursday, July 13, 2017. Opened commercial fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 7:00 PM until 10:00 PM on Thursday, July 13, 2017.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-14-17	15-Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 12:00 PM (noon) until 11:00 PM on Saturday, July 15, 2017. Opened drift gillnetting in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict and in the Anchor Point Section of the Lower Subdistrict from 12:00 PM (noon) until 11:00 PM on Saturday, July 15, 2017.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
2S-15-17	17-Jul	Opened commercial salmon fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 7:00 AM until 7:00 PM on Monday, July 17, 2017.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-16-17	20-Jul	Reduced legal gear to 1 set gillnet per permit, measuring no more than 35 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 AM until 7:00 PM on Thursday, July 20, 2017, from 7:00 AM until 7:00 PM on Monday, July 24, 2017, and from 7:00 AM until 7:00 PM on Thursday, July 27, 2017.	To comply with the Northern District Salmon Management Plan and the Susitna River Sockeye Action Plan
2S-17-17	20-Jul	Opened commercial salmon fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 7:00 AM until 7:00 PM on Thursday, July 20, 2017.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-18-17	24-Jul	Closed commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Forelands sections of the Upper Subdistrict and with drift gillnets in all waters of the Central District on Monday, July 24, 2017	To reduce the harvest of Kenai River sockeye salmon.
2S-19-17	27-Jul	Closed commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Forelands sections of the Upper Subdistrict and with drift gillnets in all waters of the Central District on Thursday, July 27, 2017	To reduce the harvest of Kenai River sockeye salmon.
2S-20-17	29-Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Forelands sections of the Upper Subdistrict from 9:00 AM until 11:00 PM on Saturday, July 29, 2017. Drift gillnetting will be open in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict and in the Anchor Point Section of the Lower Subdistrict from 9:00 AM until 11:00 PM on Saturday, July 29, 2017.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-21-17	31-Jul	Reduced legal gear to 1 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 AM until 7:00 PM on Monday, July 31, 2017, and from 7:00 AM until 7:00 PM on Thursday, August 3, 2017.	To comply with the Northern District Salmon Management Plan and the Susitna River Sockeye Action Plan

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Emergency Order No.	Effective Date	Action	Reason
2S-22-17	31-Jul	Opened drift gillnetting in all waters of the Central District of Upper Cook Inlet normally open to drift gillnetting from 7:00 AM until 7:00 PM on Monday, July 31, 2017.	To comply with the Central District Drift Gillnet Fishery Management Plan.
2S-23-17	7-Aug	Reduced the open fishing time from twelve hours to 6 hours, from 7:00 AM until 1:00 PM, in the Northern District set gillnet fishery on Monday, August 7, 2017	To conserve coho salmon bound for the Susitna River.
2S-24-17	9-Aug	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 6:00 AM until 9:00 PM on Wednesday, August 9, 2017. Opened drift gillnetting in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict and in the Anchor Point Section of the Lower Subdistrict from 6:00 AM until 9:00 PM on August 9, 2017.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon and to comply with the Central District Drift Gillnet Fishery Management Plan.
2S-25-17	10-Aug	Reduced the open fishing time for set gillnets from twelve hours to 6 hours per day, or from 7:00 AM until 1:00 PM, in that portion of the General Subdistrict of the Northern District east of the Susitna River, including Fire Island, on Thursday, August 10, 2017	To conserve coho salmon bound for the Little Susitna River.
2S-26-17	10-Aug	Rescinded Emergency Order No. 2S-11-17 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 AM until 7:00 PM, beginning on Thursday, August 10, 2017, at 7:00 AM	To reduce the harvest of Crescent Lake sockeye salmon.
2S-27-17	10-Aug	Extended commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 7:00 PM until 10:00 PM on Thursday, August 10, 2017. Opened commercial fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof section of the Upper Subdistrict and Anchor Point section of the Lower Subdistrict from 7:00 PM until 10:00 PM on Thursday, August 10, 2017	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
2S-28-17	12-Aug	Opened commercial salmon fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict and in the Anchor Point Section of the Lower Subdistrict from 7:00 AM until 7:00 PM on Saturday, August 12, 2017	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-29-17	14-Aug	Reduced the open fishing time for set gillnets from twelve hours to 6 hours per day, or from 7:00 AM until 1:00 PM, in that portion of the General Subdistrict of the Northern District east of the Susitna River, including Fire Island, on Monday, August 14, 2017	To conserve coho salmon bound for the Little Susitna River.
2S-31-17	18-Aug	Opened commercial fishing with set and drift gillnets in the Chinitna Bay Subdistrict of the Central District on Tuesdays and Fridays from 7:00 AM until 7:00 PM, beginning at 7:00 AM on Friday, August 18, 2017	To provide fishing opportunity in the Chinitna Bay Subdistrict.
2S-32-17	17-Aug	Reduced the open fishing time for set gillnets from twelve hours to 6 hours per day, or from 7:00 AM until 1:00 PM, in that portion of the General Subdistrict of the Northern District east of the Susitna River, including Fire Island, on Thursday, August 17, 2017	To conserve coho salmon bound for the Little Susitna River.
2S-33-17	21-Aug	Reduced the open fishing time for set gillnets from twelve hours to 6 hours per day, or from 7:00 AM until 1:00 PM, in that portion of the General Subdistrict of the Northern District east of the Susitna River, including Fire Island, on Monday, August 21, 2017	To conserve coho salmon bound for the Little Susitna River.
2S-34-17	21-Aug	Closed commercial salmon fishing with set gillnets in the Northern District, and also in the Western, Kalgin Island, Kustatan, and Chinitna Bay Subdistricts of the Central District of Upper Cook Inlet for the remainder of the 2017 season, effective at 7:00 PM on Friday, October 6, 2017. Commercial salmon fishing with drift gillnets was closed in the Central District of Upper Cook Inlet for the remainder of the 2017 season, effective at 7:00 PM on Friday, October 6, 2017.	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, 2017.

Date	Day	Time	Set gillnet	Drift gillnet
29 May	Mon	0700–1900	Northern District	
2 Jun	Fri	0700–1900	Kustatan (Big River) - Kalgin Island	
5 Jun	Mon	0700–1900	Kustatan (Big River) - Kalgin Island - N. Dist	
7 Jun	Wed	0700–1900	Kustatan (Big River) - Kalgin Island	
9 Jun	Fri	0700–1900	Kustatan (Big River) - Kalgin Island	
12 Jun	Mon	0700–1900	Kustatan - Big River - Kalgin Island - N. Dist	
14 Jun	Wed	0700–1900	Kustatan (Big River) - Kalgin Island	
16 Jun	Fri	0700–1900	Kustatan (Big River) - Kalgin Island	
19 Jun	Mon	0700–1300	Northern District	
		0700–1900	Western Subdistrict	All
		0700–1900	Kustatan (Big River) - Kalgin Island	
21 Jun	Wed	0700–1900	Kustatan (Big River) - Kalgin Island	
22 Jun	Thu	0700–1900	Western Subdistrict	All
23 Jun	Fri	0700–1900	Kustatan (Big River) - Kalgin Island	
24 Jun	Sat	0700–2000	Kasilof Section	Kasilof Section
26 Jun	Mon	0700–1900	All except Kenai & E. Forelands Sections	All
		1900–2100	Kasilof Section	Kasilof Section
28 Jun	Wed	0700–1900	Western Subdistrict	
		0700–1600	Kasilof Section	Kasilof Section
29 Jun	Thu	0700–1900	All except Kenai & E. Forelands Sections	All
1 Jul	Sat	0700–0000	Kasilof Section	Kasilof Section
3 Jul	Mon	0500–1400	All except Kenai & E. Forelands Sections	All
5 Jul	Wed	0800–1700	Kasilof Section	Kasilof Section
6 Jul	Thu	0700–1900	All except Kenai & E. Foreland Sections	All
8 Jul	Sat	0700–0000	Kasilof Section	Kasilof Section
10 Jul	Mon	0600–2200	Western Subdistrict south of Redoubt Pt.	Drift Area 1, Ex. Ken/Kas Sec
		0700–1900	All	
12 Jul	Wed	0600–2200	Kenai, Kasilof, & E. Foreland Sections	Expanded Kenai/Kasilof Sections
13 Jul	Thu	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All	Drift Area 1, Ex. Ken/Kas Sec
		1900–2200		Expanded Kenai/Kasilof Sections
		1900–2200	Kenai, Kasilof, & E. Foreland Sections	
15 Jul	Sat	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All	
		0700–2200	Kenai, Kasilof, & E. Foreland Sections	Expanded Kenai/Kasilof Sections
17 Jul	Mon	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All	Expanded Kenai/Kasilof Sections
20 Jul	Thu	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	Kenai, Kasilof, & E. Foreland Sections	Expanded Kenai/Kasilof Sections

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Date	Day	Time	Set gillnet	Drift gillnet
22 Jul	Sat	0600–2200	Western Subdistrict south of Redoubt Pt.	
24 Jul	Mon	0700–1900	All except Kenai, Kasilof, & E. Foreland Sections	
27 Jul	Thu	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Kenai, Kasilof, & E. Foreland Sections	
29 Jul	Sat	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0900–2300	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
31 Jul	Mon	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All	All
3 Aug	Thu	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All	All
5 Aug	Sat	0600–2200	Western Subdistrict south of Redoubt Pt.	
7 Aug	Mon	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1300	Northern District	
		0700–1900	Kenai, Kasilof, & E. Foreland Sections	Drift Area 1, Ex. Ken/Kas sec
9 Aug	Wed	0600–2100	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
		0600–2200	Western Subdistrict south of Redoubt Pt.	
10 Aug	Thu	0700–1900	All except Portion of Gen. Sub.	Drift Area 1, Ex. Ken/Kas sec
		0700–1300	Gen Sub. E. of Susitna River	
12 Aug	Sat	0700–1900	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
14 Aug	Mon	0700–1900	All except Portion of Gen. Sub.	Drift Areas 1 & 3, Ex. Ken/Kas sec
		0700–1300	Gen Sub. E. of Susitna River	
		1900–2300	Kasilof Section	
15 Aug	Tue	0600–1900	Kasilof Section	
17 Aug	Thu	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
18 Aug	Fri	0700–1900	Chinitna Bay	Chinitna Bay
21 Aug	Mon	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
22 Aug	Tue	0700–1900	Chinitna Bay	Chinitna Bay
24 Aug	Thu	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
25 Aug	Fri	0700–1900	Chinitna Bay	Chinitna Bay
28 Aug	Thu	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
29 Aug	Fri	0700–1900	Chinitna Bay	Chinitna Bay
31 Aug	Mon	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
1 Sep	Tue	0700–1900	Chinitna Bay	Chinitna Bay
4 Sep	Thu	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
5 Sep	Fri	0700–1900	Chinitna Bay	Chinitna Bay
7 Sep	Mon	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
8 Sep	Tue	0700–1900	Chinitna Bay	Chinitna Bay
11 Sep	Thu	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
12 Sep	Fri	0700–1900	Chinitna Bay	Chinitna Bay
14 Sep	Mon	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
15 Sep	Tue	0700–1900	Chinitna Bay	Chinitna Bay
18 Sep	Thu	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
19 Sep	Fri	0700–1900	Chinitna Bay	Chinitna Bay

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	418,197	327,732	304,449	219,041	190,460	314,447	141,804	228,536	167,374	373,915	312,068
MR : Weirs ratio	3.6	2.2	1.9	2.1	2.5	2.6	2.0	2.1	2.8	NA	NA
MR : 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, 2017.

Stream	0.2	0.3	1.1	1.2	2.1	1.3	2.2	1.4	2.3	2.4	3.2	3.3	Total[a]
Kenai River	0.1		0.2	6.2	0.4	40.7	3.1	1.8	46.4	0.7	0.4	0.1	100.0
Kasilof River	0.0		2.6	32.7	4.1	21.2	25.5	0.1	13.7	0.1			100.0
Fish Creek			23.1	64.0	0.8	8.6	2.4		1.1				100.0
Hidden Creek			0.7	85.1		2.7	11.5						100.0
Larson			0.4	45.7		27.1	17.9		8.9				100.0
Chelatna	0.5	2.4		24.6		64.0	2.1	1.0	5.5				100.0
Judd				18.8		55.0	4.1		22.1				100.0

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

Appendix A14.–Upper Cook Inlet salmon average weights (in pounds) by area, 2017.

Fishery	Chinook	Sockeye	Coho	Pink	Chum
Upper Cook Inlet Total	21.9	5.7	6.3	3.6	8.2
A. Northern District Total	14.8	5.0	5.7	3.6	7.1
1. Northern District West	14.5	5.0	5.4	3.3	6.9
a. Trading Bay 247-10	15.1	5.6	6.0	3.3	8.3
b. Tyonek 247-20	13.3	5.2	5.1	3.2	6.0
c. Beluga 247-30	8.3	5.4	5.5	3.8	7.2
d. Susitna Flat 247-41	14.1	4.7	5.7	2.6	7.0
e. Pt. Mackenzie 247-42	15.2	4.4	5.9	4.0	7.4
f. Fire Island 247-43	15.9	5.0	5.9	4.0	7.6
2. Northern District East	16.0	5.1	6.1	3.7	7.6
a. Pt. Possession 247-70	16.4	5.1	5.9	3.7	7.7
b. Birch Hill 247-80	15.1	5.1	6.3	3.8	7.2
c. Number 3 Bay 247-90	14.1	5.1	6.0	3.6	6.9
B. Central District Total	24.8	5.8	6.4	3.6	8.2
1. East Side Set Total	25.9	5.6	6.4	3.6	6.7
a. Salamatof/East Foreland	27.1	6.1	6.2	3.7	7.1
1. Salamatof 244-41	27.3	6.2	6.2	3.7	7.2
2. East Forelands 244-42	20.2	5.4	6.1	3.7	7.0
b. Kalifonsky Beach	25.6	5.5	6.4	3.4	6.9
1. South K. Beach 244-31	25.0	5.1	6.4	3.2	7.6
2. North K. Beach 244-32	26.4	6.0	6.4	3.6	6.6
d. Cohoe/Ninilchik	24.6	5.5	6.6	3.5	6.4
1. Cohoe 244-22	24.6	5.4	6.7	3.5	6.3
2. Ninilchik 244-21	24.7	5.5	6.6	3.5	6.4

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Fishery	Chinook	Sockeye	Coho	Pink	Chum
2. West Side Set Total	23.5	5.3	6.2	3.8	7.1
a. Little Jack Slough 245-50	21.0	5.0	6.5	3.4	6.5
b. Polly Creek 245-40					
c. Tuxedni Bay 245-30	23.5	5.3	6.0	3.9	7.2
3. Kustatan Total	22.0	5.3	5.7	3.8	8.7
a. Big River 245-55	22.0	5.2	4.8	3.4	
b. West Foreland 245-60		6.1	5.9	4.0	8.7
4. Kalgin Island Total	17.0	5.5	6.0	3.3	7.3
a. West Side 246-10	16.9	5.4	6.0	3.3	7.3
b. East Side 246-20	32.0	5.7	6.1	3.2	6.1
5. Chinitna Bay Total	5.0	5.2	6.8	3.3	7.4
a. Set 245-10		6.0	7.5	3.0	8.0
b. Drift 245-10	5.0	5.2	6.8	3.3	7.4
6. Central District Set Total	25.4	5.6	6.2	3.6	7.2
7. Central District Drift Total	14.4	5.9	6.4	3.6	8.2
a. Area 1/District Wide 244-60	11.5	5.9	6.4	3.6	8.3
b. Kasilof section, narrow 244-61	13.7	5.8	5.3	3.6	7.6
c. Full ex corridor 244-56 & 244-57	18.5	5.9	6.0	3.5	8.1
d. Area 3/4 244-60	7.0	5.4	6.5	3.4	7.1

Note: Average weights determined from total pounds of fish divided by numbers of fish from commercial harvest tickets.

Appendix A15.–Age composition of Chinook salmon harvested in the Upper Subdistrict set gillnet fishery, UCI, Alaska, 1986–2017.

Year	Sample size	Percent composition by age class (%)														
		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	1,212	0.1	2.1	0.08	14.7			33.0	0.2	48.5	0.3	1.1	0.1			100
1988	870		3.2		10.8		0.23	14.3	0.4	68.5	0.1	1.8	0.7			100
1989	854		0.9		15.1			21.1	0.2	53.3		9.4				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
Mean	923	0.04	7.24	0.02	25.74	0.10	0.04	27.37	0.21	36.76	0.24	1.99	0.26	0.00	0.00	100

Appendix A16.–Major buyers and processors of Upper Cook Inlet fishery products, 2017.

Buyer/processor	Code	Plant site	Contact	Address
Icicle Seafoods Inc	F0135	Seward	Kelly Glidden	842 Fish Dock Rd. Homer, AK 99603
Pacific Star Seafoods Inc.	F1834	Kenai	Steve Lee	PO Box 190 Kenai, AK 99611
Snug Harbor Seafoods	F3894	Kenai	Brenda Stoops	PO Box 701 Kenai, AK 99611
North Pacific Seafoods	F10419	Kenai	Leauri Moore	PO Box 114 Kenai, AK 99611
Copper River Seafoods	F6426	Anchorage	Nicole Holiday	1118 E. 5th Ave. Anchorage, AK 99501
Alaska Salmon Purchasers	F4665	Kenai	Mark Powell	46655 Kenai Spur Hwy. Kenai, AK 99611
Fishhawk Fisheries	F1540	Kenai	Steve Fick	PO Box 715 Astoria, OR 97103
The Auction Block Co.	F8162	Homer	Heather Brinster	4501 Ice Dock Rd. Homer, AK 99603
Peninsula Processing	F6618	Soldotna	Tim Berg Jr.	720 K. Beach Rd. Soldotna, AK 99669
The Fish Factory LLC	F4449	Homer	Mike McCune	800 Fish Dock Rd. Homer, AK 99603
Favco Inc.	F0398	Anchorage	Bill Buck	PO Box 190968 Anchorage, AK 99519
Tanner's Fresh Fish Processing	F9070	Ninilchik	Rory Tanner	16050 Sterling Hwy Ninilchik, AK 99639

Appendix A17.–Number of salmon harvested by gear, area, and species in personal use fisheries, Upper Cook Inlet, 2017.

	Harvest					
Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
Kasilof Gillnet	118	21,927	5	48	43	22,141
Kasilof Dip Net	14	78,260	605	2,850	969	82,698
Kenai Dip Net	1,103	297,049	732	7,962	886	307,732
Fish Creek Dip Net	1	4,894	281	273	54	5,503
Beluga Dip Net	0	26	36	4	0	66
No Site Reported	19	4,760	41	107	10	4,937
Total	1,255	406,916	1,700	11,244	1,962	423,077

Note: Preliminary estimates for sockeye salmon only.

Appendix A18.–Personal use sockeye salmon harvest by day, 2017.

	Kasilof gillnet		Kasilof dip net		Kenai dip net	
Date	Daily	Cum	Daily	Cum	Daily	Cum
15 Jun	2,279	2,279				
16 Jun	2,547	4,826				
17 Jun	2,800	7,626				
18 Jun	2,012	9,638				
19 Jun	1,930	11,568				
20 Jun	1,362	12,930				
21 Jun	1,460	14,390				
22 Jun	1,464	15,854				
23 Jun	1,847	17,701				
24 Jun	443	18,144				
25 Jun			386	386		
26 Jun			273	659		
27 Jun			509	1,168		
28 Jun			346	1,514		
29 Jun			238	1,752		
30 Jun			1,110	2,862		
1 Jul			731	3,593		
2 Jul			987	4,580		
3 Jul			816	5,396		
4 Jul			1,213	6,609		
5 Jul			606	7,215		
6 Jul			694	7,909		
7 Jul			1,284	9,193		
8 Jul			1,338	10,531		
9 Jul			1,754	12,285		

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	Kasilof gillnet		Kasilof dip net		Kenai dip net	
Date	Daily	Cum	Daily	Cum	Daily	Cum
10 Jul			1,094	13,379	1,813	1,813
11 Jul			1,275	14,654	2,577	4,390
12 Jul			884	15,538	1,696	6,086
13 Jul			824	16,362	1,478	7,564
14 Jul			1,943	18,305	3,730	11,294
15 Jul			2,915	21,220	7,060	18,354
16 Jul			3,487	24,707	8,011	26,365
17 Jul			2,264	26,971	12,972	39,337
18 Jul			2,079	29,050	11,104	50,441
19 Jul			2,001	31,051	16,363	66,804
20 Jul			2,182	33,233	19,489	86,293
21 Jul			3,142	36,375	13,533	99,826
22 Jul			3,912	40,287	21,930	121,756
23 Jul			3,023	43,310	14,318	136,074
24 Jul			1,933	45,243	16,311	152,385
25 Jul			2,163	47,406	16,916	169,301
26 Jul			1,697	49,103	14,829	184,130
27 Jul			1,983	51,086	15,970	200,100
28 Jul			1,659	52,745	17,976	218,076
29 Jul			1,175	53,920	8,553	226,629
30 Jul			974	54,894	4,117	230,746
31 Jul			436	55,330	3,456	234,202
1 Aug			350	55,680		
2 Aug			517	56,197		
3 Aug			333	56,530		
4 Aug			696	57,226		
5 Aug			1,133	58,359		
6 Aug			985	59,344		
7 Aug			230	59,574		

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, 2017.

Sample date = 5/1–5

Sample area	Age	No. of Fish: Male	Imm. female	Ripe female	Spawned female	Unknown	Total	Percent of total	Weight: Mean (g)	SD	Number weighed	Length: Mean (mm)	SD	Number measured
ESSN	5	6	–	2	–	–	8	13	124	10.7	8	206	5.5	8
	6	9	–	6	–	–	15	25	141	16.4	15	202	50.4	15
	7	8	–	7	–	–	15	25	159	18.0	15	228	10.0	15
	8	5	–	6	–	–	11	18	156	23.0	11	229	13.1	11
	9	5	–	5	–	–	10	17	182	30.9	10	235	11.8	10
	10	–	–	1	–	–	1	2	191	–	1	236	–	1
Sample total		33	0	27	0	0	60	100	154	26.8	60	220	29.4	60
Sex composition		55%	0%	45%	0%	0%								

Sample date = 5/12

Sample Area	Age	No. of Fish: Male	Imm. female	Ripe female	Spawned female	Unknown	Total	Percent of Total	Weight: Mean (g)	SD	Number weighed	Length: Mean (mm)	SD	Number measured
ESSN	4	2	–	6	–	–	8	11	117	15.7	8	199	8.2	8
	5	8	–	9	–	–	17	24	121	12.4	17	205	6.7	17
	6	6	–	13	–	–	19	26	134	13.2	19	212	5.1	19
	7	6	–	9	–	–	15	21	142	21.1	15	219	9.2	15
	8	4	–	7	–	–	11	15	160	27.0	11	223	8.3	11
	9	1	–	1	–	–	2	3	187	30.2	2	237	18.4	2
Sample Total		27	0	45	0	0	72	100	136	23.9	72	213	11.4	72
Sex composition		38%	0%	63%	0%	0%								

-continued-

Sample date = 5/19

Sample area	Age	No. of Fish: Male	Imm. female	Ripe female	Spawned female	Unknown	Total	Percent of total	Weight: Mean (g)	SD	Number weighed	Length: Mean (mm)	SD	Number measured
ESSN	5	14	–	1	8	–	23	29	109	8.9	23	208	6.4	23
	6	13	–	1	5	–	19	24	116	8.6	19	212	4.8	19
	7	14	–	–	4	–	18	23	121	12.2	18	217	8.7	18
	8	8	–	–	3	–	11	14	128	14.0	11	223	6.6	11
	9	3	–	–	2	–	5	6	136	11.9	5	225	7.1	5
	10	-	–	–	1	–	1	1	135	–	1	227	-	1
	11	1	–	–	–	–	1	1	201	–	1	240	-	1
Sample total		53	0	2	23	0	78	100	120	16.1	78	215	9.2	78
Sex composition		68%	0%	3%	29%	0%								

Sample date = 6/2

Sample Area	Age	No. of Fish: Male	Imm. female	Ripe female	Spawned female	Unknown	Total	Percent of total	Weight: Mean (g)	SD	Number weighed	Length: Mean (mm)	SD	Number measured
ESSN	4	5	–	11	–	–	16	27	112	15.9	16	194	6.6	16
	5	8	–	19	1	–	28	47	124	20.2	28	202	7.8	28
	6	4	–	6	–	–	10	17	138	14.0	10	210	5.3	10
	7	1	–	1	–	–	2	3	151	29.1	2	230	17.7	2
	9	2	–	–	–	–	2	3	137	24.6	2	222	0.7	2
	10	2	–	–	–	–	2	3	128	16.1	2	234	13.4	2
Sample total		22	0	37	1	0	60	100	128	21.7	60	216	14.1	60
Sex composition		37%	0%	62%	2%	0%								

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Sample date = All

Sample area	Age	No. of Fish: Male	Imm. female	Ripe female	Spawned female	Unknown	Total	Percent of total	Weight: Mean (g)	SD	Number weighed	Length: Mean (mm)	SD	Number measured
ESSN	4	7	–	17	–	–	24	9	114	15.7	24	196	7.3	24
	5	36	–	31	9	–	76	28	119	15.9	76	205	7.3	76
	6	32	–	26	5	–	63	23	131	16.4	63	209	24.7	63
	7	29	–	17	4	–	50	19	140	23.2	50	221	10.6	50
	8	18	–	12	3	–	33	12	148	26.1	33	225	10.0	33
	9	11	–	6	2	–	19	7	166	33.5	19	231	11.5	19
	10	2	–	1	1	–	4	1	146	31.8	4	233	8.7	4
	11	1	–	–	–	–	1	0	240	-	1	240	-	1
Sample total		136	0	110	24	0	270	100	133	25.3	270	213	17.7	270
Sex composition		50%	0%	41%	9%	0%								

Appendix A20.–Age, sex, and size distribution of eulachon (smelt) from Upper Cook Inlet commercial dip net fishery, 2007–2017.

2007

Age	Sex	Length (mm)	No. sampled	%
3	Male	179	10	9%
	Female	174	5	5%
4	Male	188	65	60%
	Female	186	23	21%
5	Male	201	4	4%
	Female	192	1	1%
Avg	Male	188	79	73%
	Female	184	29	27%
Avg - All		187	108	100%

2008

Age	Sex	Length (mm)	No. sampled	%
3	Male	194	3	3%
	Female	185	10	10%
4	Male	201	37	37%
	Female	193	36	36%
5	Male	208	12	12%
	Female	206	3	3%
Avg	Male	202	52	51%
	Female	192	49	49%
Avg - All		197	101	100%

2009

Age	Sex	Length (mm)	No. sampled	%
3	Male	195	12	7%
	Female	191	18	10%
4	Male	203	74	41%
	Female	194	58	32%
5	Male	203	13	7%
	Female	203	5	3%
Avg	Male	202	99	55%
	Female	194	81	45%
Avg - All		198	180	100%

2010

Age	Sex	Length (mm)	No. sampled	%
3	Male	189	14	7%
	Female	194	10	5%
4	Male	197	61	31%
	Female	204	105	53%
5	Male	204	3	2%
	Female	203	6	3%
Avg	Male	196	78	39%
	Female	203	121	61%
Avg - All		200	199	100%

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2011

Age	Sex	Length (mm)	No. sampled	%
3	Male	192	25	13%
	Female	185	47	24%
4	Male	205	48	24%
	Female	203	41	21%
5	Male	210	28	14%
	Female	208	11	6%
Avg	Male	203	101	51%
	Female	195	99	50%
Avg - All		199	200	100%

2012

Age	Sex	Length (mm)	No. sampled	%
3	Male	191	20	11%
	Female	198	19	10%
4	Male	204	50	27%
	Female	207	88	47%
5	Male	208	2	1%
	Female	215	7	4%
Avg	Male	201	72	39%
	Female	206	114	61%
Avg - All		204	186	100%

2013

Age	Sex	Length (mm)	No. sampled	%
3	Male	212	7	4%
	Female	216	7	4%
4	Male	219	78	50%
	Female	212	37	24%
5	Male	224	22	14%
	Female	217	5	3%
Avg	Male	220	107	69%
	Female	213	49	31%
Avg - All		218	156	100%

2014

Age	Sex	Length (mm)	No. sampled	%
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%

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2015

Age	Sex	Length (mm)	No. sampled	%
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)	No. sampled	%
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

		Length (mm)	No. sampled	%
3	Male	173	69	23%
	Female	172	2	1%
4	Male	187	232	76%
	Female	159	1	0.3%
All	Male	184	301	99%
	Female	168	3	1%
Avg - All		183	304	100%

All Years (2007-2016)

Age	Sex	Length (mm)	No. sampled	%
3	Male	192	197	11%
	Female	190	173	10%
4	Male	202	733	41%
	Female	199	535	30%
5	Male	209	103	6%
	Female	166	40	2%
Avg	Male	203	344	58%
	Female	197	249	42%
Avg - All		200	594	100%

Appendix A21.–Seldovia District tide tables, May through August, 2017.

May

		High Tides						Low Tides			
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Mon	6:35	18.5	7:50	16.4	1	Mon	12:31	2.7	1:09	-1.6
2	Tue	7:35	16.8	9:01	15.6	2	Tue	1:32	4.1	2:13	0.3
3	Wed	8:51	15.2	10:18	15.4	3	Wed	2:47	5.1	3:26	1.8
4	Thu	10:17	14.6	11:28	15.1	4	Thu	4:13	5.1	4:44	2.3
5	Fri	11:37	14.8	……..	……..	5	Fri	5:34	4.2	5:51	2.4
6	Sat	0:24	16.6	12:42	15.3	6	Sat	6:35	2.9	6:44	2.2
7	Sun	1:08	17.3	1:32	16.0	7	Sun	7:22	1.4	7:27	2.0
8	Mon	1:45	17.1	2:15	16.8	8	Mon	8:01	0.2	8:04	1.1
9	Tue	2:17	18.4	2:53	17.2	9	Tue	8:36	**-0.9**	8:38	1.1
10	Wed	2:47	18.7	3:29	17.6	10	Wed	9:09	**-1.5**	9:11	1.1
11	Thu	3:15	18.9	4:04	17.7	11	Thu	9:41	**-1.8**	9:45	2.2
12	Fri	3:45	18.8	4:39	17.4	12	Fri	10:13	**-1.8**	10:18	2.8
13	Sat	4:16	18.4	5:15	16.1	13	Sat	10:46	**-1.3**	10:54	3.5
14	Sun	4:48	17.8	5:53	16.1	14	Sun	11:21	**-0.6**	11:31	4.3
15	Mon	5:23	16.9	6:36	15.2	15	Mon	11:58	0.4	……..	……..
16	Tue	6:01	15.9	7:25	14.5	16	Tue	12:00	5.2	12:40	1.4
17	Wed	6:49	14.7	8:21	13.1	17	Wed	1:01	6.0	1:30	2.4
18	Thu	7:50	13.7	9:25	13.1	18	Thu	2:03	6.6	2:30	3.0
19	Fri	9:06	13.1	10:27	14.6	19	Fri	3:16	6.3	3:39	3.3
20	Sat	10:28	13.4	11:22	15.7	20	Sat	4:31	5.1	4:46	3.0
21	Sun	11:40	14.4	……..	……..	21	Sun	5:36	3.3	5:47	2.4
22	Mon	0:11	16.1	12:42	15.8	22	Mon	6:31	1.0	6:40	1.5
23	Tue	0:56	18.5	1:37	17.2	23	Tue	7:20	**-1.3**	7:30	0.7
24	Wed	1:40	19.1	2:28	18.5	24	Wed	8:07	**-3.5**	8:17	0.0
25	Thu	2:24	21.1	3:17	19.5	25	Thu	8:52	**-5.1**	9:03	**-0.3**
26	Fri	3:09	21.9	4:06	19.1	26	Fri	9:37	**-6.0**	9:49	**-0.3**
27	Sat	3:54	21.1	4:55	19.9	27	Sat	10:23	**-6.1**	10:37	0.3
28	Sun	4:41	21.4	5:45	19.3	28	Sun	11:10	**-5.4**	11:26	1.2
29	Mon	5:30	20.2	6:37	18.4	29	Mon	11:59	**-3.1**	……..	……..
30	Tue	6:23	18.6	7:33	17.4	30	Tue	12:20	2.3	12:52	**-2.1**
31	Wed	7:21	16.9	8:35	16.6	31	Wed	1:20	3.5	1:49	**-0.2**

-continued-

June

High Tides						Low Tides					
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Thu	8:29	14.9	21:38	15.9	1	We	2:28	4.2	14:52	1.4
2	Fri	9:48	13.9	22:42	15.8	2	Th	3:45	4.2	16:00	2.7
3	Sat	11:08	13.6	23:39	16.1	3	Fr	5:03	3.6	17:06	3.4
4	Sun			12:16	14.0	4	Sa	6:08	2.6	18:04	3.6
5	Mon	0:26	16.5	13:11	14.6	5	Su	6:58	1.4	18:53	3.6
6	Tue	1:06	16.9	13:57	15.3	6	Mo	7:39	0.4	19:34	3.5
7	Wed	1:42	17.4	14:37	15.9	7	Tu	8:15	**-0.5**	20:12	3.3
8	Thu	2:16	17.9	15:14	16.4	8	We	8:49	**-1.2**	20:48	3.1
9	Fri	2:49	18.2	15:50	16.8	9	Th	9:22	**-1.8**	21:24	3.0
10	Sat	3:22	18.4	16:26	17.0	10	Fr	9:55	**-2.0**	22:00	3.1
11	Sun	3:56	18.3	17:02	16.9	11	Sa	10:29	**-1.9**	22:37	3.4
12	Mon	4:31	17.9	17:39	16.6	12	Su	11:03	**-1.6**	23:15	3.8
13	Tue	5:08	17.2	18:18	16.1	13	Mo	11:39	**-0.9**	23:57	4.3
14	Wed	5:47	16.4	18:59	15.7	14	Tu			12:18	**-0.1**
15	Thu	6:32	15.4	19:44	15.3	15	We	0:43	4.8	13:02	0.9
16	Fri	7:27	14.4	20:35	15.2	16	Th	1:36	5.0	13:52	1.9
17	Sat	8:33	13.6	21:31	15.5	17	Fr	2:39	4.9	14:50	2.7
18	Sun	9:50	13.4	22:28	16.2	18	Sa	3:48	4.1	15:55	3.2
19	Mon	11:07	13.9	23:25	17.2	19	Su	4:57	2.7	17:01	3.3
20	Tue			12:17	15.0	20	Mo	6:00	0.8	18:04	2.9
21	Wed	0:18	18.5	13:18	16.3	21	Tu	6:56	**-1.2**	19:01	2.3
22	Thu	1:10	19.8	14:14	17.7	22	We	7:48	**-3.2**	19:55	1.6
23	Fri	2:01	20.9	15:06	18.8	23	Th	8:36	**-4.7**	20:45	1.0
24	Sat	2:50	21.6	15:55	19.6	24	Fr	9:23	**-5.7**	21:34	0.6
25	Sun	3:39	21.8	16:42	19.9	25	Sa	10:09	**-5.9**	22:23	0.5
26	Mon	4:28	21.4	17:29	19.7	26	Su	10:55	**-5.3**	23:12	0.9
27	Tue	5:17	20.3	18:16	19.1	27	Mo	11:41	**-4.1**		
28	Wed	6:07	18.7	19:05	18.2	28	Tu	0:03	1.5	12:29	**-2.4**
29	Thu	7:01	16.9	19:55	17.2	29	We	0:57	2.4	13:18	**-0.4**
30	Fri	8:00	15.1	20:50	16.3	30	Th	1:57	3.2	14:11	1.6

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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	Sat	9:09	13.7	21:47	15.7	1	Fr	3:04	3.7	15:09	3.3
2	Sun	10:26	12.9	22:45	15.4	2	Sa	4:18	3.7	16:13	4.5
3	Mon	11:41	12.9	23:39	15.6	3	Su	5:29	3.2	17:17	5.2
4	Tue			12:45	13.4	4	Mo	6:28	2.4	18:15	5.3
5	Wed	0:27	15.9	13:37	14.2	5	Tu	7:15	1.4	19:04	5.1
6	Thu	1:09	16.5	14:20	15.0	6	We	7:55	0.4	19:47	4.6
7	Fri	1:49	17.1	14:58	15.9	7	Th	8:30	**-0.5**	20:27	4.0
8	Sat	2:26	17.8	15:34	16.6	8	Fr	9:04	**-1.3**	21:05	3.5
9	Sun	3:03	18.2	16:08	17.1	9	Sa	9:37	**-1.9**	21:42	3.0
10	Mon	3:40	18.5	16:42	17.5	10	Su	10:10	**-2.2**	22:19	2.8
11	Tue	4:16	18.4	17:16	17.5	11	Mo	10:44	**-2.1**	22:57	2.7
12	Wed	4:54	18.1	17:51	17.4	12	Tu	11:18	**-1.7**	23:37	2.8
13	Thu	5:33	17.4	18:27	17.1	13	We	11:55	**-0.9**		
14	Fri	6:16	16.5	19:06	16.8	14	Th	0:19	3.0	12:35	0.1
15	Sat	7:06	15.4	19:51	16.5	15	Fr	1:07	3.3	13:19	1.4
16	Sun	8:06	14.4	20:43	16.4	16	Sa	2:04	3.4	14:12	2.6
17	Mon	9:19	13.6	21:43	16.6	17	Su	3:10	3.2	15:15	3.7
18	Tue	10:42	13.6	22:48	17.2	18	Mo	4:23	2.4	16:26	4.3
19	Wed	12:00	14.4	23:52	18.1	19	Tu	5:34	1.0	17:38	4.3
20	Thu			13:07	15.8	20	We	6:38	3.6	18:43	3.5
21	Fri	0:52	19.2	14:04	17.3	21	Th	7:34	**-2.5**	19:41	2.5
22	Sat	1:47	20.3	14:55	18.6	22	Fr	8:24	**-4.0**	20:33	1.4
23	Sun	2:39	21.2	15:41	19.6	23	Sa	9:10	**-4.9**	21:22	0.5
24	Mon	3:29	21.5	16:25	20.2	24	Su	9:54	**-5.2**	22:09	**-0.1**
25	Tue	4:16	21.3	17:07	20.2	25	Mo	10:37	**-4.7**	22:55	**-0.1**
26	Wed	5:02	20.5	17:48	19.7	26	Tu	11:19	**-3.6**	23:41	0.4
27	Thu	5:48	19.1	18:29	18.8	27	We			12:01	**-1.9**
28	Fri	6:35	17.4	19:11	17.7	28	Th	0:28	1.3	12:43	**0.0**
29	Sat	7:26	15.5	19:55	16.5	29	Fr	1:19	2.3	13:28	2.1
30	Sun	8:25	13.8	20:45	15.4	30	Sa	2:15	3.4	14:18	4.1
31	Mon	9:37	12.6	21:43	14.8	31	Su	3:22	4.1	15:17	5.6

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August

		High Tides						Low Tides			
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Tue	11:01	12.3	22:47	14.6	1	Mo	4:40	4.2	16:27	6.6
2	Wed	12:18	12.7	23:48	14.9	2	Tu	5:54	3.6	17:39	6.7
3	Thu			13:16	13.7	3	We	6:51	2.6	18:39	6.2
4	Fri	0:41	15.6	14:00	14.8	4	Th	7:33	1.4	19:27	5.3
5	Sat	1:27	16.6	14:36	15.9	5	Fr	8:09	0.3	20:08	4.2
6	Sun	2:08	17.5	15:10	16.9	6	Sa	8:42	**-0.8**	20:46	3.2
7	Mon	2:46	18.4	15:42	17.8	7	Su	9:15	**-1.7**	21:23	2.2
8	Tue	3:24	19.0	16:14	18.4	8	Mo	9:47	**-2.2**	21:59	1.4
9	Wed	4:01	19.3	16:46	18.8	9	Tu	10:20	**-2.4**	22:35	1.0
10	Thu	4:38	19.2	17:18	18.8	10	We	10:54	**-2.0**	23:14	0.8
11	Fri	5:17	18.7	17:52	18.6	11	Th	11:30	**-1.2**	23:54	1.0
12	Sat	6:00	17.7	18:29	18.2	12	Fr			12:08	0.0
13	Sun	6:47	16.4	19:12	17.7	13	Sa	0:40	1.4	12:51	1.5
14	Mon	7:45	15.0	20:03	17.1	14	Su	1:34	2.0	13:42	3.2
15	Tue	8:59	13.9	21:07	16.6	15	Mo	2:39	2.4	14:46	4.6
16	Wed	10:27	13.6	22:22	16.7	16	Tu	3:55	2.3	16:04	5.5
17	Thu	11:52	14.4	23:37	17.4	17	We	5:16	1.4	17:24	5.3
18	Fri			13:00	15.9	18	Th	6:26	0.0	18:35	4.2
19	Sat	0:44	18.5	13:54	17.5	19	Fr	7:23	**-1.6**	19:34	2.7
20	Sun	1:41	19.7	14:40	18.9	20	Sa	8:11	**-2.9**	20:24	1.1
21	Mon	2:32	20.7	15:22	19.9	21	Su	8:55	**-3.7**	21:09	**-0.1**
22	Tue	3:19	21.2	16:00	20.5	22	Mo	9:35	**-3.9**	21:52	**-0.9**
23	Wed	4:02	21.1	16:37	20.5	23	Tu	10:14	**-3.5**	22:33	**-1.1**
24	Thu	4:44	20.5	17:13	20.1	24	We	10:52	**-2.5**	23:14	**-0.6**
25	Fri	5:26	19.3	17:48	19.2	25	Th	11:29	**-0.9**	23:55	0.3
26	Sat	6:07	17.7	18:23	18.0	26	Fr	……..	……..	12:07	0.9
27	Sun	6:51	15.9	19:00	16.6	27	Sa	0:38	1.6	12:46	3.0
28	Mon	7:43	14.2	19:43	15.4	28	Su	1:25	3.0	13:30	4.9
29	Tue	8:49	12.8	20:37	14.3	29	Mo	2:23	4.2	14:25	6.6
30	Wed	10:17	12.1	21:50	13.7	30	Tu	3:39	4.9	15:40	7.6
31	Thu	11:47	12.6	23:10	14.0	31	We	5:08	4.7	17:06	7.7

Appendix A22.–Total sockeye salmon harvest from all sources in Upper Cook Inlet, 1996–2017.

	Commercial				Sport[a,b,c]			Personal Use					Subsistence/Educational		
Year	Drift	Set	Test Fishery	All	Kenai River	All Other UCI	All	Kas. Gillnet	Kas. Dip net	Ken. Dip net	Other[d]	All	Subsist.	Educ.	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	287,806	29,790	317,596	26,646	73,035	339,993	18,006	457,680	253	7,190	2,842,461
2010	1,587,657	1,240,685	6,670	2,835,012	316,213	23,589	339,802	21,924	70,774	389,552	32,052	514,302	865	5,652	3,695,633
2011	3,201,035	2,076,960	5,660	5,283,655	410,709	22,507	433,216	26,780	49,766	537,765	16,068	630,379	700	8,048	6,355,998
2012	2,924,144	209,695	11,839	3,145,678	471,008	20,168	491,176	15,638	73,419	526,992	13,304	629,353	441	4,418	4,271,066
2013	1,662,561	1,020,663	5,283	2,688,507	458,522	30,173	488,695	14,439	85,528	347,222	7,126	454,315	333	6,185	3,638,035
2014	1,501,678	842,356	5,648	2,349,682	380,055	24,751	404,806	22,567	88,513	379,823	15,144	506,047	587	7,724	3,268,846
2015	1,012,684	1,636,983	2,378	2,652,045	476,791	24,238	501,029	27,567	89,000	377,532	27,951	522,050	800	9,170	3,685,094
2016	1,266,696	1,130,112	2,096	2,398,904	342,440	21,082	363,522	26,539	58,723	259,057	4,837	349,156	659	7,449	3,119,690
2017	880,279	968,571	2,701	1,851,551	250,000	20,000	270,000	21,927	78,260	297,049	9,654	406,890	911	10,968	2,540,320

[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).

Appendix A23.–Daily commercial harvest of razor clams, Upper Cook Inlet, 2017.

Date	Lb	No. Diggers	Date	Lb	No. Diggers
05/08	868	12	06/20	2,000	12
05/09	1,783	15	06/21	2,916	11
05/10	2,188	15	06/22	3,925	13
05/11	2,610	14	06/23	5,704	13
05/12	2,807	13	06/24	5,696	13
05/13	1,844	11	06/25	3,837	13
05/14	3,427	14	06/26	2,840	11
05/15	2,753	14	06/27	2,780	11
05/16	2,751	15	06/28	1,932	11
05/22	1,821	13	06/29	1,732	10
05/23	2,651	13	07/05	2,790	11
05/24	2,685	12	07/06	2,001	10
05/25	4,465	14	07/07	2,860	12
05/26	3,831	14	07/08	2,887	11
05/27	3,823	14	07/09	3,622	12
05/29	3,861	14	07/10	2,854	12
05/30	3,958	14	07/11	2,861	12
05/31	3,660	12	07/12	2,915	12
06/01	2,545	14	07/13	1,919	11
06/05	2,969	13	07/14	1,915	9
06/06	1,992	12	07/15	2,288	12
06/07	2,597	14	07/19	1,506	10
06/08	2,960	13	07/20	1,116	8
06/09	2,689	13	07/21	3,660	12
06/10	2,995	11	07/22	3,667	11
06/11	3,942	12	07/23	4,654	12
06/12	3,753	13	07/24	2,669	9
06/13	2,874	13	07/25	3,501	11
06/14	2,000	12	07/26	2,778	11
06/15	2,689	13	07/27	2,496	12
06/16	1,614	13	07/28	1,421	11
Total for Year = 177,147 lb					

APPENDIX B: HISTORICAL DATA

Appendix B1.–Upper Cook Inlet commercial Chinook salmon harvest by gear type and area, 1966–2017.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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

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	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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
1966-16 Avg [a]	954	6.5	9,365	65.0	1,216	9.2	3,038	19.3	14,573
2007-16 Avg	581	6.8	6,074	60.2	626	8.4	2,145	24.6	9,427

Note: Harvest data prior to 2017 reflect 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 B2.–Upper Cook Inlet commercial sockeye salmon harvest by gear type and area, 1966–2017.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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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	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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
1966-16 Avg [a]	1,634,022	55.6	1058010	35.2	102707	4.9	83888	4.3	2878627
2007-16 Avg	1,693,136	57.1	1,074,802	38.0	103,065	3.7	34,672	1.3	2,905,675

Note: Harvest data prior to 2017 reflect 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 B3.–Upper Cook Inlet commercial coho salmon harvest by gear type and area, 1966–2017.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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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	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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
1966-16 Avg [a]	144,812	48.6	34,329	12.6	47,787	16.8	61,902	22.0	288,830
2007-16 Avg	98,870	58.1	14,938	9.3	20,619	12.6	32,947	19.9	167,374

Note: Harvest data prior to 2017 reflect 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 B4.–Upper Cook Inlet commercial pink salmon harvest by gear type and area, 1966–2017.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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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	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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
1966-16 Avg [a]	210058	45.6	168518	37.2	12182	4.1	65920	13.2	456677
2007-16 Avg	153,201	58.2	83,650	36.8	3,830	2.6	4,207	2.4	244,887

Note: Harvest data prior to 2017 reflect 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 B5.–Upper Cook Inlet commercial chum salmon harvest by gear type and area, 1966–2017.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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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	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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
1966-16 Avg [a]	373,883	88.8	2,416	0.7	20,859	5.0	22,779	5.5	419,937
2007-16 Avg	139,660	93.1	1,007	0.7	5,472	3.8	3,212	2.4	149,350

Note: Harvest data prior to 2017 reflect 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 B6.–Upper Cook Inlet commercial salmon harvest by species, 1966–2017.

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

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Year	Chinook	Sockeye	Coho	Pink	Chum	Total
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
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	82,808	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	1,849,234	303,642	167,842	243,600	2,571,987
1966-2016 Avg[a]	14,573	2,878,636	288,911	456,724	420,970	4,059,814
2007-2016 Avg	9,427	2,905,675	167,374	244,887	149,350	3,476,713

Note: Harvest statistics prior to 2017 reflect minor adjustments to catch database.

Appendix B7.–Approximate exvessel value of Upper Cook Inlet commercial salmon harvest by species, 1960–2017.

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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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%	$ 115,965	0.8%	$ 14,573,849
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	$ 546,931	2.4%	$ 20,624,849	92.1%	$ 552,273	2.5%	$ 271,150	1.2%	$ 404,459	1.8%	$ 22,399,662
2017	$ 634,666	2.7%	$ 19,711,470	82.7%	$ 2,168,037	9.1%	$ 89,448	0.4%	$ 1,234,825	5.2%	$ 23,838,446

Appendix B8.–Commercial herring harvest by fishery, Upper Cook Inlet, 1973–2017.

	Harvest (short tons)				
Year	Upper Subdistrict	Chinitna Bay	Tuxedni Bay	Kalgin Isl	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	28.3

Note: Dashes represent years when fisheries were closed.

Appendix B9.–Commercial harvest of razor clams in Upper Cook Inlet, 1919–2017.

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		

Appendix B10.–Enumeration goals and counts of sockeye salmon in selected streams of Upper Cook Inlet, 1978–2017.

	Kenai River		Kasilof River		Fish Creek	
Year	Enumeration goal[a]	Enumeration estimate [a, b]	Enumeration goal[a]	Enumeration estimate [a, b]	Enumeration goal	Enumeration Estimate[c]
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

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	Yentna River		Crescent River		Packers Creek	
Year	Enumeration goal[a]	Enumeration estimate[e]	Enumeration goal	Enumeration estimate[e, f]	Enumeration goal	Enumeration estimate[f, 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[e]	–	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[g]
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]	–	–	30,000–70,000	–	15,000–30,000	16,473[g]
2010[e]	–	–	30,000–70,000	86,333	15,000–30,000	–
2011[e]	–	–	30,000–70,000	81,952	15,000–30,000	–
2012[e]	–	–	30,000–70,000	58,838	15,000–30,000	–
2013[e]	–	–	30,000–70,000	ND	15,000–30,000	–
2014[e]	–	–	30,000–70,000	ND	15,000–30,000	19,242[g]
2015[e]	–	–	30,000–70,000	ND	15,000–30,000	28,072[g]
2016[e]	–	–	30,000–70,000	ND	15,000–30,000	–
2017[e]	–	–	30,000–70,000	ND	15,000–30,000	17,106[i]

[a] Inriver goal

[b] Enumeration estimates prior to 2016 reflect minor adjustments to the escapement database.

[c] Yentna River escapement goal only.

[d] Weir counts.

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

[f] From 1978 to 2010 enumeration and goals were Bendix sonar; from 2011 to 2016 goals are DIDSON based.

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

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

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

Appendix B11.–Average price per pound for commercially-harvested salmon, Upper Cook Inlet, 1975–2017.

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

Note: Price expressed as dollars per pound. Data source: 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, 1975–2017.

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
2007-2016 Avg	18.5	6.1	6.3	3.6	7.2
1975-2016 Avg	23.9	6.2	6.5	3.6	7.3
2017	21.9	5.7	6.3	3.6	8.2

Note: Total poundage divided by numbers of fish from fish ticket totals.

Appendix B13.–Registered units of gillnet fishing effort by gear type in Cook Inlet, 1975–2017.

	Drift Gillnet			Set Gillnet			
Year	Resident	Non-Resident	Subtotal	Resident	Non-Resident	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

Source: Commercial Fisheries Entry Commission. http://www.cfec.state.ak.us/pstatus/14052016.htm

Appendix B14.–Forecast and projected commercial harvests of salmon by species, Upper Cook Inlet, 1990–2017.

	Sockeye			Coho			Pink			Chum			Chinook		
Year	Forecast[a]	Actual[b,d]	Error	Projected	Actual[c,d]	Error	Projected	Actual[c,d]	Error	Projected	Actual[c,d]	Error	Projected	Actual[c,d]	Error
1990	4,300,000	3,822,864	-12%	250,000	501,739	50%	600,000	603,630	1%	400,000	351,197	-14%	25,000	16,105	-55%
1991	3,200,000	2,472,589	-29%	400,000	426,498	6%	90,000	14,663	-514%	500,000	280,230	-78%	20,000	13,542	-48%
1992	3,600,000	9,502,392	62%	400,000	468,930	15%	400,000	695,861	43%	350,000	274,303	-28%	20,000	17,171	-16%
1993	2,500,000	5,042,799	50%	450,000	306,882	-47%	25,000	100,934	75%	350,000	122,770	-185%	15,000	18,871	21%
1994	2,000,000	3,826,508	48%	400,000	583,793	31%	600,000	523,434	-15%	250,000	303,177	18%	15,000	19,962	25%
1995	2,700,000	3,224,087	16%	400,000	447,130	11%	100,000	133,578	25%	250,000	529,428	53%	15,000	17,893	16%
1996	3,300,000	4,262,377	23%	400,000	321,668	-24%	600,000	242,911	-147%	350,000	156,520	-124%	15,000	14,306	-5%
1997	5,300,000	4,546,125	-17%	400,000	152,408	-162%	100,000	70,945	-41%	250,000	103,036	-143%	15,000	13,292	-13%
1998	2,500,000	1,619,119	-54%	300,000	160,688	-87%	300,000	551,737	46%	200,000	95,704	-109%	17,000	8,124	-109%
1999	2,000,000	3,164,355	37%	300,000	126,105	-138%	75,000	16,176	-364%	200,000	174,554	-15%	16,000	14,383	-11%
2000	3,000,000	1,778,547	-69%	150,000	236,871	37%	500,000	146,482	-241%	200,000	127,069	-57%	15,000	7,350	-104%
2001	2,700,000	2,304,670	-17%	300,000	113,311	-165%	50,000	72,560	31%	250,000	84,494	-196%	13,000	9,295	-40%
2002	2,200,000	3,356,572	34%	160,000	246,281	35%	170,000	446,960	62%	120,000	237,949	50%	10,000	12,714	21%
2003	2,400,000	4,145,981	42%	170,000	101,756	-67%	80,000	48,789	-64%	140,000	120,767	-16%	10,000	18,503	46%
2004	3,700,000	5,639,628	34%	160,000	311,058	49%	380,000	357,939	-6%	150,000	146,165	-3%	10,000	26,922	63%
2005	4,100,000	5,962,572	31%	200,000	224,657	11%	70,000	48,419	-45%	140,000	69,740	-101%	10,000	27,667	64%
2006	2,100,000	2,653,446	21%	200,000	177,853	-12%	350,000	404,111	13%	140,000	64,033	-119%	20,000	18,029	-11%
2007	3,300,000	4,044,832	18%	210,000	177,339	-18%	50,000	147,020	66%	130,000	77,240	-68%	20,000	17,625	-13%
2008	3,900,000	3,005,299	-30%	200,000	171,869	-16%	380,000	169,368	-124%	100,000	50,315	-99%	20,000	13,333	-50%
2009	3,000,000	2,842,335	-6%	210,000	153,210	-37%	70,000	214,321	67%	80,000	82,808	3%	20,000	8,750	-129%
2010	2,300,000	3,695,633	38%	179,000	207,350	14%	305,000	292,706	-4%	70,000	228,863	69%	17,000	9,900	-72%
2011	4,600,000	6,359,116	28%	178,000	95,291	-87%	106,000	34,123	-211%	101,000	129,407	22%	14,000	11,248	-24%
2012	4,400,000	4,271,018	-3%	159,000	106,775	-49%	334,000	469,598	29%	113,000	269,733	58%	12,000	2,527	-375%
2013	4,900,000	3,639,862	-35%	147,000	260,963	44%	99,000	48,275	-105%	152,000	139,365	-9%	9,000	5,398	-67%
2014	4,300,000	3,329,970	-29%	165,000	137,376	-20%	338,000	642,879	47%	170,000	116,093	-46%	7,600	4,660	-63%
2015	3,700,000	3,685,160	0%	161,000	216,032	25%	98,000	48,004	-104%	176,000	275,960	36%	6,700	10,798	38%
2016	5,300,000	3,342,183	-59%	160,000	147,469	-8%	393,000	382,436	-3%	184,000	123,711	-49%	6,700	10,027	33%
2017	4,016,000	4,608,000	13%	167,000	303,642	45%	98,000	167,842	42%	184,000	243,600	24%	6,300	7,660	18%
Avg.	3,404,143	3,933,859	13%	249,143	245,891	-1%	241,464	253,418	5%	203,571	177,794	-14%	14,296	13,431	-6%

[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, 1980–2017.

Tyonek Subsistence Fishery								
	No. 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

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Appendix B15.–Page 2 of 2.

Yentna Subsistence Fishery								
	No. 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

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

Appendix B16.–Upper Cook Inlet educational fisheries salmon harvest, 2017.

Year	Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
2017	Kenaitze	22	9,372	285	90	0	9,769
	NTC	48	873	482	224	0	1,627
	NND	31	220	55	39	0	345
	NES	16	110	34	20	0	180
	Sons of American Legion	0	7	58	10	0	75
	APVFW	0	4	9	7	0	20
	Kasilof H.A.	0	27	42	0	0	69
	SCF	0	54	15	12	0	81
	Knik	0	48	22	17	12	99
	Big Lake	2	19	14	1	13	49
	Eklutna	0	128	3	9	26	166
	Territorial Homestead Lodge	3	106	23	21	6	159
	Chickaloon Native Village	-	-	-	-	-	0
	Total	122	10,968	1,042	450	57	12,639

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

Appendix B17.–Effort and harvest in Upper Cook Inlet personal use salmon fisheries, 1996–2016.

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
Min.	5	582		9,506		46		0		2		0		9,561	
Mean	9	1,389		20,159		182		89		25		8		20,539	
Max.	13	1,963		28,867		514		420		105		23		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
Min.	27	1,091		9,737		0		90		19		17		9,900	
Mean	39	5,658		53,042		52		1,021		952		195		55,262	
Max.	44	10,346		89,000		138		2,723		2,850		969		94,230	

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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.	SE	Chum Est.	SE	Total Est.	SE
1996	27	10,503	60	102,821	367	295	5	1,932	29	2,404	33	175	10	107,627	375
1997	22	11,023	87	114,619	439	364	13	559	21	619	14	58	5	116,219	448
1998	18	10,802	59	103,847	716	254	10	1,011	62	1,032	62	85	3	106,229	724
1999	22	13,738	79	149,504	1,084	488	13	1,009	108	1,666	64	102	13	152,769	1,094
2000	22	12,354	69	98,262	752	410	18	1,449	62	1,457	75	193	31	101,771	762
2001	22	14,772	66	150,766	909	638	15	1,555	105	1,326	37	155	19	154,440	926
2002	22	14,840	56	180,028	844	606	11	1,721	64	5,662	102	551	36	188,568	874
2003	22	15,263	50	223,580	891	1,016	18	1,332	68	1,647	98	249	22	227,824	905
2004	22	18,513	35	262,831	583	792	7	2,661	66	2,103	27	387	12	268,774	905
2005	22	20,977	18	295,496	273	997	3	2,512	24	1,806	12	321	2	301,132	275
2006	20	12,685	16	127,630	183	1,034	3	2,235	15	11,127	37	551	9	142,577	203
2007	22	21,908	23	291,270	335	1,509	4	2,111	24	1,939	23	472	17	297,301	337
2008	22	20,772	27	234,109	338	1,362	10	2,609	21	10,631	49	504	8	249,215	343
2009	22	26,171	35	339,993	524	1,189	7	2,401	29	5,482	27	285	7	349,350	525
2010	22	28,342	44	389,552	702	865	7	2,870	56	3,655	28	508	15	397,451	705
2011	22	32,818	60	537,765	1,105	1,243	10	4,745	107	3,914	86	915	47	548,583	1,115
2012	22	34,374	61	526,992	1,109	40	3	4,008	117	3,770	101	424	14	535,236	1,120
2013	22	33,193	63	347,222	822	11	1	3,169	74	3,625	49	701	29	354,727	827
2014	22	36,380	81	379,823	1,023	0	0	4,710	157	19,140	184	1,194	51	404,866	1,053
2015	22	31,487	75	377,532	1,088	66	2	4,150	130	4,147	99	957	45	386,853	1,101
2016	22	30,745	75	259,057	817	638	8	3,277	106	7,834	90	717	34	271,524	830
2017	22	27,775	87	297,049	1,103	1,194	14	732	41	7,962	117	886	75	307,824	1,112
Min.	18	10,503		98,262		0		559		619		58		101,771	
Mean	22	21,792		263,170		682		2,398		4,679		472		271,403	
Max.	27	36,380		537,765		1,509		4,745		19,140		1,194		548,583	

Unknown Fishery

Year	Days Open	Days Fished Est.	SE	Sockeye Est.	SE	Chinook Est.	SE	Coho Est.	SE	Pink Est.	SE	Chum Est.	SE	Total Est.	SE
1996	-	472	33	4,761	463	24	7	131	37	127	37	4	3	5,047	467
1997	-	1,003	50	3,310	276	0	0	64	14	51	21	4	3	3,429	282
1998	-	921	39	7,562	287	34	5	294	77	196	19	20	0	8,106	301
1999	-	684	20	7,994	352	51	5	76	7	126	2	4	0	8,251	353
2000	-	648	23	5,429	274	44	13	218	60	84	11	24	15	5,799	282
2001	-	1,339	34	12,673	380	188	17	292	30	175	24	90	34	13,418	394
2002	-	1,339	26	14,846	353	166	10	341	25	916	81	54	8	16,323	380
2003	-	1,325	21	15,675	247	238	25	219	14	140	9	88	9	16,360	254
2004	-	1,143	13	13,527	179	99	3	366	25	210	10	25	4	14,227	185
2005	-	270	2	4,520	38	32	1	39	1	40	2	4	0	4,635	38
2006	-	371	2	3,406	34	29	1	47	2	304	16	84	0	3,870	41
2007	-	534	3	6,729	52	37	1	61	3	28	1	6	0	6,861	52
2008	-	622	4	6,890	63	41	2	66	3	412	9	58	3	7,467	64
2009	-	719	7	7,968	84	25	1	144	10	133	4	57	5	8,327	85
2010	-	760	8	8,300	125	15	1	168	7	109	2	12	1	8,605	125
2011	-	836	11	10,695	136	17	1	80	5	135	17	72	7	10,962	137
2012	-	937	14	13,295	219	4	1	173	25	127	9	36	5	13,635	221
2013	-	867	15	7,126	154	9	2	155	17	113	8	8	2	7,411	154
2014	-	1,022	14	9,315	131	0	0	129	18	563	22	78	15	10,085	135
2015	-	820	14	8,626	183	0	0	263	19	153	12	41	3	9,084	184
2016	-	645	14	4,837	155	15	1	34	7	233	23	81	12	5,200	158
2017		543	16	4,760	147	19	2	41	4	107	9	10	2	4,937	148
Min.		270		3,310		0		34		28		4		3,429	
Mean		810		8,284		49		155		204		39		8,729	
Max.		1,339		15,675		238		366		916		90		16,360	

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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.	SE	Chum Est.	SE	Total Est.	SE
1996	27	10,503	60	102,821	367	295	5	1,932	29	2,404	33	175	10	107,627	375
1997	22	11,023	87	114,619	439	364	13	559	21	619	14	58	5	116,219	448
1998	18	10,802	59	103,847	716	254	10	1,011	62	1,032	62	85	3	106,229	724
1999	22	13,738	79	149,504	1,084	488	13	1,009	108	1,666	64	102	13	152,769	1,094
2000	22	12,354	69	98,262	752	410	18	1,449	62	1,457	75	193	31	101,771	762
2001	22	14,772	66	150,766	909	638	15	1,555	105	1,326	37	155	19	154,440	926
2002	22	14,840	56	180,028	844	606	11	1,721	64	5,662	102	551	36	188,568	874
2003	22	15,263	50	223,580	891	1,016	18	1,332	68	1,647	98	249	22	227,824	905
2004	22	18,513	35	262,831	583	792	7	2,661	66	2,103	27	387	12	268,774	905
2005	22	20,977	18	295,496	273	997	3	2,512	24	1,806	12	321	2	301,132	275
2006	20	12,685	16	127,630	183	1,034	3	2,235	15	11,127	37	551	9	142,577	203
2007	22	21,908	23	291,270	335	1,509	4	2,111	24	1,939	23	472	17	297,301	337
2008	22	20,772	27	234,109	338	1,362	10	2,609	21	10,631	49	504	8	249,215	343
2009	22	26,171	35	339,993	524	1,189	7	2,401	29	5,482	27	285	7	349,350	525
2010	22	28,342	44	389,552	702	865	7	2,870	56	3,655	28	508	15	397,451	705
2011	22	32,818	60	537,765	1,105	1,243	10	4,745	107	3,914	86	915	47	548,583	1,115
2012	22	34,374	61	526,992	1,109	40	3	4,008	117	3,770	101	424	14	535,236	1,120
2013	22	33,193	63	347,222	822	11	1	3,169	74	3,625	49	701	29	354,727	827
2014	22	36,380	81	379,823	1,023	0	0	4,710	157	19,140	184	1,194	51	404,866	1,053
2015	22	31,487	75	377,532	1,088	66	2	4,150	130	4,147	99	957	45	386,853	1,101
2016	22	30,745	75	259,057	817	638	8	3,277	106	7,834	90	717	34	271,524	830
2017	22	27,775	87	297,049	1,103	1,194	14	732	41	7,962	117	886	75	307,824	1,112
Min.	18	10,503		98,262		0		559		619		58		101,771	
Mean	22	21,792		263,170		682		2,398		4,679		472		271,403	
Max.	27	36,380		537,765		1,509		4,745		19,140		1,194		548,583	

Unknown Fishery

Year	Days Open	Days Fished Est.	SE	Sockeye Est.	SE	Chinook Est.	SE	Coho Est.	SE	Pink Est.	SE	Chum Est.	SE	Total Est.	SE
1996	-	472	33	4,761	463	24	7	131	37	127	37	4	3	5,047	467
1997	-	1,003	50	3,310	276	0	0	64	14	51	21	4	3	3,429	282
1998	-	921	39	7,562	287	34	5	294	77	196	19	20	0	8,106	301
1999	-	684	20	7,994	352	51	5	76	7	126	2	4	0	8,251	353
2000	-	648	23	5,429	274	44	13	218	60	84	11	24	15	5,799	282
2001	-	1,339	34	12,673	380	188	17	292	30	175	24	90	34	13,418	394
2002	-	1,339	26	14,846	353	166	10	341	25	916	81	54	8	16,323	380
2003	-	1,325	21	15,675	247	238	25	219	14	140	9	88	9	16,360	254
2004	-	1,143	13	13,527	179	99	3	366	25	210	10	25	4	14,227	185
2005	-	270	2	4,520	38	32	1	39	1	40	2	4	0	4,635	38
2006	-	371	2	3,406	34	29	1	47	2	304	16	84	0	3,870	41
2007	-	534	3	6,729	52	37	1	61	3	28	1	6	0	6,861	52
2008	-	622	4	6,890	63	41	2	66	3	412	9	58	3	7,467	64
2009	-	719	7	7,968	84	25	1	144	10	133	4	57	5	8,327	85
2010	-	760	8	8,300	125	15	1	168	7	109	2	12	1	8,605	125
2011	-	836	11	10,695	136	17	1	80	5	135	17	72	7	10,962	137
2012	-	937	14	13,295	219	4	1	173	25	127	9	36	5	13,635	221
2013	-	867	15	7,126	154	9	2	155	17	113	8	8	2	7,411	154
2014	-	1,022	14	9,315	131	0	0	129	18	563	22	78	15	10,085	135
2015	-	820	14	8,626	183	0	0	263	19	153	12	41	3	9,084	184
2016	-	645	14	4,837	155	15	1	34	7	233	23	81	12	5,200	158
2017		543	16	4,760	147	19	2	41	4	107	9	10	2	4,937	148
Min.		270		3,310		0		34		28		4		3,429	
Mean		810		8,284		49		155		204		39		8,729	
Max.		1,339		15,675		238		366		916		90		16,360	

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Unknown Fishery

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	-	472	33	4,761	463	24	7	131	37	127	37	4	3	5,047	467
1997	-	1,003	50	3,310	276	0	0	64	14	51	21	4	3	3,429	282
1998	-	921	39	7,562	287	34	5	294	77	196	19	20	0	8,106	301
1999	-	684	20	7,994	352	51	5	76	7	126	2	4	0	8,251	353
2000	-	648	23	5,429	274	44	13	218	60	84	11	24	15	5,799	282
2001	-	1,339	34	12,673	380	188	17	292	30	175	24	90	34	13,418	394
2002	-	1,339	26	14,846	353	166	10	341	25	916	81	54	8	16,323	380
2003	-	1,325	21	15,675	247	238	25	219	14	140	9	88	9	16,360	254
2004	-	1,143	13	13,527	179	99	3	366	25	210	10	25	4	14,227	185
2005	-	270	2	4,520	38	32	1	39	1	40	2	4	0	4,635	38
2006	-	371	2	3,406	34	29	1	47	2	304	16	84	0	3,870	41
2007	-	534	3	6,729	52	37	1	61	3	28	1	6	0	6,861	52
2008	-	622	4	6,890	63	41	2	66	3	412	9	58	3	7,467	64
2009	-	719	7	7,968	84	25	1	144	10	133	4	57	5	8,327	85
2010	-	760	8	8,300	125	15	1	168	7	109	2	12	1	8,605	125
2011	-	836	11	10,695	136	17	1	80	5	135	17	72	7	10,962	137
2012	-	937	14	13,295	219	4	1	173	25	127	9	36	5	13,635	221
2013	-	867	15	7,126	154	9	2	155	17	113	8	8	2	7,411	154
2014	-	1,022	14	9,315	131	0	0	129	18	563	22	78	15	10,085	135
2015	-	820	14	8,626	183	0	0	263	19	153	12	41	3	9,084	184
2016	-	645	14	4,837	155	15	1	34	7	233	23	81	12	5,200	158
2017		543	16	4,760	147	19	2	41	4	107	9	10	2	4,937	148
Min.		270		3,310		0		34		28		4		3,429	
Mean		810		8,284		49		155		204		39		8,729	
Max.		1,339		15,675		238		366		916		90		16,360	

Upper Cook Inlet Personal Use Fisheries Total

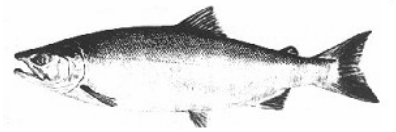
Year	Days Fished Est.	Days Fished SE	Sockeye Est.	Sockeye SE	Chinook Est.	Chinook SE	Coho Est.	Coho SE	Pink Est.	Pink SE	Chum Est.	Chum SE	Total Est.	Total SE
1996	16,606	85	145,545	644	452	12	4,811	56	2,973	50	350	12	154,131	655
1997	14,923	114	148,940	592	464	13	777	26	844	27	88	6	151,113	604
1998	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
Min.	14,923		145,545		50		777		844		88		151,113	
Mean	30,021		346,653		947		4,428		6,001		713		358,743	
Max.	50,819		630,242		1,924		10,648		26,795		1,927		644,498	

Note: Does not include Beluga River dip net fishery.

APPENDIX C: SALMON OUTLOOK AND FORECAST

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

Sam Cotten, Commissioner
Scott Kelly, Director



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Pat Shields, Area Management Biologist 43961 Kalifornsky Beach Rd.
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Phone: (907) 262-9368 Soldotna, AK 99669
Fax: (907) 262-4709 Date Issued: March 30, 2016

UPPER COOK INLET
2017 OUTLOOK FOR COMMERCIAL SALMON FISHING

SOCKEYE SALMON

A run of approximately 4.0 million sockeye salmon is forecasted to return to Upper Cook Inlet (UCI) in 2017, with a harvest by all user groups of 2.6 million. The commercial fishery harvest in 2017 is expected to be approximately 1.7 million sockeye salmon, which is 1.2 million fish less than the most recent 10-year average annual commercial sockeye salmon harvest of 2.9 million fish.

The run forecast for the Kenai River is approximately 2.2 million, which is 1.4 million less than the 20-year average run of 3.6 million. In 2017, the predominant age classes are projected to be age 1.3 (60%), age 1.2 (16%), age 2.2 (7%) and age 2.3 (15%). The 10-year mean absolute percent error (MAPE) for the set of models used for the 2017 Kenai River sockeye salmon forecast is 20%. The department uses the European salmon aging system. One digit is placed to the left of the decimal point to indicate freshwater age (not including the year spent in the gravel during egg incubation and hatching – referred to as the gravel year), and another digit is placed to the right of the decimal point to indicate ocean age. For example, an age 1.3 sockeye salmon spent two years in freshwater and three years rearing in the ocean. A salmon of this age is referred to as a 5-year-old fish, with the total age starting from the year of egg deposition.

The Kasilof River sockeye salmon run forecast for 2017 is 825,000 fish, which is 16% less than the 20-year average annual run of 987,000. The predominant age classes in the run forecast are age 1.2 (34%), age 1.3 (28%), age 2.2 (25%), and age 2.3 (10%). The 10-year MAPE for the set of models used for the 2017 Kasilof River sockeye salmon run forecast is 12%.

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The Susitna River sockeye salmon run forecast is 366,000, which is 5% less than the 10-year average of 387,000. This forecast was derived using mean return per spawner by age class and mark–recapture estimates of spawner abundance for brood years 2006–2012. Sonar estimates of spawner abundance were not used, because mark–recapture studies have shown that the Yentna River sonar project underestimated sockeye salmon escapement causing estimates of adult returns to also be underestimated. The 4-year MAPE for this forecast method is 17%. The predominant age classes in the 2017 Susitna River sockeye salmon run forecast are age 1.2 (20%), age 1.3 (53%) and age 2.3 (12%).

The Fish Creek sockeye salmon run forecast is 75,000, which is 11% less than the 20-year average of 84,000. The predominant age classes in the 2017 Fish Creek run forecast are age 1.2 (64%) and age 1.3 (23%). The 10-year MAPE for the Fish Creek sockeye salmon run forecast is 70%.

Forecast runs to individual freshwater systems are as follows:

System	Run	Goals[a]
Kenai River [b,c]	2,164,000	900,000–1,100,000
Kasilof River [b,d]	825,000	160,000–340,000
Susitna River	366,000	
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	75,000	15,000–45,000[e]
Unmonitored Systems [f]	586,000	N/A
Total	4,016,000	

[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.

2017 REGULATORY CHANGES

Several regulatory changes were made by the Alaska Board of Fisheries (board) during the February-March 2017 meeting that will be implemented during the 2017 fishing season. The following summary is for informational purposes only and is not a comprehensive review. Regulatory booklets will be published after the new regulations become law, which should occur in early June. Once published, booklets will be available to allow fishermen to become familiar with the new regulations prior to fishing.

Upper Subdistrict Set Gillnet

- **One-percent rule**: In the Upper Subdistrict set gillnet fishery, the calculation to

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- determine if less than one-percent of the total sockeye salmon harvest has occurred for two consecutive periods now begins after August 7 instead of after July 31.
- **Kasilof River Special Harvest Area (KRSHA**): When this area is open to commercial fishing, dual set gillnet permit holders may now fish with one net per permit, or two nets total. The provision limiting how much gear vessels may have on board while fishing in the KRSHA was repealed; however, the limit on the amount of gear that may be fished in the KRSHA was not changed, which is one 35-fathom set gillnet per permit holder and no more than 50 fathoms per drift gillnet vessel. Drifters are reminded that 5 AAC 21.331 and 5 AAC 39.240 are still in effect, limiting the amount of drift gillnet gear that may be aboard to no more than 150 fathoms for single permit vessels or no more than 200 fathoms for dual permit vessels. Except for nets which may not be in the water after the close of a fishing period, set gillnet gear, including running lines, shore leads, anchors, and buoys must be removed from the water and the beach prior to the first opening of the KRSHA, no more than 4 hours after any closure of the KRSHA, and may not be placed back in the water or on the beach prior to the next opening of the KRSHA. The boundaries of the KRSHA, including the areas open only to set gillnetting and areas open only to drift gillnetting, are comprised of a series of waypoints that have now been placed into regulation (Figure 1).
- **Closed waters at the Kasilof and Kenai rivers:** waters not open to commercial fishing, i.e., closed waters, at the mouths of the Kasilof (Figure 2) and Kenai (Figure 3) rivers are now described by a series of waypoints.
- **Kasilof River Salmon Management Plan:** Set gillnetting in the Kasilof Section may be limited to fishing within 600 feet of mean high tide in lieu of fishing in the KRSHA or in combination with the KRSHA. When the fishery is open in this area, hours fished will not count toward the restrictive hourly provisions in either the *Kenai River Late-Run King Salmon Management* Plan or the *Kenai River Late-Run Sockeye Salmon Management Plan*.
- **Kenai River Late-Run Sockeye Salmon Management Plan:** Kenai River sockeye salmon are to be managed to meet abundance-based inriver goals and to achieve the SEG of 700,000–1,200,000 spawners. The OEG was removed from the management plan. Inriver goal ranges were modified as follows: for runs less than 2.3 million sockeye salmon, the inriver goal range is 900,000–1,100,000 fish; for runs between 2.3 million and 4.6 million fish, the inriver goal range is 1,000,000–1,300,000 fish; and for runs greater than 4.6 million fish, the inriver goal range is 1,100,000–1,500,000 fish.
- **Kenai Section (North of Blanchard Line and South of Kenai River mouth):** On or after July 8, any time the Kasilof Section is open, but the Kenai and East Foreland sections are closed, set gillnetting may be allowed within 600 feet of the mean high tide mark in statistical area 244-32, which is that portion of the Kenai Section north of the Blanchard Line and south of the Kenai River mouth.
- **Kenai River Late-Run King Salmon Management Plan**: Beginning with the 2017 season, Kenai River late-run king salmon will be managed to meet a sustainable

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- escapement goal (SEG) of 13,500–27,000 large (>75cm mid-eye to tail fork) fish. From July 1–31, in order to achieve the SEG, if the sport fishery is restricted to fishing with no bait, then the Upper Subdistrict set gillnet fishery will be managed with the following provisions:

  g. No Monday/Thursday regular fishing periods.

  h. No more than 48 hours of fishing time per week with a 36-hour Friday window.

  i. The following gear modifications are options for the department to consider:

     - gear restrictions where fishermen would be allowed to fish up to 4 set gillnets that are each not more than 35 fathoms in length and 29 meshes in depth and 105 fathoms in the aggregate, or two set gillnets that are each not more than 35 fathoms in length and 45 meshes in depth;

     - gear restrictions where fishermen would be allowed to fish two set gillnets that are each not more than 35 fathoms in length and 29 meshes in depth or one set gillnet that is not more than 35 fathoms in length and 45 meshes in depth;

  j. If the sport fishery is restricted to no bait and no retention of king salmon, then the Upper Subdistrict set gillnet fishery is open for no more than 24 hours per week in July, with a 36-hour "Friday" window. No additional restrictions on gear would occur during this time period.

  k. The East Foreland Section set gillnet fishery is now exempt from the "paired" restrictive provisions in the *Kenai River Late-Run King Salmon Management Plan*.

  l. In August, the Upper Subdistrict set gillnet fishery will be managed to achieve the Kenai River late-run king salmon SEG and Kenai and Kasilof river sockeye salmon goals. Weekly EO hour limitations and no-fishing "windows" will follow the provisions found in the *Kenai River Late-Run Sockeye Salmon Management Plan*.

Central District Drift Gillnet

- ***Drift Gillnet Fishery Management Plan***: From July 16–31, at run strengths of 2.3 million to 4.6 million Kenai River sockeye salmon, fishing during one 12-hour regular fishing period may be fished districtwide instead of in Drift Gillnet Area 1.

- **Dual drift fishing**: One person may now own two CFEC limited entry drift gillnet permits (S03H) and operate 50 fathoms of additional drift gillnet gear when fishing as a dual-permit holder. The option for two different permit holders operating together from one vessel was retained in regulation.

- **Kasilof River Special Harvest Area (KRSHA)**: Dual-permit drift vessels may now fish in the KRSHA with the standard limit of 50 fathoms of gear while having up to 200 fathoms of gear on board.

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- **Regular and Expanded Kasilof Section boundary change:** The SW corner of the Expanded Kasilof Section was moved 1.2 nautical miles west to match the NW corner of the Anchor Point Section. The coordinates of the SW corner of the Expanded Kasilof Section are now 60° 04.02′ N lat, 151° 49.00′ W long.

General Provisions

- *Pink Salmon Management Plan*: The harvest triggers needed to open the fishery were reduced. Based upon the number of pink salmon that are harvested by the Upper Subdistrict set gillnet fishery from August 6–10, a pink salmon fishery may be opened in even years only for up to two fishing periods from August 11–15. The first pink salmon commercial fishing period will occur only if, during the regular fishing periods from August 6–10, the daily harvest of pink salmon in the Upper Subdistrict set gillnet fishery exceeds 25,000 fish (changed from 50,000 fish) or the cumulative harvest is 50,000 (changed from 100,000 fish) or more pink salmon. The second pink salmon commercial fishing period will occur only if 25,000 (changed from 50,000 fish) or more pink salmon and no more than 2,500 coho salmon are harvested in the Upper Subdistrict set gillnet fishery during the first pink salmon commercial fishing period. The gear restriction limiting nets to a mesh size no larger than four and three-quarters inches remains for both set and drift gillnets while operating under the provisions of the *Pink Salmon Management Plan.*

2017 FISHING STRATEGY

Northern District Set Gillnet

Since 2011, management actions in the Northern District directed king 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 king salmon. Because king salmon escapements have improved modestly in the Northern District in recent years, this has resulted in a relaxation of some sport fish restrictions in the Deshka and Little Susitna rivers. Harvest and escapement data over recent years, in combination with recent strength of age class relationships derived from data collected at the Deshka and Little Susitna weirs, indicate that additional harvest over 2013–2016 levels is sustainable for these systems only. Therefore, the Northern District directed king salmon commercial fishery will start the 2017 season fishing regularly scheduled 12-hour fishing periods. There will be four fishing periods in the 2017 season; those being May 29, and June 5, 12, and 19. Permit holders are allowed to operate no more than one set gillnet and set gillnets may not be operated within 1,200 feet of each other. In addition, the area from the wood chip dock to the Susitna River will remain closed to commercial king salmon fishing. This area closure is estimated to reduce the overall commercial harvest of king salmon by approximately 50%. Escapement of king salmon into the Deshka and Little Susitna rivers will be closely monitored during the 2017 season. Additional restrictions or closures to commercial fishing periods will be based upon inseason assessment of king salmon escapements.

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- Beginning Monday, June 26, the entire Northern District set gillnet fishery will be managed per the provisions of 5 AAC 21.358. *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 board meeting. According to 5 AAC 21.358. *The Northern District Salmon Management Plan*, the department may reduce the legal complement of gear in the Northern District set gillnet fishery to no more than one net 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, the department may allow the use of no more than two nets per permit after July 30. In 2017, 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 Monday, August 7.

Central District Fisheries

Upper Subdistrict Set Gillnet Fishery – Overview

The 2017 Kenai River late-run king salmon forecast projects a total run of approximately 33,600 "large" (>75cm mid-eye to tail fork) fish. The SEG for Kenai River late-run king salmon is 13,500–27,000 large fish. Therefore, if the forecasted run is realized, the SEG is very likely to be achieved without restrictive actions in either the sport, personal use, or Upper Subdistrict set gillnet fisheries. 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 king salmon escapement relative to the SEG.

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

> (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 three 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 objective 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.

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Achievement of the inriver goal ranges will likely 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 PM Thursday and 7:00 AM Friday. Additionally, the department may allow up to 48 hours of additional fishing time per week (Sunday through Saturday).

Kasilof, Kenai and East Forelands Sections

- The Kenai and East Forelands sections fishing season opens on or after July 8.
- Management of the Kasilof, Kenai and East Forelands 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 king salmon. From July 1–31, if the run of Kenai River late-run king salmon is projected to meet or exceed the minimum SEG, then management of the Upper Subdistrict set gillnet fishery is to follow provisions in 5 AAC 21.360. *Kenai River Late-Run Sockeye Salmon Management Plan*. For the 2017 season, the Kenai River sockeye salmon run projection is 2.2 million fish. Therefore, the season will be managed following guidelines outlined below for runs less than 2.3 million fish, which includes an inriver goal range of 900,000–1,100,000 fish. The Kenai River sockeye salmon run will be reassessed after July 20 to determine inseason run strength.

    a. For runs **less than 2.3 million Kenai River sockeye salmon**, the department may allow up to 24 hours of additional fishing time per week in the Upper Subdistrict set gillnet fishery. There is no mandatory weekly no-fishing "window" on run sizes less than 2.3 million sockeye salmon. If the Kenai and East Forelands sections are not fished, the department may limit regular and extra periods in the Kasilof Section to within one-half mile of shore. After July 15, if the department determines that the Kenai River late-run sockeye salmon run strength is less than 2.3 million fish and projects the Kasilof River OEG of 390,000 fish may be exceeded, an additional 24 hours of fishing time may be provided in the Kasilof Section within one-half mile of the mean high tide mark.

- From July 1–31, if the Kenai River late-run king salmon sport fishery is restricted to no bait in order to meet the SEG, management actions in the Upper Subdistrict set gillnet fishery will be "paired" as described in 5 AAC 21.359. *Kenai River Late-Run King Salmon Management Plan*.

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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 king salmon SEG. If the king 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–Thursday regular 12-hour fishing periods are allowed. However, the season may close any time after August 7 if during two 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.

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 4 & 5), and Drift Gillnet Area 1 (Figure 6).
  b. All additional fishing time is allowed only in the Expanded Kenai and Expanded Kasilof sections.
- From July 16 through July 31:
  a. In runs less than 2.3 million Kenai River sockeye salmon, fishing during all regular 12-hour fishing periods will be restricted to the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict. All additional fishing time outside regular fishing periods is allowed only in one or more of the following: the Expanded Kenai, Expanded Kasilof, and Anchor Point sections.
- From August 1 through August 15:
  a. Fishing is open districtwide for Mon/Thu regular 12-hour fishing periods. Additional fishing time outside regular fishing periods and the areas fished will be dependent upon meeting king, 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 fishing periods will be restricted to Drift Areas 3 and 4 (Figure 7).
- 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.

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SEASON OPENING DATES

Season opening dates in 2017 for the various fisheries around the inlet are as follows:

- *Northern District King Salmon Fishery:* May 29. As explained earlier in this document, there are four regular Monday fishing periods in the 2017 fishery that occur beginning Monday, May 29, and include June 5, 12, and 19. The area from a point at the wood chip dock to the Susitna River remains closed for the directed king salmon fishery in 2017.
- *Big River Fishery:* June 2 and continuing through June 24, unless the 1,000 king salmon harvest limit is reached prior to that date. Weekly fishing periods are Mondays, Wednesdays, and Friday from 7:00 AM to 7:00 PM
- *Western Subdistrict Set Gillnet Fishery:* June 19.
- *Drift Gillnet Fishery*: June 19.
- *All remaining set gillnet fisheries, except the Upper Subdistrict:* June 26.
- *Upper Subdistrict Set Gillnet Fishery:* June 26 for the Kasilof Section (that portion south of the Blanchard Line), unless opened earlier by EO (based on an inriver estimate of 50,000 Kasilof River sockeye salmon before the June 26 opener), but will not open before June 20. The Kenai and East Forelands sections (that portion of the Upper Subdistrict north of the Blanchard Line) will open on *Monday, July 10*. 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 three 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 three 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 three 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.

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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.

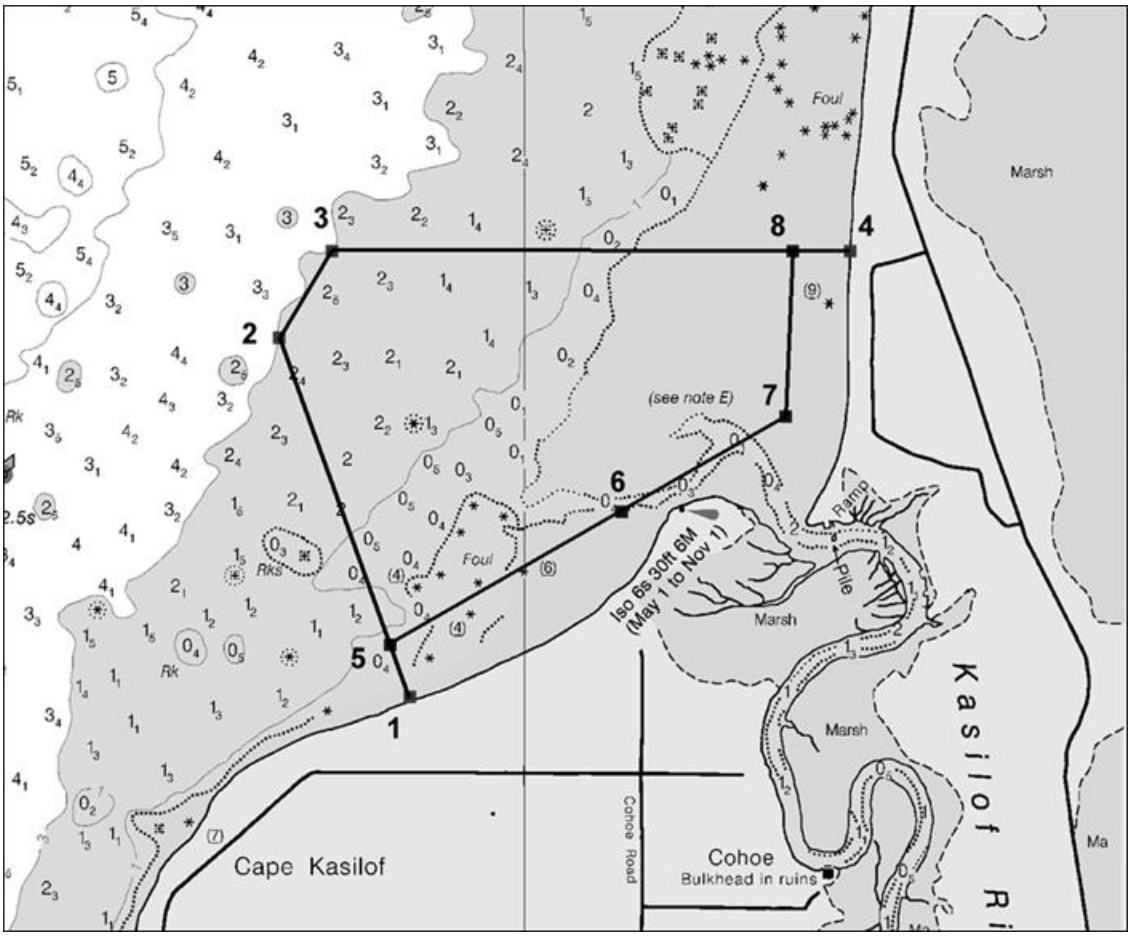

Figure 1.–Map of the Kasilof River Special Harvest Area with waypoint boundaries.

Waypoint 1:	60° 22.59′ N lat	151° 20.79′ W long
Waypoint 2:	60° 23.83′ N lat	151° 21.70′ W long
Waypoint 3:	60° 24.13′ N lat	151° 21.34′ W long
Waypoint 4:	60° 24.13′ N lat	151° 17.72′ W long
Waypoint 5:	60° 22.77′ N lat	151° 20.93′ W long
Waypoint 6:	60° 23.23′ N lat	151° 19.31′ W long
Waypoint 7:	60° 23.56′ N lat	151° 18.17′ W long
Waypoint 8:	60° 24.13′ N lat	151° 18.12′ W long

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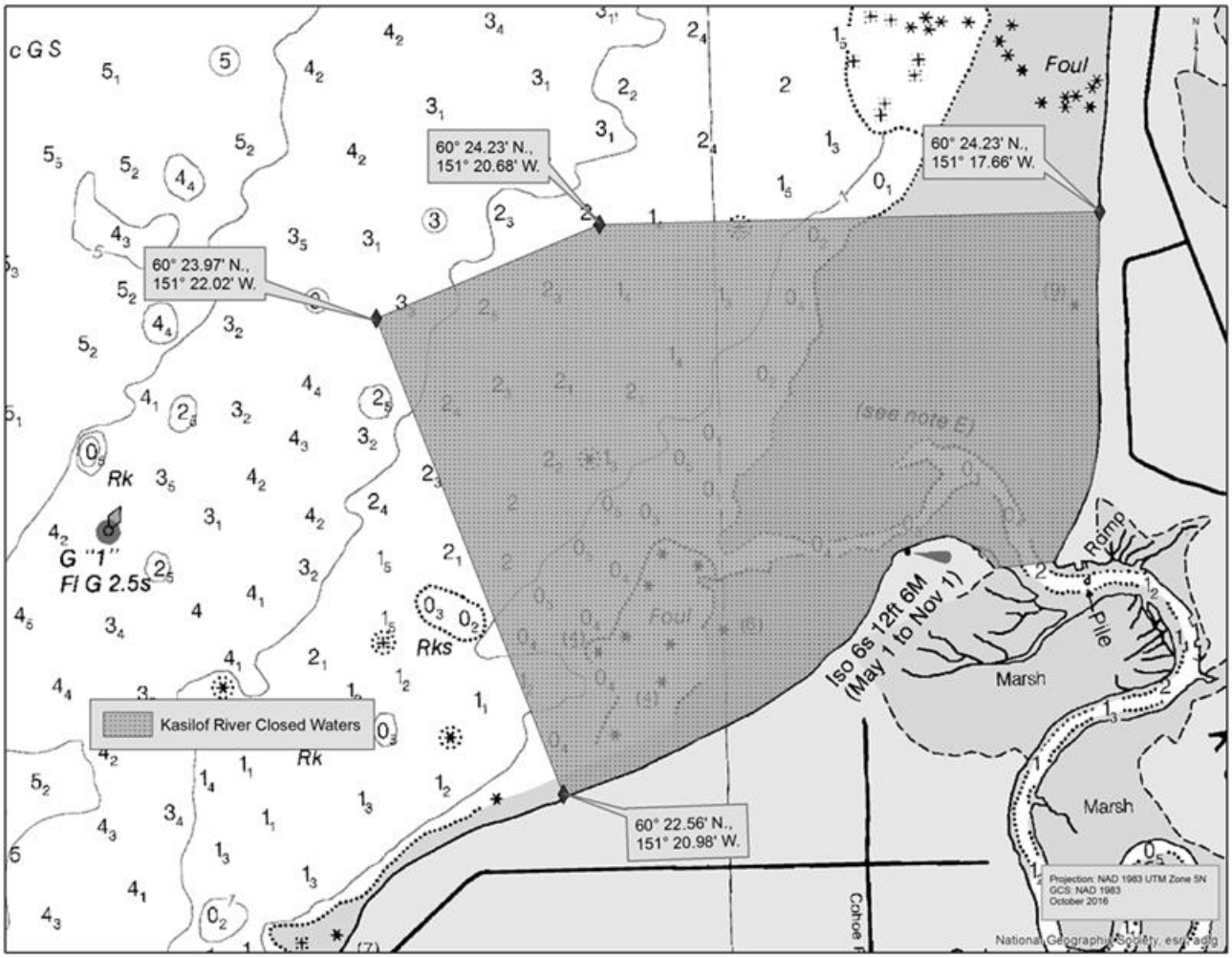

Figure 2.–Waypoint locations marking closed waters at the mouth of the Kasilof River.

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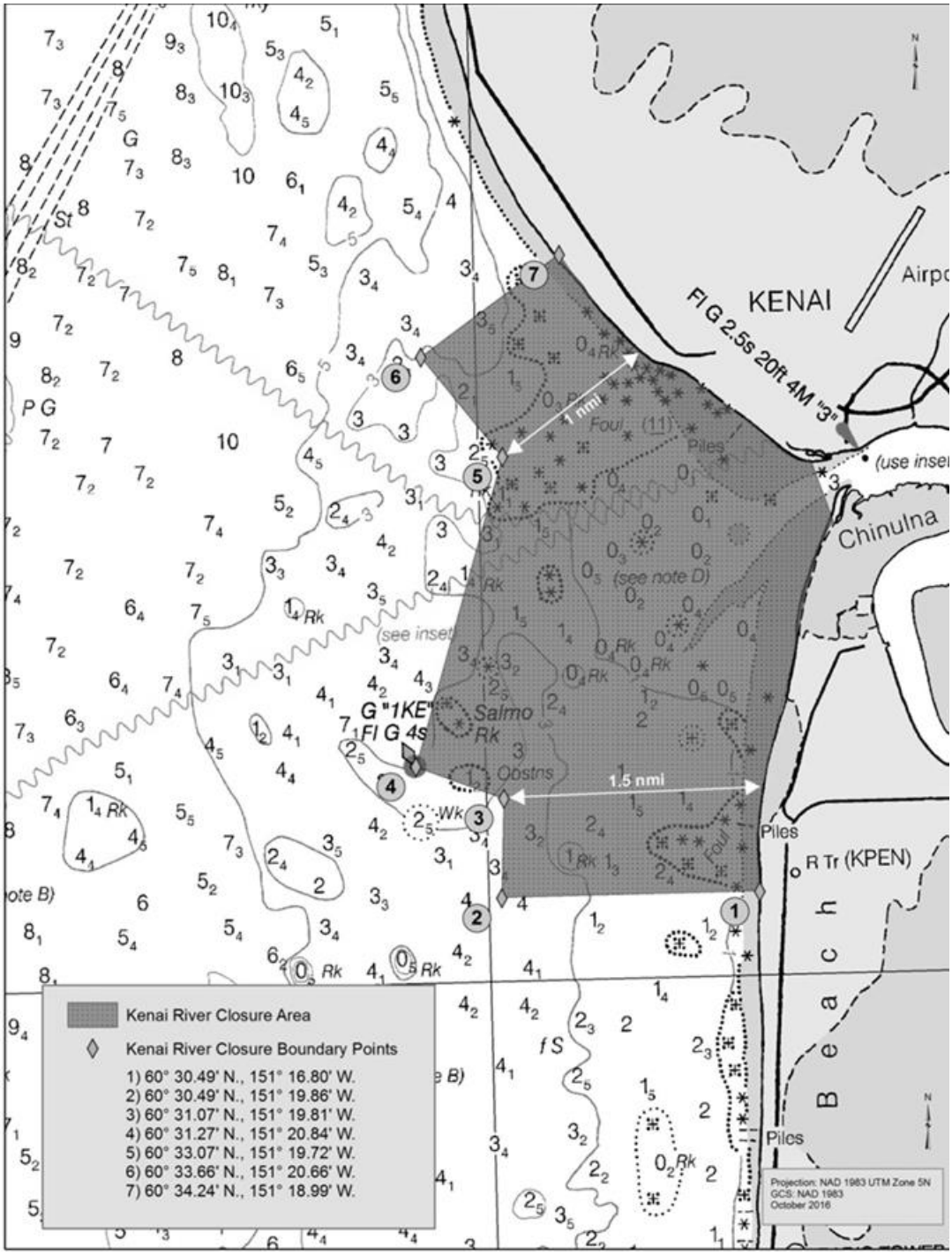

Figure 3.–Waypoint locations marking closed waters at the mouth of the Kenai River.

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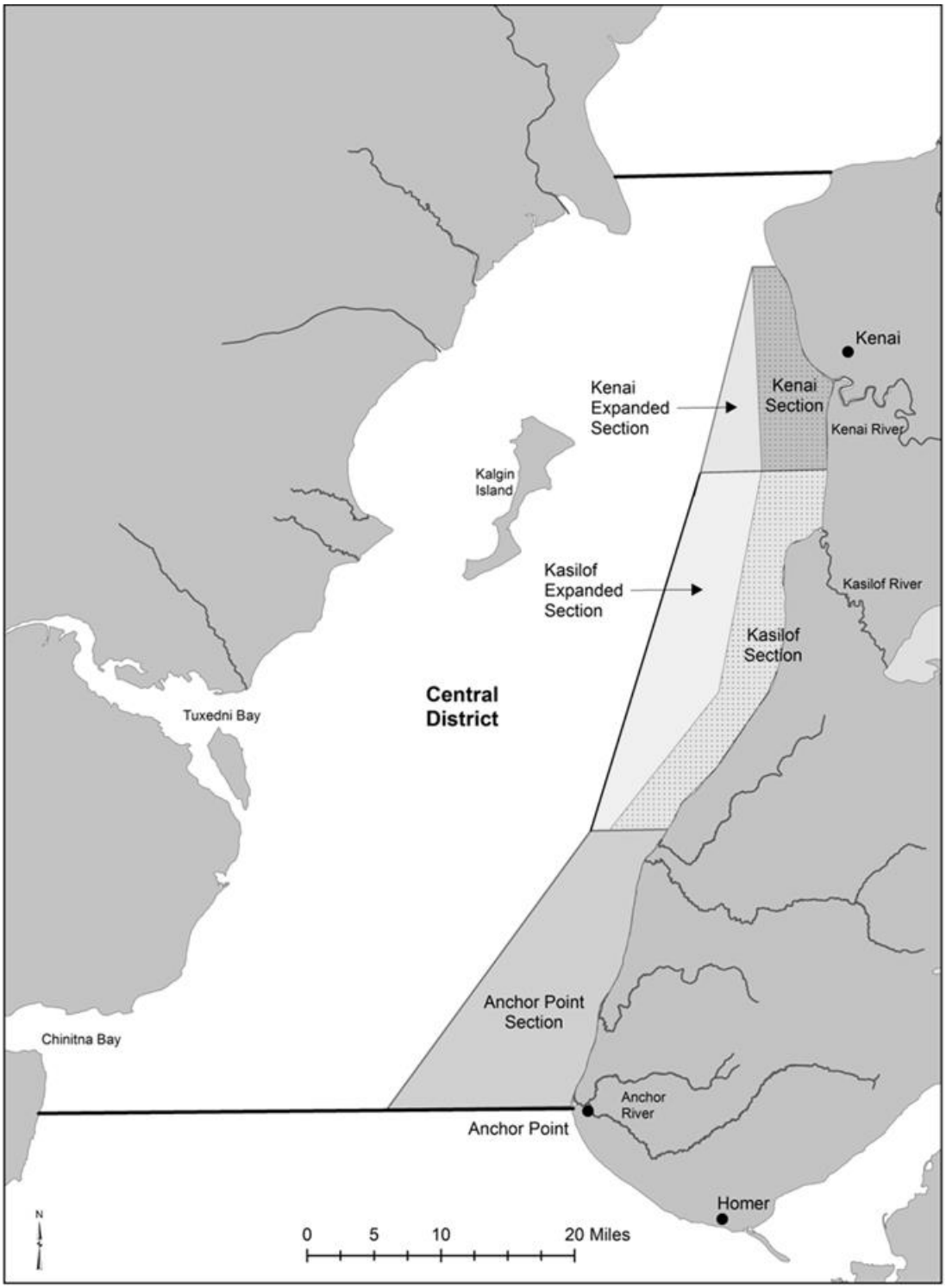

Figure 4.–Map of the Regular and Expanded Kenai sections, Regular and Expanded Kasilof sections, and Anchor Point section.

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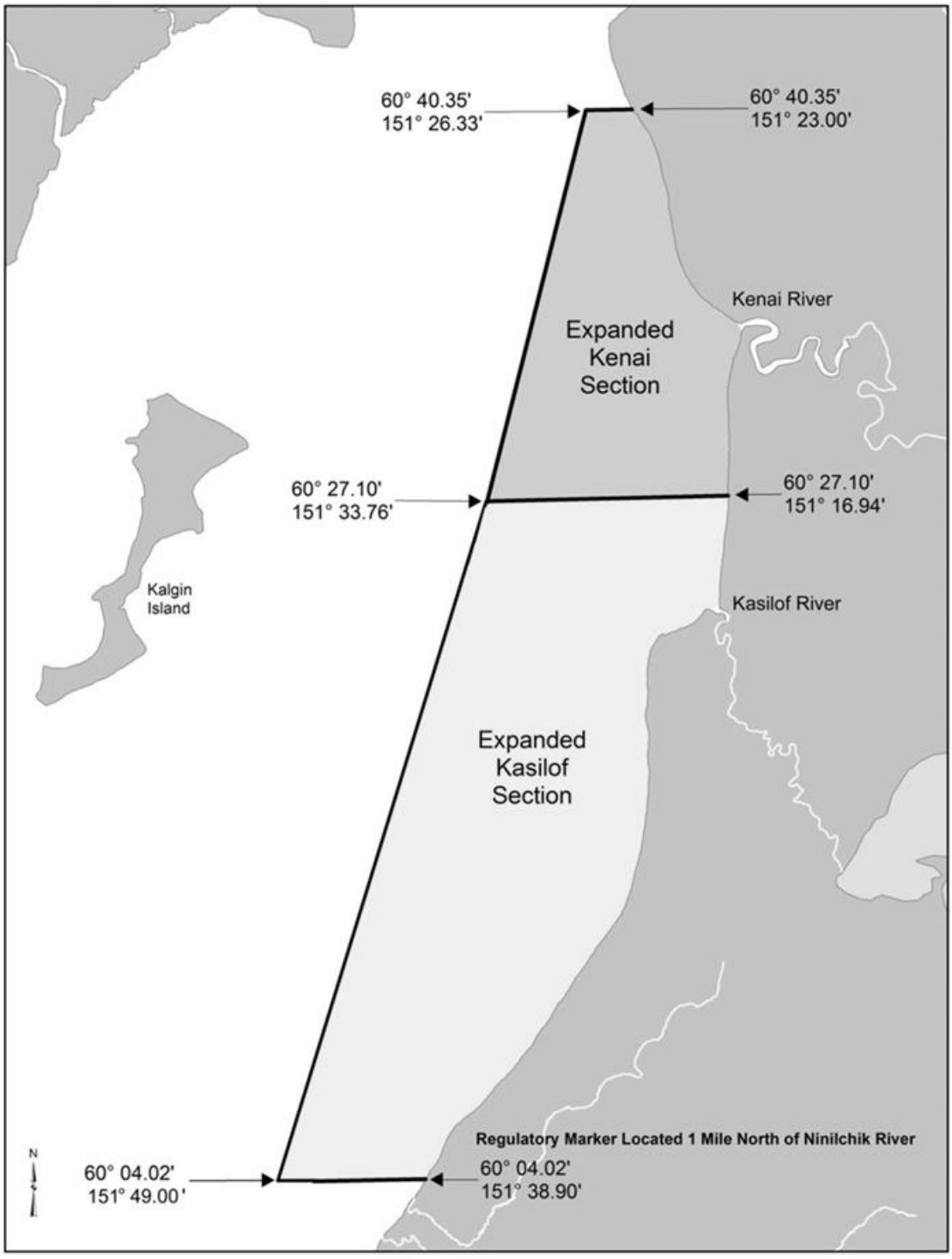

Latitude and Longitude are based on the North American Datum of 1983 (NAD 83), equivalent to the World Geodetic System 1984 (WGS 84).

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

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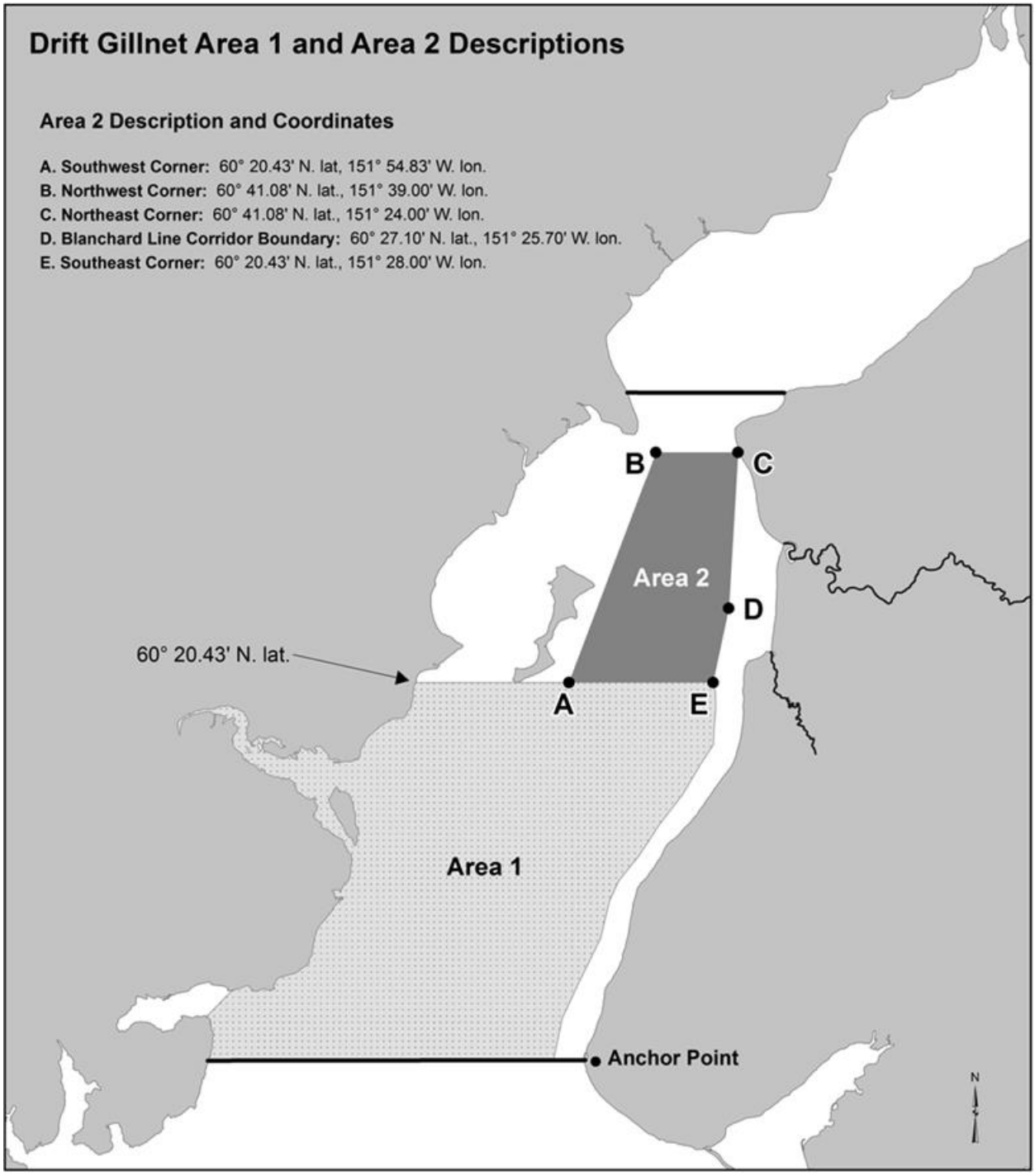

Latitude and Longitude are based on the North American Datum of 1983 (NAD 83), equivalent to the World Geodetic System 1984 (WGS 84).

Figure 6.–Map of drift gillnet areas 1 and 2.

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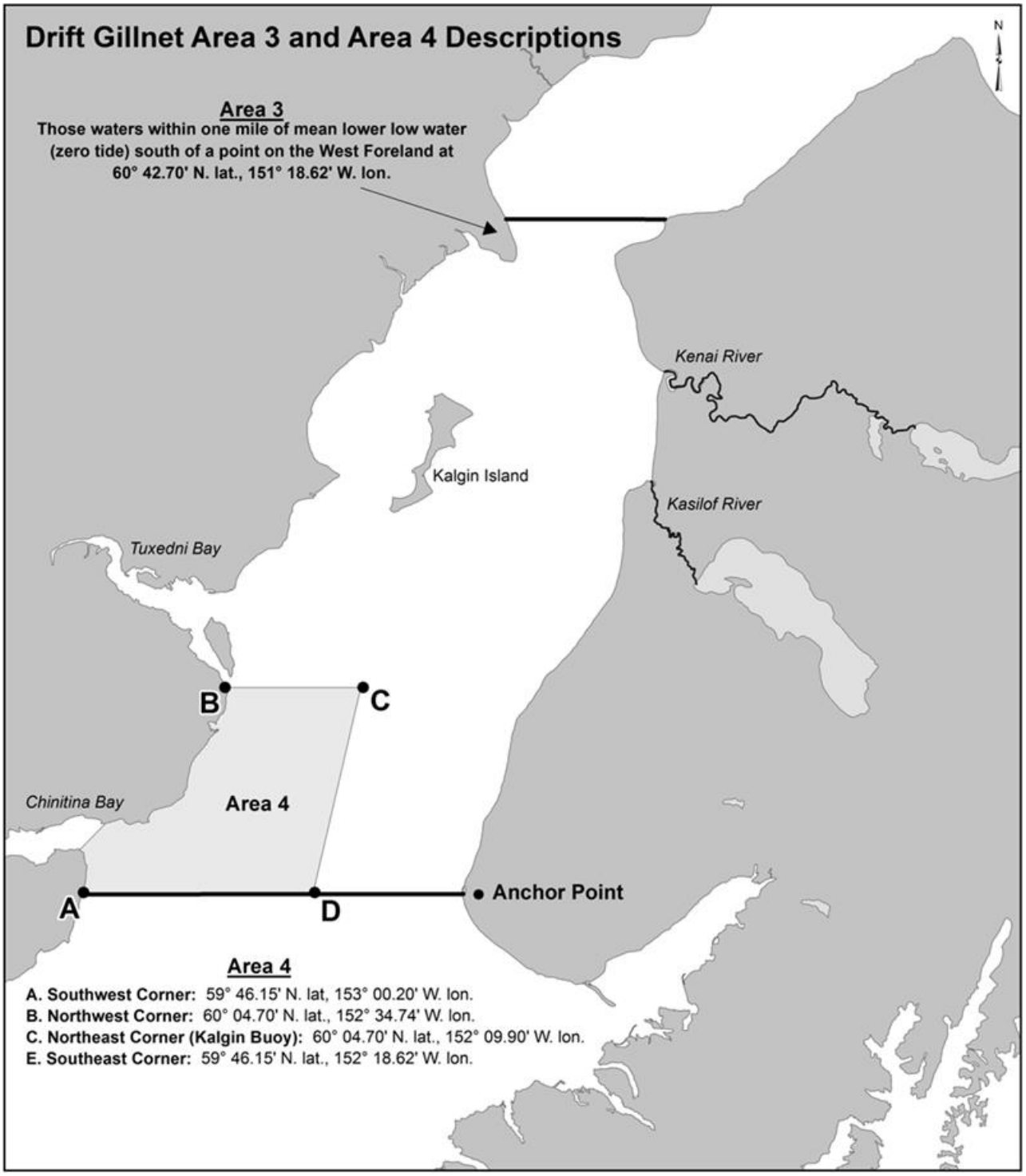
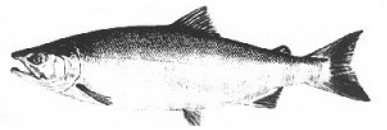


Latitude and Longitude are based on the North American Datum of 1983 (NAD 83), equivalent to the World Geodetic System 1984 (WGS 84).

Figure 7.–Map of the drift gillnet areas 3 and 4; open beginning after August 15.

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

Sam Cotten, Commissioner
Scott Kelley, Director



Contact:
Mark Willette, Research Project Leader
Pat Shields, Area Management Biologist
Phone: (907) 262-9368
Fax: (907) 262-4709

Soldotna ADF&G
43961 Kalifornsky Beach Rd.
Suite B
Soldotna, AK 99669
Date Issued: Nov. 21, 2017

2018 UPPER COOK INLET SOCKEYE SALMON FORECAST

The forecasts of the 2018 Upper Cook Inlet sockeye salmon run and harvests are as follows:

	Forecast Estimate (millions)	Forecast Range (millions)
TOTAL PRODUCTION:		
Total Run	4.6	3.6–5.5
Escapement	2.0	
UCI Commercial Harvest	1.9	
Other UCI Harvests	0.7	

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. Four models were evaluated to forecast the total run of sockeye salmon to UCI in 2018: (1) the relationship between adult returns and spawners, (2) the relationship between adult returns and fall fry, (3) the relationship between adult returns and smolts, 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 typically selected. Forecast model predictions were compared to evaluate uncertainty.

The return of age-1.3 Kenai River sockeye salmon in 2018 was forecasted using a sibling model. The sibling-model prediction of the return of age-1.3 salmon is based on the abundance of age-1.2 salmon that returned in 2017. A spawner-recruit model predicts the age-1.2 salmon return

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based upon the spawning escapement in 2014. 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 2017, and the return of age-2.3 salmon was forecasted using a fry model based upon the abundance of age-1 fry rearing in Skilak and Kenai lakes in the fall of 2014. The returns of age-1.2, -1.3, and -2.2 Kasilof River sockeye salmon in 2018 were forecasted using sibling models based upon returns of age-1.1, -1.2, and -2.1 salmon in 2017. A smolt model based upon age-1 smolt abundance in 2015 was used to forecast the return of age-2.3 Kasilof River sockeye 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 2006–2013. 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 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 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 2008 through 2017.

2017 Run and Forecast

In 2017, the commercial harvest of sockeye salmon in UCI (1.8 million) was 0.1 million greater than the preseason forecast of 1.7 million. In 2017, the estimated total run was 2.9 million to the Kenai River; 817,000 to the Kasilof River; 306,000 to the Susitna River; and 83,000 to Fish Creek. The 2017 run forecast was 2.2 million to the Kenai River; 825,000 to the Kasilof River; 366,000 to the Susitna River; and 75,000 to Fish Creek. Overall, the 2017 sockeye salmon run (4.6 million) was 15% above forecast (4.0 million), largely due to the above forecast Kenai River sockeye salmon run.

Forecast Discussion

In 2018, a run of approximately 4.6 million sockeye salmon is forecasted to return to UCI with a commercial harvest of 1.9 million. The forecasted commercial harvest in 2018 is 0.9 million less than the 20-year average harvest.

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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. A sibling model based upon the return of age-1.2 salmon in 2017 (201,000; 391,000 20-year average) predicted a return of 1.2 million age-1.3 salmon. A fry model based upon the abundance of age-0 fry rearing in Skilak and Kenai lakes in the fall of 2014 (16.2 million; 17.3 million 20-year average) and the average weight of age-0 fall fry rearing in Skilak Lake (0.8 grams; 1.1 grams 20-year average) predicted a return of 1.1 million age-1.3 salmon. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling (21%) than the fry model (26%). A fry model based upon the abundance of age-1 fry rearing in Skilak and Kenai lakes in the fall of 2014 (1.4 million; 2.1 million 20-year average) predicted a return of 718,000 age-2.3 salmon in 2018. A sibling model based upon the return of age-2.2 salmon in 2017 (89,000; 247,000 20-year average) predicted a return of 315,000 age-2.3 salmon. The fry model was used for this forecast, because the 10-year MAPE was lower for the fry (37%) than the sibling model (49%). The predominant age classes in the 2018 run forecast are age 1.2 (17%), age 1.3 (47%) and age 2.3 (29%). The 10-year MAPE for the set of models used for the 2018 Kenai sockeye salmon run forecast is 14%.

The Kasilof River sockeye salmon run forecast is 866,000, which is 11% less than the 20-year average of 971,000. A sibling model based upon the return of age-1.2 salmon in 2017 (295,000; 313,000 20-year average) was used to forecast a return of 294,000 age-1.3 salmon in 2018. A smolt model based upon the abundance of age-1 smolt in 2015 (5.3 million; 4.3 million 20-year average) predicted a return of 320,000 age-1.3 salmon. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling (31%) than the smolt model (64%). A sibling model based upon the return of age-1.1 salmon in 2017 was used to forecast a return of 254,000 age-1.2 salmon in 2018. A spawner-recruit model based upon spawner abundance in 2014 forecasted a return of 278,000 age-1.2 salmon. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling (47%) than the spawner-recruit model (61%). A sibling model based upon the return of age-2.1 salmon in 2017 was used to forecast a return of 226,000 age-2.2 salmon in 2018. A spawner-recruit model forecast for age-2.2 salmon was 294,000. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling (16%) than the spawner-recruit model (19%). The predominant age classes in the 2018 run forecast are age 1.2 (29%), age 1.3 (34%), and age 2.2 (26%). 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 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. A sibling model based upon the return of age-1.1 salmon in 2017 (15,000; 3,000 20-year average) was used to forecast a return of 164,000 age-1.2 salmon. A spawner-recruit

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model forecasted a return of 68,000 age-1.2 salmon. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling (94%) than the spawner-recruit model (143%). 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 2018 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%.

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

		Major Age Classes				Total	Escapement
System		1.2	1.3	2.2	2.3	Run[a]	Goals[b]
Kenai River	**Forecast**	**428**	**1,167**	**127**	**718**	**2,485**	**1,000 – 1,300[c]**
	20-yr average	391	2,072	247	768	3,556	
Kasilof River	**Forecast**	**254**	**294**	**226**	**75**	**866**	**160 – 340**
	20-yr average	313	312	244	83	971	
Susitna River	**Forecast**	**67**	**186**	**24**	**20**	**329**	**No Goal[d]**
	20-yr average	93	193	27	43	398	
Fish Creek	**Forecast**	**164**	**23**	**11**	**1**	**211**	**15 – 45**
	20-yr average	43	20	6	3	76	
Unmonitored	**Forecast**	**156**	**286**	**66**	**139**	**665**	**No Goal**
	20-yr average	144	444	89	153	855	
Total Run	**Forecast**	**1,069**	**1,956**	**454**	**953**	**4,556**	
	20-yr average	984	3,041	613	1,050	5,856	

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. Current escapement goals for these lakes are: Larson (15,000–35,000), Chelatna (20,000–45,000) and Judd (15,000–40,000).

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OTHER SALMON SPECIES

The forecast of the 2018 commercial harvest of other salmon species is as follows:

	Commercial Harvest Forecasts
Pink Salmon	389,000
Chum Salmon	177,000
Coho Salmon	203,000
Chinook Salmon	7,400

Forecast Methods

The recent 5-year average commercial harvest was used to forecast the harvest of chum, coho, and Chinook salmon in 2018. The forecast for pink salmon is based upon the average harvest during the past 5 even-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 with a sockeye salmon run below average.

For more information contact Mark Willette or Pat Shields 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, Area Mgmt. Biologist; 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 4, 2017 Time: 3:00 PM

2017 UCI COMMERCIAL SMELT (HOOLIGAN) AND HERRING FISHING SEASONS
Emergency Order 2G-01-17 and 2H-01-17

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). This fishery occurs in those waters located between the Chuit River and the Little Susitna River (in salt water only). In 2017, the season will open at 12:01 AM on Monday, May, 1 and close no later than 11:59 PM on Friday, June 30. At the 2017 Alaska Board of Fisheries meeting, the harvest limit for the commercial smelt fishery was increased from 100 tons to 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.

The *Central District Herring Management Plan* (5 AAC 27.409) provides for a commercial herring fishery in the Central District of Upper Cook Inlet, including 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 AM on Mondays until 6:00 PM on Fridays. A fishing period may extend beyond May 31 if the fishing period began before May 31. In 2017, commercial fishing for herring will open at 12:01 AM on Thursday, April 20, and close at 6:00 PM on Friday, June 2, unless closed earlier by emergency order in any area where the guideline harvest level 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 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

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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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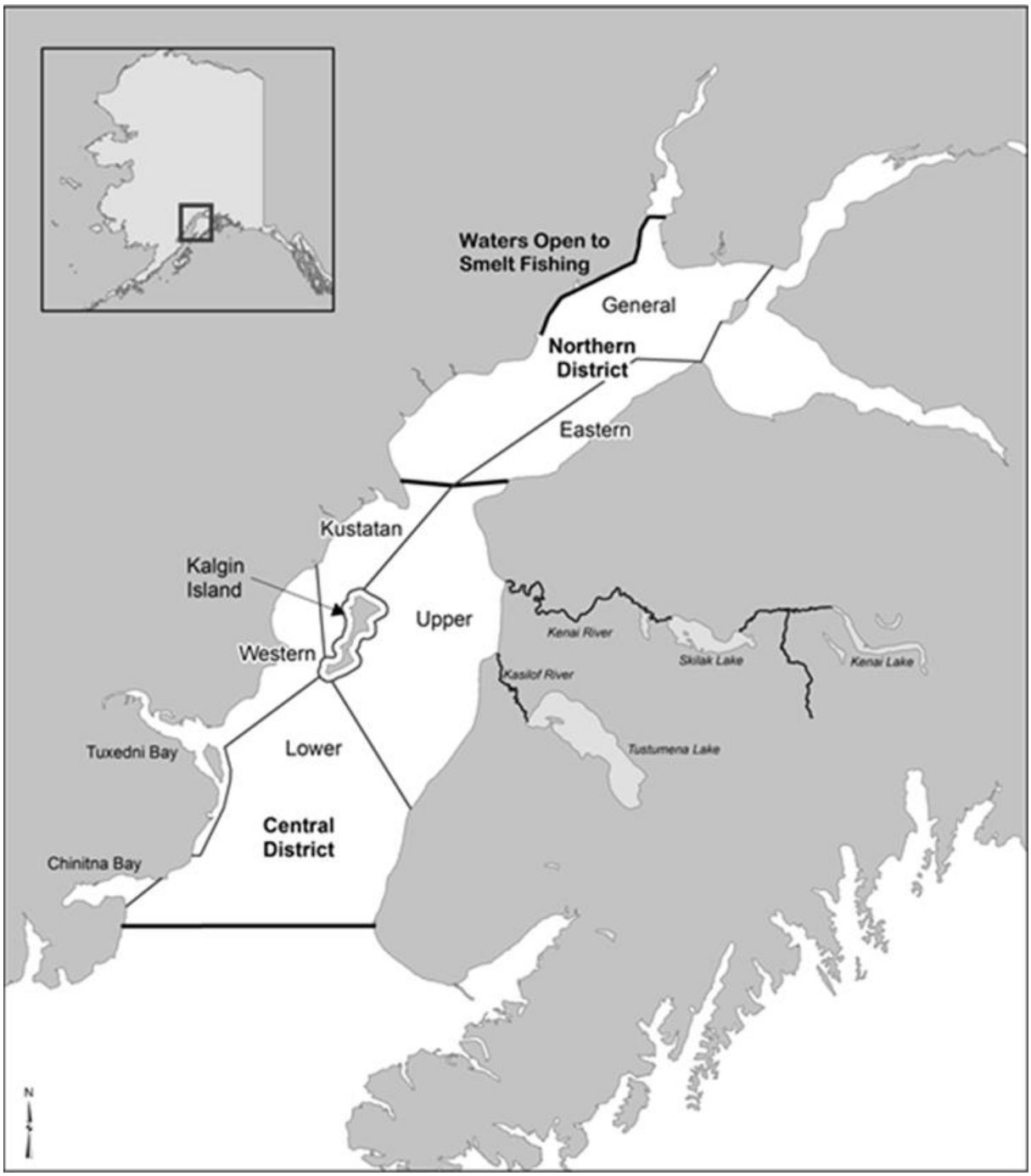

Figure 1.–Upper Cook Inlet commercial fisheries Subdistrict fishing boundaries.