Fishery Management Report No. 17-05

Upper Cook Inlet Commercial Fisheries Annual Management Report, 2016

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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ABSTRACT

The 2016 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. Approximately 5.3 million sockeye salmon returned to UCI in 2016; the preseason forecast projected a total run of 7.1 million sockeye salmon. The 2016 UCI commercial harvest of 3.1 million salmon was approximately 26% less than the 1966–2015 average annual harvest of 4.1 million fish, and the commercial sockeye salmon harvest of 2.4 million fish was 17% less than the 1966–2015 average annual harvest of 2.9 million fish. The 2016 estimated exvessel value of $22.4 million was 23% less than 2006–2015 average annual exvessel value of $28.9 million, and approximately 6% less than the 1966–2015 average annual exvessel value of $23.7 million. In the 2016 season, 2 of 5 sockeye salmon enumeration estimates fell within established goal ranges, 2 of 5 exceeded goal ranges, and one of 5 fell just short of achieving the minimum escapement objective. The timing of the 2016 UCI sockeye salmon run was estimated to be 2 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 1882, 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*), as well as 56% of sockeye (*O. nerka*), 48% of coho (*O. kisutch*), 45% of pink (*O. gorbuscha*), and 88% of chum salmon (*O. keta*) (Appendices B1–B5); set gillnets have harvested virtually all of the remainder. However, from 2005 to 2014, 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. For Chinook salmon, average annual harvest during the last 10 years 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 with fixed opening dates of 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, extending 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, 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 tons in Chinitna Bay and 50 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. The Kalgin Island Subdistrict was included in legal waters in 2005, 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 generally 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 of the year and are not targeted because of their small run size.

Prior to adoption of 5 AAC 39.212. *Forage Fish Management Plan*, the entire UCI area was open to smelt fishing from October 1 to June 1 (Shields 2005). The only documented commercial harvests 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. There has been no quantitative assessment of Susitna River smelt stocks, but participants in the fishery report significant numbers of smelt migrating up the Susitna River. Recently, 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).

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. 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 of the commercial harvest has come by hand-digging, although regulations prior to 1990 allowed the use of mechanical harvesters (dredges) south of Spring Point, or within a 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.

2016 COMMERCIAL SALMON FISHERY

The 2016 UCI commercial harvest of 3.1 million salmon was approximately 25% less than the 1966–2015 average annual harvest of 4.1 million fish (Appendix B6). The 2016 sockeye salmon harvest estimate of 2.4 million fish was 17% less than the 1966–2015 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 2016 UCI commercial fishery of $22.4 million was approximately 23% less than the 2006–2015

average annual exvessel value of $28.9 million, and approximately 6% less than the average annual exvessel value of $23.7 million from 1966 to 2015 (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, a trend observed for the past few seasons continued; early-season pricing for Chinook and sockeye salmon is much higher than what is paid later in the season. The price per pound paid for sockeye salmon in 2016 was estimated to be $1.50, which was very close to the average price of $1.52 from the previous 10 years (2006–2015).

Currently, there are 6 sockeye salmon systems with escapement and/or inriver goals that are monitored in UCI (Table 1; Appendix A2, and Appendix B10). In 2016, 2 of 5 enumeration estimates fell within established goal ranges, 2 of 5 exceeded goal ranges, and 1 of 5 fell just short of achieving the minimum escapement objective. 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 both the sustainable escapement goal (SEG) and optimum escapement goal (OEG) ranges. This marked the eighth year sockeye salmon escapement in the Susitna River drainage was monitored at individual lakes in the Yentna River (Chelatna Lake) and mainstem Susitna River (Larson Lake). These lakes are major producers of sockeye salmon in the Susitna watershed. The weir at Judd Lake, located in the Yentna River drainage, was not operated in 2016 due to cuts to ADF&G budgets; it is not expected to be operated in the near future. 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.

Table 1.–Upper Cook Inlet sockeye salmon escapement goals and passage estimates, 2016.

		Goal range		
System	Goal type	Lower	Upper	2016 passage
Fish Creek	SEG	20,000	70,000	46,202
Kasilof River	BEG	160,000	340,000	239,981
Kenai River	Inriver	1,100,000	1,350,000	1,383,692
Larson Lake	SEG	15,000	50,000	14,313
Chelatna Lake	SEG	20,000	65,000	61,054[a]
Packers Creek	SEG	15,000	30,000	Incomplete count

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] High water prevented a total enumeration; upper end of SEG probably exceeded.

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 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 2016 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 2016 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's most recent regular triennial meeting to deliberate UCI finfish proposals occurred in Anchorage from January 31 to February 13, 2014. During that meeting, there were numerous regulatory changes that were summarized in Shields and Dupuis (2015).

CHINOOK SALMON

The 2016 UCI harvest of 10,027 Chinook salmon was the 15th smallest since 1966 (51 years) and was approximately 6% less than the previous 10-year (2006–2015) average annual harvest of 10,227 fish (Appendices A3, B1, and B6). Exvessel value for UCI Chinook salmon in 2016 was estimated at $491,000, which represented approximately 2% of the total exvessel value for all salmon (Appendix B7).

Chinook salmon harvests were 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. In 2016, there were only 4 scheduled periods during the directed Chinook salmon commercial fishery; during the previous 3 years there had been 5 scheduled Monday periods. As a precautionary measure, the first fishing period in 2016, which occurred on Monday, May 30, was reduced in duration from 12 hours to 6 hours. The remaining 3 Monday fishing periods were all open for 12 hours each.

The Deshka River is the primary system in northern Cook Inlet where Chinook salmon escapement has been monitored inseason with a weir. Prior to the 2016 season, the Division of Sport Fish reduced the annual limit to 2 fish in the Susitna and Little Susitna drainages. However, based on weir counts of approximately 11,400 fish through June 9, the Chinook salmon annual limit in the Deshka River was restored to 5 fish, effective June 11. The final 2016 Deshka River Chinook salmon escapement estimate of 22,774 fish was within the SEG range of 13,000–28,000 fish and represented the second highest escapement since 2006.

Forty-one commercial permit holders participated in the 2016 Northern District Chinook salmon fishery, with an estimated harvest of 2,030 fish (Table 2 and Appendix A3). This was the 13th smallest harvest in the 31-year history of the fishery, but only 3% less than the previous 10-year average annual harvest of 2,110 fish. The number of permit holders participating in this fishery rapidly declined beginning in 1993, which is the year 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, 1986–2016.

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				

Upper Subdistrict

Approximately 67% of the UCI Chinook salmon commercial harvest in 2016 occurred in the Upper Subdistrict set gillnet fishery (Appendix B1). The 2016 estimated harvest of 6,413 Chinook salmon was nearly identical to the previous 10-year average annual harvest, but approximately 32% less than the 1966–2015 average annual harvest in this fishery of 9,418 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).

The preseason outlook for the early-run of Chinook salmon to the Kenai River anticipated a total run of approximately 5,206 fish[1]; the OEG for this stock is 5,300–9,000 fish. However, based on better than expected inseason daily passage rates, an EO was issued, opening the lower 18 miles of the Kenai River to sport fishing under a no-bait provision from June 18 to June 30. This was the first time since 2011 that the early-run sport fishery in the Kenai River was allowed to harvest Chinook salmon. After harvest above the river mile 14 sonar is subtracted from the total passage estimate, it is probable the upper end of the OEG will have been exceeded in 2016.

The preseason forecast for 2016 Kenai River late-run Chinook salmon was for a total run of approximately 30,000 fish[2]. Based on this projection, the sport fishery in the Kenai River began the season on July 1 under a no-bait restriction due to concerns for achieving the SEG of 15,000–30,000 fish. In response to this action, the Upper Subdistrict set gillnet fishery was managed conservatively, but was not tied to the weekly 36-hour restriction for inriver runs of less than 22,500 fish. By July 8, the passage estimate of late-run Chinook salmon in the Kenai River exceeded 3,600 fish, which prompted a return of bait to the sport fishery beginning on July 9.

During the month of July, the Kasilof Section set gillnet fishery was open on 17 different days, and the Kenai and East Foreland sections were open on 12 different days, as this area did not begin fishing by regulation until Monday, July 11. The Kasilof River Special Harvest Area (KRSHA) was not opened in 2016. The entire Upper Subdistrict set gillnet fishery was opened for 5 days in August.

The estimated commercial harvest of all Chinook salmon stocks in the 2016 Upper Subdistrict set gillnet fishery was 6,759 fish. The stock composition of the 2016 harvest will not be known until genetic samples collected during the fishery are processed by ADF&G's Gene Conservation Laboratory[3]. The preliminary estimate of late-run Chinook salmon passage at the river mile 14 sonar site was 22,535 fish. The total estimated inriver mortality (harvest and catch and release mortality) above the sonar was 4,497 fish with an estimated number of Chinook salmon spawning downstream of the sonar of 761 fish. This resulted in a preliminary escapement estimate of 18,790 Chinook salmon, which is within the SEG of 15,000–30,000 fish.

SOCKEYE SALMON

Management of the UCI sockeye salmon fishery integrates information received 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

[1] http://www.adfg.alaska.gov/sf/EONR/index.cfm?ADFG=region.NR&Year=2016&NRID=2200
[2] http://www.adfg.alaska.gov/sf/eonr/index.cfm?adfg=region.nr&nrid=2286&year=2016
[3] http://www.adfg.alaska.gov/index.cfm?adfg=fishinggeneconservationlab.main

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 2005–2011 (Habicht et al. 2007; Barclay et al. 2010a, 2010b, 2013, and 2014).

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). 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 an estimate could be made of the final CPUE; which in turn provided for an inseason estimate of the total run of sockeye salmon to UCI. The timing of the 2016 sockeye salmon run was estimated to be approximately 2 days late (Dupuis and Willette 2016).

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 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 Crescent River sonar project, which had been operational since 1979, was discontinued in 2013 due to a lack of funding.

DIDSON was also used to enumerate sockeye salmon in the Yentna River as part of an ongoing research project; however, a comprehensive sockeye salmon mark–recapture study in the Susitna River drainage verified that sockeye salmon passage estimates in the Yentna River were biased low (Appendix A12; Yanusz et al. 2007). The probable cause for the biased sonar counts was fish wheel species selectivity. Because of this, in 2009, the Yentna River sockeye salmon SEG was replaced with 3 lake-based SEGs monitored via weir at Chelatna Lake (20,000–65,000 fish) and Judd Lake (25,000–55,000 fish) in the Yentna River drainage, and Larson Lake (15,000–50,000 fish) in the Susitna River drainage (Fair et al. 2009). The Judd Lake weir was not operated in 2016 as a result of cuts to ADF&G budgets.

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 2016. However, in 2006, an electronic malfunction did not allow for a complete census of the escapement. From 2010 to 2013, and in 2016, technical difficulties prevented retrieval of all of 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 for estimating 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). There were 19,983 sockeye salmon examined for age, length, and sex determination from catch and escapement samples in 2016 (Wendy Gist,

Commercial Fisheries Biologist, ADF&G, Soldotna; personal communication). Age composition of adult sockeye salmon returning to certain systems are monitored (Appendix A13).

For the 2016 season, approximately 7.1 million sockeye salmon were expected to return to UCI (Table 3; Appendix C1). The actual run estimate totaled about 5.2 million fish, which was 27% less than the preseason forecast. It should be noted that at the time this report was published, harvest data from the 2016 sport fisheries were not available; therefore, sport fishery harvests were estimated by comparing previous years' catches from similar sized runs. Of the expected run of 7.1 million sockeye salmon, approximately 1.8 million fish were expected to escape all fisheries, leaving 5.3 million sockeye salmon available for harvest to all users. Assuming that sport and personal use harvests in 2016 would be similar in proportion to previous runs of this size, the commercial catch in 2016 was projected to be approximately 4.1 million sockeye salmon. The actual commercial sockeye salmon harvest of 2.4 million fish was, therefore, 42% less than preseason expectations. Drift gillnet fishermen accounted for approximately 53% of the 2016 commercial sockeye salmon harvest, or 1.3 million fish, whereas set gillnet fishermen caught 47% of the commercial harvest, or 1.1 million fish (Appendix B2). The 2016 run was allocated to individual river systems inseason using a weighted age-composition catch allocation method, as described by Tobias and Tarbox (1999). GSI samples were collected from the 2016 commercial harvest and will be analyzed at a later date. The last reported commercial fishing activity in any area of UCI in 2016 was September 26.

Table 3.–2016 Upper Cook Inlet sockeye salmon forecast and actual run.

System	Forecast	Actual	Difference
Kenai River	4,731,000	3,553,000	-25%
Kasilof River	861,000	559,000	-35%
Susitna River	372,000	351,000	-6%
Fish Creek	110,000	64,000	-42%
Minor Systems	1,039,000	679,000	-35%
Overall Total	7,113,000	5,206,000	-27%

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

In 2016, the total sockeye salmon harvest from commercial, sport, personal use, subsistence, and educational fisheries was estimated at 3.1 million fish (Appendix A22). This amount was approximately 16% less than the 1996–2015 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 2016 sport harvest was estimated based on harvest from similar sized runs. The 2016 personal use harvest estimate of approximately 344,000 sockeye salmon was nearly identical to the average annual harvest of 347,000 fish from 1996 to 2015. 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 is typically is 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 2016 salmon fishery was approximately $22.3 million (Appendix B7). Using an average price of $1.50/lb, the

exvessel value for sockeye salmon was estimated to be $20.8 million, which was 24% less than the previous 10-year (2006–2015) value of $27.0 million.

Big River

The first commercial sockeye salmon fishery to open in UCI in 2016 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 for a small set gillnet fishery in the northwest corner of the Central District. At the 2005 BOF meeting, the plan was modified by expanding the area open to fishing to include the waters along the west side of Kalgin Island. Between June 1 and June 24, fishing is allowed each Monday, Wednesday, and Friday from 7:00 AM to 7:00 PM. Permit holders are limited to a single 35 fathom set gillnet, and the minimum distance between nets is 1,800 feet; which is three 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 462 fish, which is well below the 1,000 fish cap. Since 2005, average annual sockeye salmon harvest has been 15,302 fish. The 2016 fishery began on Wednesday, June 1, with harvests reported from 11 different days, yielding a total harvest of 9,770 sockeye and 258 Chinook salmon (Appendices A3 and A4). Of the total harvest, 64% of both the Chinook and 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 a slight increase from recent years, but less than the peak effort of 41 permit holders in 1992.

Western Subdistrict

The next commercial fishery to open in 2016 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 2016, the Western Subdistrict set gillnet fishery opened for the season on Thursday, June 18, and remained open for all regular Monday and Thursday fishing periods through Thursday, June 30. 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. 6 was issued on July 3, 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 4. This fishing schedule remained in place until 10:00 PM on Monday, August 8, when EO No. 32 was issued, returning the fishery to its regular schedule of 2 fishing periods per week, and beginning on Thursday, August 11. In 2016, approximately 39,000 sockeye salmon were harvested by 22 permit holders fishing in the Western Subdistrict set gillnet fishery, which was 14% 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 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."

In 2016, 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. 18 was issued on July 20, 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 21, 25, and 27. On Sunday, July 31, EO No. 25 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 August 1 and August 4. On Monday, August 8, gear restrictions imposed by the NDSMP and the SSSAP expired and a full complement of gear became legal for the remainder of the season. A final EO impacting commercial fishing in the Northern District was issued on August 17, closing that portion of the General Subdistrict of the Northern District east of the Susitna River, including Fire Island, beginning on Thursday, August 18. This season ending closure was implemented in order to conserve Little Susitna River coho

salmon. For the 2016 season, 47,150 sockeye salmon were harvested by 75 permit holders in the Northern District set gillnet fishery (Appendices A4 and A8). This harvest was approximately 55% greater than the previous 10-year average annual harvest of 31,220 sockeye salmon and was also the 3rd highest harvest in the Northern District since 1999 (Appendix B2).

Upper Subdistrict Set Gillnet and Central District Drift Gillnet

At the 2014 BOF meeting, substantive changes to management of the Upper Subdistrict set gillnet fishery during years of low Kenai River Chinook salmon abundance were adopted. 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.

There are 2 principal restrictions to the set gillnet fishery within the KRSMP and KRLSSMP: 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 closed fishing periods (or "windows") each week. 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 on the 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 while 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 2016 regular season for drift gillnetting began on Monday, June 20, as provided for in the CDDGFMP. Similar to 2015, the harvest in the drift fleet early in the season was below average. Drifting was open for 2 regular periods on June 20 and 23 and 1 additional period in the Kasilof Section (Figure 5) on Saturday, June 25. Although drift harvests are typically fairly small early in the season, the cumulative harvest after the first 3 periods of about 5,700 sockeye salmon was below average (Appendix A4). By late afternoon on June 22, more than 37,000 sockeye salmon had passed the Kasilof River sonar counter with passage estimates for June 22 at nearly 10,000 fish. Thus, the Kasilof Section was opened to set gillnetting beginning on Thursday, June 23. Sockeye salmon passage in the Kasilof River through midnight on June 24 was 51,000 fish (Appendix A2). The Kasilof Section was again opened to set gillnetting on Saturday, June 25, for a total of 28 hours for the week (Table 4). Approximately 26,000 sockeye salmon were harvested in the setnet fishery during these 2 days of fishing (Appendix A4). The cumulative sockeye

salmon passage estimate in the Kasilof River through June 25 was nearly 56,000 fish (Appendix A2).

Table 4.–Upper Subdistrict set gillnet fishing hours and mandatory closures, 2016.

	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 19–25	48	28	36	36	Closed	Closed	Closed	Closed
June 26–Jul 2	48	24	36	36	Closed	Closed	Closed	Closed
Jul 3–9	48	25	36	36	Closed	Closed	Closed	Closed
Jul 10–16	84	37	36	36	84	37	36	36
Jul 17–23	84	45	36	36	84	45	36	36
Jul 24–30	84	11	36	36	84	11	36	36
Jul 31–Aug 1[a]	84	2	0	0	84	2	0	0
Aug 2–13[b]	36	48	0	0	36	48	0	0
Totals	516	220	216	216	372	143	108	108

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

[a] Hours switched from 84 to 36 for all of August on August 2.

[b] 36 hours available from August 2 to 13.

During the management week of June 26 to July 2, the drift gillnet fleet fished the regularly scheduled 12-hour districtwide fishing periods on June 27 and June 30, as well as 2 additional days in the Kasilof Section; a 9-hour period on June 29 and a 15-hour period on July 2. The Kasilof Section set gillnet fishery was opened for the same schedule during the week as the drift gillnet fishery. The Kenai River late-run Chinook salmon sport fishery began the season on July 1 under a no-bait restriction; however, the justification for the restriction was based on concerns of not achieving the lower end of the SEG, as opposed to an assessment that estimated less than 22,500 late-run Chinook would enter the Kenai River. Therefore, the set gillnet fishery did not come under the mandatory "paired-restriction" provisions of the KRLKSMP. Nevertheless, the set gillnet fishery was managed conservatively until enough time had passed to get a more accurate estimate of the abundance of late-run Chinook salmon. For the week of June 26 to July 2, a total of 48 hours of fishing time was used as follows: two 12-hour regular periods and 24 additional hours (Table 4; Figure 6). The 36 hour "Friday" no fishing window was fulfilled per the KRLSSMP. Sockeye salmon passage into the Kasilof River through July 2 reached 84,602 fish. Typically, passage into the Kasilof River through July 2 is about 26% complete, which projected a final passage of approximately 320,000 fish. The Kenai River sockeye salmon sonar project began enumeration activities on July 1; the total passage estimate through July 2 was 24,821 fish, well ahead of the average of 10,700 after 2 days of counting. For the week, drifters harvested approximately 31,000 sockeye salmon, and setnetters harvested 54,000 sockeye salmon.

During the management week of July 3–9, the drift fishery was open on 4 different days. On Monday, July 4, and Thursday, July 7, drifting was open for 12-hour districtwide periods; the period on July 7 was extended for 2 hours in the Kasilof Section. Drifting was opened in the Kasilof Section on July 6 for 9 hours and on July 9 for 14 hours. Set gillnetting was opened in the Kasilof Section for the same hours the drift fishery was open during the week. By July 8, the passage estimate of late-run Chinook salmon in the Kenai River exceeded 3,600 fish, which

prompted a return of bait to the sport fishery beginning on July 9. Based on a Kenai River sockeye salmon run preseason forecast greater than 4.6 million fish (Appendix C1), the KRLSSMP allowed for as many as 84 additional fishing hours each week in the Upper Subdistrict set gillnet fishery beyond the two 12-hour regular periods. For the week, drifters harvested approximately 196,500 sockeye salmon and setnetters harvested about 65,600 fish. Sockeye salmon passage in the Kenai River through July 9 was estimated to be approximately 199,000 fish, which was the highest cumulative count through that date in the past 10 years and the 2nd highest cumulative passage estimate since 1979 (Appendix A2). The Kasilof River sockeye salmon passage estimate through July 9 was 114,000 fish, a figure which now projected a final passage estimate of approximately 325,000 fish.

The week of July 10–16 was the first time the set gillnet fishery in the Kenai and East Foreland sections was open. This management week also encompassed the July 9–15 time period where mandatory area restrictions to the drift fishery must occur. Based on continued strong sockeye salmon passage into the Kenai River, the drift fleet fished on 5 different days during the week. On Monday, July 11, the regularly scheduled 12-hour fishing period was restricted to the Expanded Kenai/Kasilof sections and Drift Area 1 (Figures 7 and 8), with a 4-hour extension in the expanded corridors. Drifting was opened for 15 hours on Wednesday, July 13 in the expanded corridors; restricted on Thursday, July 14 to Drift Area 1 and the expanded corridors, with a 2-hour extension in the expanded corridors; opened for 12 hours on Friday, July 15, in Drift Area 1 and the expanded corridors; and finally opened for 14 hours on Saturday, July 16 in the expanded Kenai/Kasilof and Anchor Point sections. The fishing period on Friday, July 15, is an optional period that is provided for in the CDDGFMP and was used to increase the harvest rate on both Kenai and Kasilof sockeye salmon.

The entire Upper Subdistrict setnet fishery was open on 4 different days during the week for a total of 61 hours (24 regular hours plus 37 additional EO hours). For the week, drifters harvested approximately 476,500 sockeye salmon; the harvest on Friday, July 15, of 123,000 fish turned out to be the 2nd largest daily harvest of the season. Setnetters harvested 283,000 sockeye salmon, with 201,500 (71%) of those coming from the Kenai and East Foreland sections. Sockeye salmon passage estimates in the Kenai River for the week showed about 305,000 fish entered the river for a cumulative passage estimate through July 16 of 504,000 fish (Appendix A2), which represented the highest passage through that date in the past 10 years and the 4th highest passage since 1979. Typically, Kenai River sockeye salmon passage is about 18% complete by this date, which projected a final passage of more than 2.7 million fish. Conversely, in the Kasilof River, approximately 35,000 sockeye salmon were enumerated at the sonar site during the week, for a season total through July 16 of 149,000 fish (Appendix A2). Based on these data, which showed the Kasilof River sockeye salmon run to be 51% complete on average through July 16, the projected final sonar passage would be around 290,000 fish, well within the BEG range of 160,000–340,000.

The familiar challenge to commercial fisheries management was to keep harvest rates high enough on Kenai River sockeye salmon in order to finish within the inriver goal range of 1.1–1.35 million fish at the end of the season, and at the same time closely monitor Kenai River late-run Chinook salmon abundance in order to achieve escapement objectives for this stock. The estimated Chinook salmon passage through July 16 of 9,286 suggested a final escapement well within the SEG range of 15,000–30,000 fish, but it was uncertain as to whether or not the final escapement would exceed 22,500 fish.

Similar to the previous week, management actions taken during the week of July 17–23 were again aimed primarily at slowing the rate of sockeye salmon escapement into both the Kenai and Kasilof rivers, and continue to closely monitor Kenai River Chinook salmon passage. During the week, drift gillnetting was open on 6 different days. The regularly scheduled period on Monday, July 18, was a districtwide period. For Kenai River sockeye salmon runs greater than 4.6 million fish, 1 fishing period per week from July 16 to July 31 may be fished districtwide, and all other times, per the CDDGFMP, may occur in the expanded corridors and/or Anchor Point section. Therefore, the other 5 days fished during the week (a total of 63 hours) were limited to the expanded corridors and Anchor Point section. The Upper Subdistrict set gillnet fishery was opened on 5 different days during the week, with 24 regular hours and 45 additional EO hours being used. The 36-hour Friday window was implemented in the setnet fishery. The set gillnet fishery harvest for this week was 322,000 sockeye salmon for a season total of 751,000 sockeye salmon; the drift gillnet fishery harvested 412,000 sockeye salmon, for a season total of 1,121,500 fish (Appendix A4). Sockeye salmon passage estimates in the Kenai River reached 729,000 fish through July 23 (Appendix A2). With the run now typically 47% complete by this date, the final projection of inriver passage was approximately 1.5 million sockeye salmon, which if realized, would exceed the 1.1–1.35 million inriver goal. In the Kasilof River, sonar estimates of passage were 175,700 fish through July 23, which projected a final passage estimate of about 245,000 fish, comfortably in the BEG range of 160,000–340,000 (Appendix A2). The Kenai River late-run Chinook salmon cumulative passage estimate of 12,830 fish strongly indicated the SEG would be achieved, but it remained uncertain as to whether or not the final escapement would exceed 22,500 fish, which meant it was possible that restrictions to the set gillnet fishery in August might occur.

During the week of July 24–30, drift gillnetting was open just 3 days, due in part to declining sockeye salmon harvests, but mostly due to very strong winds at the end of the week that prevented fishing. The expanded Kenai/Kasilof and Anchor Point sections were open for 11 hours on Sunday, July 24, and the 12-hour regular periods on Monday, July 25 and Thursday, July 28, were both fished. Per the CDDGFMP, 1 of regular periods could be fished districtwide, and the other was to be restricted to the expanded corridors and the Anchor Point Section; the July 25 period was fished districtwide. Wind speeds in excess of 30 knots produced very high seas, which prevented additional fishing on Friday through Sunday for both the drift and set gillnet fisheries. The Upper Subdistrict set gillnet fishery was open for 11 hours on July 24 and then fished both 12-hour regular periods on July 25 and July 28. The 36-hour Friday no-fishing window was implemented. The estimated sockeye salmon harvest from drift gillnetting during the week was 71,000 fish, with only 30,000 sockeye salmon being harvested from 406 boats (74 fish/boat) during the district wide period on July 25 (Appendix A4). The Upper Subdistrict set gillnet fishery harvested approximately 105,000 sockeye salmon during the week. Sockeye salmon passage in the Kenai River through Saturday, July 30, had reached 877,000 fish; the estimated passage in the Kasilof River through the same date was 196,000 fish (Appendix A2). Estimates of final sockeye salmon passage into the Kenai River now projected a season ending total of 1.26 million, and the season final passage estimate in the Kasilof River was approximately 225,000 fish.

On July 26, 2016, UCI Commercial Fisheries staff estimated the total Kenai River sockeye salmon run through July 25 to be 2.6 million fish. The final run to the Kenai River was projected to range from 4.3 million to 5.6 million sockeye salmon. The entire UCI sockeye salmon run to date through July 25 was estimated to be 3.8 million fish, with a final run projected to range from

6.4 million to 8.3 million fish. Using this inseason assessment, management of the Upper Subdistrict set gillnet and Central District drift gillnet commercial fisheries remained under the regulations for run sizes greater than 4.6 million Kenai River sockeye salmon. Based on this projected run size, the Kenai River sockeye salmon inriver goal remained at 1.1–1.35 million fish.

The next to last management week of the season for both fisheries occurred from July 31 to August 6. During the week, the drift fishery was opened on 4 days, with 12-hour districtwide periods occurring on August 1 and August 4. The expanded Kenai/Kasilof/Anchor Point sections were opened for a total of 26 hours over 3 days, August 1 (2 hours), August 3 (12 hours), and August 6 (12 hours). The Upper Subdistrict set gillnet fishery was open for the 12-hour regular period on Monday, August 1, with a 2-hour extension. On Tuesday, August 2, the Division of Sport Fish officially estimated the final escapement for late-run Kenai River Chinook salmon would be less than 22,500 fish, but more than 16,500 fish. Based on this projection, the KRLKSMP required the Upper Subdistrict set gillnet fishery to be limited to fishing no more than 36 hours for the remainder of the month. Per the management plan, regular fishing periods and the 36-hour Friday no-fishing window were no longer was in effect. Twenty-four of the 36 hours were used with 12-hour fishing periods on Wednesday, August 5, and Friday, August 7. For the week, drifters harvested 68,000 sockeye salmon (Appendix A4), and the Upper Subdistrict setnetters harvested approximately 115,000 sockeye salmon. Sockeye salmon passage estimates in the Kenai River had reached 1.13 million fish through August 6, and 222,000 fish in the Kasilof River through August 6 (Appendix A2).

The final management week of the 2016 season was August 7–13. Drift gillnetting was opened for 12 hours in the expanded Kenai/Kasilof and Anchor Point sections on Sunday, August 7, followed by the regular 12-hour fishing period on Monday, August 8. Drift gillnet sockeye salmon harvest from the regular periods on August 4 and August 8 were less than one-percent of the season total harvest; therefore, in compliance with the CDDGFMP, all regularly scheduled Monday/Thursday fishing periods were restricted to Drift Gillnet areas 3 and 4 (Figure 9), beginning with the fishing period on Thursday, August 11. One last 12-hour fishing period was provided to the drift fleet in the expanded Kenai/Kasilof and Anchor Point sections on Tuesday, August 9. In the Upper Subdistrict set gillnet fishery, a 12-hour fishing period was opened on Sunday, August 7, which utilized all of the 36 hours of fishing time provided for in the KRLKSMP when Chinook salmon escapement was projected to be less than 22,500 fish. ADF&G staff met during the week to assess Kenai River sockeye salmon passage and decided to allow some additional fishing time in the Upper Subdistrict set gillnet fishery in an attempt to keep sockeye salmon passage close to the upper end of the inriver goal of 1.35 million fish. Therefore, 1 additional 12-hour fishing period was provided on Tuesday, August 9; the Upper Subdistrict set gillnet fishery closed for the season after the August 9 fishing period. During the week, drift gillnetters harvested 6,000 sockeye salmon and setnetters harvested approximately 26,700 fish (Appendix A4).

For the 2016 season, sockeye salmon passage was monitored in the Kasilof River through August 14, producing a final estimate of 239,981 fish, which was the lowest total passage estimate in the past 10 years and the second lowest since 1996 (Appendix B10). The Kenai River sonar was operational through August 19, producing a final passage estimate of 1,383,692 fish. The upper end of the Kenai River sockeye salmon inriver goal of 1.35 million fish was exceeded by about 34,000 fish. Although the inriver goal was exceed, once sport fishing harvest above the

sonar is subtracted, it is probable that the SEG of 700,000–1,200,000 and OEG 700,000–1,400,000 will have been met. Chinook salmon passage was monitored in the Kenai River through August 19, with a final passage estimate of 22,535 fish. After sport harvest above the Chinook salmon sonar site is subtracted, and spawning below the sonar is accounted for, the final estimate of escapement is expected to be close to 18,000 fish.

The season total sockeye salmon harvest for drift gillnetters was approximately 1.27 million fish, which represented 53% of the UCI total sockeye salmon harvest (Appendix B2). This was very close to the long term (1966–2015) average of 56% and the most recent 10-year (2016–2015) average of 55%. The Upper Subdistrict set gillnet total sockeye salmon harvest in 2016 was approximately 997,000 fish, or 42% of the UCI total harvest. The Anchor Point offshore test fishery project indicated the 2016 UCI sockeye salmon run was 2 days later than average. For the first time since 2012, the KRSHA was not open to commercial fishing.

By management plan, the drift fleet is restricted to Drift Gillnet areas 3 and 4 for the remainder of the season after August 15 (Figure 9). Chinitna Bay may be open to drift gillnetting, but only by EO, which it was in 2016 on Tuesdays and Fridays from 7:00 AM until 7:00 PM, beginning on Friday, August 26 (EO No. 35). For the 2016 season, the drift gillnet fishery harvested 107 sockeye salmon in Chinitna Bay (Appendix A4).

Kalgin Island Subdistrict

The estimated sockeye salmon harvest in the Kalgin Island Subdistrict in 2016 was 41,553 fish. Approximately 6,300 fish, or 15% of the season total, were 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 2016 Kalgin Island Subdistrict sockeye salmon harvest was 33% less than the average annual harvest of approximately 62,000 fish from the previous 10 years 2006–2015). In 2016, a remote video system was once again used to estimate sockeye salmon escapement into Packers Lake. The video system was in operation from June 14 through September 7. 2 issues affected the enumeration effort at Packers Lake in 2016, resulting in only a partial count of the escapement. First, beaver activity was especially prevalent during the season, completely blocking salmon passage in Packers Creek numerous times during the season. Beaver dams had to be notched several times to allow salmon passage. 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. The SEG for Packers Lake sockeye salmon is 15,000–30,000 fish; it is unknown whether or not the SEG was achieved. However, no additional fishing time was provided in the Kalgin Island Subdistrict in 2016 beyond regular periods.

COHO SALMON

The 2016 UCI commercial coho salmon harvest of 147,000 fish was approximately 14% less than the recent 10-year (2006–2015) average annual harvest of approximately 170,000 fish, but approximately 49% less than the 1966–2015 average annual harvest of 292,000 coho salmon (Appendix B3).

Total coho salmon harvest in the UCI drift gillnet fishery for 2016 was 90,242 fish, which was 10% less than the 2006–2015 average annual harvest of 99,693 fish. Chinitna Bay was opened to drift gillnetting on Tuesdays and Fridays beginning on Friday, August 26. The estimated coho salmon harvest by drift gillnetters in Chinitna Bay was approximately 4,219 fish (Appendix A5).

Exvessel value of coho salmon from the 2016 UCI commercial fishery was $557,000 or 2.5% of the total exvessel value (Appendix B7). The average price paid for coho salmon was estimated at $0.60/lb (Appendix B11), which was fairly close to the average price paid per pound during the previous 10 years of $0.66/lb. Typically, the price paid for coho salmon in August and September is higher than July pricing, so it is possible the exvessel value was greater than what was estimated here.

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 2016 UCI commercial pink salmon harvest of 382,000 fish was 3% more than the average annual harvest of 372,000 fish from the previous 10 years of odd-year harvests. Using an average weight of 4.3lb/fish and an average price of $0.20/lb, the estimated exvessel value for the 2016 pink salmon harvest was $329,000 or 1.5% of the total exvessel value (Appendices B8 and B11). During the season many fishermen and processors reported pink salmon were larger than normal, especially during the latter part of July and into August. At this time of year, the Upper Subdistrict set gillnet fishery is the primary harvester of pink salmon. The average weight of pink salmon harvested in the Upper Subdistrict set gillnet fishery in 2016 was approximately 5.0 lb. The previous 10-year average weight for pink salmon in the Upper Subdistrict fishery was 3.6 lb, and the largest average weight for pink salmon from 1966 to 2015 was 4.5 lb, occurring during the 2006 season. Thus, the preliminary data from the 2016 Upper Subdistrict set gillnet fishery harvest indicated this year's pink salmon were the largest on record.

CHUM SALMON

A total of 124,000 chum salmon were harvested by UCI commercial fishermen in 2016, which was 10% less than the previous 10-year average annual harvest of 136,000 fish (Appendix B5). Chinitna Bay was opened by EO No. 35 to set and drift gillnetting for 12 hour fishing periods on Tuesdays and Fridays, beginning on Friday, August 26. Approximately 1,326 chum salmon were harvested by in Chinitna Bay in 2016 (Appendix A7). The 2016 exvessel value for chum salmon was $351,400, or 1.6% of the overall exvessel value of the 2016 fishery (Appendix B7). The average price paid for chum salmon in 2016 was estimated to be $0.40/lb (Appendix B11) or equal to the lowest price in the past 7 years.

PRICE, AVERAGE WEIGHT, AND PARTICIPATION

The estimated average price per pound paid to UCI commercial fishermen for their harvest in 2016 was somewhat similar to prices paid in 2015 (Appendix B11). The estimate of $1.50/lb for sockeye salmon was 10 cents less than the $1.60/lb paid in 2015, and nearly identical to the average annual price of $1.52 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 2016.

The average weights calculated from the 2016 UCI commercial harvest showed that the average sockeye salmon weight of 5.8 lb increased by about a half pound from the extremely small average size of 5.3 lb in 2015. Still, the 2016 sockeye salmon average weight of 5.8 lb was the smallest size since 2006 (excluding 2015; Appendices A14 and B12). The 19.6 lb average weight

of Chinook salmon from all commercial fisheries in 2016 was slightly larger than the average weight from the previous 10-years (2006–2015), but still less than the 1970–2015 average of 24.0 lb. The smaller average weight for Chinook salmon in recent years is most probably due to the age of the fish in the harvest. From 2001 to 2016, the age composition of Chinook salmon harvested in the Upper Subdistrict set gillnet fishery averaged 44% for fish that had spent 2 years or less in salt water. This is twice the 1987–2000 annual average of 22% for these age classes (Figure 10; Appendix A15). In 2016, the proportion of younger-aged Chinook salmon captured by Upper Subdistrict set gillnetters was 35% of their total harvest. This high proportion of younger, smaller fish in the harvest helps explain the lower than average weight of all commercially harvested Chinook salmon in UCI in 2016. The average size of the 2016 pink salmon commercial harvest of 4.3 lb was equal to the largest sized observed from 1970 to 2015 (seen also in 2006 and 2010). However, as noted in the pink salmon commercial harvest section of this report, the average pink salmon size of 5.0 lb in the Upper Subdistrict set gillnet fishery represents the largest pink salmon on record. The average size of coho and chum salmon in 2016 were fairly similar to recent or long-term averages.

The Commercial Fisheries Entry Commission (CFEC) reported that 568 active drift gillnet permits were issued in 2016, with 409 (72%) issued to Alaskan residents (Appendix B13). In the setnet fishery, CFEC reported that 735 permits were issued, with 613 (84%) issued to Alaskan residents. In 2016, 504 drift gillnet permits and 532 set gillnet permits were reported as fishing in UCI (Appendix A8). In the drift fishery, 60 vessels and 117 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 20 shore-based processors purchased UCI fishery products in 2016, as well as 15 direct marketing vessels, 1 catcher-exporter, 2 buyer-exporters, and 40 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 2016 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). 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.

Table 5.–Production of sockeye salmon in Big Lake, 1997–2016.

Year	Total run	Weir	Spawners	Spring fry release	Fall fry release	Smolt release	Smolt emigration Age-1	Smolt emigration Age-2
1997	131,814	54,656	48,513	4,018,000				
1998	45,622	22,859	18,789	5,000,000				
1999	45,714	26,749	25,199		197,000			
2000	37,635	19,533	16,704	846,000				
2001	70,013	43,486	39,093					
2002	133,640	90,483	86,181	4,316,000				
2003	149,586	91,743	86,858	3,589,000			114,654	2,340
2004	42,160	22,157	20,065	5,000,000			251,195	25,632
2005	21,967	14,215	12,140	1,742,300			135,739	22,623
2006	36,567	32,562	26,712	444,200	426,000		205,135	19,307
2007	48,277	27,948	23,845	3,812,400	702,500	315,700	278,351	30,928
2008	26,872	19,339	19,314	3,610,000		433,000	592,919	38,785
2009	121,965	83,477	83,477					
2010	209,000	126,826	126,826					
2011	119,528	66,183	66,183				269,020	23,722
2012	32,460	18,813	18,713				178,081	11,857
2013	25,082	18,912	18,315				422,258	8,241
2014	64,729	43,915	43,824				271,557	7,828
2015	141,833	102,309	102,124				424,112	8,552
2016	63,968	46,202	46,202				None	None

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 there after the 2008 season (see the stock status section of this report for further details on Big Lake sockeye salmon). 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 2011–2015. 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 fry 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 2015, CIAA released approximately 1,231,000 unfed sockeye salmon fry (0.09 g) into Hidden Lake (http://www.ciaanet.org). These fry were otolith-marked, which allowed for identification and enumeration of hatchery stocks when the smolt emigrated to sea. From May 16 to July 5, 2016, CIAA enumerated approximately 326,122 sockeye salmon smolt emigrating Hidden Lake, of which approximately 65% were estimated to be of hatchery origin, with 93% of the emigrants

being age-1 smolt (Wizik and Cherry 2016). Adult salmon are also sampled and examined for hatchery otolith marks when they swim through the weir at Hidden Creek. In 2016, CIAA enumerated approximately 1,225 adult sockeye salmon returning to Hidden Lake. All of the fish that made it to the weir were allowed to escape into Hidden Lake; i.e., there were not enough fish for CIAA to obtain eggs for their enhancement program. At the time this document was prepared, the proportion of hatchery to wild fish escaping into the lake was unknown (Wizik and Cherry 2016).

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

In 2016, total run forecast for the Susitna River was 372,000 sockeye salmon (Table 3), which was 5% less than the 10-year average run of 389,000 fish. This forecast was derived using mean return per spawner by age class for brood years 2006–2010 and mark–recapture estimates of spawner abundance in 2009 through 2011. This was the third year this forecast method was used, so mean absolute percent error (MAPE) between the forecast and actual runs was not available. The 9-year average run (2006–2015) was calculated using mark–recapture estimates of inriver run and genetic estimates of commercial harvests.

The 2016 sockeye salmon actual run to the Susitna River was estimated at 390,000 fish (using the escapement and the mean harvest rate estimated from genetic stock composition of the commercial harvest in 2007–2010; Table 6). The 2016 run was about 6% less than the preseason forecast (Table 3). Beginning in 2016, the weir at Judd Lake was not operated due to cuts to ADF&G operating budgets; however, weirs were operated at Chelatna and Larson lakes. At Chelatna Lake, 61,054 fish were enumerated through August 6 (escapement goal of 20,000–65,000; Table 1), when high water flooded the weir for the remainder of the season. Typically, escapement at Chelatna Lake is about 84% complete through August 6, so it is possible that more than 70,000 fish escaped into Chelatna Lake in 2016. The estimated escapement at Larson Lake was 14,313 (escapement goal is 15,000–30,000), thus missing the lower end of the SEG by 687 fish. Retention of sockeye salmon was prohibited in the sport fishery near the confluence of Larson Creek and the Talkeetna River beginning on August 11.

Table 6.–Upper Cook Inlet sockeye salmon run, 2016.

System	Commercial harvest	Escapement	Other harvests	Total
Fish Creek	17,738	45,960	296	63,994
Kasilof River	244,405	239,981	122,890	607,276
Kenai River	1,784,389	1,058,622	807,728	3,650,739
Susitna River	127,570	256,255	6,546	390,371
All Others	222,706	354,707	7,915	585,328
Total	2,396,808	1,955,525	945,375	5,297,708

Since 1976, Susitna River sockeye salmon total annual run estimates 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 Yentna River sockeye salmon SEG be eliminated and replaced with 3 lake SEGs. The 2007 UCI annual management report (Shields 2007) provided additional details about the declining sockeye salmon runs to the Susitna River drainage over the past decade.

As noted earlier in this report, 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 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, and at Larson Lake, the SEG recommendation was 15,000–35,000 fish. Thus, the lower end of each goal did not change, but the upper bounds of the SEG for both lakes decreased.

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[4]). Potential impacts 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 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. For example, 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). Other lakes experiencing marked reductions in sockeye salmon production in the Susitna River drainage include Whiskey,

[4] 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).

Hewett, Shell, and Red Shirt lakes. Continued research is needed to better understand sockeye salmon abundance and distribution within the Susitna River drainage.

Fish Creek

Sockeye salmon runs to Fish Creek, which drains Big Lake and flows into Knik Arm, have been highly variable (Table 5), ranging from as few as 25,000 fish to as many as 209,000. Consequently, achieving the escapement goal for this system has been inconsistent (Appendix B10). From 1982 to 2001 (20 years), the 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, with escapements meeting or exceeding the goal range 10 times (67%), and failing to achieve the goal 5 times (33%). The 2016 total run forecast for Fish Creek sockeye salmon was 110,000 fish (Table 3; Appendix C1), but the actual run was approximately 64,000 fish (Tables 5 and 6). The 2016 escapement estimate of 46,202 fish fell at the mid-point of the SEG (Table 1); the Fish Creek personal use dip net fishery was not opened in 2016. 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 2016, approximately 17,679 Fish Creek sockeye salmon were estimated to have been harvested commercially, which represents a harvest rate of 28% for this stock.

A decline in sockeye salmon numbers in the late 1990s led to a technical review assessing Fish Creek sockeye salmon production. This review was completed prior to the 2002 BOF meeting (Litchfield and Willette 2001). The report proposed 2 likely causes for the decline in sockeye salmon production: 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 2016.

2016 Sockeye Salmon Outlook

A run of 7.1 million sockeye salmon was forecasted to return to UCI in 2016, with a harvest by all user groups of 5.3 million fish and a commercial harvest expectation of approximately 4.1 million fish (Appendix C2). The forecasted commercial harvest in 2016 was 1.1 million greater than the 20-year average annual 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 predominant age classes in the 2016 run forecast are 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 is 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. And, 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 is 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 is 21%. The predominant age classes in the 2016 Susitna sockeye salmon run forecast are 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 are age 1.2 (57%) and age 1.3 (29%). The 10-year MAPE for the Fish Creek sockeye salmon run forecast is 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 2016 UCI commercial harvest of pink salmon was estimated to be approximately 382,000 fish which was very close to the average annual harvest of 373,000 fish from the previous 10-years of even-year harvests

(Table 7). From 1966 to 2016, even-year harvests have ranged from a low of 146,000 fish in 2000 to a high of 2.3 million fish in 1968 (Appendix B4).

Table 7.–Upper Cook Inlet pink salmon commercial harvest and Deshka River escapement, 1996–2016.

	UCI Pink Salmon			
	Commercial harvest		Deshka River enumeration	
Year	Even-Year	Odd-Year	Even-Year	Odd-Year
1996	242,911		37,482	
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	

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

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 their 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 are harvested at very low rates in UCI.

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 2016 harvest of 123,000 chum salmon was approximately 9% less than the previous

10-year (2006–2015) average annual harvest of 136,000 fish (Appendix B5). An evaluation of chum salmon runs is made difficult because of a lack of information other than commercial harvest 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 3,800–8,400 fish (Fair et al. 2007). Since 2002, this SEG has been met or exceeded in 14 of 15 years. As a result, drift gillnetting has been opened by EO in Chinitna Bay each of the past 10 years per 5 AAC 21.320(c)(1). An aerial survey of Clearwater Creek/Chinitna River on August 26, 2016, estimated 5,056 fish escaped the fishery, meaning the SEG had been achieved. EO No. 53 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 26.

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 2016 chum salmon run was probably average in abundance, with the harvest of 123,000 fish similar to 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 the escapement objective in Chinitna Bay has 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[5] (Table 8). Therefore, at the 2005 BOF meeting, restrictions on commercial fishing in August in the Upper

[5] Yanusz, R., J. Carlon, D. Bosch, and R. Clark. *Unpublished* . Stock status of coho salmon in Upper Cook Inlet, a report to the Alaska Board of Fisheries. Located at: Alaska Department of Fish and Game, Division of Sport Fish, 333 Raspberry Road, Anchorage.

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 as a result of 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 each year from 2000 to 2008 and 2013 to 2015. However, the SEG was not achieved from 2009 to 2012 and was also just missed in 2016 (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.

Although there are several regulatory management plans pertinent to the Susitna River that provide direction to ADF&G about management of coho salmon, there are no escapement goals or comprehensive sustained yield objectives for Susitna River drainage coho salmon. Sustained yield is thought to be provided for by basic bag limits and seasons in the sport fishery and inseason management of the commercial fishery[6]. In the UCI escapement goal memo presented to the BOF at their October 2016 annual work session, ADF&G recommended establishing a coho salmon SEG of 10,200–24,100 fish at the Deshka River, derived using the Clark et al. (2014) percentile approach.

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 (27 years), the escapement goal has been met or exceeded 21 years, or 78% of the time. The coho salmon escapement goal at Fish Creek has been achieved or exceeded 19 years out of the 22 years (86%) it has been in existence, including every year for the past 17 years. Finally, 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 12 times (71%).

[6] Lafferty, R., R. Massengill, T. Namtvedt, D. Bosch, and J. Hasbrouck. *Unpublished*. Stock status of coho salmon in Upper Cook Inlet, Alaska. Alaska Department of Fish and Game, Report to the Alaska Board of Fisheries, 2005. Located at: Alaska Department of Fish and Game, Division of Sport Fish, 333 Raspberry Road, Anchorage.

Table 8.–Coho salmon escapement and enumeration, 1996–2016.

Year	Fish Creek	L. Susitna River	Jim Creek[c]	Deshka River	OTF CPUE[d]
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			766
2001	10,047	30,587			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

[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] 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.

Kenai River

The status of Kenai River coho salmon was reviewed in previous versions of this report (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). Please see the Chinook salmon section earlier in this report for restrictive actions taken in the commercial fishery during the 2016 season.

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.

Table 9.–Deshka River Chinook salmon passage, 1995–2016.

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

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

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 the past 7 consecutive years. In 2016, the annual limit for Deshka River Chinook salmon was increased from 2 fish to 5 fish in response to a strong early enumeration of fish at the Deshka River weir. The final Chinook salmon escapement estimate of more than 22,700 fish was within 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 22 years. However, in recent years, restrictive actions in both commercial and sport fisheries were needed to ensure escapement objectives were met.

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 have been 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* 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 that 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 2014–2016 (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 escapement goal for both early- and late-run Chinook salmon stocks in the Kenai River was being developed. The memo clarified that ADF&G is currently finalizing run reconstructions and stock-recruit analyses for fish approximately 33.3 inches in length or greater for both Kenai River Chinook salmon runs. Based on these analyses, recommendations for new SEGs for fish 33.3 inches in length or greater were being developed. The memo concluded by saying that a written report describing the analyses and results will be presented at the UCI BOF meeting.

In summary, the Kenai River Chinook salmon late-run stock has 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 30 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 2016 UCI herring fishery produced a harvest of 22.9 short tons[7], with all of the harvest coming from the Upper Subdistrict (Appendix B8). This was the fifth largest herring harvest in UCI since the fishery reopened in 1998. A total of 12 permit holders reported fishing, which was equal to the average annual number of participants from the previous 10 years (2006–2015). 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 2016, comprising 88% of the 293 samples collected from 5 sample dates. The average by age-class was age 4 (3%), age 5 (14%), age 6 (16%), age 7 (26%), age 8 (32%), 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/lb or $2,000/ton. Based on this price, and harvest of 22.9 short tons, the estimated exvessel value of the 2016 commercial herring fishery was approximately $46,000.

COMMERCIAL SMELT FISHERY

From 1978 to 2014, commercial smelt harvests in UCI have ranged from 300 lb 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 2016, 6 fishermen obtained commissioner's permits enabling them to participate in the fishery, with 4 CFEC permit holders reporting harvests on fish tickets. In 2016, total smelt harvest in UCI was approximately 95.8 tons. The harvest cap for this fishery is 100 tons. The amount of smelt harvested in this fishery is 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 vast majority of the harvest is sold as bait, with smaller amounts marketed for human consumption. The final value of the smelt fishery is unknown, but probably exceeds $1.00/lb. Using this estimate of price per pound and the harvest of 191,536 lb, the estimated exvessel value is approximately $192,000.

[7] 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 = 2,000 lb or 907.2 kg.

Age-composition analyses (determined from otoliths) of samples collected from the 2006 to 2016 harvests show that age-4 smelt are the most abundant age class, ranging from 45% to 84% of the population (Appendix A20). The average fork length from the 2016 harvest of 190 mm was similar to the average fork lengths from previous years. In 2016, the percent female was 48%, which was similar to the average from all previous years (Appendix A20). It should be noted that samples collected for age and size data were from a single date and therefore would not reflect temporal changes in these parameters.

Table 10.–Commercial smelt harvest, 1978, 1980, 1998–1999, and 2006–2016.

Year	Pounds	Tons	Permits
1978	300	0.2	NA
1980	4,000	2	NA
1998	18,610	9.3	2
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

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 collect data needed to develop an optimal sampling design for a future full-scale survey of the beach in this area[8]. A grant was applied for and awarded to ADF&G from the North Pacific Research Board that will allow for testing of sampling designs and gear to assess razor clam populations in all of Cook Inlet. These studies will begin in the spring of 2017.

[8] Dupuis, A., and T. M. Willette. 2016. Operational plan: Western Cook Inlet razor clam study, 2016. Alaska Department of Fish and Game, Regional Operational Plan ROP.CF.2A.2016.04, Anchorage.

The 2016 harvest, taken primarily from the Polly Creek/Crescent River area, was approximately 285,000 lb in the shell (Appendices A23 and B9). A total of 21 diggers participated in the fishery. Harvest was reported from 67 different days from May 3 to August 4. Diggers were paid an average of $0.66/lb for their harvest, resulting in an exvessel value for this fishery of approximately $188,000. The average clam size from the 2016 harvest was 132 mm, or 5.4 inches (Figure 12). The 2016 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 5AAC 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 require 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, focusing on the annual Chinook run, is the most popular fishery. Few late-season permits are issued.

The 2016 harvest for the Tyonek subsistence salmon fishery included 813 Chinook, 164 sockeye, 206 coho, 9 pink, and 4 chum salmon taken by 60 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 2016 Yentna River subsistence fisheries harvest was below average and included 495 sockeye, 192 coho, 33 pink, and 36 chum salmon taken by 25 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 2016 was 9,348 fish. The average annual harvest from 1994 through 2015 was approximately 6,951 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 2016, the Kenaitze Tribe

harvested 10 Chinook, 6,709 sockeye, 502 coho, and 203 pink salmon, for a total of 7,424 salmon (Appendix B16). From 1994 through 2015, the average annual harvest of all salmon by the Kenaitze Indian Tribe was 4,843 fish. The total fish harvest quota for this group is 8,000 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 2016, the NTC harvested 95 Chinook, 319 sockeye, 428 coho, 233 pink, and 1 chum salmon. The NND reported a harvest of 50 Chinook, 57 sockeye, 34 coho, 11 pink, and 1 chum salmon in 2016 (Appendix B16).

In 2003, another group from Ninilchik, the Ninilchik Emergency Services (NES), applied for and was granted an educational fishery. In 2016, the NES harvested 18 Chinook salmon, 41 sockeye salmon, 38 coho, and 7 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 2016 fishing activities: 30 sockeye, 39 coho, and 34 pink salmon (Appendix B16).

In 2011, the Homer VFW applied for and was granted an educational fishery permit. They reported a harvest of 11 sockeye and 23 coho salmon in 2016 (Appendix B16).

The Kasilof Regional Historical Association applied for an educational permit beginning with the 2008 season. For 2016, they reported the following harvest: 2 Chinook salmon, 46 sockeye, and 27 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 2016 was 53 sockeye salmon and 14 coho salmon (Appendix B16).

NORTHERN DISTRICT EDUCATIONAL FISHERIES

In the Northern District of UCI, 6 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) Native Village of Tyonek, 5) 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 2016 totaled 50 sockeye salmon, 4 coho salmon, and 11 chum salmon. The peak harvest from this group of 823 fish occurred in 2003 (Appendix B16).

In 2015, Big Lake Cultural Outreach group, which first received a permit in 2004, reported harvesting 24 sockeye salmon and 1 chum salmon (Appendix B16).

The Native Village of Eklutna was also issued an educational fisheries permit beginning in 1994. They reported a harvest in 2016 of 94 sockeye salmon, 86 coho salmon, 10 pink salmon, and 16 chum salmon (Appendix B16).

The Native Village of Tyonek began an educational fishery in 1997. This educational fishery was denied 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.

There are 2 additional educational permits in the Northern District that are no longer fishing, these being the McLaughlin Youth Center (permitted in 2012–2013) and the Intertribal Native Leadership (permitted from 2005 to 2007).

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 2016, the harvest from this fishery was 1 Chinook salmon and 15 sockeye 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.

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 50,000 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 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 2016 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 opened on Wednesday, June 15, 2016. For the first time since 2012 the Kasilof River personal use gillnet fishery was prosecuted without any restrictions. For the 2016 season, 26,500 sockeye salmon were estimated to have been harvested. Other species harvests during 2016 were not available at the time this report was finalized. The average annual Chinook salmon harvest during the previous 10 years (2006 to 2015) was 147 fish, and the average annual sockeye salmon harvest during this time period was 22,280 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, 2016 (44 days), producing an estimated harvest of 58,000 sockeye salmon, which was the lowest harvest since 2011 (Appendix A17). The previous 10-year (2006–2015) average annual harvest of sockeye salmon was 68,352 fish (Appendix B17). For the first time since 2012, 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. The final

Kasilof River sockeye salmon escapement in 2016 was estimated to be 240,000 fish (Appendix A2), well within 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. However, on July 20, an inseason assessment projected the total Kenai River sockeye salmon run would exceed 2.3 million fish, prompting the release of Sport Fish EO No. 2-RS-1-35-16, expanding the hours the Kenai River dip net fishery was open to 24 hours per day, beginning at 11:00 PM on July 22. The sockeye salmon dip net harvest in 2016 was estimated to be 259,000 fish (Appendix A17), which was the lowest harvest since 2008 where 2340,000 fish were harvested. The entry pattern of sockeye salmon into the Kenai River in 2016 was not conducive to large dip net harvests, as no significant passage event took place during the season (Appendix A2; Appendix A18). In fact, the largest daily estimate of sockeye salmon passage in the Kenai River during the 2016 season of 52,674 fish on August 1 was the lowest peak passage day ever measured. In 2011 and 2012, 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 1996 to 2015 was approximately 355,189 fish (Appendix B17).

UNKNOWN FISHERY

Households that failed to indicate which fishery they participated in were estimated as "unknown fishery" (Dunker 2013). In 2016, the total sockeye salmon harvest from all personal use fisheries categorized as "unknown" was 4,837. This was approximately 1.4% of the total personal use harvest of 348,707 sockeye salmon (Appendix B17).

FISH CREEK DIP NET FISHERY

During the 2016 season, the Fish Creek dip net fishery was not opened. 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 50,000 fish. The conditions necessary to open this fishery were not met in 2016. Approximately 46,000 sockeye salmon were estimated to have escaped Big Lake in 2016 (Table 1; Appendix B10).

BELUGA RIVER SENIOR CITIZEN DIP NET FISHERY

In 2016, 9 permit holders participated in the Beluga River senior citizen dip net fishery. The total harvest was 102 salmon (52 sockeye salmon, 45 coho salmon, 2 pink salmon, and 2 chum salmon; Appendix A17).

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Soldotna Office Staff

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FIGURES

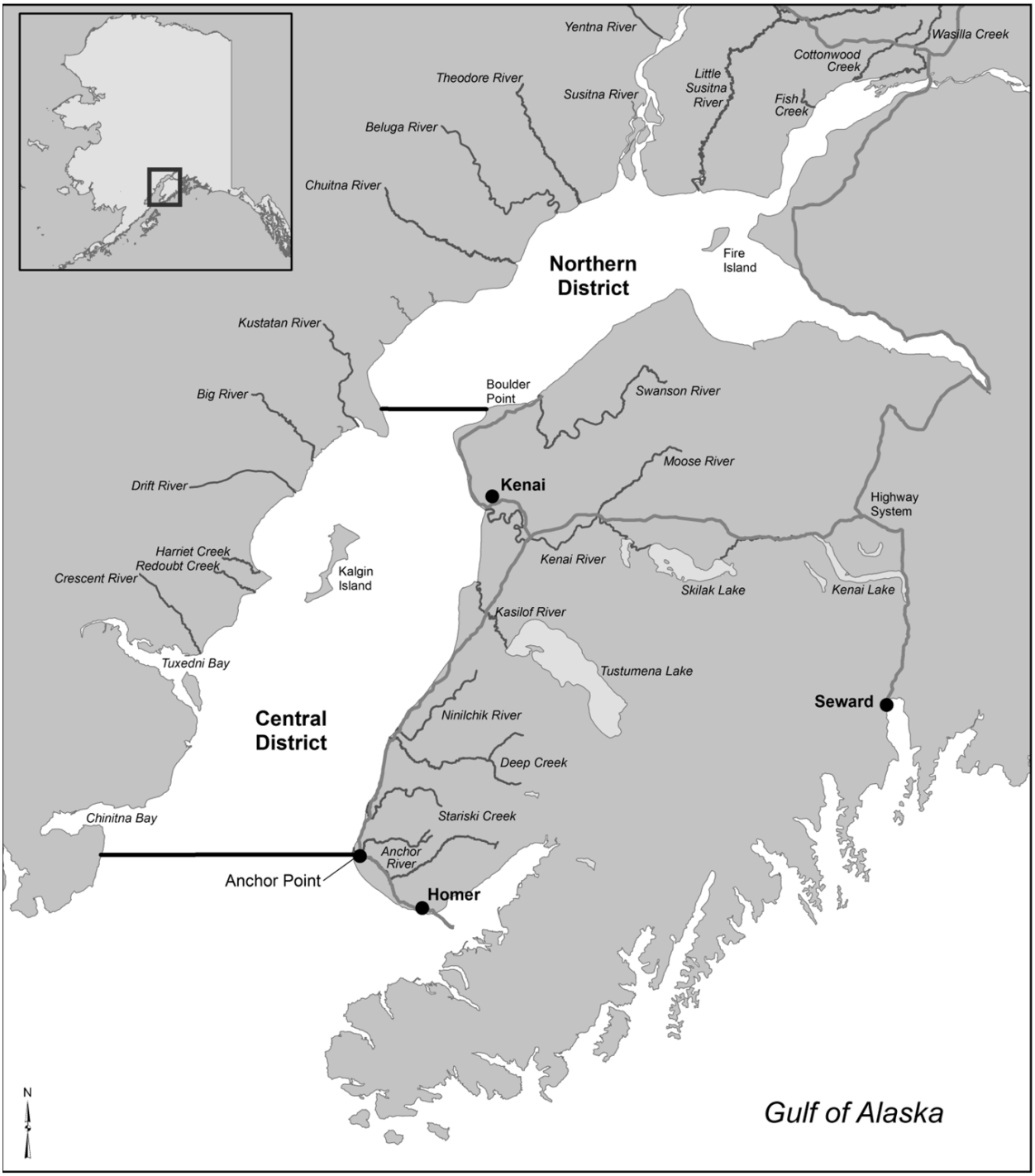


Figure 1.–Major tributaries of the Cook Inlet basin.

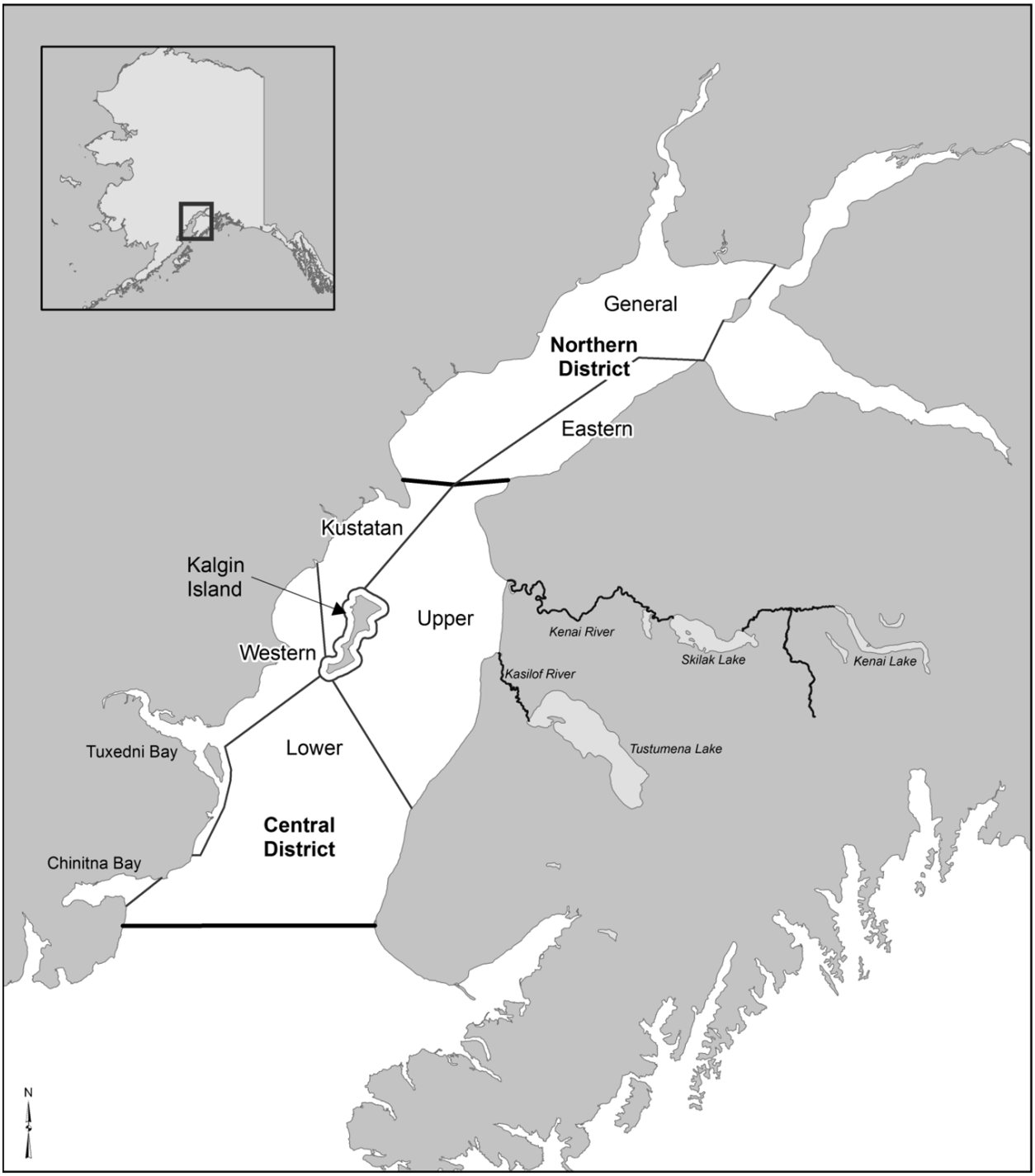


Figure 2.–Upper Cook Inlet commercial fisheries subdistrict fishing boundaries.

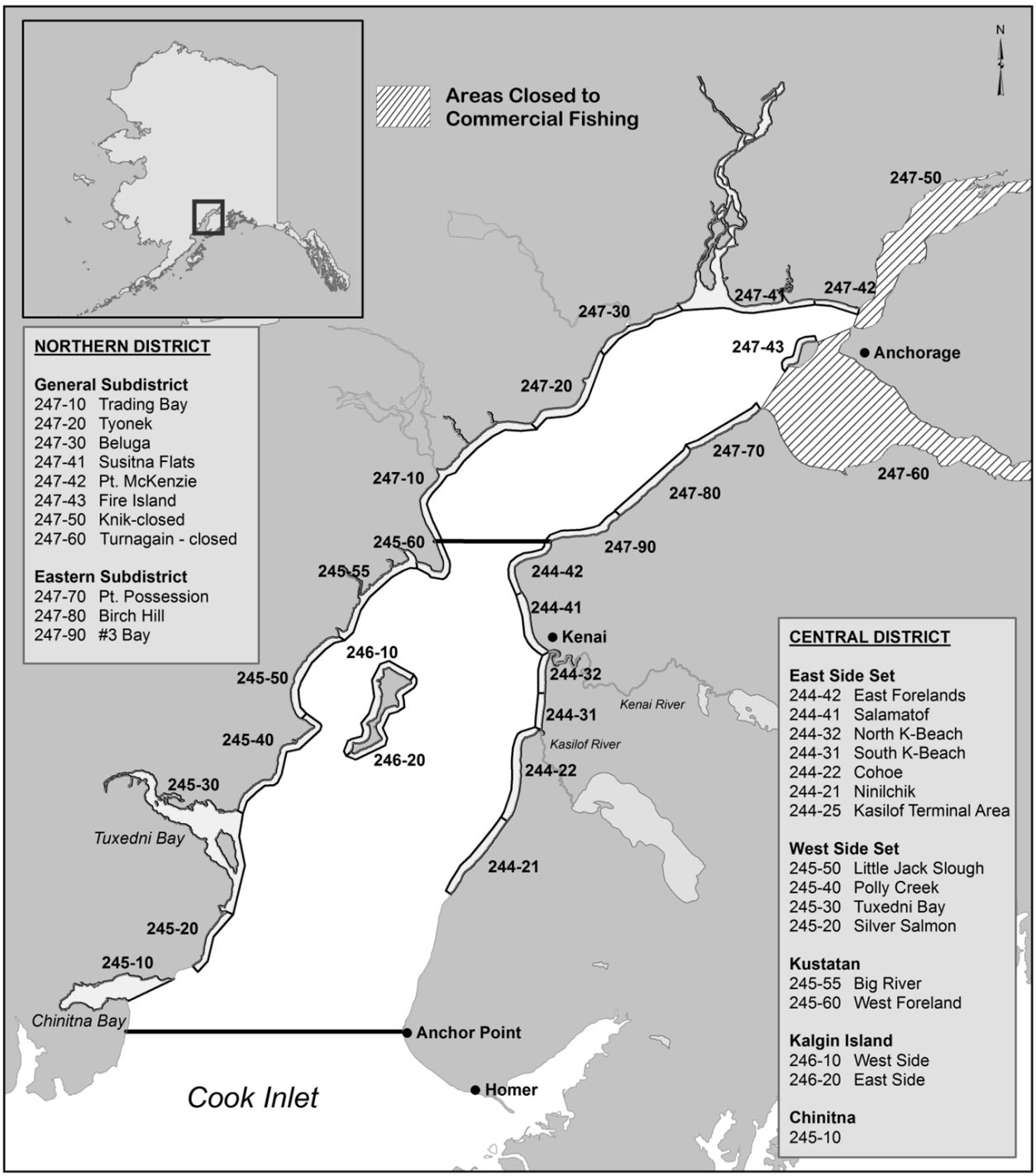


Figure 3.–Upper Cook Inlet commercial set gillnet statistical areas.

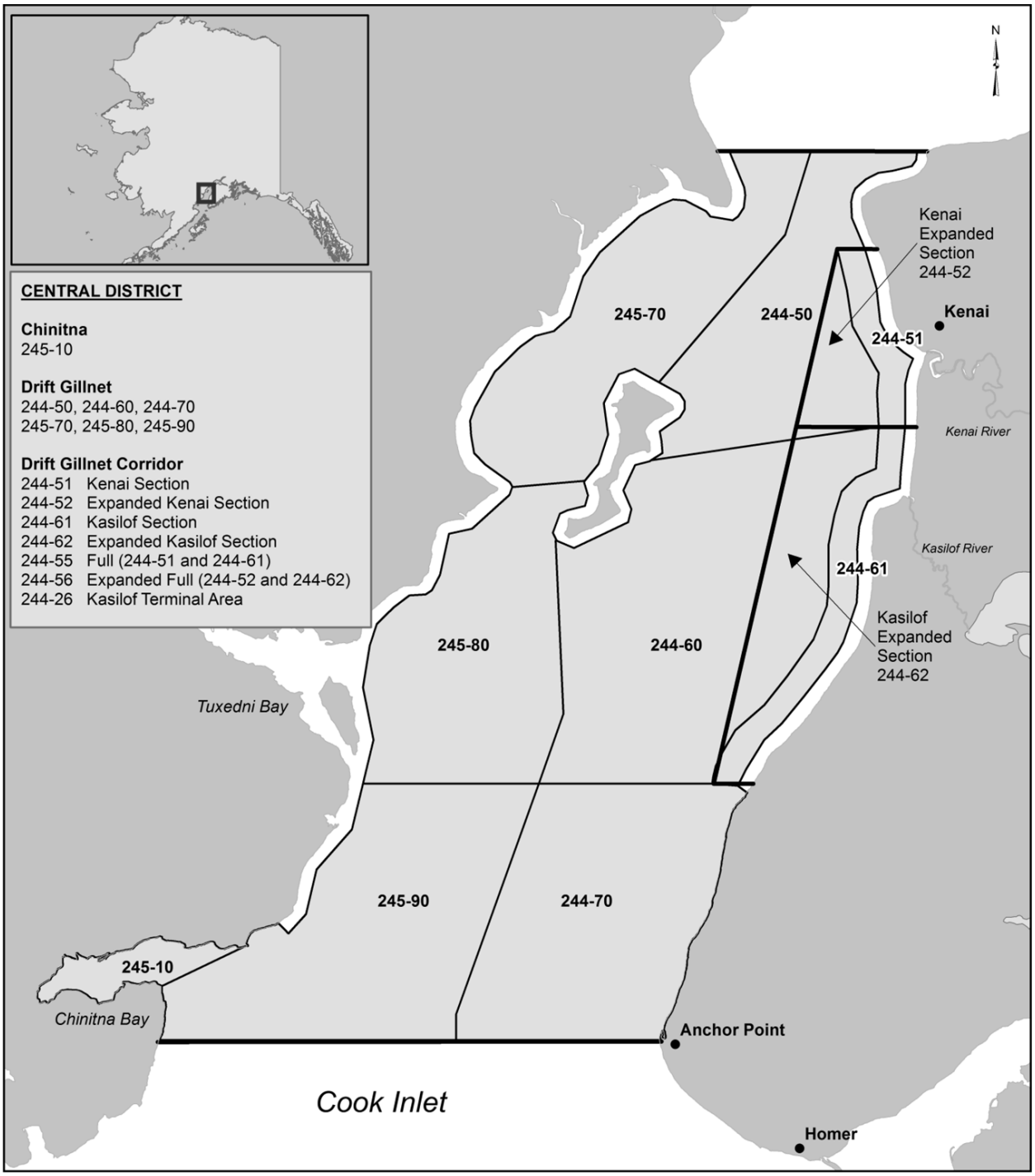


Figure 4.–Upper Cook Inlet commercial drift gillnet statistical areas.

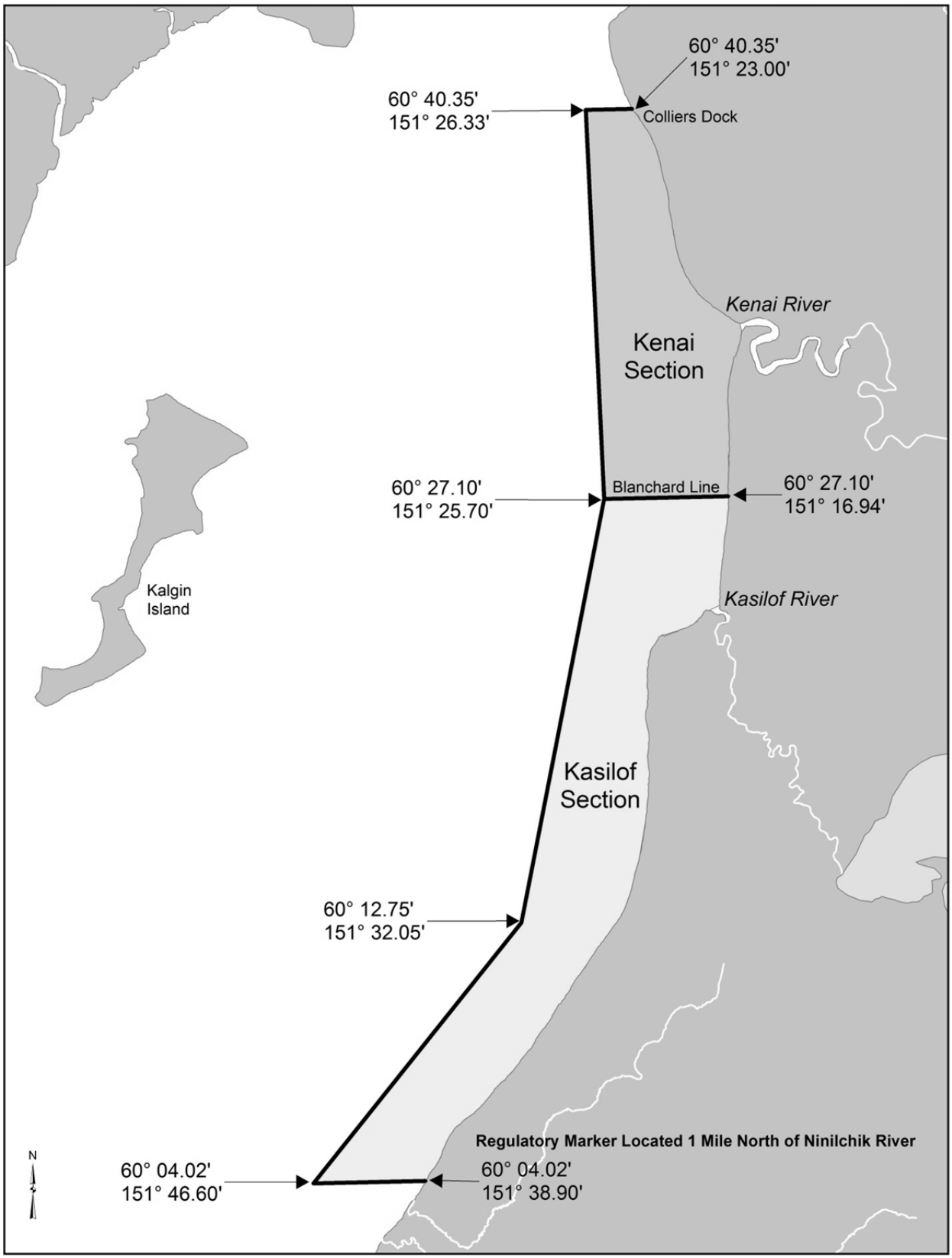
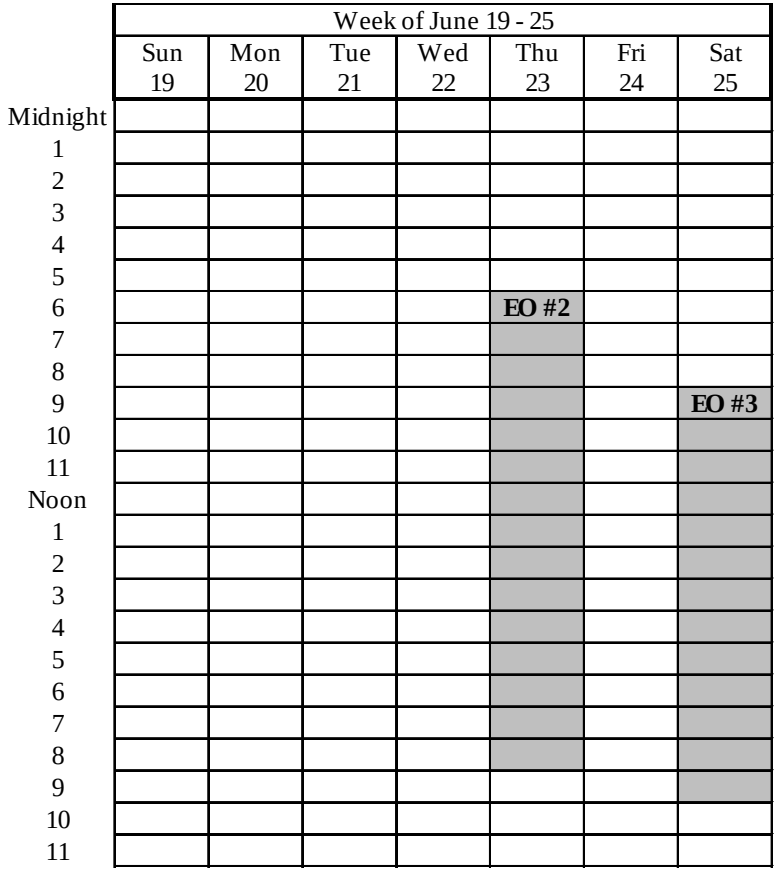
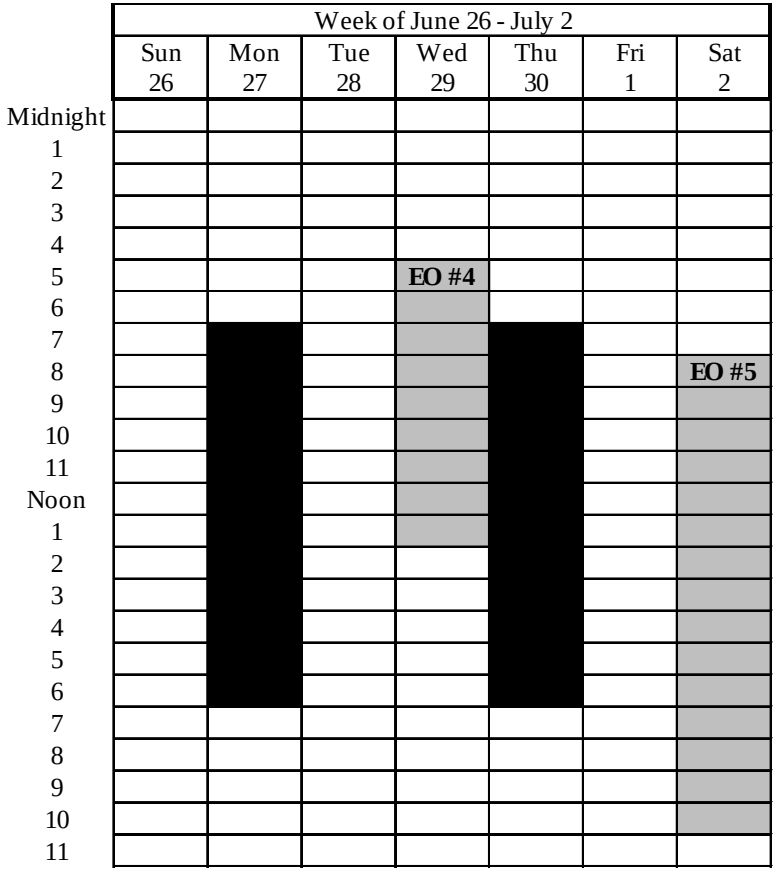


Figure 5.–Map of the Kenai and Kasilof Sections with waypoint descriptions.





EO #2 Kasilof Section from 6am to 9pm on June 23
EO #3 Kasilof Section from 9am to 10pm on June 25

EO #4 Kasilof Section from 5am to 2pm on June 29
EO #5 Kasilof Section from 8am to 11pm on July 2

Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

Figure 6.–Hours fished in the Upper Subdistrict set gillnet fishery, 2016.

	Week of July 3 - 9						
	Sun 3	Mon 4	Tue 5	Wed 6	Thu 7	Fri 8	Sat 9
Midnight							
1							
2							
3							
4							
5							
6							
7							
8							
9							**EO #9**
10							
11							
Noon				**EO #7**			
1							
2							
3							
4							
5							
6							
7					**EO #8**		
8							
9							
10							
11							

EO #7 Kasilof Section from 12pm to 9pm on July 6
EO #8 Kasilof Section from 7pm to 9pm on July 7
EO #9 Kasilof Section from 9am to 11pm on July 9

Regular Fishing Periods
Emergency Order Fishing time
No Commercial Fishing

	Week of July 10 - 16						
	Sun 10	Mon 11	Tue 12	Wed 13	Thu 14	Fri 15	Sat 16
Midnight							
1							
2							
3							
4							
5				**EO #11**			
6							
7							
8							
9							**EO #14**
10							
11							
Noon							
1							
2							
3							
4							
5							
6							
7		**EO #10**			**EO #12**		
8							
9							
10							
11							

EO #10 Kenai/Kas/East Forelands 7pm to midnight on July 11
EO #11 Kenai/Kas/East Forelands 5am to 8pm on July 13
EO #12 Kenai/Kas/East Forelands 7pm to 9pm on July 14
EO #14 Kenai/Kas/East Forelands 9am to midnight

Regular Fishing Periods
Emergency Order Fishing time
No Commercial Fishing

Figure 6.–Page 2 of 4.

	Week of July 17 - 23						
	Sun 17	Mon 18	Tue 19	Wed 20	Thu 21	Fri 22	Sat 23
Midnight		**EO #15**					
1							
2							
3							
4							
5					**EO #19**		
6							
7							
8							
9			**EO #17**				**EO #21**
10							
11							
Noon							
1							
2							
3							
4	**EO #15**						
5							
6							
7							
8							
9							
10							
11							

EO #15 Kenai/Kas/East Forelands 4pm 7/17 to 7am 7/18
EO #17 Kenai/Kas/East Forelands 9am to 9pm on July 19
EO #19 Kenai/Kas/East Forelands 5 am to 7am and 7pm to 9pm on July 21
EO #21 Kenai/Kas/East Forelands 9am to 11pm on July 23

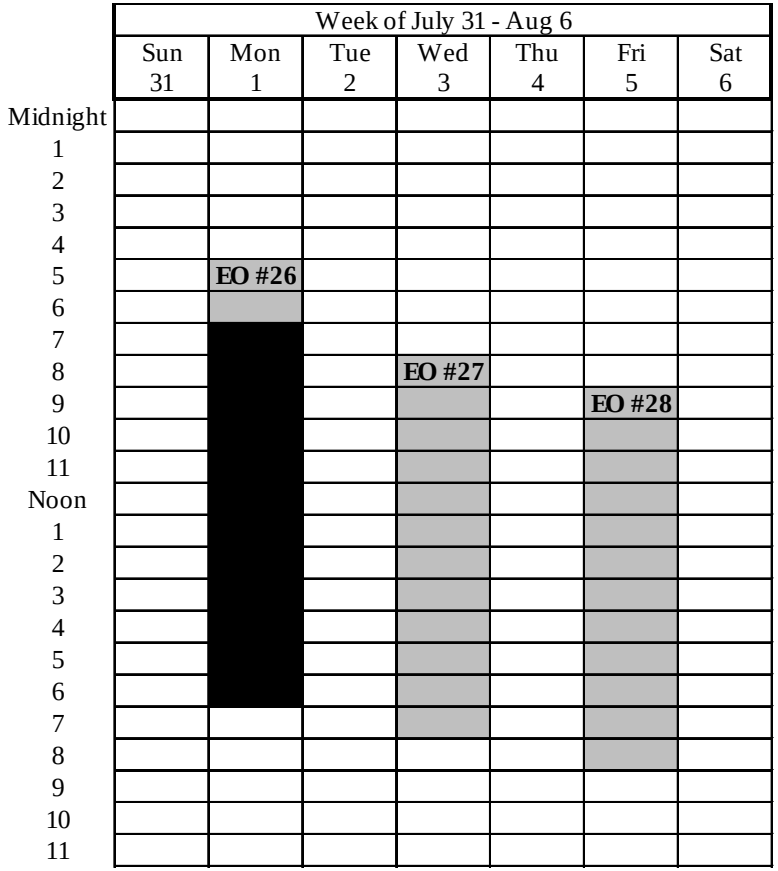
Regular Fishing Periods
Emergency Order Fishing time
No Commercial Fishing

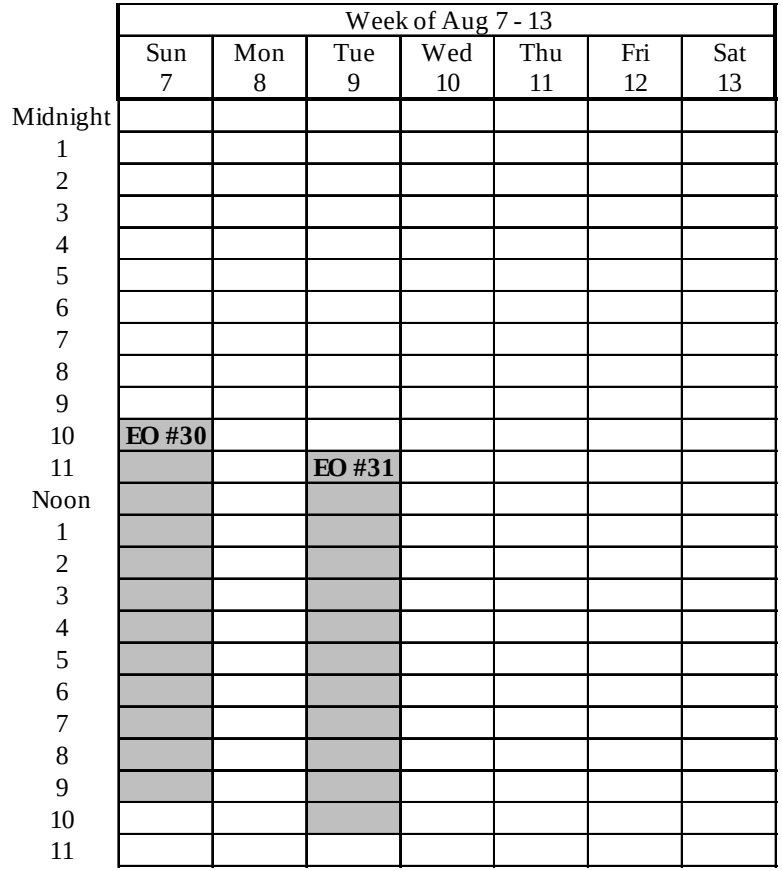
	Week of July 24 - 30						
	Sun 24	Mon 25	Tue 26	Wed 27	Thu 28	Fri 29	Sat 30
Midnight							
1							
2							
3							
4							
5					**EO #24**		
6							
7							
8							
9							
10							
11							
Noon	**EO #22**						
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							

EO #22 Kenai/Kas/East Forelands 12pm to 11pm on July 24
EO #24 Kenai/Kas/EF 5 am to 7am and 7pm to 9pm on July 21

Regular Fishing Periods
Emergency Order Fishing time
No Commercial Fishing

Figure 6.–Page 3 of 4.





EO #26 Kenai/Kas/East Forelands 5am to 7am August 1
EO #27 Kenai/Kas/East Forelands 8am to 8pm on August 3
EO #28 Kenai/Kas/East Forelands 9am to 9pm on August 5

EO #30 Kenai/Kas/East Forelands 10am to 10pm on August 7
EO #31 Kenai/Kas/East Forelands 11am to 11pm on August 9

Regular Fishing Periods
Emergency Order Fishing time
No Commercial Fishing

Regular Fishing Periods
Emergency Order Fishing time
No Commercial Fishing

Figure 6.–Page 4 of 4.

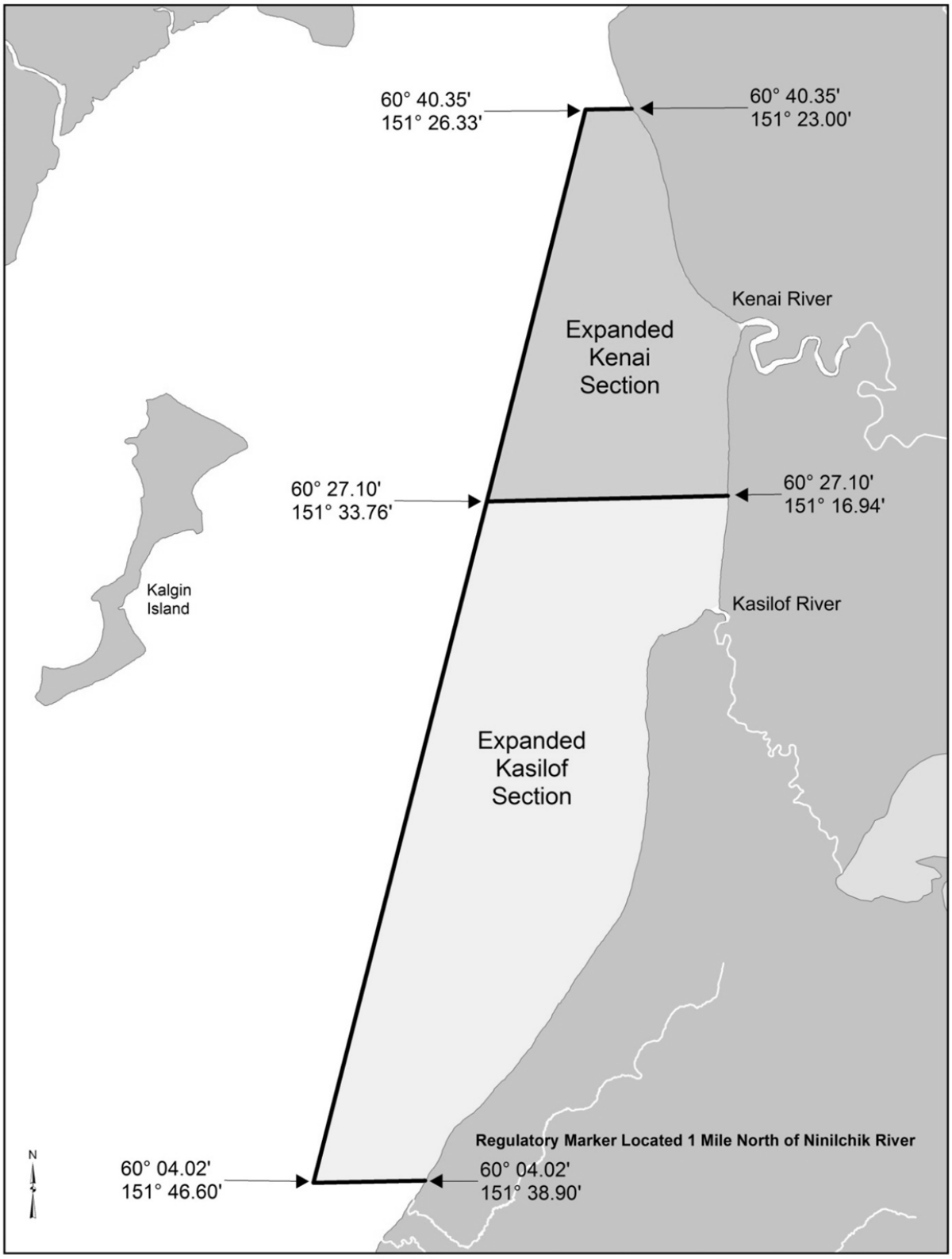


Figure 7.–Map of the Expanded Kenai and Expanded Kasilof Sections with waypoint descriptions.

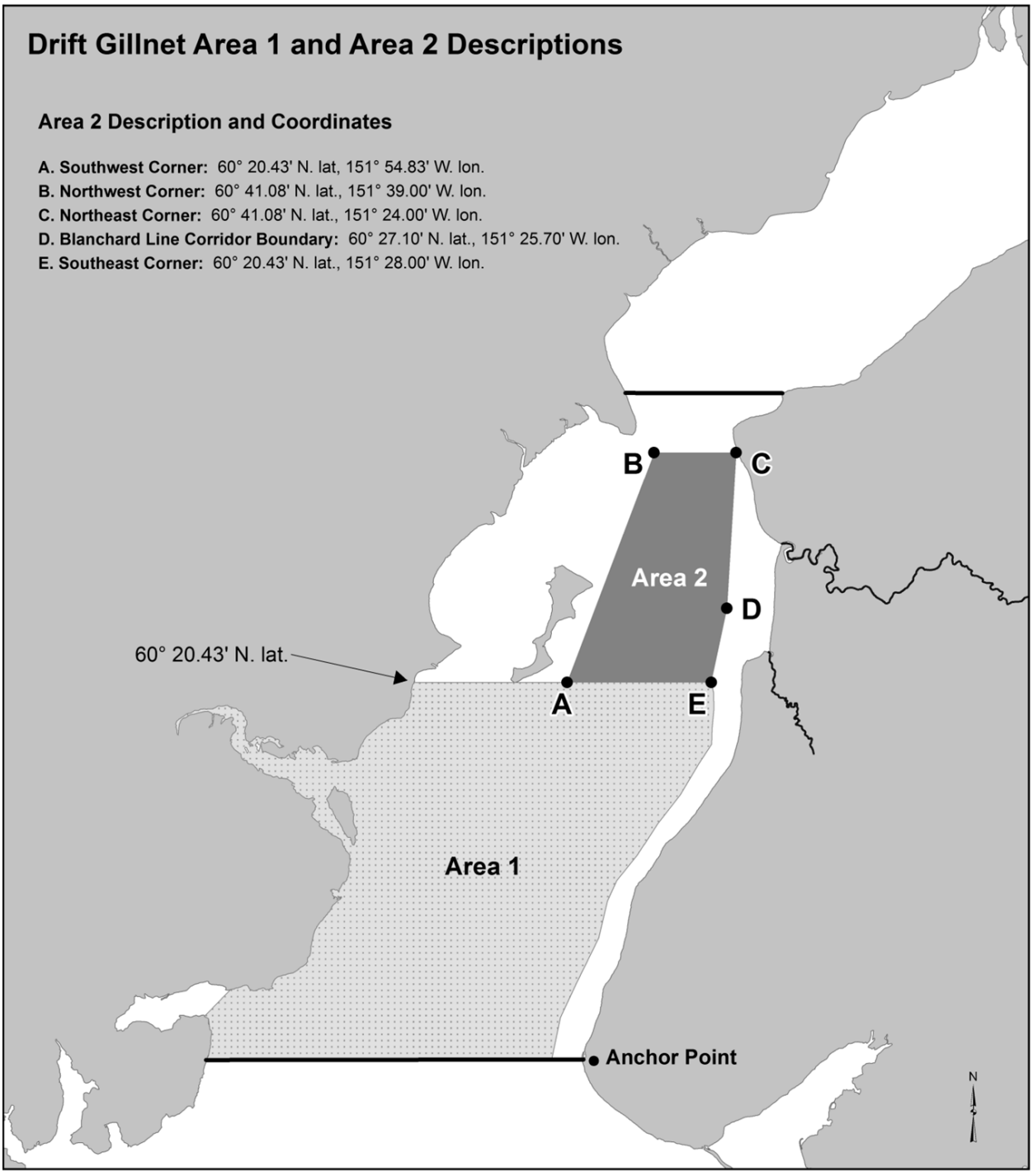


Figure 8.–Drift gillnet boundaries for fishing Areas 1 and 2.

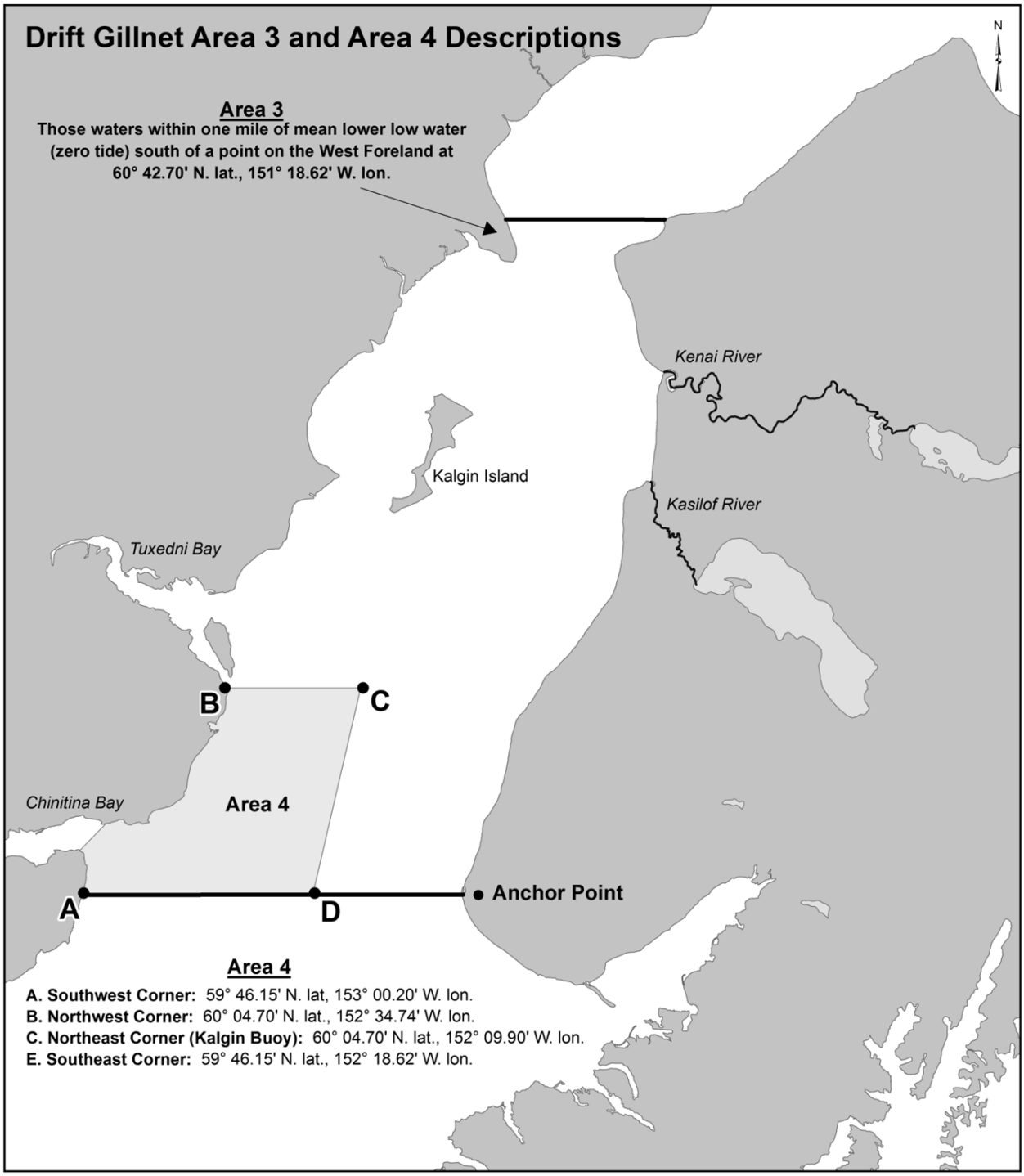


Figure 9.–Map of drift gillnet Areas 3 and 4.

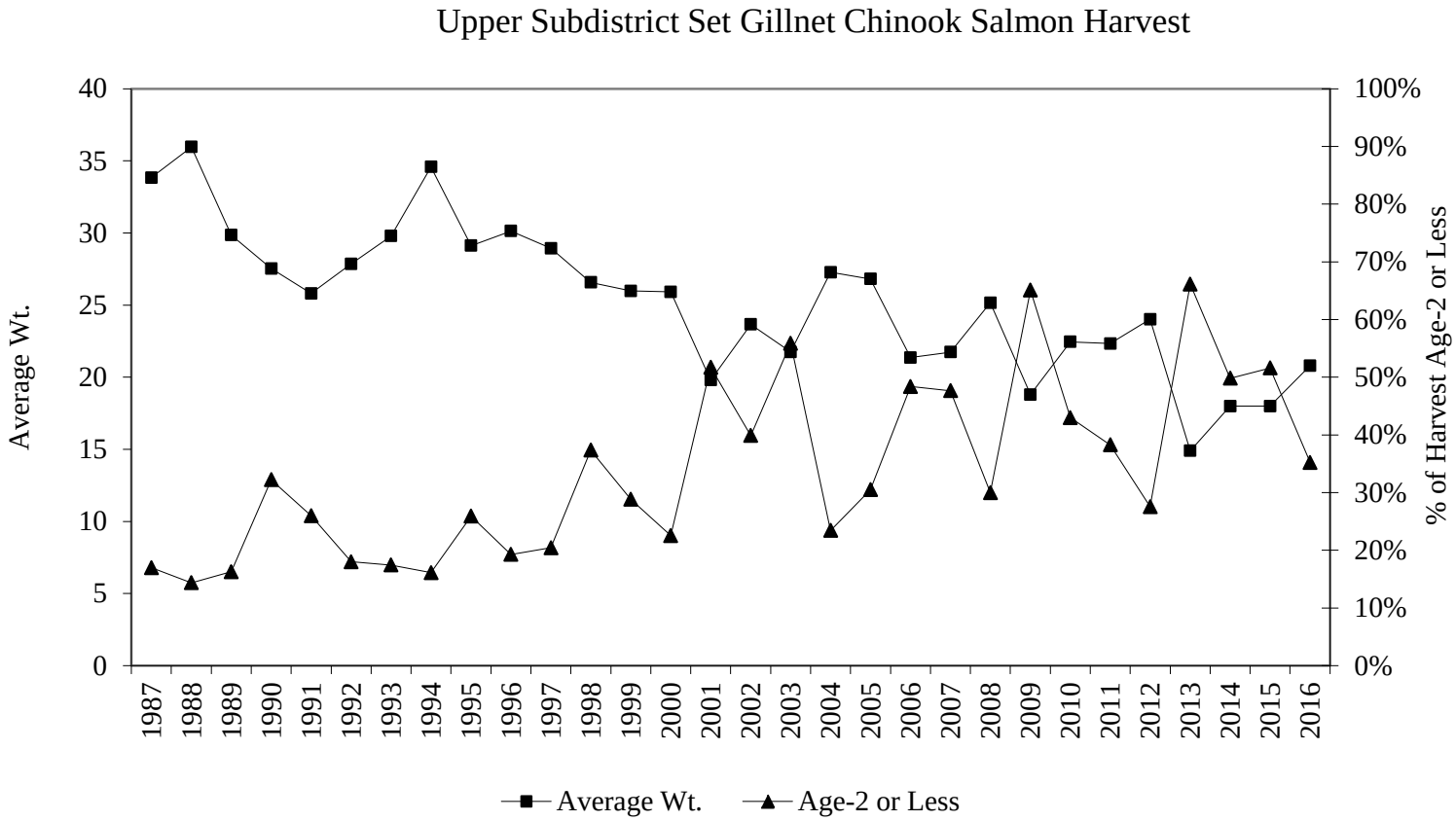


Figure 10.–Chinook salmon average weight (all fish) and percentage of the harvest comprised of ocean-age-2 or less fish in the Upper Subdistrict set gillnet commercial fishery, 1987–2016.

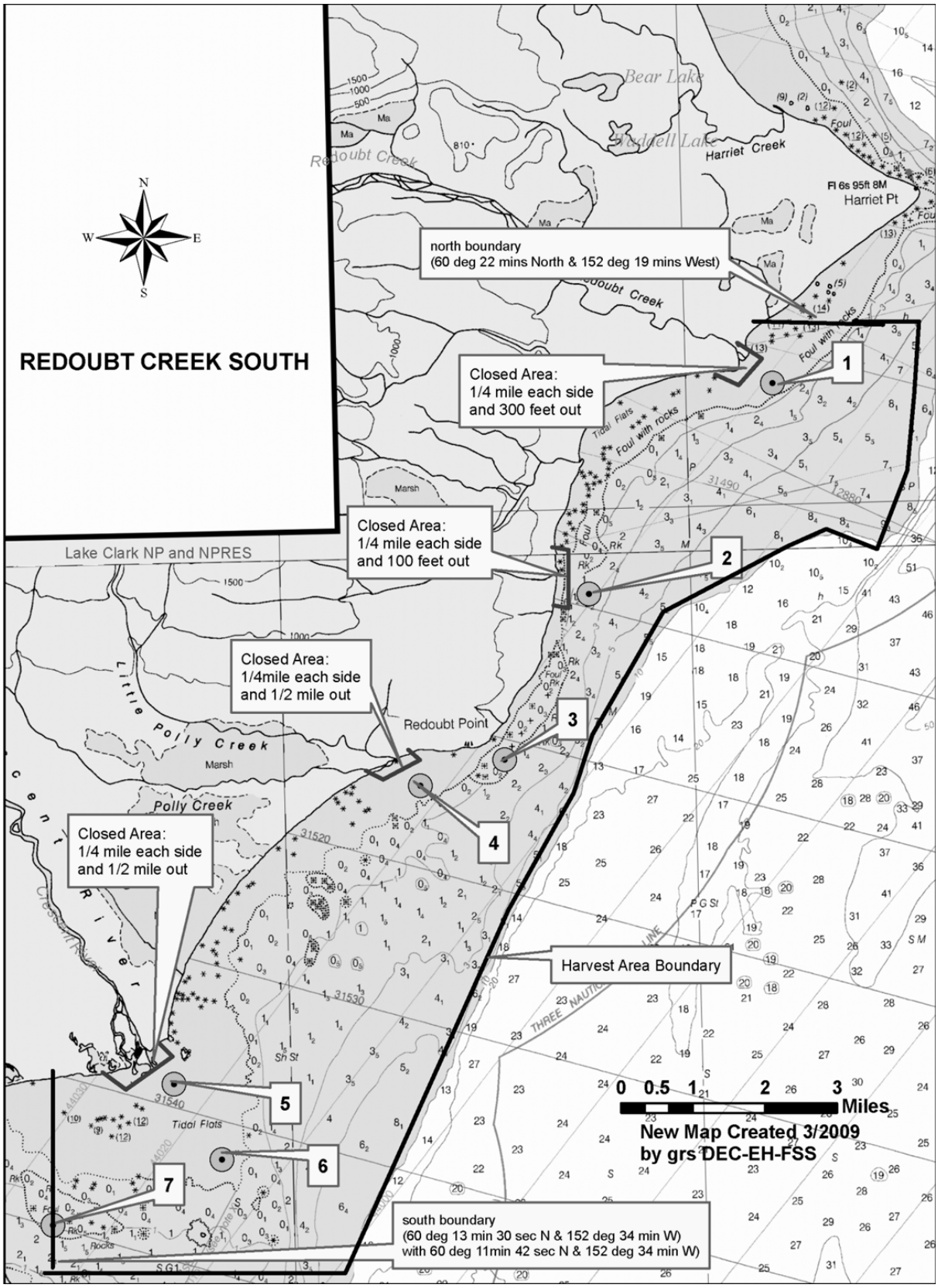


Figure 11.–Area open to the commercial razor clam fishery on the west side of Cook Inlet, Alaska.

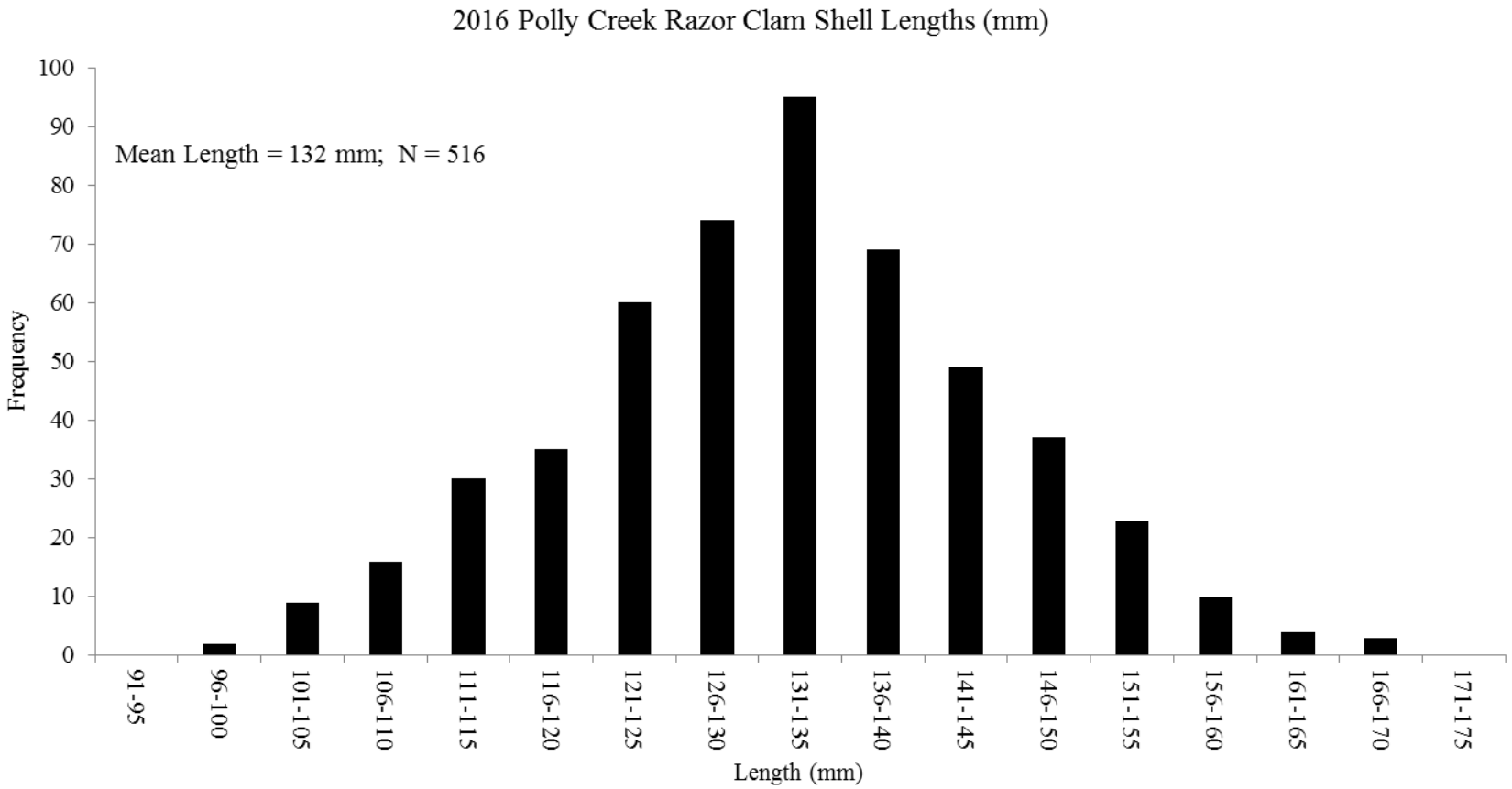


Figure 12.–Length frequency of razor clam shells sampled from the 2016 Polly Creek commercial razor clam fishery.

APPENDIX A: 2016 SEASON DATA

Appendix A1.–Offshore test fishery sockeye salmon catch results and environmental data, 2016.

Date	No. of Stations	Fishing Time (min)	Catch Daily	Catch Cum	Index[b] Daily	Index[b] Cum	Mean Length (mm)	Water Temp (c)	Air Temp (c)	Salinity (ppm)	Beginning Wind Vel	Beginning Wind Dir	Ending Wind Vel	Ending Wind Dir
7/1	6	238.1	117	117	84	84	558	11.0	12.2	28.6	16	S	5	SE
7/2	6	230.0	19	136	14	98	525	11.0	13.3	28.4	5	NE	0	–
7/3	6	246.0	108	244	79	177	552	10.7	13.8	28.8	15	S	20	S
7/4	6	212.0	32	276	29	205	550	11.1	13.1	28.4	10	W	5	W
7/5	6	219.5	63	339	51	256	554	11.2	13.6	28.3	5	E	5	SW
7/6	6	225.0	125	464	91	347	546	11.1	12.9	28.4	0	–	0	–
7/7	6	223.5	74	538	59	406	550	11.3	16.5	28.4	0	–	5	SW
7/8	6	219.0	85	623	66	471	558	11.3	17.8	28.4	5	S	0	–
7/9	6	218.0	55	678	43	514	555	12.1	15.5	27.3	0	–	20	SW
7/10	6	229.5	41	719	32	546	559	11.8	16.8	27.9	15	SE	5	SW
7/11	6	216.5	7	726	5	551	546	12.1	18.1	27.9	10	N	5	NW
7/12	6	217.5	30	756	25	575	554	11.8	19.2	28.1	0	–	0	–
7/13	6	216.5	55	811	46	621	557	12.9	19.4	26.4	5	SW	15	SW
7/14	6	232.0	95	906	72	693	559	12.8	19.3	26.4	15	SW	0	–
7/15	6	254.0	257	1,163	177	870	558	14.0	20.2	25.2	15	SW	15	S
7/16	5[a]	179.0	31	1,194	38	908	557	13.6	18.9	25.9	4	S	3	SW
7/17	6	235.5	152	1,346	107	1,015	556	14.2	20.3	24.9	15	SW	4	S
7/18	6	223.0	85	1,431	67	1,082	559	13.5	18.4	26.4	20	SW	15	SW
7/19	0[a]	–	–	1,431	121	1,204	–	–	–	–	–	–	–	–
7/20	6	239.0	259	1,690	175	1,379	550	12.2	19.9	28.5	5	SW	6	SW
7/21	3[a]	99.5	14	1,704	27	1,406	539	12.8	17.3	27.1	25	SW	0	–
7/22	6	232.5	126	1,830	93	1,499	560	12.3	0.0	28.2	18	SE	9	SE
7/23	6	224.5	87	1,917	68	1,567	555	12.3	0.0	28.0	11	SW	4	–
7/24	4[a]	141.0	24	1,941	27	1,594	556	12.6	16.2	27.6	5	SW	0	–
7/25	6	211.0	15	1,956	13	1,607	559	12.2	14.3	28.0	20	NE	15	N
7/26	6	218.0	54	2,010	43	1,650	558	12.1	14.7	28.0	15	N	10	N
7/27	0[a]	–	–	2,010	40	1,689	–	–	–	–	–	–	–	–
7/28	6	226.0	45	2,055	34	1,723	552	12.6	15.7	27.5	0	–	15	SW
7/29	4[a]	168.0	100	2,155	69	1,792	553	13.4	15.6	25.9	18	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, 2016.

	Kenai River		Kasilof River		Fish Creek		Chelatna Lake		Larson Lake	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
15 Jun			4,278	4,278						
16 Jun			3,054	7,332						
17 Jun			5196	12,528						
18 Jun			4,530	17,058						
19 Jun			2,844	19,902						
20 Jun			3,602	23,504						
21 Jun			6,360	29,864						
22 Jun			9,930	39,794						
23 Jun			7,998	47,792						
24 Jun			3,306	51,098						
25 Jun			4,446	55,544						
26 Jun			2,226	57,770						
27 Jun			4,656	62,426						
28 Jun			4,218	66,644						
29 Jun			5,724	72,368						
30 Jun			3,918	76,286						
1 Jul	11,786	11,786	3,960	80,246						
2 Jul	13,035	24,821	4,356	84,602						
3 Jul	12,018	36,839	2,130	86,732						
4 Jul	32,648	69,487	5,592	92,324						
5 Jul	35,839	105,326	4,730	97,054						
6 Jul	31,464	136,790	6,900	103,954						
7 Jul	20,872	157,662	2,856	106,810	271	271				
8 Jul	19,449	177,111	2,562	109,372	319	590				
9 Jul	22,224	199,335	4,458	113,830	32	622				
10 Jul	31,028	230,363	4,212	118,042	0	622				

-continued-

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	Kenai River		Kasilof River		Fish Creek		Chelatna Lake		Larson Lake	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
11 Jul	50,695	281,058	8,124	126,166	16	638				
12 Jul	44,322	325,380	4,272	130,438	659	1,297				
13 Jul	45,852	371,232	6,210	136,648	600	1,897				
14 Jul	45,797	417,029	3,708	140,356	1,957	3,854			23	23
15 Jul	50,674	467,703	3,330	143,686	888	4,742	936	936	1	24
16 Jul	36,338	504,041	5,454	149,140	303	5,045	668	1604	0	24
17 Jul	36,852	540,893	2,934	152,074	537	5,582	894	2498	13	37
18 Jul	34,753	575,646	2,172	154,246	481	6,063	1136	3634	29	66
19 Jul	18,300	593,946	4,242	158,488	815	6,878	1291	4925	134	200
20 Jul	15,046	608,992	3,624	162,112	1,174	8,052	2016	6941	141	341
21 Jul	27,852	636,844	4,356	166,468	813	8,865	2902	9,843	33	374
22 Jul	40,031	676,875	4,332	170,800	2,047	10,912	2,771	12,614	82	456
23 Jul	52,398	729,273	4,968	175,768	2,591	13,503	2,867	15,481	234	690
24 Jul	13,740	743,013	2,604	178,372	2,506	16,009	3,034	18,515	39	729
25 Jul	21,918	764,931	3,480	181,852	3,880	19,889	2,173	20,688	68	797
26 Jul	20,118	785,049	2,435	184,287	3,132	23,021	4,410	25,098	244	1,041
27 Jul	17,389	802,438	3,030	187,317	2,276	25,297	3,460	28,558	355	1,396
28 Jul	34,610	837,048	3,026	190,343	2,302	27,599	4,465	33,023	256	1,652
29 Jul	15,556	852,604	3,467	193,810	2,396	29,995	4,563	37,586	345	1,997
30 Jul	24,077	876,681	2,589	196,399	2,192	32,187	4,298	41,884	433	2,430
31 Jul	35,248	911,929	4,882	201,281	2,138	34,325	3,689	45,573	837	3,267
1 Aug	52,674	964,603	4,794	206,075	1,274	35,599	3,210	48,783	733	4,000
2 Aug	27,678	992,281	3,345	209,420	1,449	37,048	3,649	52,432	443	4,443

-continued-

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	Kenai River		Kasilof River		Fish Creek		Chelatna Lake		Larson Lake	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
3 Aug	37,554	1,029,835	4,843	214,263	1248	38,296	2,892	55,324	938	5,381
4 Aug	44,055	1,073,890	3,169	217,432	1313	39,609	1886	57,210	257	5,638
5 Aug	30,402	1,104,292	2,923	220,355	1,403	41,012	2013	59,223	344	5,982
6 Aug	22,968	1,127,260	1,155	221,510	835	41,847	1,831	61,054	428	6,410
7 Aug	24,244	1,151,504	2,497	224,007	951	42,798			433	6,843
8 Aug	24,313	1,175,817	1,947	225,954	626	43,424			121	6,964
9 Aug	24,556	1,200,373	3,925	229,879	749	44,173			641	7,605
10 Aug	24,225	1,224,598	2,561	232,440	322	44,495			490	8,095
11 Aug	24,066	1,248,664	2,816	235,256	441	44,936			404	8,499
12 Aug	25,061	1,273,725	1,684	236,940	742	45,678			491	8,990
13 Aug	26,637	1,300,362	1,487	238,427	180	45,858			492	9,482
14 Aug	25,645	1,326,007	1,554	239,981	344	46,202			689	10,171
15 Aug	18,338	1,344,345							466	10,637
16 Aug	15,396	1,359,741							316	10,953
17 Aug	8,383	1,368,124							443	11,396
18 Aug	8,209	1,376,333							379	11,775
19 Aug	7,359	1,383,692							526	12,301
20 Aug									335	12,636
21 Aug									365	13,001
22 Aug									269	13,270
23 Aug									227	13,497
24 Aug									288	13,785
25 Aug									206	13,991
26 Aug									95	14,086
27 Aug									101	14,187
28 Aug									126	14,313

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, 2016.

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	33	33	28	28	13	13							74	74
25 Jun	10	43	16	44	8	21							34	108
27 Jun	28	71	7	51	6	27							41	149
29 Jun	22	93	23	74	15	42							60	209
30 Jun	55	148	31	105	30	72							116	325
2 Jul	38	186	42	147	32	104							112	437
4 Jul	37	223	53	200	60	164							150	587
6 Jul	49	272	47	247	28	192							124	711
7 Jul	53	325	31	278	30	222							114	825
9 Jul	140	465	124	402	52	274							316	1,141
11 Jul	53	518	61	463	68	342	94	94	445	445	10	10	731	1,872
13 Jul	67	585	79	542	50	392	61	155	221	666	5	15	483	2,355
14 Jul	40	625	41	583	45	437	79	234	204	870	6	21	415	2,770
16 Jul	41	666	56	639	87	524	76	310	282	1,152	3	24	545	3,315
17 Jul	10	676	18	657	34	558	17	327	143	1,295	4	28	226	3,541
18 Jul	49	725	45	702	45	603	79	406	312	1,607	5	33	535	4,076
19 Jul	37	762	47	749	50	653	52	458	167	1,774		33	353	4,429
21 Jul	32	794	90	839	71	724	71	529	114	1,888	9	42	387	4,816
23 Jul	39	833	54	893	59	783	73	602	240	2,128	8	50	473	5,289
24 Jul	28	861	51	944	49	832	24	626	100	2,228	9	59	261	5,550
25 Jul	33	894	43	987	31	863	43	669	90	2,318	10	69	250	5,800
28 Jul	8	902	20	1,007	50	913	46	715	156	2,474	4	73	284	6,084
1 Aug	16	918	30	1,037	31	944	20	735	170	2,644	2	75	269	6,353
3 Aug	14	932	18	1,055	9	953	12	747	67	2,711	2	77	122	6,475
5 Aug	5	937	13	1,068	6	959	24	771	97	2,808	2	79	147	6,622
7 Aug	9	946	8	1,076	12	971	15	786	43	2,851	1	80	88	6,710
9 Aug	2	948	1	1,077	5	976	5	791	36	2,887		80	49	6,759

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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
1 Jun											27	27			57	57			84	84
3 Jun											6	33			9	66			15	99
6 Jun												33			11	77			11	110
8 Jun											9	42			5	82			14	124
10 Jun												42			7	89			7	131
13 Jun											24	66			20	109			44	175
15 Jun											28	94			20	129			48	223
16 Jun					27	27			1	1									28	251
17 Jun												94			3	132			3	254
20 Jun					4	31					1	95			18	150			23	277
22 Jun											1	96			5	155			6	283
23 Jun					24	55				1									24	307
24 Jun											1	97			6	161			7	314
27 Jun					35	90				1					3	164			38	352
30 Jun					7	97						97			5	169			12	364
4 Jul					13	110				1					4	173			17	381
7 Jul					14	124			1	2					4	177	1	1	20	401

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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					9	133													9	410
11 Jul					7	140				2					7	184	2	3	16	426
14 Jul					8	148				2						184		3	8	434
16 Jul					4	152													4	438
18 Jul					2	154			1	3					6	190		3	9	447
21 Jul						154				3		97			1	191	2	5	3	450
23 Jul					1	155													1	451
25 Jul					1	156				3		97			1	192	1	6	3	454
28 Jul						156				3		97				192		6	0	454
30 Jul					1	157													1	455
1 Aug					1	158				3						192	2	8	3	458
4 Aug						158				3					1	193	1	9	2	460
6 Aug						158													0	460
8 Aug						158										193		9	0	460
11 Aug						158				3						193		9	0	460
15 Aug						158				3						193		9	0	460

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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
30 May	315	315	170	170			39	39	5	5	45	45	131	131	23	23	23	23	751	751
6 Jun	43	358	177	347			1	40	46	51	19	64	76	207			6	29	368	1,119
13 Jun	152	510	74	421			32	72	52	103	101	165	173	380		23	16	45	600	1,719
20 Jun	42	552	93	514			11	83	37	140	55	220	71	451	1	24	1	46	311	2,030
27 Jun	13	565	41	555					4	144	3	223	4	455		24		46	65	2,095
30 Jun	4	569	16	571	1	1	6	89					5	460		24	1	47	33	2,128
4 Jul	2	571	5	576		1			2	146		223	4	464			3	50	16	2,144
7 Jul	1	572	9	585		1		89	6	152	1	224	3	467		24		50	20	2,164
11 Jul	1	573	2	587		1	3	92	1	153	1	225	1	468	2	26		50	11	2,175
14 Jul		573	2	589		1	2	94		153		225		468		26		50	4	2,179
18 Jul	1	574		589		1		94		153		225	1	469	1	27		50	3	2,182
21 Jul		574		589		1		94		153			2	471		27		50	2	2,184
25 Jul		574		589	2	3		94		153		225		471	1	28		50	3	2,187
28 Jul		574		589		3		94		153		225	1	472		28		50	1	2,188
1 Aug		574		589		3	1	95		153		225		472		28		50	1	2,189
4 Aug		574		589		3		95		153	1	226	1	473		28		50	2	2,191

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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
8 Aug		574		589		3		95		153		226	2	475		28		50	2	2,193
11 Aug		574		589		3	1	96	1	154		226		475	2	30		50	4	2,197
15 Aug		574		589		3		96		154		226		475	1	31	1	51	2	2,199
18 Aug		574		589										475		31		51	0	2,199
22 Aug		574		589										475		31		51	0	2,199
25 Aug		574	3	592										475		31		51	3	2,202
29 Aug		574		592										475		31		51	0	2,202
1 Sep		574		592										475		31		51	0	2,202
5 Sep		574		592										475		31		51	0	2,202
8 Sep		574		592										475					0	2,202
12 Sep		574												475					0	2,202
15 Sep														475					0	2,202
19 Sep				592															0	2,202
26 Sep				592															0	2,202

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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
20 Jun	53					11	11					11	11
23 Jun	103					24	35					24	35
25 Jun	16							1	1			1	36
27 Jun	179					38	73					38	74
29 Jun	15							3	4			3	77
30 Jun	239					96	169					96	173
2 Jul	28							6	10			6	179
4 Jul	350					38	207					38	217
6 Jul	54							6	16			6	223
7 Jul	299					26	233					26	249
9 Jul	330	52	52									52	301
11 Jul	424					31	264					31	332
13 Jul	372	43	95									43	375
14 Jul	420					42	306					42	417
15 Jul	354					56	362					56	473
16 Jul	361			23	23							23	496
17 Jul	152			5	28							5	501
18 Jul	419					18	380					18	519
19 Jul	360			8	36							8	527
21 Jul	379			23	59							23	550
22 Jul	378			11	70							11	561
23 Jul	321			4	74							4	565
24 Jul	122			3	77							3	568
25 Jul	406					9	389					9	577

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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
28 Jul	338			8	85							8	585
1 Aug	334					3	392					3	588
3 Aug	216			5	90							5	593
4 Aug	256					2	394					2	595
6 Aug	114			3	93							3	598
7 Aug	25			3	96							3	601
8 Aug	146					2	396					2	603
9 Aug	14				96							0	603
11 Aug	35					1	397					1	604
15 Aug	32						397					0	604
18 Aug	16					1	398					1	605
22 Aug	1						398					0	605
25 Aug	11						398					0	605
26 Aug	12									1	1	1	606
29 Aug	8						398					0	606
30 Aug	11										1	0	606
1 Sep	3						398					0	606
2 Sep	4										1	0	606
5 Sep	6						398					0	606
6 Sep	5										1	0	606
8 Sep	4						398					0	606
9 Sep	4										1	0	606
16 Sep	3										1	0	606

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

Appendix A4.–Commercial sockeye salmon harvest by area and date, Upper Cook Inlet, 2016.

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	5,855	5,855	4,298	4,298	5,381	5,381							15,534	15,534
25 Jun	5,445	11,300	2,362	6,660	3,338	8,719							11,145	26,679
27 Jun	7,742	19,042	3,753	10,413	3,100	11,819							14,595	41,274
29 Jun	4,390	23,432	3,950	14,363	3,180	14,999							11,520	52,794
30 Jun	4,376	27,808	2,325	16,688	3,263	18,262							9,964	62,758
2 Jul	9,204	37,012	4,344	21,032	3,699	21,961							17,247	80,005
4 Jul	6,301	43,313	5,653	26,685	6,380	28,341							18,334	98,339
6 Jul	6,889	50,202	4,899	31,584	3,017	31,358							14,805	113,144
7 Jul	4,779	54,981	3,640	35,224	2,548	33,906							10,967	124,111
9 Jul	8,325	63,306	8,015	43,239	5,177	39,083							21,517	145,628
11 Jul	14,745	78,051	10,352	53,591	7,845	46,928	15,058	15,058	42,806	42,806	7,573	7,573	98,379	244,007
13 Jul	7,358	85,409	3,767	57,358	3,808	50,736	6,020	21,078	37,234	80,040	6,873	14,446	65,060	309,067
14 Jul	8,548	93,957	2,713	60,071	3,718	54,454	6,148	27,226	28,559	108,599	6,121	20,567	55,807	364,874
16 Jul	8,167	102,124	5,697	65,768	4,961	59,415	8,938	36,164	29,792	138,391	6,400	26,967	63,955	428,829
17 Jul	9,857	111,981	6,874	72,642	2,489	61,904	4,172	40,336	28,462	166,853	5,705	32,672	57,559	486,388
18 Jul	15,443	127,424	5,819	78,461	4,554	66,458	8,016	48,352	40,582	207,435	10,223	42,895	84,637	571,025
19 Jul	10,198	137,622	3,559	82,020	2,351	68,809	2,878	51,230	17,504	224,939	4,444	47,339	40,934	611,959
21 Jul	2,828	140,450	3,202	85,222	3,384	72,193	6,632	57,862	62,323	287,262	12,892	60,231	91,261	703,220
23 Jul	2,946	143,396	2,995	88,217	1,925	74,118	2,749	60,611	31,045	318,307	6,071	66,302	47,731	750,951
24 Jul	3,201	146,597	3,399	91,616	3,004	77,122	6,889	67,500	21,447	339,754	4,265	70,567	42,205	793,156
25 Jul	2,820	149,417	3,283	94,899	1,772	78,894	4,644	72,144	14,123	353,877	3,530	74,097	30,172	823,328
28 Jul	3,110	152,527	4,256	99,155	1,863	80,757	3,431	75,575	16,694	370,571	3,109	77,206	32,463	855,791
1 Aug	7,927	160,454	5,546	104,701	2,033	82,790	3,785	79,360	29,155	399,726	5,218	82,424	53,664	909,455
3 Aug	2,715	163,169	3,714	108,415	1,644	84,434	3,774	83,134	21,275	421,001	6,235	88,659	39,357	948,812
5 Aug	5,106	168,275	4,305	112,720	1,905	86,339	2,719	85,853	7,217	428,218	954	89,613	22,206	971,018
7 Aug	4,418	172,693	3,028	115,748	1,265	87,604	2,439	88,292	5,818	434,036	870	90,483	17,838	988,856
9 Aug	576	173,269	749	116,497	375	87,979	813	89,105	4,613	438,649	1,786	92,269	8,912	997,768

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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
1 Jun											314	314			747	747			1,061	1,061
3 Jun											411	725			351	1,098			762	1,823
6 Jun											193	918			256	1,354			449	2,272
8 Jun											345	1,263			279	1,633			624	2,896
10 Jun											299	1,562			454	2,087			753	3,649
13 Jun											492	2,054			417	2,504			909	4,558
15 Jun											640	2,694			678	3,182			1,318	5,876
16 Jun					491	491	40	40	175	175									706	6,582
17 Jun											166	2,860			327	3,509			493	7,075
20 Jun					933	1,424					223	3,083			1,344	4,853			2,500	9,575
22 Jun											157	3,240			824	5,677			981	10,556
23 Jun					1,001	2,425			71	246									1,072	11,628
24 Jun											250	3,490			603	6,280			853	12,481
27 Jun					1,784	4,209			166	412					1,144	7,424	535	535	3,629	16,110
30 Jun					2,750	6,959					162	3,652			2,378	9,802	701	1,236	5,991	22,101
4 Jul					2,502	9,461			211	623					1,117	10,919	409	1,645	4,239	26,340
7 Jul					3,583	13,044			192	815					2,495	13,414	391	2,036	6,661	33,001

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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					4,225	17,269													4,225	37,226
11 Jul					3,764	21,033			379	1,194					2,356	15,770	778	2,814	7,277	44,503
14 Jul					2,831	23,864	146	186	256	1,450					389	16,159	362	3,176	3,984	48,487
16 Jul					2,008	25,872													2,008	50,495
18 Jul					1,959	27,831	247	433	505	1,955			90	90	2,830	18,989	685	3,861	6,316	56,811
21 Jul					1,268	29,099	195	628	386	2,341	118	3,770	138	228	2,421	21,410	656	4,517	5,182	61,993
23 Jul					765	29,864													765	62,758
25 Jul					514	30,378	55	683	83	2,424	51	3,821	119	347	2,054	23,464	1,013	5,530	3,889	66,647
28 Jul					751	31,129	157	840	169	2,593	32	3,853	45	392	604	24,068	431	5,961	2,189	68,836
30 Jul					808	31,937													808	69,644
1 Aug					1,538	33,475	295	1,135	277	2,870					3,144	27,212	2,619	8,580	7,873	77,517
4 Aug					420	33,895	295	1,430	62	2,932					1,721	28,933	843	9,423	3,341	80,858
6 Aug					371	34,266													371	81,229
8 Aug					64	34,330	411	1,841							1,029	29,962	296	9,719	1,800	83,029
11 Aug	3	3			163	34,493	218	2,059	172	3,104					581	30,543	367	10,086	1,504	84,533
15 Aug					9	34,502			67	3,171					448	30,991	137	10,223	661	85,194

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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
30 May	14	14	1	1			21	21	1	1	8	8	518	518	249	249	88	88	900	900
6 Jun	6	20	1	2				21	11	12	2	10	268	786			62	150	350	1,250
13 Jun	20	40		2			11	32	21	33	4	14	457	1,243	33	282	112	262	658	1,908
20 Jun	19	59	11	13			4	36	4	37	11	25	193	1,436	18	300	68	330	328	2,236
27 Jun	30	89	169	182					2	39	2	27	138	1,574	43	343	220	550	604	2,840
30 Jun	37	126	568	750	5	5	14	50					562	2,136	44	387	222	772	1,452	4,292
4 Jul	51	177	1,507	2,257	21	26			41	80	15	42	966	3,102			480	1,252	3,081	7,373
7 Jul	73	250	1,136	3,393	25	51	57	107	69	149	144	186	1,301	4,403	37	424	246	1,498	3,088	10,461
11 Jul	129	379	1,607	5,000	285	336	181	288	107	256	179	365	647	5,050	156	580	444	1,942	3,735	14,196
14 Jul	34	413	1,469	6,469	1,377	1,713	305	593	346	602	79	444	850	5,900	187	767	242	2,184	4,889	19,085
18 Jul	231	644	1,888	8,357	945	2,658	633	1,226	316	918	334	778	712	6,612	661	1,428	314	2,498	6,034	25,119
21 Jul	10	654	413	8,770	505	3,163	280	1,506	287	1,205			678	7,290	543	1,971	255	2,753	2,971	28,090
25 Jul	93	747	881	9,651	522	3,685	538	2,044	532	1,737	360	1,138	353	7,643	319	2,290	29	2,782	3,627	31,717
28 Jul	9	756	557	10,208	342	4,027	351	2,395	655	2,392	68	1,206	1,253	8,896	228	2,518	227	3,009	3,690	35,407
1 Aug	107	863	557	10,765	493	4,520	182	2,577	319	2,711	180	1,386	1,438	10,334	222	2,740	569	3,578	4,067	39,474
4 Aug	151	1,014	396	11,161	237	4,757	126	2,703	341	3,052	271	1,657	662	10,996	696	3,436	419	3,997	3,299	42,773

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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
8 Aug	47	1,061	117	11,278	21	4,778	118	2,821	241	3,293	71	1,728	527	11,523	239	3,675	509	4,506	1,890	44,663
11 Aug	70	1,131	107	11,385	32	4,810	127	2,948	75	3,368	90	1,818	289	11,812	93	3,768	294	4,800	1,177	45,840
15 Aug	11	1,142	13	11,398	3	4,813	9	2,957	55	3,423	58	1,876	242	12,054	168	3,936	68	4,868	627	46,467
18 Aug	10	1,152	21	11,419									107	12,161	7	3,943	77	4,945	222	46,689
22 Aug	6	1,158	14	11,433									97	12,258	16	3,959	44	4,989	177	46,866
25 Aug	28	1,186	22	11,455									84	12,342	5	3,964	56	5,045	195	47,061
29 Aug		1,186	2	11,457									5	12,347	4	3,968	23	5,068	34	47,095
1 Sep	3	1,189		11,457									6	12,353	1	3,969	21	5,089	31	47,126
5 Sep	1	1,190		11,457									6	12,359		3,969	4	5,093	11	47,137
8 Sep	1	1,191		11,457									6	12,365					7	47,144
12 Sep		1,191											6	12,371					6	47,150
15 Sep														12,371					0	47,150
19 Sep				11,457															0	47,150
26 Sep				11,457															0	47,150

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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
20 Jun	53					1,890	1,890					1,890	1,890
23 Jun	103					3,682	5,572					3,682	5,572
25 Jun	16							220	220			220	5,792
27 Jun	179					9,975	15,547					9,975	15,767
29 Jun	15							287	507			287	16,054
30 Jun	239					19,638	35,185					19,638	35,692
2 Jul	28							502	1,009			502	36,194
4 Jul	350					59,864	95,049					59,864	96,058
6 Jul	54							1,822	2,831			1,822	97,880
7 Jul	299					63,159	158,208					63,159	161,039
9 Jul	330	71,648	71,648									71,648	232,687
11 Jul	424					118,807	277,015					118,807	351,494
13 Jul	372	63,942	135,590									63,942	415,436
14 Jul	420					101,452	378,467					101,452	516,888
15 Jul	354					122,712	501,179					122,712	639,600
16 Jul	361			69,680	69,680							69,680	709,280
17 Jul	152			21,898	91,578							21,898	731,178
18 Jul	419					149,884	651,063					149,884	881,062
19 Jul	360			49,042	140,620							49,042	930,104
21 Jul	379			111,603	252,223							111,603	1,041,707
22 Jul	378			40,873	293,096							40,873	1,082,580
23 Jul	321			38,931	332,027							38,931	1,121,511
24 Jul	122			13,092	345,119							13,092	1,134,603
25 Jul	406					30,686	681,749					30,686	1,165,289

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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
28 Jul	338			26,877	371,996							26,877	1,192,166
1 Aug	334					29,374	711,123					29,374	1,221,540
3 Aug	216			21,952	393,948							21,952	1,243,492
4 Aug	256					11,263	722,386					11,263	1,254,755
6 Aug	114			5,253	399,201							5,253	1,260,008
7 Aug	25			694	399,895							694	1,260,702
8 Aug	146					4,543	726,929					4,543	1,265,245
9 Aug	14			240	400,135							240	1,265,485
11 Aug	35					664	727,593					664	1,266,149
15 Aug	32					194	727,787					194	1,266,343
18 Aug	16					122	727,909					122	1,266,465
22 Aug	1					20	727,929					20	1,266,485
25 Aug	11					26	727,955					26	1,266,511
26 Aug	12									26	26	26	1,266,537
29 Aug	8					32	727,987					32	1,266,569
30 Aug	11									44	70	44	1,266,613
1 Sep	3					18	728,005					18	1,266,631
2 Sep	4									11	81	11	1,266,642
5 Sep	6					26	728,031					26	1,266,668
6 Sep	5									9	90	9	1,266,677
8 Sep	4					6	728,037					6	1,266,683
9 Sep	4									4	94	4	1,266,687
16 Sep	3									9	103	9	1,266,696

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

Appendix A5.–Commercial coho salmon harvest by area and date, Upper Cook Inlet, 2016.

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	1		1	1	1							2	3
27 Jun		1	1	2	1	2							2	5
29 Jun		1	2	4		2							2	7
30 Jun	1	2		4		2							1	8
2 Jul		2	2	6	1	3							3	11
4 Jul	4	6	1	7		3							5	16
6 Jul	6	12	6	13	3	6							15	31
7 Jul	2	14	2	15		6							4	35
9 Jul	9	23	5	20	6	12							20	55
11 Jul	18	41	17	37	7	19	15	15	98	98	93	93	248	303
13 Jul	10	51	6	43	3	22	3	18	30	128	23	116	75	378
14 Jul	15	66	9	52	1	23	1	19	39	167	30	146	95	473
16 Jul	16	82	20	72	5	28	7	26	34	201	24	170	106	579
17 Jul	16	98	20	92	12	40	9	35	29	230	27	197	113	692
18 Jul	20	118	48	140	10	50	10	45	29	259	52	249	169	861
19 Jul	27	145	23	163	11	61	3	48	59	318	22	271	145	1,006
21 Jul	41	186	72	235	30	91	70	118	185	503	149	420	547	1,553
23 Jul	33	219	22	257	3	94	7	125	27	530	22	442	114	1,667
24 Jul	52	271	39	296	4	98	17	142	47	577	18	460	177	1,844
25 Jul	54	325	61	357	9	107	13	155	109	686	111	571	357	2,201
28 Jul	95	420	108	465	19	126	19	174	181	867	105	676	527	2,728
1 Aug	248	668	165	630	26	152	55	229	346	1,213	140	816	980	3,708
3 Aug	402	1,070	397	1,027	63	215	49	278	300	1,513	125	941	1,336	5,044
5 Aug	798	1,868	226	1,253	58	273	137	415	278	1,791	212	1,153	1,709	6,753
7 Aug	693	2,561	375	1,628	97	370	311	726	500	2,291	151	1,304	2,127	8,880
9 Aug	390	2,951	303	1,931	138	508	346	1,072	954	3,245	569	1,873	2,700	11,580

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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
1 Jun																			0	0
3 Jun																			0	0
6 Jun																			0	0
8 Jun																			0	0
10 Jun																			0	0
13 Jun																			0	0
15 Jun																			0	0
16 Jun																			0	0
17 Jun																			0	0
20 Jun					1	1													1	1
22 Jun																			0	1
23 Jun					1	2													1	2
24 Jun															2	2			2	4
27 Jun						2									3	5			3	7
30 Jun						2									14	19			14	21
4 Jul					1	3			1	1					25	44	3	3	30	51
7 Jul					30	33				1					60	104	4	7	94	145

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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
30 May																			0	0
6 Jun																			0	0
13 Jun																			0	0
20 Jun																			0	0
27 Jun											3	3					1	1	4	4
30 Jun	2	2	7	7	1	1							3	3			1	2	14	18
4 Jul	16	18	75	82	5	6					1	4	15	18			3	5	115	133
7 Jul	11	29	82	164		6	7	7			11	15	43	61			2	7	156	289
11 Jul	67	96	976	1,140	137	143	33	40	23	23	55	70	118	179	11	11	15	22	1,435	1,724
14 Jul	81	177	967	2,107	528	671	86	126	58	81	76	146	107	286	3	14	3	25	1,909	3,633
18 Jul	58	235	760	2,867	600	1,271	260	386	55	136	101	247	87	373	32	46		25	1,953	5,586
21 Jul	9	244	35	2,902	112	1,383	113	499	41	177			80	453	17	63	4	29	411	5,997
25 Jul	104	348	1,174	4,076	444	1,827	487	986	149	326	354	601	199	652	106	169	3	32	3,020	9,017
28 Jul	53	401	1,446	5,522	711	2,538	270	1,256	229	555	195	796	245	897	41	210	5	37	3,195	12,212
1 Aug	165	566	1,087	6,609	241	2,779	388	1,644	281	836	366	1,162	947	1,844	72	282	71	108	3,618	15,830
4 Aug	343	909	1,061	7,670	254	3,033	78	1,722	155	991	289	1,451	435	2,279	296	578	61	169	2,972	18,802

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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
8 Aug	134	1,043	364	8,034	6	3,039	48	1,770	186	1,177	143	1,594	311	2,590	224	802	148	317	1,564	20,366
11 Aug	33	1,076	557	8,591	23	3,062	227	1,997	176	1,353	353	1,947	446	3,036	314	1,116	371	688	2,500	22,866
15 Aug	89	1,165	215	8,806	7	3,069	16	2,013	149	1,502	279	2,226	300	3,336	498	1,614	219	907	1,772	24,638
18 Aug	84	1,249	185	8,991									302	3,638	377	1,991	416	1,323	1,364	26,002
22 Aug	52	1,301	130	9,121									283	3,921	553	2,544	253	1,576	1,271	27,273
25 Aug	133	1,434	145	9,266									192	4,113	273	2,817	282	1,858	1,025	28,298
29 Aug	41	1,475	74	9,340									38	4,151	463	3,280	331	2,189	947	29,245
1 Sep	47	1,522	36	9,376									88	4,239	277	3,557	94	2,283	542	29,787
5 Sep	105	1,627	26	9,402									72	4,311	78	3,635	38	2,321	319	30,106
8 Sep	62	1,689	40	9,442									121	4,432					223	30,329
12 Sep	35	1,724											84	4,516					119	30,448
15 Sep													9	4,525					9	30,457
19 Sep			9	9,451															9	30,466
26 Sep			10	9461															10	30,476

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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
20 Jun	53					6	6					6	6
23 Jun	103					14	20					14	20
25 Jun	16											0	20
27 Jun	179					50	70					50	70
29 Jun	15							1	1			1	71
30 Jun	239					226	296					226	297
2 Jul	28							3	4			3	300
4 Jul	350					903	1,199					903	1,203
6 Jul	54											0	1,203
7 Jul	299					1,789	2,988					1,789	2,992
9 Jul	330	885	885									885	3,877
11 Jul	424					4,951	7,939					4,951	8,828
13 Jul	372	1,062	1,947									1,062	9,890
14 Jul	420					5,381	13,320					5,381	15,271
15 Jul	354					5,242	18,562					5,242	20,513
16 Jul	361			1,597	1,597							1,597	22,110
17 Jul	152			751	2,348							751	22,861
18 Jul	419					10,751	29,313					10,751	33,612
19 Jul	360			1,490	3,838							1,490	35,102
21 Jul	379			3,228	7,066							3,228	38,330
22 Jul	378			1,414	8,480							1,414	39,744
23 Jul	321			1,017	9,497							1,017	40,761
24 Jul	122			437	9,934							437	41,198
25 Jul	406					11,210	40,523					11,210	52,408

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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
28 Jul	338			2,686	12,620							2,686	55,094
1 Aug	334					4,941	45,464					4,941	60,035
3 Aug	216			2,584	15,204							2,584	62,619
4 Aug	256					9,290	54,754					9,290	71,909
6 Aug	114			679	15,883							679	72,588
7 Aug	25			193	16,076							193	72,781
8 Aug	146					6,635	61,389					6,635	79,416
9 Aug	14			152	16,228							152	79,568
11 Aug	35					1,427	62,816					1,427	80,995
15 Aug	32					1,535	64,351					1,535	82,530
18 Aug	16					854	65,205					854	83,384
22 Aug	1					66	65,271					66	83,450
25 Aug	11					879	66,150					879	84,329
26 Aug	12									1,900	1,900	1,900	86,229
29 Aug	8					476	66,626					476	86,705
30 Aug	11									1,107	3,007	1,107	87,812
1 Sep	3					502	67,128					502	88,314
2 Sep	4									661	3,668	661	88,975
5 Sep	6					467	67,595					467	89,442
6 Sep	5									225	3,893	225	89,667
8 Sep	4					249	67,844					249	89,916
9 Sep	4									217	4,110	217	90,133
16 Sep	3									109	4,219	109	90,242

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

Appendix A6.–Commercial pink salmon harvest by area and date, Upper Cook Inlet, 2016.

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	3	3	4	4									7	7
25 Jun	4	7		4									4	11
27 Jun	7	14	1	5									8	19
29 Jun	10	24	6	11									16	35
30 Jun	23	47	10	21									33	68
2 Jul	73	120	78	99	12	12							163	231
4 Jul	105	225	79	178	12	24							196	427
6 Jul	263	488	189	367	16	40							468	895
7 Jul	361	849	203	570	38	78							602	1,497
9 Jul	458	1,307	478	1,048	74	152							1,010	2,507
11 Jul	543	1,850	458	1,506	37	189	60	60	1,015	1,015	1,210	1,210	3,323	5,830
13 Jul	158	2,008	152	1,658	13	202	10	70	572	1,587	629	1,839	1,534	7,364
14 Jul	279	2,287	196	1,854	17	219	10	80	452	2,039	445	2,284	1,399	8,763
16 Jul	575	2,862	610	2,464	54	273	61	141	690	2,729	726	3,010	2,716	11,479
17 Jul	393	3,255	791	3,255	130	403	62	203	295	3,024	407	3,417	2,078	13,557
18 Jul	843	4,098	724	3,979	193	596	219	422	998	4,022	706	4,123	3,683	17,240
19 Jul	1,031	5,129	493	4,472	240	836	129	551	524	4,546	214	4,337	2,631	19,871
21 Jul	573	5,702	560	5,032	223	1,059	483	1,034	764	5,310	351	4,688	2,954	22,825
23 Jul	1,257	6,959	992	6,024	363	1,422	429	1,463	1,547	6,857	189	4,877	4,777	27,602
24 Jul	508	7,467	856	6,880	339	1,761	969	2,432	1,411	8,268	158	5,035	4,241	31,843
25 Jul	734	8,201	664	7,544	204	1,965	307	2,739	929	9,197	159	5,194	2,997	34,840
28 Jul	1,764	9,965	1,899	9,443	548	2,513	1,241	3,980	3,740	12,937	221	5,415	9,413	44,253
1 Aug	3,094	13,059	2,534	11,977	1,017	3,530	2,136	6,116	5,486	18,423	339	5,754	14,606	58,859
3 Aug	1,602	14,661	2,907	14,884	1,147	4,677	2,130	8,246	3,583	22,006	201	5,955	11,570	70,429
5 Aug	4,854	19,515	3,059	17,943	1,346	6,023	1,929	10,175	5,936	27,942	181	6,136	17,305	87,734
7 Aug	2,278	21,793	2,315	20,258	893	6,916	2,132	12,307	3,725	31,667	113	6,249	11,456	99,190
9 Aug	114	21,907	261	20,519	240	7,156	716	13,023	2,712	34,379	238	6,487	4,281	103,471

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Appendix A6.–Page 2 of 7.

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
1 Jun																			0	0
3 Jun																			0	0
6 Jun																			0	0
8 Jun																			0	0
10 Jun																			0	0
13 Jun																			0	0
15 Jun																			0	0
16 Jun																			0	0
17 Jun																			0	0
20 Jun																			0	0
22 Jun																			0	0
23 Jun																			0	0
24 Jun															1	1			1	1
27 Jun									1	1						1			1	2
30 Jun					2	2					2	2			5	6			9	11
4 Jul					6	8			1	2					30	36	4	4	41	52
7 Jul					16	24			9	11					138	174	10	14	173	225

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Appendix A6.–Page 3 of 7.

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					25	49													25	250
11 Jul					27	76			6	17					412	586	105	119	550	800
14 Jul					17	93			1	18					45	631	13	132	76	876
16 Jul					18	111													18	894
18 Jul					5	116			1	19			21	21	107	738	7	139	141	1,035
21 Jul					1	117			1	20		2	11	32	70	808	3	142	86	1,121
23 Jul					4	121													4	1,125
25 Jul					7	128				20		2	13	45	37	845	9	151	66	1,191
28 Jul					29	157			5	25		2	25	70	66	911	6	157	131	1,322
30 Jul					26	183													26	1,348
1 Aug					54	237			10	35					140	1,051	65	222	269	1,617
4 Aug					15	252	7	7		35					248	1,299	14	236	284	1,901
6 Aug					5	257													5	1,906
8 Aug					5	262	3	10							96	1,395		236	104	2,010
11 Aug	2	2			6	268	3	13	2	37					37	1,432	13	249	63	2,073
15 Aug					3	271			1	38					12	1,444		249	16	2,089

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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
30 May																			0	0
6 Jun																			0	0
13 Jun																			0	0
20 Jun																			0	0
27 Jun																			0	0
30 Jun													10	10			1	1	11	11
4 Jul			15	15	2	2							124	134			13	14	154	165
7 Jul			145	160		2	1	1	1	1			234	368			24	38	405	570
11 Jul	5	5	654	814	92	94	2	3	5	6	42	42	397	765			154	192	1,351	1,921
14 Jul		5	708	1,522	674	768	11	14	18	24		42	578	1,343	112	112	94	286	2,195	4,116
18 Jul		5	681	2,203	407	1,175	74	88	8	32	18	60	277	1,620	284	396	78	364	1,827	5,943
21 Jul		5		2,203	7	1,182	23	111	3	35			261	1,881	177	573	16	380	487	6,430
25 Jul		5	63	2,266	22	1,204	29	140	4	39		60	104	1,985	92	665	4	384	318	6,748
28 Jul		5	30	2,296	33	1,237	27	167	11	50		60	233	2,218	19	684	14	398	367	7,115
1 Aug		5	57	2,353	21	1,258	4	171	5	55		60	196	2,414	25	709	91	489	399	7,514
4 Aug	21	26	24	2,377		1,258	1	172	5	60		60	76	2,490	106	815	36	525	269	7,783

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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
8 Aug	1	27	13	2,390		1,258	4	176	4	64		60	25	2,515	27	842	14	539	88	7,871
11 Aug	2	29		2,390		1,258	3	179	5	69		60	22	2,537	13	855	22	561	67	7,938
15 Aug		29		2,390		1,258		179		69		60	3	2,540	10	865	4	565	17	7,955
18 Aug	1	30		2,390										2,540	1	866	2	567	4	7,959
22 Aug		30	3	2,393									1	2,541		866	2	569	6	7,965
25 Aug		30		2,393										2,541		866	1	570	1	7,966
29 Aug		30		2,393										2,541		866	1	571	1	7,967
1 Sep		30		2,393										2,541		866	1	572	1	7,968
5 Sep		30		2,393										2,541		866		572	0	7,968
8 Sep		30		2,393										2,541					0	7,968
12 Sep		30												2,541					0	7,968
15 Sep														2,541					0	7,968
19 Sep				2,393															0	7,968
26 Sep				2,393															0	7,968

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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
20 Jun	53					20	20					20	20
23 Jun	103					5	25					5	25
25 Jun	16							1	1			1	26
27 Jun	179					86	111					86	112
29 Jun	15							1	2			1	113
30 Jun	239					754	865					754	867
2 Jul	28							26	28			26	893
4 Jul	350					9,925	10,790					9,925	10,818
6 Jul	54							186	214			186	11,004
7 Jul	299					13,771	24,561					13,771	24,775
9 Jul	330	15,624	15,624									15,624	40,399
11 Jul	424					37,009	61,570					37,009	77,408
13 Jul	372	19,401	35,025									19,401	96,809
14 Jul	420					27,123	88,693					27,123	123,932
15 Jul	354					32,150	120,843					32,150	156,082
16 Jul	361			23,299	23,299							23,299	179,381
17 Jul	152			7,992	31,291							7,992	187,373
18 Jul	419					29,443	150,286					29,443	216,816
19 Jul	360			5,944	37,235							5,944	222,760
21 Jul	379			6,046	43,281							6,046	228,806
22 Jul	378			4,988	48,269							4,988	233,794
23 Jul	321			3,914	52,183							3,914	237,708
24 Jul	122			1,189	53,372							1,189	238,897
25 Jul	406					7,003	157,289					7,003	245,900

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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
28 Jul	338			3,576	56,948							3,576	249,476
1 Aug	334					5,309	162,598					5,309	254,785
3 Aug	216			4,264	61,212							4,264	259,049
4 Aug	256					5,374	167,972					5,374	264,423
6 Aug	114			1,044	62,256							1,044	265,467
7 Aug	25			309	62,565							309	265,776
8 Aug	146					2,776	170,748					2,776	268,552
9 Aug	14			145	62,710							145	268,697
11 Aug	35					145	170,893					145	268,842
15 Aug	32					47	170,940					47	268,889
18 Aug	16					7	170,947					7	268,896
22 Aug	1						170,947					0	268,896
25 Aug	11					1	170,948					1	268,897
26 Aug	12									4	4	4	268,901
29 Aug	8					1	170,949					1	268,902
30 Aug	11									1	5	1	268,903
1 Sep	3					2	170,951					2	268,905
2 Sep	4										5	0	268,905
5 Sep	6						170,951					0	268,905
6 Sep	5									2	7	2	268,907
8 Sep	4						170,951					0	268,907
9 Sep	4										7	0	268,907
16 Sep	3									1	8	1	268,908

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

Appendix A7.–Commercial chum salmon harvest by area and date, Upper Cook Inlet, 2016.

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		1							2	10
6 Jul	3	11	4	5		1							7	17
7 Jul	2	13	1	6		1							3	20
9 Jul	1	14		6	8	9							9	29
11 Jul	1	15	1	7	1	10	1	1	2	2	10	10	16	45
13 Jul		15	1	8		10		1	5	7		10	6	51
14 Jul	2	17	3	11		10	3	4	1	8		10	9	60
16 Jul	2	19	39	50		10		4	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		7	14	27	13	38	38	180
19 Jul	5	34	6	64		21		7	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	0	25	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		26	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
1 Jun																			0	0
3 Jun																			0	0
6 Jun																			0	0
8 Jun																			0	0
10 Jun																			0	0
13 Jun																			0	0
15 Jun																			0	0
16 Jun																			0	0
17 Jun																			0	0
20 Jun					1	1													1	1
22 Jun															1	1			1	2
23 Jun					1	2													1	3
24 Jun															1	2			1	4
27 Jun					4	6									4	6			8	12
30 Jun						6									3	9			3	15
4 Jul					5	11									10	19			15	30
7 Jul					13	24									16	35			29	59

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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					79	103													79	138
11 Jul					78	181			2	2					25	60	18	18	123	261
14 Jul					168	349			2	4					4	64		18	174	435
16 Jul					121	470													121	556
18 Jul					45	515			1	5					39	103		18	85	641
21 Jul					111	626			11	16					40	143	3	21	165	806
23 Jul					84	710													84	890
25 Jul					371	1,081			1	17			1	1	70	213	17	38	460	1,350
28 Jul					592	1,673	7	7	9	26			2	3	15	228	1	39	626	1,976
30 Jul					297	1,970													297	2,273
1 Aug					583	2,553		7	12	38					311	539	99	138	1,005	3,278
4 Aug					564	3,117	18	25	11	49					183	722	18	156	794	4,072
6 Aug					428	3,545													428	4,500
8 Aug					290	3,835	26	51							124	846		156	440	4,940
11 Aug	294	294			491	4,326	3	54	32	81					37	883	7	163	864	5,804
15 Aug					171	4,497			10	91					65	948		163	246	6,050
20 Aug					140	9,457			13	279									153	6,203

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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
30 May																			0	0
6 Jun																			0	0
13 Jun																			0	0
20 Jun																			0	0
27 Jun			2	2									1	1					3	3
30 Jun				2	1	1	2	2						1					3	6
4 Jul			12	14	1	2					1	1	6	7					20	26
7 Jul			35	49		2	7	9			4	5	8	15					54	80
11 Jul			158	207	19	21	19	28			7	12	28	43					231	311
14 Jul			58	265	24	45	35	63	52	52	28	40	64	107					261	572
18 Jul			70	335	38	83	58	121	16	68	16	56	6	113	4	4			208	780
21 Jul				335	129	212	39	160	27	95			2	115	1	5	1	1	199	979
25 Jul	1	1	40	375	99	311	115	275	76	171	19	75	16	131	13	18		1	379	1,358
28 Jul		1	26	401	45	356	49	324	54	225	2	77	12	143		18		1	188	1,546
1 Aug	7	8	46	447	79	435	53	377	67	292		77	19	162	1	19	4	5	276	1,822
4 Aug	18	26	63	510	64	499	76	453	92	384		77	27	189	5	24	1	6	346	2,168

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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
8 Aug		26	89	599	36	535	106	559	93	477		77	58	247	11	35	5	11	398	2,566
11 Aug	14	40		599	41	576	185	744	81	558	5	82	54	301	4	39	2	13	386	2,952
15 Aug		40		599	7	583	17	761	46	604		82	19	320	20	59		13	109	3,061
18 Aug	2	42		599									10	330		59	1	14	13	3,074
22 Aug		42		599									9	339		59	1	15	10	3,084
25 Aug	26	68	4	603									24	363		59	4	19	58	3,142
29 Aug		68		603										363		59	2	21	2	3,144
1 Sep	1	69		603									1	364		59		21	2	3,146
5 Sep		69		603									3	367		59		21	3	3,149
8 Sep		69		603									7	374					7	3,156
12 Sep		69											9	383					9	3,165
15 Sep													3	386					3	3,168
19 Sep				603															0	3,168
26 Sep				603															0	3,168

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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
20 Jun	53					77	77					77	77
23 Jun	103					122	199					122	199
25 Jun	16											0	199
27 Jun	179					297	496					297	496
29 Jun	15							1	1			1	497
30 Jun	239					1,754	2,250					1,754	2,251
2 Jul	28							3	4			3	2,254
4 Jul	350					3,120	5,370					3,120	5,374
6 Jul	54							14	18			14	5,388
7 Jul	299					4,700	10,070					4,700	10,088
9 Jul	330	1,720	1,720									1,720	11,808
11 Jul	424					5,461	15,531					5,461	17,269
13 Jul	372	2,447	4,167									2,447	19,716
14 Jul	420					4,997	20,528					4,997	24,713
15 Jul	354					5,943	26,471					5,943	30,656
16 Jul	361			2,345	2,345							2,345	33,001
17 Jul	152			1,814	4,159							1,814	34,815
18 Jul	419					14,136	40,607					14,136	48,951
19 Jul	360			3,439	7,598							3,439	52,390
21 Jul	379			3,534	11,132							3,534	55,924
22 Jul	378			3,532	14,664							3,532	59,456
23 Jul	321			4,687	19,351							4,687	64,143
24 Jul	122			1,467	20,818							1,467	65,610
25 Jul	406					7,765	48,372					7,765	73,375

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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
28 Jul	338			4,478	25,296							4,478	77,853
1 Aug	334					9,649	58,021					9,649	87,502
3 Aug	216			4,266	29,562							4,266	91,768
4 Aug	256					7,090	65,111					7,090	98,858
6 Aug	114			4,301	33,863							4,301	103,159
7 Aug	25			406	34,269							406	103,565
8 Aug	146					5,893	71,004					5,893	109,458
9 Aug	14			56	34,325							56	109,514
11 Aug	35					1,034	72,038					1,034	110,548
15 Aug	32					677	72,715					677	111,225
18 Aug	16					195	72,910					195	111,420
22 Aug	1					15	72,925					15	111,435
25 Aug	11					303	73,228					303	111,738
26 Aug	12									786	786	786	112,524
29 Aug	8					36	73,264					36	112,560
30 Aug	11									293	1,079	293	112,853
1 Sep	3					80	73,344					80	112,933
2 Sep	4									71	1,150	71	113,004
5 Sep	6					58	73,402					58	113,062
6 Sep	5									80	1,230	80	113,142
8 Sep	4					20	73,422					20	113,162
9 Sep	4									78	1,308	78	113,240
16 Sep	3									18	1,326	18	113,258

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, 2016.

Gear	District	Subdistrict	Stat Area	Permits[a]	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	504	606	1,266,696	90,242	268,908	113,258	1,739,710
Set	Central	Upper	24421	100	948	173,269	2,951	21,907	410	199,485
			24422	72	1,077	116,497	1,931	20,519	381	140,405
			24431	65	976	87,979	508	7,156	33	96,652
			24432	59	791	89,105	1,072	13,023	28	104,019
			24441	65	2,887	438,649	3,245	34,379	207	479,367
			24442	31	80	92,269	1,873	6,487	176	100,885
			All	392	6,759	997,768	11,580	103,471	1,235	1,120,813
		Kalgin Is.	24610	27	193	30,991	8,432	1,444	948	42,008
			24620	4	9	10,223	1,421	249	163	12,065
			All	31	202	41,214	9,853	1,693	1,111	54,073
		Chinitna	24510	<4	0	3	180	2	294	479
		Western	24520	0	0	0	0	0	0	0
			24530	17	158	34,502	2,737	271	4,497	42,165
			24540	<4	0	2,059	705	13	54	2,831
			24550	4	3	3,171	778	38	91	4,081
			All	23	161	39,732	4,220	322	4,642	49,077
		Kustatan	24555	9	97	3,853	643	2		4,595
			24560	<4		392	275	70	3	740
			All	10	97	4,245	918	72	3	5,335
		All	All	457	7,219	1,082,962	26,751	105,560	7,285	1,229,777
	Northern	General	24710	7	574	1191	1724	30	69	3,588
			24720	11	592	11457	9,461	2393	603	24,506
			24730	5	3	4,813	3,069	1258	583	9,726
			24741	9	96	2,957	2,013	179	761	6,006
			24742	5	154	3,423	1,502	69	604	5,752
			24743	6	226	1,876	2,226	60	82	4,470
			All	43	1,645	25,717	19,995	3,989	2,702	54,048
		Eastern	24770	15	475	12,371	4,525	2541	386	20,298
			24780	12	31	3969	3,635	866	59	8,560
			24790	5	51	5,093	2,321	572	21	8,058
			All	32	557	21,433	10,481	3,979	466	36,916
		All	All	75	2,202	47,150	30,476	7,968	3,168	90,964
Set	All	All	All	532	9,421	1,130,112	57,227	113,528	10,453	1,320,741
Seine	All	All	All	0	0	0	0	0	0	0
All	All	All	All	1,036	10,027	2,396,808	147,469	382,436	123,711	3,060,451

[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, 2016.

Gear	District	Subdistrict	Stat Area	Permits[a]	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	504	1	2,513	179	534	225	3,452
Set	Central	Upper	24421	100	9	1,733	30	219	4	1,995
			24422	72	15	1,618	27	285	5	1,950
			24431	65	15	1,354	8	110	1	1,487
			24432	59	13	1,510	18	221	0	1,763
			24441	65	44	6,748	50	529	3	7,375
			24442	31	3	2,976	60	209	6	3,254
			All	392	17	2,545	30	264	3	2,859
		Kalgin Is.	24610	27	7	1,148	312	53	35	1,556
			24620	4	2	2,556	355	62	41	3,016
			All	31	7	1,329	318	55	36	1,744
		Chinitna	24510	<4	na	na	na	na	na	na
		Western	24520	0	0	0	0	0	0	0
			24530	17	9	2,030	161	16	265	2,480
			24540	<4	na	na	na	na	na	na
			24550	4	1	793	195	10	23	1,020
			All	23	7	1,727	183	14	202	2,134
		Kustatan	24555	9	11	428	71	0	0	511
			24560	<4	na	na	na	na	na	na
			All	10	10	425	92	7	0	534
		All	All	457	16	2,370	59	231	16	2,691
	Northern	General	24710	7	82	170	246	4	10	513
			24720	11	54	1,042	860	218	55	2,228
			24730	5	1	963	614	252	117	1,945
			24741	9	11	329	224	20	85	667
			24742	5	31	685	300	14	121	1,150
			24743	6	38	313	371	10	14	745
			All	43	38	598	465	93	63	1,257
		Eastern	24770	15	32	825	302	169	26	1,353
			24780	12	3	331	303	72	5	713
			24790	5	10	1,019	464	114	4	1,612
			All	32	17	670	328	124	15	1,154
		All	All	75	29	629	406	106	42	1,213
Set	All	All	All	532	18	2,124	108	213	20	2,483
Seine	All	All	All	-	-	-	-	-	-	-
All	All	All	All	1,036	10	2,314	142	369	119	2,954

[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 2016 Upper Cook Inlet fishing season.

Emergency Order No.	Effective Date	Action	Reason
2S-01-16	30 May	Reduced the open fishing time in the Northern District directed king salmon set gillnet fishery from twelve to six hours for the regularly scheduled period on May 30, 2016. This Emergency Order also closed that portion of the General Subdistrict of the Northern District from a point at the wood chip dock located approximately three miles south of Tyonek at 61° 02.77' N. lat., 151° 10.04' W. long., to the Susitna River to commercial king salmon fishing for the 2016 directed king salmon fishery. The fishing periods affected by this announcement were May 30, June 6, June 13, and June 20, 2016.	Chuitna River king salmon are a stock of management concern. As a result, sport fishing in the Chuitna River was closed, which, according to the N. Dist. King Salmon Mngt. Plan, required a closure of the commercial fishery from the wood chip dock to the Susitna River. Additionally, predicted low abundance of Northern District king salmon stocks required conservative management for the 2016 season.
2S-02-16	23 Jun	Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 6:00 a.m. until 9:00 p.m. on Thursday, June 23, 2016. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 6:00 a.m. until 7:00 a.m. and from 7:00 p.m. until 9:00 p.m. on Thursday, June 23, 2016.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-03-16	25 Jun	Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 9:00 a.m. until 10:00 p.m. on Saturday, June 25, 2016. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 9:00 a.m. until 10:00 p.m. on Saturday, June 25, 2016.	To reduce the escapement rate of Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
2S-04-16	29 Jun	Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 5:00 a.m. until 2:00 p.m. on Wednesday, June 29, 2016. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 5:00 a.m. until 2:00 p.m. on Wednesday, June 29, 2016.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-05-16	2 Jul	Opened commercial salmon fishing with set gillnets in the Kasilof Section of the Upper Subdistrict from 8:00 a.m. until 11:00 p.m. on Saturday, July 30, 2016. Opened drift gillnetting in the Kasilof Section of the Upper Subdistrict from 8:00 a.m. until 11:00 p.m. on Saturday, July 2, 2016.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-06-16	4 Jul	Opened commercial salmon fishing with set gillnets in that portion of the Western Subdistrict of the Central District south of the latitude of Redoubt Point from 6:00 a.m. until 10:00 p.m. on Mondays; from 6:00 a.m. until 10:00 p.m. on Thursdays; and from 6:00 a.m. until 10:00 p.m. on Saturdays each week until further notice, effective beginning at 6:00 a.m. on Monday, July 4, 2016.	To reduce the escapement rate of Crescent River sockeye salmon.
2S-07-16	6 Jul	Opened commercial salmon fishing with set and drift gillnets in the Kasilof Section of the Upper Subdistrict from 12:00 p.m. until 9:00 p.m. on Wednesday, July 6, 2016.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-08-16	7 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 p.m. until 9:00 p.m. on Thursday, July 7, 2016.	To reduce the escapement rate of Kasilof River sockeye salmon.
2S-09-16	9 Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 9:00 a.m. until 11:00 p.m. on Saturday, July 9, 2016. Opened commercial fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 9:00 a.m. until 11:00 p.m. on Saturday, July 9, 2016.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-10-16	11 Jul	Extended commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 7:00 p.m. until 12:00 midnight on Monday, July 11, 2016. Opened commercial fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 7:00 p.m. until 11:00 p.m. on Monday, July 11, 2016.	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-11-16	13 Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 5:00 a.m. until 8:00 p.m. on Wednesday, July 13, 2016. Opened commercial fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 5:00 a.m. until 8:00 p.m. on Wednesday, July 13, 2016.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-12-16	14 Jul	Extended commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 7:00 p.m. until 9:00 p.m. on Thursday, July 14, 2016. Opened commercial fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 7:00 p.m. until 9:00 p.m. on Thursday, July 14, 2016.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-13-16	14 Jul	Extended commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 7:00 p.m. until 9:00 p.m. on Thursday, July 14, 2016. Opened commercial fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof sections of the Upper Subdistrict from 7:00 p.m. until 9:00 p.m. on Thursday, July 14, 2016.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-14-16	16 Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 9:00 a.m. until 12:00 midnight on Saturday, July 16, 2016. 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 9:00 a.m. until 11:00 p.m. on Saturday, July 16, 2016.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-15-16	17 Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 4:00 p.m. on Sunday, July 17, 2016 until 7:00 a.m. on Monday, July 18, 2016. 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 4:00 p.m. until 11:00 p.m. on Sunday, July 17, 2016.	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-16-16	18 Jul	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 5:00 a.m. until 7:00 a.m. on Monday, July 18, 2016. Opened drift gillnetting in all waters of the Central District of Upper Cook Inlet normally open to drift gillnetting from 7:00 a.m. until 7:00 p.m. on Monday, July 18, 2016.	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-17-16	19 Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 9:00 a.m. until 9:00 p.m. on Tuesday, July 19, 2016. 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 9:00 a.m. until 9:00 p.m. on Tuesday, July 19, 2016.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-18-16	21 Jul	Reduced legal gear to one 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 two set gillnets per permit, measuring no more than 35 fathoms in length in the Eastern Subdistrict of the Northern District from 7:00 a.m. until 7:00 p.m. on Thursday, July 21, 2016, from 7:00 a.m. until 7:00 p.m. on Monday, July 25, 2016, and from 7:00 a.m. until 7:00 p.m. on Thursday, July 28, 2016.	To comply with the Northern District Salmon Management Plan and the Susitna River Sockeye Action Plan
2S-19-16	21 Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 5:00 a.m. until 7:00 a.m. and from 7:00 p.m. until 9:00 p.m. on Thursday, July 21, 2016. 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 5:00 a.m. until 9:00 p.m. on Thursday, July 21, 2016.	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-20-16	22 Jul	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 7:00 a.m. until 7:00 p.m. on Friday, July 22, 2016.	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-21-16	23 Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 9:00 a.m. until 11:00 p.m. on Saturday, July 23, 2016. 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 9:00 a.m. until 11:00 p.m. on Saturday, July 23, 2016.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-22-16	24 Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 12:00 p.m. until 11:00 p.m. on Sunday, July 24, 2016. 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 p.m. until 11:00 p.m. on Sunday, July 24, 2016.	To reduce the escapement rate of Kenai River and Kasilof River sockeye salmon.
2S-23-16	25 Jul	Opened drift gillnetting in all waters of the Central District of Upper Cook Inlet normally open to drift gillnetting from 7:00 a.m. until 7:00 p.m. on Monday, July 25, 2016.	To comply with the Central District Drift Gillnet Fishery Management Plan.
2S-24-16	28 Jul	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 5:00 a.m. until 7:00 a.m. and from 7:00 p.m. until 9:00 p.m. on Thursday, July 28, 2016. 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 5:00 a.m. until 9:00 p.m. on Thursday, July 28, 2016.	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.

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Emergency Order No.	Effective Date	Action	Reason
2S-25-16	1 Aug	Modified Emergency Order No. 2S-18-16, issued on July 20, 2016, which reduced legal gear in the Northern District of Upper Cook Inlet beginning at 7:00 a.m. on Thursday, July 21, 2016. Modified legal gear for that portion of the General Subdistrict of the Northern District along the western shore of Upper Cook Inlet and south of the Susitna River and in the Eastern Subdistrict of the Northern District, to allow no more than two set gillnets per permit, with the aggregate length not to exceed 70 fathoms, from 7:00 a.m. until 7:00 p.m. on Monday, August 1, 2016 and from 7:00 a.m. until 7:00 p.m. on Thursday, August 4, 2016.	To comply with the Northern District Salmon Management Plan and the Susitna River Sockeye Salmon Action Plan.
2S-26-16	1 Aug	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 5:00 a.m. until 7:00 a.m. on Monday, August 1, 2016. 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 5:00 a.m. until 7:00 a.m. on Monday, August 1, 2016.	To reduce the escapement rate of Kenai and Kasilof river sockeye salmon.
2S-27-16	3 Aug	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 8:00 a.m. until 8:00 p.m. on Wednesday, August 3, 2016. 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 8:00 a.m. until 8:00 p.m. on Wednesday, August 3, 2016.	To reduce the escapement rate of Kasilof River sockeye salmon and to comply with the Kenai River late-run king salmon management plan.
2S-28-16	5 Aug	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 9:00 a.m. until 9:00 p.m. on Friday, August 5, 2016.	To reduce the escapement rate of Kasilof River sockeye salmon and to comply with the Kenai River late-run king salmon management plan.

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Emergency Order No.	Effective Date	Action	Reason
2S-29-16	6 Aug	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 7:00 a.m. until 7:00 p.m. on Saturday, August 6, 2016.	To reduce the escapement rate of Kenai and Kasilof river sockeye salmon.
2S-30-16	7 Aug	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 10:00 a.m. until 10:00 p.m. on Sunday, August 7, 2016. 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 10:00 a.m. until 10:00 p.m. on Sunday, August 7, 2016.	To reduce the escapement rate of Kasilof River sockeye salmon and to comply with the Kenai River late-run king salmon management plan.
2S-31-16	9 Aug	Opened commercial salmon fishing with set gillnets in the Kenai, Kasilof, and East Foreland sections of the Upper Subdistrict from 11:00 a.m. until 11:00 p.m. on Tuesday, August 9, 2016. 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 11:00 a.m. until 11:00 p.m. on Tuesday, August 9, 2016.	To reduce the escapement rate of Kenai and Kasilof river sockeye salmon.
2S-32-16	9 Aug	Rescinded Emergency Order No. 2S-06-16 and closed set gillnetting in that portion of the Western Subdistrict south of the latitude of Redoubt Point, effective immediately. This area reopened to set gillnetting during regular fishing periods only, on Mondays and Thursdays from 7:00 a.m. until 7:00 p.m., beginning on Thursday, August 11, 2016, at 7:00 a.m.	To reduce the harvest of Crescent Lake sockeye salmon.
2S-33-16	11 Aug	Restricted commercial fishing with drift gillnets to Drift Gillnet Areas 3 and 4 from 7:00 a.m. until 7:00 p.m. on Thursday August 11, 2016 and from 7:00 a.m. until 7:00 p.m. on Monday August 15,2016.	To comply with the Central District Drift Gillnet Fishery Management Plan.

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Emergency Order No.	Effective Date	Action	Reason
2S-34-16	17 Aug	Closed that portion of the General Subdistrict of the Northern District east of the Susitna River, including Fire Island, to commercial fishing.	To conserve coho salmon bound for the Little Susitna River.
2S-35-16	26 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 a.m. until 7:00 p.m. beginning on Friday, August 26, 2016.	To provide fishing opportunity in the Chinitna Bay Subdistrict.

Appendix A11.–Commercial salmon fishing periods, Upper Cook Inlet, 2016.

Date	Day	Time	Set Gillnet	Drift Gillnet
30 May	Mon	0700–1300	Northern District	
1 Jun	Wed	0700–1900	Kustatan - Big River - Kalgin Island	
3 Jun	Fri	0700–1900	Kustatan - Big River - Kalgin Island	
6 Jun	Mon	0700–1900	Kustatan - Big River - Kalgin Island - N. Dist	
8 Jun	Wed	0700–1900	Kustatan - Big River - Kalgin Island	
10 Jun	Fri	0700–1900	Kustatan - Big River - Kalgin Island	
13 Jun	Mon	0700–1900	Kustatan - Big River - Kalgin Island - N. Dist	
15 Jun	Wed	0700–1900	Kustatan - Big River - Kalgin Island	
16 Jun	Thu	0700–1900	Western Subdistrict	
17 Jun	Fri	0700–1900	Kustatan - Big River - Kalgin Island	
20 Jun	Mon	0700–1900	Kustatan - Big River - Kalgin Island - N. Dist	All
22 Jun	Wed	0700–1900	Kustatan - Big River - Kalgin Island	
23 Jun	Thu	0600–2100	Kasilof Section	
		0600–0700		Kasilof Section
		0700–1900	All except Kenai & E. Forelands Sections	All
		1900–2100		Kasilof Section
24 Jun	Fri	0700–1900	Kustatan - Big River - Kalgin Island	
25 Jun	Sat	0900–2200	Kasilof Section	Kasilof Section
27 Jun	Mon	0700–1900	All except Kenai & E. Forelands Sections	All
29 Jun	Wed	0500–1400	Kasilof Section	Kasilof Section
30 Jun	Thu	0700–1900	All except Kenai & E. Forelands Sections	All
2 Jul	Sat	0800–2300	Kasilof Section	Kasilof Section
4 Jul	Mon	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Kenai & E.Foreland Sections	All
6 Jul	Wed	1200–2100	Kasilof Section	Kasilof Section
7 Jul	Thu	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Kenai & E.Foreland Sections	All
		1900–2100	Kasilof Section	Kasilof Section
9 Jul	Sat	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0900–2300	Kasilof Section	Expanded Kenai/Kasilof Sections
11 Jul	Mon	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All	Drift Area 1, Ex. Ken/Kas sec
		1900–2300		Expanded Kenai/Kasilof Sections
		1900–2400	Kenai, Kasilof, & E. Foreland Sections	
13 Jul	Wed	0500–2000	Kenai, Kasilof, & E. Foreland Sections	Expanded Kenai/Kasilof Sections
14 Jul	Thu	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All	Drift Area 1, Ex. Ken/Kas sec
		1900–2100	Kenai, Kasilof, & E. Foreland Sections	Expanded Kenai/Kasilof Sections
15 Jul	Fri	0700–1900		Drift Area 1, Ex. Ken/Kas sec

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Date	Day	Time	Set Gillnet	Drift Gillnet
16 Jul	Sat	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0900–2400	Kenai, Kasilof, & E. Foreland Sections	
		0900–2300		Exp. Ken/Kas, and Anchor Pt.
17 Jul	Sun	1400–2400	Kenai, Kasilof, & E. Foreland Sections	
		1400–2300		Exp. Ken/Kas, and Anchor Pt.
18 Jul	Mon	0000–0700	Kenai, Kasilof, & E. Foreland Sections	
		0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All	All
19 Jul	Tue	0900–2100	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
21 Jul	Thu	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0500–2100	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
		0700–1900	All	
22 Jul	Fri	0700–1900		Exp. Ken/Kas, and Anchor Pt.
23 Jul	Sat	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0900–2300	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
24 Jul	Sun	1200–2300	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
25 Jul	Mon	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All	All
28 Jul	Thu	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0500–2100	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
		0700–1900	All	
30 Jul	Sat	0600–2200	Western Subdistrict south of Redoubt Pt.	
1 Aug	Mon	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0500–0700	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
		0700–1900	All	All
3 Aug	Wed	0800–2000	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
4 Aug	Thu	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Upper Subdistrict	All
5 Aug	Fri	0900–2100	Kenai, Kasilof, & E. Foreland Sections	
6 Aug	Sat	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900		Exp. Ken/Kas, and Anchor Pt.
7 Aug	Sun	1000–2200	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.
8 Aug	Mon	0600–2200	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Upper Subdistrict	All
9 Aug	Tue	1100–2300	Kenai, Kasilof, & E. Foreland Sections	Exp. Ken/Kas, and Anchor Pt.

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Date	Day	Time	Set Gillnet	Drift Gillnet
11 Aug	Thu	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
15 Aug	Mon	0700–1900	All except Upper Subdistrict	Drift Areas 3 & 4
18 Aug	Thu	0700–1900	All except U. Sub. & Portion of Gen. Sub.	Drift Areas 3 & 4
22 Aug	Mon	0700–1900	All except U. Sub. & Portion of Gen. Sub.	Drift Areas 3 & 4
25 Aug	Thu	0700–1900	All except U. Sub. & Portion of Gen. Sub.	Drift Areas 3 & 4
26 Aug	Fri	0700–1900	Chinitna Bay	Chinitna Bay
29 Aug	Mon	0700–1900	All except U. Sub. & Portion of Gen. Sub.	Drift Areas 3 & 4
30 Aug	Tue	0700–1900	Chinitna Bay	Chinitna Bay

Note: Fishing continued each Monday, Tuesday, Thursday, and Friday as described for August 25, 26, 29, and 30 for the remainder of the fishing season. The last day of recorded fishing was September 26.

Appendix A12.–Susitna River sockeye salmon studies, 2006–2015.

Yentna River Passage	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[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

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

Susitna Pop. Est.	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[b]
Mark Recapture	418,197	327,732	304,449	219,041	190,460	314,447	141,804	228,536	167,374	NA
MR : Weirs ratio	3.6	2.2	1.9	2.1	2.5	2.6	2.0	2.1	2.8	NA
MR : Bendix ratio	4.5	4.1	3.4	9.7	ND	ND	ND	ND	ND	ND

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

[b] Mark–recapture estimates from 2015 were not available when this report was published; no mark-recapture was conducted in 2016.

Appendix A13.–Age composition (in percent) of sockeye salmon escapements, Upper Cook Inlet, 2016.

	Age Group													
Stream	0.2	0.3	1.1	1.2	2.1	1.3	2.2	1.4	2.3	2.4	3.1	3.2	3.3	Total[a]
Kenai River				6.5	0.3	57.0	5.0	0.6	30.2	0.3				99.8
Kasilof River			1.6	30.0	2.0	20.3	39.2	0.2	6.8			0.1		100.2
Fish Creek	0.3		9.4	70.4	0.9	13.8	3.5		1.7					100.0
Hidden Creek			4.8	85.7		4.8	4.8							100.1

[a] Values may not sum to 100 due to rounding.

Appendix A14.–Upper Cook Inlet salmon average weights (in pounds) by area, 2016.

Fishery	Chinook	Sockeye	Coho	Pink	Chum
Upper Cook Inlet Total	19.6	5.8	6.3	4.3	7.1
A. Northern District Total	13.1	5.0	6.1	4.2	6.8
1. Northern District West	13.1	4.9	5.9	4.0	6.8
a. Trading Bay 247-10	14.6	5.6	6.4	4.5	6.7
b. Tyonek 247-20	12.6	5.2	5.8	4.2	6.3
c. Beluga 247-30	12.7	5.1	5.6	3.6	7.0
d. Susitna Flat 247-41	12.4	4.6	6.2	4.4	6.9
e. Pt. Mackenzie 247-42	11.8	4.0	6.4	4.0	6.7
f. Fire Island 247-43	12.0	4.8	6.1	1.7	7.8
2. Northern District East	13.1	5.1	6.5	4.4	7.3
a. Pt. Possession 247-70	13.4	5.1	6.1	4.3	7.6
b. Birch Hill 247-80	10.9	5.1	7.2	5.2	5.8
c. Number 3 Bay 247-90	11.1	5.1	6.1	3.8	6.3
B. Central District Total	20.0	5.8	6.3	4.3	7.1
1. East Side Set Total	20.8	5.7	6.6	5.0	6.3
a. Salamatof/EastForelands	20.0	6.0	6.5	4.7	6.6
1. Salamatof 244-41	20.3	6.0	6.6	4.7	6.5
2. East Forelands 244-42	10.9	5.7	6.4	4.7	6.9
b. Kalifonsky Beach	22.5	5.4	7.1	5.0	6.0
1. South K. Beach 244-31	22.6	5.0	7.0	5.1	5.5
2. North K. Beach 244-32	22.2	5.8	7.1	5.0	6.6
d. Cohoe/Ninilchik	20.5	5.4	6.7	5.3	6.1
1. Cohoe 244-22	19.3	5.4	6.6	5.2	6.0
2. Ninilchik 244-21	21.9	5.4	6.7	5.4	6.2

-continued-

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Fishery	Chinook	Sockeye	Coho	Pink	Chum
2. West Side Set Total	24.0	5.2	6.5	4.2	6.6
a. Little Jack Slough 245-50	23.3	4.9	6.4	4.0	6.1
b. Polly Creek 245-40	-	4.3	6.6	5.0	6.2
c. Tuxedni Bay 245-30	24.0	5.3	6.6	4.2	6.6
3. Kustatan Total	19.9	4.8	6.4	3.8	5.7
a. Big River 245-55	19.9	4.7	6.1	3.0	-
b. West Foreland 245-60	-	5.7	7.1	3.8	5.7
4. Kalgin Island Total	17.2	5.4	6.4	4.5	6.4
a. West Side 246-10	16.9	5.4	6.4	4.4	6.1
b. East Side 246-20	22.1	5.3	6.7	4.6	8.0
5. Chinitna Bay Total	8.0	5.2	7.5	4.4	6.5
a. Set 245-10	-	6.0	6.0	5.0	6.5
b. Drift 245-10	8.0	5.1	7.6	4.3	6.5
6. Central District Set Total	20.8	5.7	6.5	5.0	6.5
7. Central District Drift Total	11.0	5.9	6.1	4.1	7.1
a. Area 1/District Wide 244-60	11.2	5.8	6.3	3.9	7.1
b. Kasilof section, narrow 244-61	11.9	5.5	5.5	4.1	6.6
c. Full ex corridor 244-56 & 244-57	13.2	5.9	6.3	4.1	7.1
d. Area 3/4 244-60	3.5	5.8	7.1	4.4	6.9

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, 1986–2016.

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	0.08	2.06	0.08	14.69			33.01	0.17	48.50	0.25	1.07	0.08			100
1988	870		3.22		10.81		0.23	14.25	0.35	68.50	0.12	1.83	0.69			100
1989	854		0.94		15.11			21.08	0.23	53.28		9.37				100
1990	437	0.22	1.14	0.22	29.48	0.92	0.46	28.99	0.46	32.66	0.43	3.43	1.59			100
1991	446	0.22	0.67		24.90	0.22	0.45	32.06	0.00	38.54	0.67	2.02	0.22			100
1992	688		2.46		14.97			27.62	0.58	49.56	0.88	3.78	0.15			100
1993	992		3.33		14.01			20.76	0.10	56.46	0.80	4.04	0.50			100
1994	1,502		3.53		12.28	0.08		14.67	0.25	61.28	0.45	5.81	1.59		0.05	100
1995	1,508		2.73		22.35	0.09		32.88	0.76	34.95	0.11	5.90	0.19	0.05		100
1996	2,186		3.25		15.83	0.06		34.87	0.15	42.34	1.55	1.49	0.46			100
1997	1,691		6.38		13.51	0.27		31.08	0.27	45.64	0.72	0.73	1.40			100
1998	911	0.46	11.80	0.22	23.18	0.34	0.10	21.06	1.57	38.38	0.54	1.87	0.56			100
1999	1,818	0.05	2.32		26.30	0.16		24.52		43.46	0.40	2.78				100
2000	991		9.15	0.08	12.19	0.88		38.65	0.33	37.61	0.27	0.77	0.08			100
2001	989		11.70		40.04			14.53		32.52		1.23				100
2002	1,224		10.60	0.04	29.28			36.68		22.57		0.71	0.12			100
2003	678		3.83		51.77			23.60	0.30	18.73		1.77				100
2004	1,409		3.54		19.83	0.07		48.22		27.64	0.04	0.67				100
2005	482	0.21	2.90		26.97			20.13	0.42	47.50		1.66	0.21			100
2006	560		12.86		35.35			21.96	0.18	27.14		2.50				100
2007	789		4.82		42.71			22.44	0.13	28.51		1.27	0.13			100
2008	380		10.27		19.73			27.64		40.78		1.59				100
2009	487		13.76		51.34			12.31		21.98		0.61				100
2010	743		18.27		24.62			35.95	0.11	20.06	0.16	0.82				100
2011	1,187		4.56		33.70			25.18		35.27	0.09	1.20				100
2012	167		9.59		17.98			36.64		35.79						100
2013	668		22.69		43.44			15.22		18.65						100
2014	459		17.57		32.25			29.12		20.93		0.13				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
Mean	925	0.05	7.60	0.03	28.60	0.13	0.05	29.83	0.27	42.85	0.31	2.46	0.33	0.00	0.00	

Appendix A16.–Major buyers and processors of Upper Cook Inlet fishery products, 2016.

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
Copper River Seafoods	F10056	Anchorage	Shelly Lamb	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

Appendix A17.–Number of salmon harvested by gear, area, and species in personal use fisheries, Upper Cook Inlet, 2016.

	Harvest					
Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
Kasilof Gillnet	141	26,539	23	5	23	26,731
Kasilof Dip Net	26	58,273	1,255	1,733	329	61,616
Kenai Dip Net	638	259,057	3,277	7,834	717	271,523
Fish Creek Dip Net		closed				
Beluga Dip Net	0	52	45	2	2	101
No Site Reported	15	4,837	34	233	81	5,200
Total	820	348,758	4,634	9,807	1,152	365,171

Note: Preliminary estimates for sockeye salmon only.

Appendix A18.–Personal use sockeye salmon harvest by day, 2016.

	Kasilof Gillnet		Kasilof Dip Net		Kenai Dip Net	
Date	Daily	Cum	Daily	Cum	Daily	Cum
15 Jun	2,207	2,207				
16 Jun	2,382	4,589				
17 Jun	2,105	6,694				
18 Jun	2,587	9,281				
19 Jun	2,308	11,589				
20 Jun	2,761	14,350				
21 Jun	3,164	17,514				
22 Jun	2,232	19,746				
23 Jun	493	20,239				
24 Jun	1,428	21,667				
25 Jun			919	919		
26 Jun			911	1,830		
27 Jun			664	2,494		
28 Jun			958	3,452		
29 Jun			580	4,032		
30 Jun			517	4,549		
1 Jul			1,195	5,744		
2 Jul			1,023	6,767		
3 Jul			1,438	8,205		
4 Jul			1,244	9,449		
5 Jul			1,445	10,894		
6 Jul			824	11,718		
7 Jul			367	12,085		
8 Jul			1,130	13,215		
9 Jul			1,104	14,319		

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	Kasilof Gillnet		Kasilof Dip Net		Kenai Dip Net	
Date	Daily	Cum	Daily	Cum	Daily	Cum
10 Jul			2,245	16,564	5,191	5,191
11 Jul			1,140	17,704	4,397	9,588
12 Jul			2,344	20,048	3,274	12,862
13 Jul			998	21,046	3,264	16,126
14 Jul			1,044	22,090	6,879	23,005
15 Jul			3,136	25,226	9,426	32,431
16 Jul			1,934	27,160	13,420	45,851
17 Jul			1,854	29,014	14,594	60,445
18 Jul			1,023	30,037	8,778	69,223
19 Jul			1,068	31,105	9,263	78,486
20 Jul			1,736	32,841	14,193	92,679
21 Jul			1,064	33,905	16,924	109,603
22 Jul			1,694	35,599	23,056	132,659
23 Jul			940	36,539	13,243	145,902
24 Jul			628	37,167	11,093	156,995
25 Jul			489	37,656	5,119	162,114
26 Jul			555	38,211	6,253	168,367
27 Jul			511	38,722	8,039	176,406
28 Jul			413	39,135	4,810	181,216
29 Jul			701	39,836	6,681	187,897
30 Jul			892	40,728	7,528	195,425
31 Jul			826	41,554	10,118	205,543
1 Aug			330	41,884		
2 Aug			781	42,665		
3 Aug			356	43,021		
4 Aug			365	43,386		
5 Aug			332	43,718		
6 Aug			877	44,595		
7 Aug			396	44,991		

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, 2016.

Sample date = April 20–23, 2016

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	–	–	1	–	–	1	1	102	–	1	196		1
	5	3	–	9	–	–	12	17	113	15.4	12	206	5.7	12
	6	7	–	7	–	–	14	19	129	13.3	14	216	8.3	14
	7	9	–	8	–	–	17	24	140	23.0	17	218	10.3	17
	8	11	–	9	–	–	20	28	160	31.6	20	226	12.7	20
	9	4	–	2	–	–	6	8	160	20.8	6	228	8.8	6
	10	1	–	1	–	–	2	3	196	–	2	243	–	2
Sample Total		35	0	37	0	0	72	100	142	30.3	72	219	13.0	72
Sex Composition		49%	0%	51%	0%	0%								

Sample date = April 24–30, 2016

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	–	1	1	–	4	6	87	12.7	4	188	3.3	4
	5	2	–	–	3	–	5	7	107	12.0	5	209	8.9	5
	6	7	–	–	2	–	9	13	112	19.8	9	210	8.3	9
	7	9	–	–	7	–	16	24	124	20.0	16	219	10.3	16
	8	16	–	1	9	–	26	38	135	21.2	26	227	10.8	26
	9	4	–	–	2	–	6	9	145	25.2	6	229	10.1	6
	10	1	–	–	–	–	1	1	197	–	1	257	–	1
	11	1	–	–	–	–	1	1	163	–	1	235	–	1
Sample Total		42	0	2	24	0	68	100	127	25.8	68	220	15.0	68
Sex Composition		62%	0%	3%	35%	0%								

-continued-

Sample date = May 1–7, 2016

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	–	–	1	–	–	1	2	110	–	1	191	–	1
	5	3	–	7	1	–	11	20	120	12.0	11	206	5.8	11
	6	4	–	1	2	–	7	13	123	15.4	7	213	10.1	7
	7	9	–	3	2	–	14	26	140	24.2	14	222	10.2	14
	8	17	–	–	–	–	17	31	148	21.6	17	230	9.9	17
	9	3	–	–	1	–	4	7	178	36.5	4	241	18.2	4
Sample Total		36	0	12	6	0	54	100	139	26.2	54	221	14.8	54
Sex Composition		67%	0%	22%	11%	0%								

Sample date = May 8–14, 2016

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	1	–	–	–	–	1	2	120	–	1	196	–	1
	5	3	–	6	2	–	11	18	116	15.4	11	203	8.0	11
	6	8	–	3	2	–	13	21	122	10.0	13	211	7.6	13
	7	12	–	3	–	–	15	24	123	18.0	15	217	11.5	15
	8	11	–	5	3	–	19	31	139	21.8	19	223	13.2	19
	9	2	–	–	–	–	2	3	137	–	2	231	–	2
	10	1	–	–	–	–	1	2	204	–	1	250	–	1
Sample Total		38	0	17	7	0	62	100	128	21.7	62	216	14.1	62
Sex Composition		61%	0%	27%	11%	0%								

-continued-

Sample date = May 15–21, 2016

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	–	–	1	–	–	1	3	106	–	1	201	–	1
	5	1	–	1	–	–	2	5	95	–	2	201	–	2
	6	3	–	–	1	–	4	11	134	25.7	4	226	15.1	4
	7	12	–	–	2	–	14	38	130	17.5	14	222	10.7	14
	8	10	–	–	3	–	13	35	135	25.1	13	225	9.1	13
	9	1	–	–	2	–	3	8	166	11.6	3	236	3.6	3
Sample Total		27	0	2	8	0	37	100	132	24.2	37	223	12.4	37
Sex Composition		73%	0%	5%	22%	0%								

Sample date = All 2016

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	3	–	4	1	–	8	3	98	15.3	8	192	5.6	8
	5	13	–	22	6	–	41	14	114	14.7	41	205	7.2	41
	6	29	–	11	7	–	47	16	123	16.2	47	214	9.7	47
	7	51	–	14	11	–	76	26	132	21.6	76	220	10.5	76
	8	65	–	15	15	–	95	32	143	26.0	95	227	11.4	95
	9	14	–	2	5	–	21	7	158	27.2	21	232	12.0	21
	10	3	–	1	–	–	4	1	198	27.7	4	248	9.3	4
	11	1	–	–	–	–	1	0	235	–	1	163	–	1
Sample Total		179	0	69	45	0	293	100	134	26.7	293	220	14.1	293
Sex Composition		61%	0%	24%	15%	0%								

Appendix A20.–Age, sex, and size distribution of eulachon (smelt) from Upper Cook Inlet commercial dip net fishery, 2006–2016.

2006					2007				
Age	Sex	Length (mm)	No. Sampled	%	Age	Sex	Length (mm)	No. Sampled	%
3	Male	185	1	1%	3	Male	179	10	9%
	Female	–	–	–		Female	174	5	5%
4	Male	194	46	54%	4	Male	188	65	60%
	Female	186	22	26%		Female	186	23	21%
5	Male	200	14	16%	5	Male	201	4	4%
	Female	203	2	2%		Female	192	1	1%
Avg	Male	196	61	72%	Avg	Male	188	79	73%
	Female	187	24	28%		Female	184	29	27%
Avg - All		193	85	100%	Avg - All		187	108	100%

2008					2009				
Age	Sex	Length (mm)	No. Sampled	%	Age	Sex	Length (mm)	No. Sampled	%
3	Male	194	3	3%	3	Male	195	12	7%
	Female	185	10	10%		Female	191	18	10%
4	Male	201	37	37%	4	Male	203	74	41%
	Female	193	36	36%		Female	194	58	32%
5	Male	208	12	12%	5	Male	203	13	7%
	Female	206	3	3%		Female	203	5	3%
Avg	Male	202	52	51%	Avg	Male	202	99	55%
	Female	192	49	49%		Female	194	81	45%
Avg - All		197	101	100%	Avg - All		198	180	100%

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2010				
Age	Sex	Length (mm)	No. Sampled	%
3	Male	189.4	14	7%
	Female	193.6	10	5%
4	Male	197.2	61	31%
	Female	204.1	105	53%
5	Male	204.0	3	2%
	Female	203.2	6	3%
Avg	Male	196	78	39%
	Female	203	121	61%
Avg - All		200	199	100%

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%

-continued-

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%

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%

All Years (2006–2015)

Age	Sex	Length (mm)	No. Sampled	%
3	Male	192	181	11%
	Female	191	145	9%
4	Male	202	662	41%
	Female	199	455	29%
5	Male	209	111	7%
	Female	186	42	3%
Avg	Male	201	954	60%
	Female	196	642	40%
Avg - All		199	1,596	100%

Appendix A21.–Seldovia District tide tables, May through August, 2016.

MAY

		HIGH TIDES						LOW TIDES			
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Su	10:15	14.0	11:24	15.5	1	Su	4:16	5.5	4:44	2.5
2	Mo	11:33	15.0	…..	…..	2	Mo	5:28	3.8	5:48	1.7
3	Tu	12:16	17.0	12:37	16.5	3	Tu	6:28	1.5	6:44	0.6
4	We	1:03	18.7	1:33	18.1	4	We	7:19	**-0.9**	7:33	**-0.3**
5	Th	1:47	20.3	2:25	19.4	5	Th	8:06	**-3.1**	8:19	**-1.0**
6	Fr	2:31	21.5	3:14	20.2	6	Fr	8:52	**-4.7**	9:04	**-1.2**
7	Sa	3:14	22.2	4:02	20.5	7	Sa	9:37	**-5.6**	9:49	**-1.0**
8	Su	3:57	22.2	4:49	20.1	8	Su	10:22	**-5.7**	10:34	**-0.2**
9	Mo	4:41	21.5	5:38	19.3	9	Mo	11:08	**-4.9**	11:21	1.0
10	Tu	5:27	20.1	6:29	18.0	10	Tu	11:55	**-3.4**		
11	We	6:15	18.4	7:25	16.7	11	We	12:12	2.5	12:46	-1.6
12	Th	7:10	16.4	8:27	15.6	12	Th	1:08	3.9	1:42	0.4
13	Fr	8:15	14.6	9:36	14.9	13	Fr	2:15	5.0	2:46	2.0
14	Sa	9:34	13.4	10:44	14.8	14	Sa	3:34	5.4	3:58	3.1
15	Su	10:57	13.2	11:42	15.2	15	Su	4:57	4.9	5:07	3.6
16	Mo			12:06	13.6	16	Mo	6:03	3.8	6:05	3.6
17	Tu	12:28	15.8	12:59	14.4	17	Tu	6:51	2.5	6:50	3.4
18	We	1:06	16.4	1:43	15.2	18	We	7:30	1.3	7:29	3.0
19	Th	1:39	17.1	2:21	16.0	19	Th	8:05	0.2	8:04	2.7
20	Fr	2:10	17.8	2:58	16.6	20	Fr	8:38	**-0.8**	8:39	2.4
21	Sa	2:42	18.3	3:34	17.1	21	Sa	9:10	**-1.6**	9:13	2.3
22	Su	3:14	18.7	4:10	17.3	22	Su	9:43	**-2.1**	9:48	2.4
23	Mo	3:47	18.7	4:47	17.2	23	Mo	10:17	**-2.2**	10:25	2.7
24	Tu	4:21	18.5	5:25	16.9	24	Tu	10:52	**-2.0**	11:03	3.2
25	We	4:57	17.9	6:05	16.4	25	We	11:29	**-1.4**	11:44	3.9
26	Th	5:36	17.1	6:49	15.8	26	Th			12:10	**-0.7**
27	Fr	6:22	16.1	7:39	15.4	27	Fr	12:31	4.5	12:56	0.3
28	Sa	7:17	15.1	8:36	15.2	28	Sa	1:26	4.9	1:50	1.2
29	Su	8:27	14.2	9:38	15.5	29	Su	2:32	4.9	2:53	2.0
30	Mo	9:47	14.0	10:38	16.3	30	Mo	3:46	4.2	4:01	2.4
31	Tu	11:06	14.5	11:35	17.5	31	Tu	4:57	2.8	5:08	2.3

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JUNE

		HIGH TIDES						LOW TIDES			
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	We			12:16p	15.6	1	We	6:01	0.8	6:10	1.9
2	Th	12:28	18.8	1:17	16.9	2	Th	6:57	**-1.3**	7:05	1.3
3	Fr	1:18	20.0	2:12	18.1	3	Fr	7:48	**-3.2**	7:57	0.8
4	Sa	2:05	21.0	3:03	19.0	4	Sa	8:36	**-4.6**	8:45	0.4
5	Su	2:52	21.5	3:52	19.5	5	Su	9:22	**-5.4**	9:32	0.4
6	Mo	3:38	21.5	4:39	19.6	6	Mo	10:07	**-5.5**	10:19	0.7
7	Tu	4:24	20.9	5:26	19.1	7	Tu	10:52	**-4.8**	11:06	1.4
8	We	5:10	19.8	6:13	18.4	8	We	11:37	**-3.5**	11:55	2.3
9	Th	5:57	18.2	7:01	17.3	9	Th			12:23	**-1.9**
10	Fr	6:48	16.4	7:51	16.3	10	Fr	12:48	3.3	1:11	0.0
11	Sa	7:44	14.7	8:46	15.5	11	Sa	1:45	4.2	2:03	1.8
12	Su	8:49	13.4	9:43	15.0	12	Su	2:51	4.7	3:01	3.3
13	Mo	10:04	12.6	10:39	14.9	13	Mo	4:04	4.7	4:03	4.3
14	Tu	11:18	12.6	11:31	15.2	14	Tu	5:15	4.1	5:04	4.8
15	We	…..	…..	12:22	13.1	15	We	6:13	3.1	6:00	4.9
16	Th	12:16	15.7	1:14	13.9	16	Th	6:59	2.0	6:48	4.6
17	Fr	12:56	16.4	1:58	14.8	17	Fr	7:38	0.8	7:31	4.2
18	Sa	1:34	17.2	2:38	15.7	18	Sa	8:14	**-0.4**	8:11	3.7
19	Su	2:12	17.9	3:17	16.5	19	Su	8:49	**-1.4**	8:50	3.2
20	Mo	2:49	18.5	3:54	17.1	20	Mo	9:24	**-2.2**	9:29	2.8
21	Tu	3:26	18.9	4:31	17.5	21	Tu	9:59	**-2.7**	10:07	2.6
22	We	4:04	18.9	5:09	17.7	22	We	10:35	**-2.8**	10:47	2.6
23	Th	4:44	18.6	5:47	17.6	23	Th	11:13	**-2.5**	11:30	2.7
24	Fr	5:25	18.0	6:28	17.3	24	Fr	11:53	**-1.8**		
25	Sa	6:12	17.1	7:12	17.0	25	Sa	12:16	3.0	12:36	**-0.8**
26	Su	7:05	16.0	8:02	16.8	26	Su	1:08	3.2	1:25	0.4
27	Mo	8:08	14.9	8:57	16.7	27	Mo	2:08	3.3	2:21	1.6
28	Tu	9:22	14.1	9:58	16.9	28	Tu	3:16	3.0	3:25	2.7
29	We	10:43	14.1	11:00	17.5	29	We	4:28	2.1	4:34	3.3
30	Th	12:00	14.8	11:59	14.8	30	Th	5:38	0.7	5:42	3.4

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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	Fr			1:06	15.9	1	Fr	6:41	**-0.9**	6:44	3.0
2	Sa	12:56	19.3	2:03	17.1	2	Sa	7:35	**-2.5**	7:40	2.3
3	Su	1:48	20.2	2:55	18.2	3	Su	8:24	**-3.8**	8:32	1.6
4	Mo	2:38	20.7	3:41	19.0	4	Mo	9:10	**-4.5**	9:19	1.1
5	Tu	3:25	20.8	4:25	19.3	5	Tu	9:53	**-4.7**	10:05	1.0
6	We	4:10	20.5	5:07	19.2	6	We	10:34	**-4.2**	10:50	1.1
7	Th	4:54	19.6	5:47	18.7	7	Th	11:15	**-3.2**	11:34	1.6
8	Fr	5:37	18.4	6:28	17.9	8	Fr	11:55	**-1.8**		
9	Sa	6:21	16.9	7:08	17.0	9	Sa	12:20	2.4	12:36	**-0.1**
10	Su	7:09	15.2	7:51	16.0	10	Su	1:08	3.3	1:19	1.7
11	Mo	8:02	13.7	8:37	15.2	11	Mo	2:01	4.1	2:06	3.4
12	Tu	9:07	12.6	9:30	14.7	12	Tu	3:03	4.6	2:59	4.8
13	We	10:23	12.0	10:27	14.6	13	We	4:13	4.6	4:01	5.8
14	Th	11:40	12.3	11:24	15.0	14	Th	5:24	4.0	5:08	6.2
15	Fr			12:44	13.1	15	Fr	6:24	2.9	6:09	6.0
16	Sa	12:16	15.7	1:35	14.1	16	Sa	7:11	1.7	7:02	5.3
17	Su	1:03	16.6	2:18	15.3	17	Su	7:50	0.3	7:47	4.4
18	Mo	1:47	17.6	2:57	16.5	18	Mo	8:27	**-1.0**	8:29	3.4
19	Tu	2:29	18.6	3:33	17.5	19	Tu	9:03	**-2.2**	9:10	2.4
20	We	3:10	19.3	4:09	18.3	20	We	9:39	**-3.0**	9:50	1.6
21	Th	3:50	19.7	4:45	18.8	21	Th	10:15	**-3.4**	10:30	1.1
22	Fr	4:31	19.7	5:22	19.0	22	Fr	10:53	**-3.2**	11:12	0.9
23	Sa	5:14	19.2	6:00	18.9	23	Sa	11:32	**-2.5**	11:57	0.9
24	Su	6:00	18.3	6:42	18.6	24	Su			12:14	**-1.3**
25	Mo	6:51	17.0	7:27	18.1	25	Mo	12:46	1.3	1:00	0.2
26	Tu	7:50	15.5	8:21	17.5	26	Tu	1:42	1.7	1:53	1.9
27	We	9:03	14.3	9:23	17.1	27	We	2:48	2.1	2:55	3.5
28	Th	10:27	13.9	10:32	17.1	28	Th	4:03	1.9	4:08	4.5
29	Fr	11:51	14.4	11:41	17.6	29	Fr	5:20	1.1	5:24	4.7
30	Sa			1:00p	15.5	30	Sa	6:29	**-0.1**	6:33	4.2
31	Su	12:44	18.4	1:57	16.8	31	Su	7:26	**-1.4**	7:32	3.2

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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	Mo	1:40	19.2	2:44	18.0	1	Mo	8:14	**-2.6**	8:22	2.1
2	Tu	2:30	19.9	3:26	18.8	2	Tu	8:57	**-3.3**	9:07	1.2
3	We	3:15	20.2	4:05	19.3	3	We	9:36	**-3.5**	9:49	0.6
4	Th	3:56	20.2	4:40	19.4	4	Th	10:13	**-3.2**	10:29	0.4
5	Fr	4:36	19.6	5:15	19.1	5	Fr	10:49	**-2.4**	11:08	0.7
6	Sa	5:15	18.7	5:48	18.4	6	Sa	11:25	**-1.2**	11:47	1.4
7	Su	5:53	17.4	6:21	17.5	7	Su			12:00	0.3
8	Mo	6:34	15.9	6:56	16.5	8	Mo	12:27	2.3	12:37	2.0
9	Tu	7:19	14.4	7:35	15.6	9	Tu	1:11	3.3	1:16	3.7
10	We	8:15	13.0	8:22	14.7	10	We	2:03	4.2	2:03	5.3
11	Th	9:29	12.0	9:21	14.2	11	Th	3:07	4.8	3:03	6.6
12	Fr	10:57	11.9	10:32	14.3	12	Fr	4:26	4.8	4:19	7.2
13	Sa	12:14p	12.8	11:40	15.0	13	Sa	5:42	4.0	5:35	6.9
14	Su			1:09	14.0	14	Su	6:40	2.6	6:36	5.9
15	Mo	12:37	16.1	1:52	15.5	15	Mo	7:24	1.0	7:26	4.5
16	Tu	1:26	17.5	2:29	17.0	16	Tu	8:02	**-0.5**	8:09	2.9
17	We	2:11	18.8	3:05	18.3	17	We	8:39	**-1.9**	8:49	1.4
18	Th	2:53	19.9	3:40	19.5	18	Th	9:15	**-2.9**	9:29	0.0
19	Fr	3:35	20.7	4:15	20.2	19	Fr	9:52	**-3.4**	10:10	**-0.9**
20	Sa	4:17	20.9	4:52	20.6	20	Sa	10:30	**-3.3**	10:51	**-1.3**
21	Su	5:00	20.4	5:30	20.5	21	Su	11:10	**-2.5**	11:36	**-1.2**
22	Mo	5:46	19.4	6:10	20.0	22	Mo	11:51	**-1.1**		
23	Tu	6:37	17.8	6:55	19.0	23	Tu	12:24	**-0.6**	12:37	0.7
24	We	7:36	16.1	7:48	17.9	24	We	1:18	0.4	1:30	2.7
25	Th	8:49	14.6	8:54	16.9	25	Th	2:23	1.5	2:34	4.5
26	Fr	10:18	14.0	10:13	16.4	26	Fr	3:41	2.1	3:52	5.6
27	Sa	11:45	14.5	11:33	16.6	27	Sa	5:05	1.8	5:18	5.6
28	Su			12:53	15.7	28	Su	6:19	0.9	6:31	4.6
29	Mo	12:40	17.5	1:45	17.0	29	Mo	7:15	**-0.2**	7:27	3.2
30	Tu	1:35	18.4	2:27	18.1	30	Tu	8:00	**-1.1**	8:13	1.9
31	We	2:21	19.2	3:04	19.0	31	We	8:39	**-1.7**	8:53	0.7

Appendix A22.–Total sockeye salmon harvest from all sources in Upper Cook Inlet, 1996–2016.

	Commercial				Sport[a,b,c]			Personal Use					Subsistence/Educational		
Year	Drift	Set	Test Fishery	All	Kenai River	All Other UCI	All	Kas. Gillnet	Kas. Dipnet	Ken. Dipnet	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	350,000	20,000	370,000	26,500	58,000	259,000	52	343,552	659	7,449	3,120,564

[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 state-wide sportfish harvest survey.

[c] Sport harvest in 2016 is unknown until the state-wide harvest survey is finalized; these figures are estimates based on size of 2016 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, and 2014–2015 and Beluga dip net (2008–2016).

Appendix A23.–Daily commercial harvest of razor clams, Upper Cook Inlet, 2016.

Date	Pounds	No. Diggers	Date	Pounds	No. Diggers
5/3/2016	906	12	6/20/2016	3,883	14
5/5/2016	2,769	17	6/21/2016	5,571	15
5/6/2016	2,178	15	6/22/2016	4,598	16
5/7/2016	4,416	18	6/23/2016	4,733	16
5/8/2016	3,720	16	6/24/2016	3,480	16
5/9/2016	4,207	18	6/25/2016	2,836	15
5/10/2016	3,660	16	6/26/2016	3,043	16
5/11/2016	1,860	13	6/30/2016	2,624	15
5/12/2016	2,818	16	7/2/2016	4,709	16
5/18/2016	2,817	16	7/3/2016	5,382	16
5/19/2016	3,797	16	7/4/2016	5,585	16
5/20/2016	2,730	14	7/5/2016	4,595	16
5/21/2016	3,541	16	7/6/2016	4,604	16
5/22/2016	4,517	16	7/7/2016	4,567	16
5/23/2016	3,781	16	7/8/2016	3,543	16
5/24/2016	4,765	16	7/9/2016	2,768	15
5/25/2016	4,680	15	7/10/2016	3,512	15
5/26/2016	5,507	15	7/16/2016	4,428	15
5/27/2016	5,356	16	7/17/2016	4,518	15
5/28/2016	4,517	16	7/18/2016	4,440	15
6/1/2016	2,907	15	7/19/2016	5,336	15
6/2/2016	5,793	15	7/20/2016	5,274	15
6/3/2016	6,759	15	7/21/2016	5,256	15
6/4/2016	7,744	15	7/22/2016	4,438	15
6/5/2016	6,706	15	7/23/2016	5,581	15
6/6/2016	6,891	15	7/24/2016	4,702	15
6/7/2016	6,322	16	7/29/2016	3,416	15
6/8/2016	5,611	16	7/30/2016	3,766	15
6/9/2016	4,904	16	7/31/2016	3,508	15
6/10/2016	3,553	16	8/1/2016	4,530	15
6/16/2016	3,823	15	8/2/2016	2,771	12
6/17/2016	2,986	14	8/3/2016	5,396	15
6/18/2016	4,444	15	8/4/2016	3,610	15
6/19/2016	2,812	17			

Total for Year = 284,800 pounds

APPENDIX B: HISTORICAL DATA

Appendix B1.–Upper Cook Inlet commercial Chinook salmon harvest by gear type and area, 1966–2016.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	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	8.3	17,723	73.7	2,427	10.1	1,890	7.9	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
1966–2015 Avg [a]	961	6.5	9,418	65.2	1,232	9.4	3,055	19.0	14,666
2006–2015 Avg	799	7.5	6,394	62.7	683	8.0	2,351	21.7	10,227

Note: Harvest data prior to 2016 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, 1966–2016.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	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	1,266,696	52.8	997,768	41.6	85,194	3.6	47,150	2.0	2,396,808
1966–2015 Avg [a]	1,641,518	55.6	1,059,238	35.1	103,064	4.9	84,638	4.4	2,888,457
2006–2015 Avg	1,644,939	55.4	1,105,144	39.7	103,951	3.7	31,220	1.2	2,885,254

Note: Harvest data prior to 2016 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, 1966–2016.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	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	11,580	7.9	15,171	10.3	30,476	20.7	147,469
1966–2015 Avg [a]	145,926	48.3	34,793	12.7	48,452	16.9	62,543	22.1	291,714
2006–2015 Avg	99,693	57.6	15,994	9.8	22,787	13.7	31,936	19.0	170,410

Note: Harvest data prior to 2016 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, 1966–2016.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	Total
1966	593,654	29.6	969,624	48.3	70,507	3.5	371,960	18.5	2,005,745
1967	7,475	23.2	13,038	40.5	3,256	10.1	8,460	26.2	32,229
1968	880,512	38.7	785,887	34.5	75,755	3.3	534,839	23.5	2,276,993
1969	8,233	25.3	10,968	33.7	5,711	17.6	7,587	23.3	32,499
1970	334,737	41.1	281,067	34.5	24,763	3.0	174,193	21.4	814,760
1971	6,433	18.1	18,097	50.8	2,637	7.4	8,423	23.7	35,590
1972	115,117	18.3	403,706	64.2	18,913	3.0	90,830	14.5	628,566
1973	91,901	28.2	80,596	24.7	16,437	5.0	137,250	42.1	326,184
1974	140,432	29.0	291,408	60.2	9,014	1.9	42,876	8.9	483,730
1975	113,868	33.9	112,423	33.4	19,086	5.7	90,953	27.0	336,330
1976	599,594	47.7	479,024	38.1	30,030	2.4	148,080	11.8	1,256,728
1977	286,308	51.7	125,817	22.7	25,212	4.6	116,518	21.0	553,855
1978	934,442	55.3	372,601	22.1	54,785	3.2	326,614	19.3	1,688,442
1979	19,554	26.8	19,983	27.4	7,061	9.7	26,382	36.1	72,980
1980	964,526	54.0	299,444	16.8	47,963	2.7	474,488	26.6	1,786,421
1981	53,888	42.4	15,654	12.3	4,276	3.4	53,325	41.9	127,143
1982	270,380	34.2	432,715	54.7	14,242	1.8	73,307	9.3	790,644
1983	26,629	37.9	18,309	26.0	3,785	5.4	21,604	30.7	70,327
1984	273,565	44.3	220,895	35.8	16,708	2.7	106,284	17.2	617,452
1985	34,228	39.0	17,715	20.2	5,653	6.4	30,232	34.4	87,828
1986	615,522	47.3	530,974	40.8	15,460	1.2	139,002	10.7	1,300,958
1987	38,714	35.4	47,243	43.2	5,229	4.8	18,203	16.6	109,389
1988	227,885	48.4	176,043	37.4	12,942	2.7	54,210	11.5	471,080
1989	2	0.0	37,982	56.3	5,580	8.3	23,878	35.4	67,442
1990	323,955	53.7	225,429	37.3	10,302	1.7	43,944	7.3	603,630
1991	5,791	39.5	2,670	18.2	1,049	7.2	5,153	35.1	14,663
1992	423,738	60.9	244,068	35.1	4,250	0.6	23,805	3.4	695,861

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Appendix B4.–Page 2 of 2.

	Central District						Northern District		
	Drift Gillnet		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	103,471	27.1	2,089	0.5	7,968	2.1	382,436
1966–2015 Avg [a]	208,857	45.1	169,845	37.4	12,388	4.1	67,102	13.4	458,192
2006–2015 Avg	147,591	56.4	91,799	38.7	4,089	2.7	3,573	2.2	247,051

Note: Harvest data prior to 2016 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, 1966–2016.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	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	60.7	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	1,235	1.0	6,050	4.9	3,168	2.6	123,711
1966–2015 Avg [a]	379,201	88.7	1,235	0.7	21,161	5.0	23,179	5.5	425,983
2006–2015 Avg	127,114	93.0	1,067	0.8	5,183	4.0	2,830	2.2	136,194

Note: Harvest data prior to 2016 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, 1966–2016.

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	2,343,529	137,376	642,879	116,093	3,244,537
2015	10,798	2,649,667	216,032	48,004	275,960	3,200,461
2016	10,027	2,396,808	147,469	382,436	123,711	3,060,451
1966–2015 Avg[a]	14,907	2,930,910	292,759	450,421	420,937	4,109,934
2006–2015 Avg	10,227	2,885,203	170,406	247,041	143,382	3,456,258

Note: Harvest statistics prior to 2016 reflect minor adjustments to catch database.

Appendix B7.–Approximate exvessel value of Upper Cook Inlet commercial salmon harvest by species, 1960–2016.

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%	$ 32,812,019	93.6%	$ 778,428	2.2%	$ 588,311	1.7%	$ 687,013	2.0%	$ 35,071,891
2015	$ 359,903	1.5%	$ 22,285,338	92.2%	$ 753,078	3.1%	$ 39,197	0.2%	$ 726,696	3.0%	$ 24,164,211
2016	$ 491,323	2.2%	$ 20,852,230	92.3%	$ 557,433	2.5%	$ 328,895	1.5%	$ 351,339	1.6%	$ 22,581,220

Appendix B8.–Commercial herring harvest by fishery, Upper Cook Inlet, 1973–2016.

	Harvest (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

Note: For years where fisheries were closed, harvest is reported as a dash.

Appendix B9.–Commercial harvest of razor clams in Upper Cook Inlet, 1919–2016.

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

Appendix B10.–Enumeration goals and counts of sockeye salmon in selected streams of Upper Cook Inlet, 1978–2016.

	Kenai River		Kasilof River		Fish Creek	
Year	Enumeration Goal[a,b]	Enumeration Estimate [a,c]	Enumeration Goal[a]	Enumeration Estimate [a,c]	Enumeration Goal	Enumeration Estimate[c,d]
1978	350,000–500,000	398,900	75,000–150,000	116,600	–	3,555
1979	350,000–500,000	285,020	75,000–150,000	152,179	–	68,739
1980	350,000–500,000	464,038	75,000–150,000	184,260	–	62,828
1981	350,000–500,000	407,639	75,000–150,000	256,625	–	50,479
1982	350,000–500,000	619,831	75,000–150,000	180,239	50,000	28,164
1983	350,000–500,000	630,340	75,000–150,000	210,271	50,000	118,797
1984	350,000–500,000	344,571	75,000–150,000	231,685	50,000	192,352
1985	350,000–500,000	502,820	75,000–150,000	505,049	50,000	68,577
1986	350,000–500,000	501,157	75,000–150,000	275,963	50,000	29,800
1987	400,000–700,000	1,596,871	150,000–250,000	249,250	50,000	91,215
1988	400,000–700,000	1,021,469	150,000–250,000	204,000[e]	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	1,000,000–1,200,000	1,383,692	160,000–340,000	239,981	20,000 – 70,000	46,202

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Year	Yentna River Enumeration Goal[f]	Yentna River Enumeration Estimate[h]	Crescent River Enumeration Goal	Crescent River Enumeration Estimate[c,h]	Packers Creek Enumeration Goal	Packers Creek Enumeration Estimate[c,i]
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[i]
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	–[g]	–[g]	30,000–70,000	–	15,000–30,000	16,473[i]
2010	–[g]	–[g]	30,000–70,000	86,333	15,000–30,000	–
2011	–[g]	–[g]	30,000–70,000	81,952	15,000–30,000	–
2012	–[g]	–[g]	30,000–70,000	58,838	15,000–30,000	–
2013	–[g]	–[g]	30,000–70,000	ND	15,000–30,000	–
2014	–[g]	–[g]	30,000–70,000	ND	15,000–30,000	19,242[i]
2015	–[g]	–[g]	30,000–70,000	ND	15,000–30,000	28,072[i]
2016	–[g]	–[g]	30,000–70,000	ND	15,000–30,000	–

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

[b] Inriver goal

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

[d] Weir counts.

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

[f] Yentna River escapement goal only.

[g] Derived from BENDIX sonar.

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

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

Appendix B11.–Average price per pound for commercially-harvested salmon, Upper Cook Inlet, 1975–2016.

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

Note: Price is expressed as dollars per pound. Data source: 1969–1983: Commercial Fisheries Entry Commission; 1984–2015: random fish ticket averages, which do not include bonuses or postseason adjustments.

Appendix B12.–Average weight (pounds) of commercially-harvested salmon, Upper Cook Inlet, 1975–2016.

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
2006-2015 Avg	18.5	6.1	6.3	3.6	7.2
1975-2015 Avg	24.0	6.2	6.5	3.6	7.3
2016	19.6	5.8	6.3	4.3	7.1

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, 1975–2016.

	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

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, 1990–2016.

	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	-16%	250,000	501,739	101%	600,000	603,630	1%	400,000	351,197	-12%	25,000	16,105	-36%
1991	3,200,000	2,472,589	-32%	400,000	426,498	7%	90,000	14,663	-84%	500,000	280,230	-44%	20,000	13,542	-32%
1992	3,600,000	9,502,392	153%	400,000	468,930	17%	400,000	695,861	74%	350,000	274,303	-22%	20,000	17,171	-14%
1993	2,500,000	5,042,799	90%	450,000	306,882	-32%	25,000	100,934	304%	350,000	122,770	-65%	15,000	18,871	26%
1994	2,000,000	3,826,508	78%	400,000	583,793	46%	600,000	523,434	-13%	250,000	303,177	21%	15,000	19,962	33%
1995	2,700,000	3,224,087	9%	400,000	447,130	12%	100,000	133,578	34%	250,000	529,428	112%	15,000	17,893	19%
1996	3,300,000	4,262,377	18%	400,000	321,668	-20%	600,000	242,911	-60%	350,000	156,520	-55%	15,000	14,306	-5%
1997	5,300,000	4,546,125	-21%	400,000	152,408	-62%	100,000	70,945	-29%	250,000	103,036	-59%	15,000	13,292	-11%
1998	2,500,000	1,619,119	-51%	300,000	160,688	-46%	300,000	551,737	84%	200,000	95,704	-52%	17,000	8,124	-52%
1999	2,000,000	3,164,355	58%	300,000	126,105	-58%	75,000	16,176	-78%	200,000	174,554	-13%	16,000	14,383	-10%
2000	3,000,000	1,778,547	-41%	150,000	236,871	58%	500,000	146,482	-71%	200,000	127,069	-36%	15,000	7,350	-51%
2001	2,700,000	2,304,670	-15%	300,000	113,311	-62%	50,000	72,560	45%	250,000	84,494	-66%	13,000	9,295	-29%
2002	2,200,000	3,356,572	53%	160,000	246,281	54%	170,000	446,960	163%	120,000	237,949	98%	10,000	12,714	27%
2003	2,400,000	4,145,981	73%	170,000	101,756	-40%	80,000	48,789	-39%	140,000	120,767	-14%	10,000	18,503	85%
2004	3,700,000	5,639,628	52%	160,000	311,058	94%	380,000	357,939	-6%	150,000	146,165	-3%	10,000	26,922	169%
2005	4,100,000	5,962,572	45%	200,000	224,657	12%	70,000	48,419	-31%	140,000	69,740	-50%	10,000	27,667	177%
2006	2,100,000	2,653,446	26%	200,000	177,853	-11%	350,000	404,111	15%	140,000	64,033	-54%	20,000	18,029	-10%
2007	3,300,000	4,044,832	23%	210,000	177,339	-16%	50,000	147,020	194%	130,000	77,240	-41%	20,000	17,625	-12%
2008	3,900,000	3,005,299	-23%	200,000	171,869	-14%	380,000	169,368	-55%	100,000	50,315	-50%	20,000	13,333	-33%
2009	3,000,000	2,842,335	-5%	210,000	153,210	-27%	70,000	214,321	206%	80,000	82,808	4%	20,000	8,750	-56%
2010	2,300,000	3,695,633	61%	179,000	207,350	16%	305,000	292,706	-4%	70,000	228,863	227%	17,000	9,900	-42%
2011	4,600,000	6,359,116	38%	178,000	95,291	-46%	106,000	34,123	-68%	101,000	129,407	28%	14,000	11,248	-20%
2012	4,400,000	4,271,018	-3%	159,000	106,775	-33%	334,000	469,598	41%	113,000	269,733	139%	12,000	2,527	-79%
2013	4,900,000	3,639,862	-26%	147,000	260,963	78%	99,000	48,275	-51%	152,000	139,365	-8%	9,000	5,398	-40%
2014	4,300,000	3,329,970	-23%	165,000	137,376	-17%	338,000	642,879	90%	170,000	116,093	-32%	7,600	4,660	-39%
2015	3,700,000	3,685,160	0%	161,000	216,032	34%	98,000	48,004	-51%	176,000	275,960	57%	6,700	10,798	61%
2016	5,300,000	3,342,183	-37%	160,000	147,469	-8%	393,000	382,436	-3%	184,000	123,711	-33%	6,700	10,027	50%
Avg.	3,307,692	3,908,890	18%	252,185	243,752	1%	246,778	256,587	23%	204,296	175,357	-1%	14,593	13,644	3%

[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 2015 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, 1980–2016.

Tyonek Subsistence Fishery								
	No. of Permits							
Year	Issued	Returned	Chinook	Sockeye	Coho	Pink	Chum	Total
1980	67	NA	1,757	235	0	0	0	1,992
1981	70	NA	2,002	269	64	32	15	2,382
1982	69	NA	1,590	310	113	14	4	2,031
1983	75	NA	2,665	187	59	0	6	2,917
1984	75	NA	2,200	266	79	3	23	2,571
1985	76	NA	1,472	164	91	0	10	1,737
1986	65	NA	1,676	203	223	50	46	2,198
1987	64	61	1,610	166	149	10	24	1,959
1988	47	42	1,587	91	253	8	12	1,951
1989	49	47	1,250	85	115	0	1	1,451
1990	42	37	781	66	352	20	12	1,231
1991	57	54	902	26	58	0	0	986
1992	57	44	907	75	234	7	19	1,242
1993	62	54	1,370	57	77	19	17	1,540
1994	58	49	770	85	101	0	22	978
1995	70	55	1,317	45	153	0	15	1,530
1996	73	49	1,039	68	137	21	7	1,272
1997	70	42	639	101	137	0	8	885
1998	74	49	978	163	64	1	2	1,208
1999	77	54	1,230	144	94	32	11	1,511
2000	60	59	1,157	63	87	6	0	1,313
2001	84	58	976	172	49	4	6	1,207
2002	101	71	1,080	209	115	9	4	1,417
2003	87	74	1,183	111	44	7	10	1,355
2004	97	75	1,345	93	130	0	0	1,568
2005	78	66	982	61	139	0	2	1,184
2006	82	55	943	20	14	0	1	978
2007	84	67	1,281	200	123	3	2	1,609
2008	94	76	1,509	140	196	15	10	1,870
2009	89	69	636	184	258	1	2	1,081
2010	97	74	890	190	155	0	4	1,239
2011	116	56	554	102	19	7	7	689
2012	106	48	565	162	46	1	0	774
2013	108	58	817	173	204	20	0	1,214
2014	106	65	683	293	362	4	10	1,352
2015	103	46	744	237	331	41	5	1,358
2016	70	60	813	164	206	9	4	1,196

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Yentna Subsistence Fishery								
	No. of Permits							
Year	Issued	Returned	Chinook	Sockeye	Coho	Pink	Chum	Total
Personal Use								
1996	NR	14	0	191	36	88	40	355
1997	NR	21	0	492	61	21	8	582
Subsistence								
1998	21	28	0	473	147	33	20	673
1999	21	NR	0	455	43	15	11	524
2000	20	NR	0	379	92	4	7	482
2001	16	NR	0	514	47	9	4	574
2002	25	NR	0	414	116	14	28	572
2003	15	NR	0	433	76	2	13	524
2004	22	NR	0	391	132	0	2	525
2005	21	NR	0	177	42	24	25	268
2006	23	26	0	388	178	15	27	608
2007	22	22	0	367	66	17	18	468
2008	16	16	0	310	57	23	7	397
2009	16	17	0	253	14	0	6	273
2010	26	26	0	675	52	41	18	786
2011	25	25	0	598	90	3	21	712
2012	20	21	0	279	24	21	19	384
2013	22	23	0	160	92	128	32	412
2014	21	22	0	294	78	15	30	417
2015	28	30	0	563	147	44	56	810
2016	25	26	0	495	192	33	36	756

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

Appendix B16.–Upper Cook Inlet educational fisheries salmon harvest, 2016.

Year	Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
2016	Kenaitze	10	6,709	502	203	0	7,424
	NTC	95	319	428	233	1	1,076
	NND	50	57	34	11	1	153
	NES	18	41	38	7	0	104
	Homer VFW	0	11	23	0	0	34
	APVFW	0	30	39	34	0	103
	Kasilof H.A.	2	46	27	0	0	75
	SCF	0	53	14	0	0	67
	Knik	0	50	4	0	11	65
	Big Lake	0	24	0	0	1	25
	Eklutna	0	94	86	10	16	206
	Chickaloon Native Village	-	-	-	-	-	0
	O'Brien	1	15	0	0	0	16
	Total	176	7,449	1,195	498	30	9,348

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
Min.	5	582		9,506		46		0		2		0		9,561	
Mean	9	1,389		20,159		182		89		25		8		20,462	
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
Min.	27	1,091		9,737		0		90		19		17		9,900	
Mean	39	5,477		51,841		54		1,041		862		158		53,955	
Max.	44	10,346		89,000		138		2,723		2,769		597		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	3.432	4,008	117.1	3,770	102	425	14.989	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
Min.	18	10,503		98,262		0		559		619		58		101,771	
Mean	22	21,508		261,557		658		2,477		4,523		453		269,668	
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
Min.		270		3,310		0		34		28		4		3,429	
Mean		823		8,452		51		160		208		41		8,910	
Max.		1,339		15,675		238		366		916		90		16,360	

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Fish Creek Dip Net

Year	Days Open	Days Fished Est.	Days Fished SE	Sockeye Est.	Sockeye SE	Chinook Est.	Chinook SE	Coho Est.	Coho SE	Pink Est.	Pink SE	Chum Est.	Chum SE	Total Est.	Total SE
1996	22	3,749	41	17,260	161	37	8	2,414	25	331	9	153	5	20,195	168
1997	13	991	34	3,277	76	0	0	63	5	53	7	4	1	3,397	84
1998	15	1,141	21	4,036	113	1	0	649	19	80	10	29	2	4,795	117
1999	16	432	16	1,083	138	0	0	17	3	12	7	0	0	1,112	139
2000	16	1,054	25	6,925	211	0	0	958	72	83	12	29	3	7,995	225
2001	3	131	7	436	40	0	0	18	7	2	0	1	0	457	41
2009	7	1,436	8	9,898	73	10	0	53	6	66	3	33	5	10,060	73
2010	8	2,843	14	23,705	161	12	2	3,576	84	1,721	28	290	9	29,303	184
2011	3	1,379	14	5,236	86	2	0	905	29	155	10	72	7	6,371	92
2014	7	1,792	22	5,829	113	0	0	1,895	48	4,218	74	227	8	12,170	144
2015	8	2,303	22	19,260	280	0	0	3,321	87	1,329	48	329	27	24,239	298
Min.	3	131		436		0		17		2		0		457	
Mean	11	1,568		8,813		6		1,261		732		106		10,918	
Max.	22	3,749		23,705		37		3,576		4,218		329		29,303	

Fishery was not open 2002-2008, and 2012-2013

Beluga River Dip Net

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

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

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Date Issued: March 30, 2016

UPPER COOK INLET
2016 OUTLOOK FOR COMMERCIAL SALMON FISHING

SOCKEYE SALMON

A run of approximately 7.1 million sockeye salmon is forecasted to return to Upper Cook Inlet (UCI) in 2016, with a harvest by all user groups of 5.3 million. The commercial fishery harvest in 2016 is expected to be approximately 4.1 million sockeye salmon, which is 1.2 million fish greater 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 4.7 million fish, which is 1.0 million fish greater than the 20-year average annual run of 3.7 million. In 2016, the predominant age classes are projected to be age 1.3 (65%), age 1.2 (8%), age 2.2 (5%) and age 2.3 (21%). The 10-year mean absolute percent error (MAPE) for the set of models used for the 2016 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 five year old fish, with the total age starting from the year of egg deposition.

The Kasilof River sockeye salmon run forecast is 861,000 fish, which is 13% less than the 20-year average annual run of 987,000. The predominant age classes in the 2016 run forecast are age 1.2 (31%), age 1.3 (25%), age 2.2 (30%), and age 2.3 (10%). The 10-year MAPE for the set of models used for the 2016 Kasilof sockeye salmon run forecast is 17%.

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The Susitna River sockeye salmon run forecast is 372,000 fish, which is 12% less than the 10-year average annual run of 421,000 fish. 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 showed the Yentna River sonar project underestimated sockeye salmon escapement, causing estimates of adult returns to also be underestimated. The 3-year MAPE for this forecast method is 21%. The predominant age classes in the 2016 Susitna River sockeye salmon run forecast are age 1.2 (11%) and age 1.3 (67%).

The Fish Creek sockeye salmon run forecast is 110,000 fish, which is 31% greater than the 20-year average annual run of 84,000. The predominant age classes in the 2016 Fish Creek run forecast are age 1.2 (57%) and age 1.3 (29%). The 10-year MAPE for the Fish Creek sockeye salmon run forecast is 62%.

Forecast runs to individual freshwater systems are as follows:

System	Run	Goals[a]
Fish Creek	110,000	20,000–70,000
Kasilof River [b,c]	861,000	160,000–340,000
Kenai River [b,d]	4,731,000	1,100,000–1,350,000
Susitna River	372,000	
Larson Lake	N/A	15,000–50,000
Chelatna Lake	N/A	20,000–65,000
Judd Lake	N/A	25,000–55,000
Unmonitored Systems [e]	1,039,000	N/A
Total	7,113,000	

[a] Goals listed here are as follows: Fish Creek: Sustainable Escapement Goal (SEG); Kasilof River: Biological Escapement Goal (BEG); Kenai River: Inriver; and Susitna River: SEG (weir goals).
[b] Kasilof and Kenai rivers escapement goals are now DIDSON-based.
[c] Kasilof River optimal escapement goal is 160,000–390,000 sockeye salmon.
[d] Kenai River optimal escapement goal is 700,000–1,400,000 sockeye salmon.
[e] Unmonitored systems are estimated to be 15% of monitored systems.

2016 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. King salmon escapements have improved in the Northern District over the last couple of years. This has resulted in a relaxation of some sport fish restrictions on the Deshka and Little Su 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 2013–2015 levels is sustainable for these systems only. Therefore, the Northern District directed king salmon commercial fishery will start the 2016 season fishing regularly scheduled 12-hour fishing periods. There will be 4 fishing periods in the 2016 season (in the previous three years, 2013–2015, there

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were five regular periods per year); those being May 30, and June 6, 13, and 20. 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 River will be closely monitored during the 2016 season. Additional restrictions or closures to commercial fishing periods will be based upon inseason assessment of king salmon escapement at the Deshka River.

- Beginning Monday, June 27, 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 on fisheries that harvest this stock were retained in regulation at the 2014 Alaska Board of Fisheries (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 2016, 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 8.

Central District Fisheries

Upper Subdistrict Set Gillnet Fishery – Overview

The 2016 Kenai River late-run king salmon forecast projects a total run of approximately 30,000 fish. Because the inriver run is expected to exceed 22,500 fish management strategies for the 2016 Upper Subdistrict set gillnet fishery will deviate from the past two seasons and return to management based primarily on the 5 AAC 21.360. *Kenai River Late-Run Sockeye Salmon Management Plan.* Fishing time allowed will be based on inseason assessment of sockeye salmon abundance, while ensuring adequate king salmon escapement relative to the SEG of 15,000-30,000 Kenai River late-run king salmon.

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 an optimum escapement goal (OEG) range of 700,000–1,400,000 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 with the OEG range, in proportion to the size of the run.

All three of these management objectives are complementary to each other. Inriver harvest during the season is unknown (although it is estimated for projection purposes); therefore, the inriver goal is the primary inseason management objective. The OEG is a postseason assessment

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determined after inriver sport and federal subsistence harvest is accounted for. Achievement of the inriver goal leads towards achieving the two objectives of meeting the OEG and distributing the escapement of sockeye salmon evenly within the OEG range, in proportion to the size of the run.

Upper Subdistrict Set Gillnet Fishery – Management

Kasilof Section Prior to July 8

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

Kenai, Kasilof and East Forelands Sections

- The Kenai and East Forelands sections fishing season opens on or after July 8.
- Management of the Kenai, Kasilof, and East Foreland sections (Upper Subdistrict) set gillnet fishery will be based on the projected run size of Kenai River sockeye salmon and passage levels of sockeye salmon in both the Kenai and Kasilof rivers, as well as the abundance of Kenai River late-run king salmon. From July 1–31, if the inriver run of Kenai River late-run king salmon is projected to exceed 22,500 fish, management of the Upper Subdistrict set gillnet fishery is to follow the guidelines based on provisions in 5 AAC 21.360. *Kenai River Late-Run Sockeye Salmon Management Plan*. For the 2016 season, the Kenai River run projection is 4.7 million sockeye salmon. Therefore, the season will be managed following guidelines outlined below for runs greater than 4.6 million fish. The Kenai River sockeye salmon run will be reassessed after July 20 to determine inseason run strength. However, because of a below average Kenai River late-run king salmon forecast, all weekly fishing hours for sockeye salmon runs in the highest tier may not be utilized.
  a. For runs **greater than 4.6 million Kenai River sockeye salmon**, the department may allow up to 84 hours of additional fishing time per week in the Upper Subdistrict set gillnet fishery and will close the fishery for a 36-hour period per week, which will begin between 7:00 p.m. Thursday and 7:00 a.m. Friday. 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.
- From July 1–31, if the projected inriver run of Kenai River late-run king salmon is less than 22,500 fish, management of the Upper Subdistrict set gillnet fishery will be "paired" to actions taken in the Kenai River late-run king salmon sport fishery. If the sport fishery is restricted to fishing with no bait, then the Upper Subdistrict set gillnet fishery will be managed as described in 5 AAC 21.359. *Kenai River Late-Run King Salmon Management Plan*.
  From August 1–15, management of the Upper Subdistrict set gillnet fishery is largely dependent upon the projected final escapement of Kenai River late-run king salmon. If the projected escapement is less than 16,500 fish, the set gillnet fishery closes; if the escapement

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is projected to be 16,500–22,500 fish, then the set gillnet fishery is restricted to no more than 36 hours of total fishing time in August; if the king salmon escapement is projected to exceed 22,500 fish, then management of the set gillnet fishery falls within the provisions of the *Kenai River Late-Run Sockeye Salmon Management Plan*. The provisions of this plan do not change in August, except for two additions. First, 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; and second, the season may close any time after July 31, if during two consecutive fishing periods (defined as a calendar day) the sockeye salmon harvest is less than one-percent of the season total. The one-percent rule now applies separately to the Kasilof Section and the Kenai/East Foreland sections, which means one of the areas could close under the one-percent rule, while the other area remains open.

- From August 11–15, provisions within 5 AAC 31.354. *Cook Inlet Pink Salmon Management Plan* (see specifics on page 5 of this document) allow for up to two additional 12-hour fishing periods during the August 11–15 time frame.

Central District Drift Gillnet Fishery – Overview

The department manages the UCI drift gillnet fleet primarily under the guidance of 5 AAC 21.353. *Central District Drift Gillnet Fishery Management Plan*. The purpose of this management plan is to ensure adequate escapement of salmon into Northern Cook Inlet drainages and to provide the department with management guidelines. To meet these directives, there are two timeframes in July when drift fleet restrictions are implemented to pass fish through the Central District. At the 2014 board meeting, there were substantial changes made to the drift gillnet fishery. Please consult the 2014–2017 Cook Inlet Area Commercial Salmon Fishing Regulations prior to fishing.

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 (Figure 1), and Drift Gillnet Area 1 (Figure 2) described below.
  b. In runs of over 2.3 million Kenai River sockeye salmon, there may be one additional 12-hour period in the Expanded Kenai and Expanded Kasilof sections, and Drift Gillnet Area 1.
  c. All additional fishing time is allowed only in the Expanded Kenai and Expanded Kasilof sections.
- From July 16 through July 31:
  a. In runs greater than 4.6 million Kenai River sockeye salmon, fishing during one 12-hour fishing period per week will be restricted to the Expanded Kenai, Expanded Kasilof, and Anchor Point sections (Figure 4). There are no mandatory restrictions on the remaining 12-hour regular fishing period. 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.

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- From August 1 through August 15:
  a. 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)).
- From August 11–15:
  a. Provisions within 5 AAC 31.354. *Cook Inlet Pink Salmon Management Plan* (see specifics below) allow for up to two additional 12-hour fishing periods in the regular (narrow) Kenai Section only.
- From August 16 until closed by EO:
  a. Drift Areas 3 and 4 (Figure 5) are open for regular periods.
  b. Chinitna Bay may be opened by EO if chum salmon escapement objectives are achieved in Clearwater Creek.

5 AAC 31.354. *Cook Inlet Pink Salmon Management Plan*: This plan was modified at the 2014 UCI board meeting. Based upon the number of pink salmon that are harvested by Upper Subdistrict set gillnetters from August 6–10, in even years only, a pink salmon fishery may be opened for up to two fishing periods from August 11–15. If opened, the pink salmon fishery is only provided to setnetters in the Upper Subdistrict and to drift gillnetters in the Kenai Section (narrow Kenai corridor). The second fishing period may only be opened if more than 50,000 pink salmon and less than 2,500 coho salmon are harvested by setnetters during the first fishing period. Set gillnetting is no longer limited to more than 600 feet from shore during the pink salmon fishery, but both set and drift gillnets must still use nets with a mesh size no larger than 4¾ inches.

SEASON OPENING DATES

Season opening dates in 2016 for the various fisheries around the inlet are as follows:

- *Northern District King Salmon Fishery:* May 30. As explained earlier in this document, there are four regular Monday fishing periods in the 2016 fishery that occur beginning Monday, May 30, and include June 6, 13, and 20. The area from a point at the wood chip dock to the Susitna River remains closed for the directed king salmon fishery in 2016.
- *Big River Fishery:* June 1 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 a.m. to 7:00 p.m.
- *Western Subdistrict Set Gillnet Fishery:* June 16.
- *Drift Gillnet Fishery*: June 20.
- *All remaining set gillnet fisheries, except the Upper Subdistrict:* June 27.
- *Upper Subdistrict Set Gillnet Fishery:* June 27 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 25 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 11*. All Sections of the Upper Subdistrict will close for the season on or before August 15.

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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.

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

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

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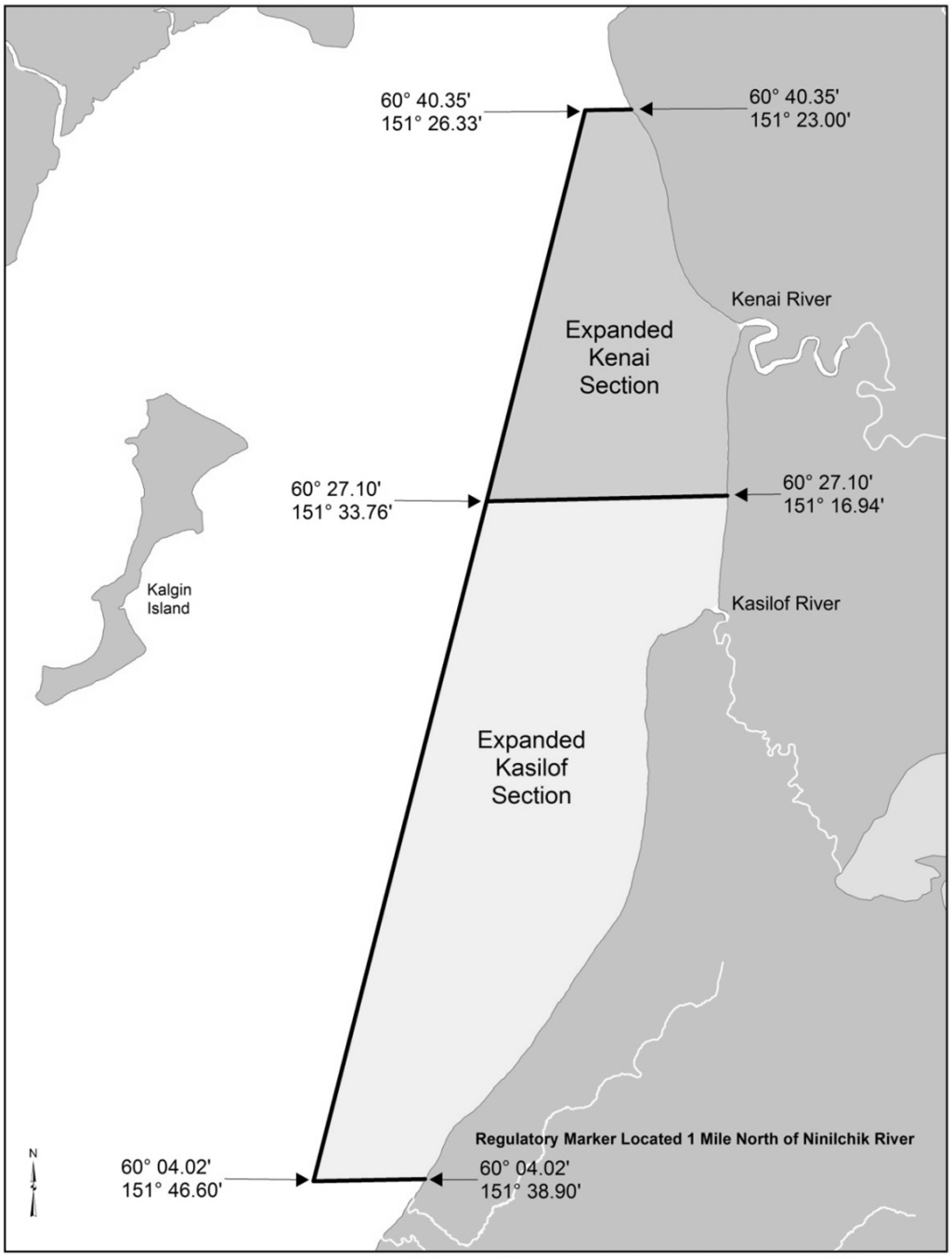

Latitude and Longitude are based on the North American Datum of 1983 (NAD 83), equivalent to the World Geodetic System 1984 (WGS 84).

Figure 1.–Map of the Expanded Kenai and Expanded Kasilof Sections with waypoint descriptions.

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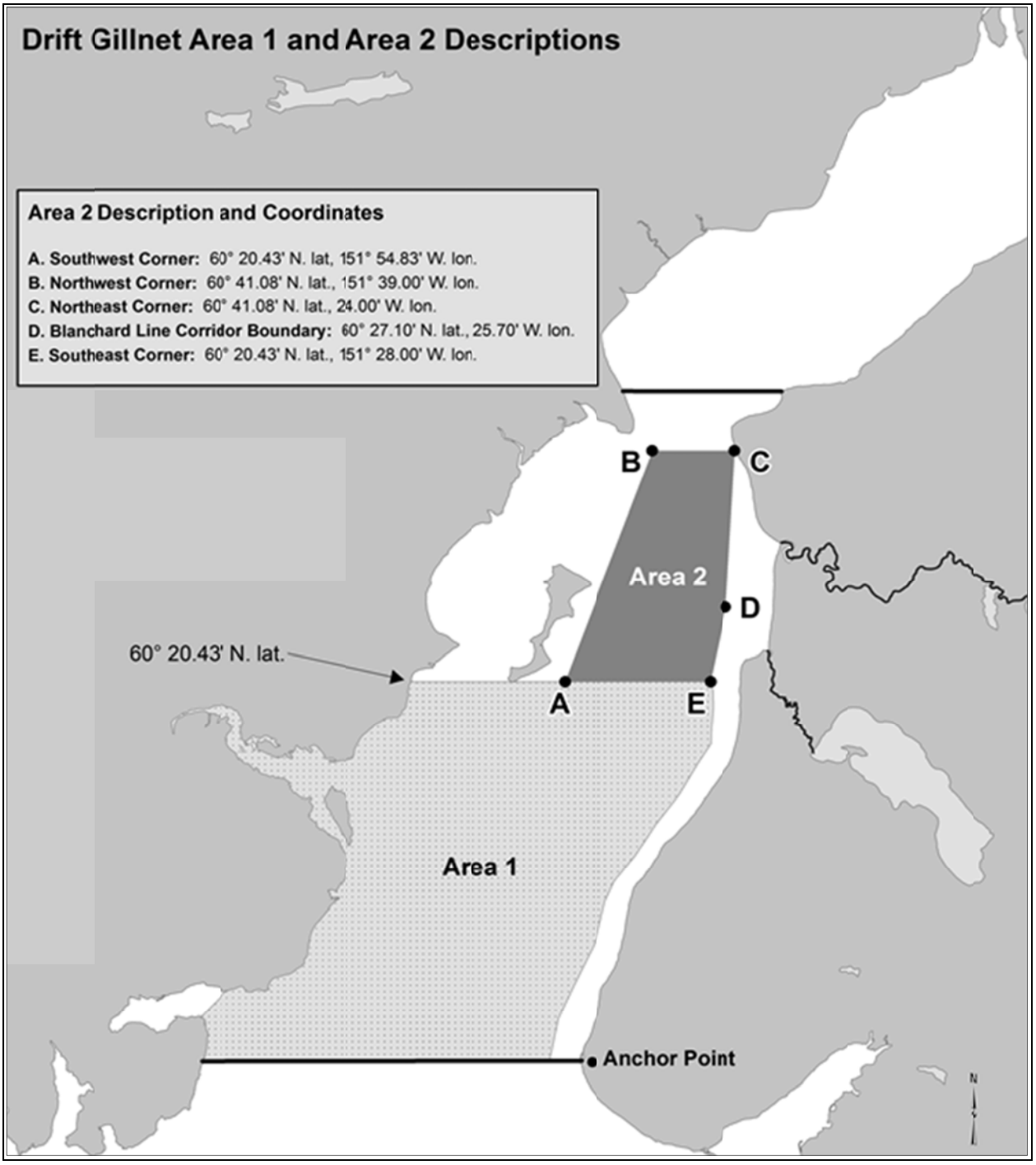

Latitude and Longitude are based on the North American Datum of 1983 (NAD 83), equivalent to the World Geodetic System 1984 (WGS 84).

Figure 2.–Map of drift gillnet fishing areas one and two.

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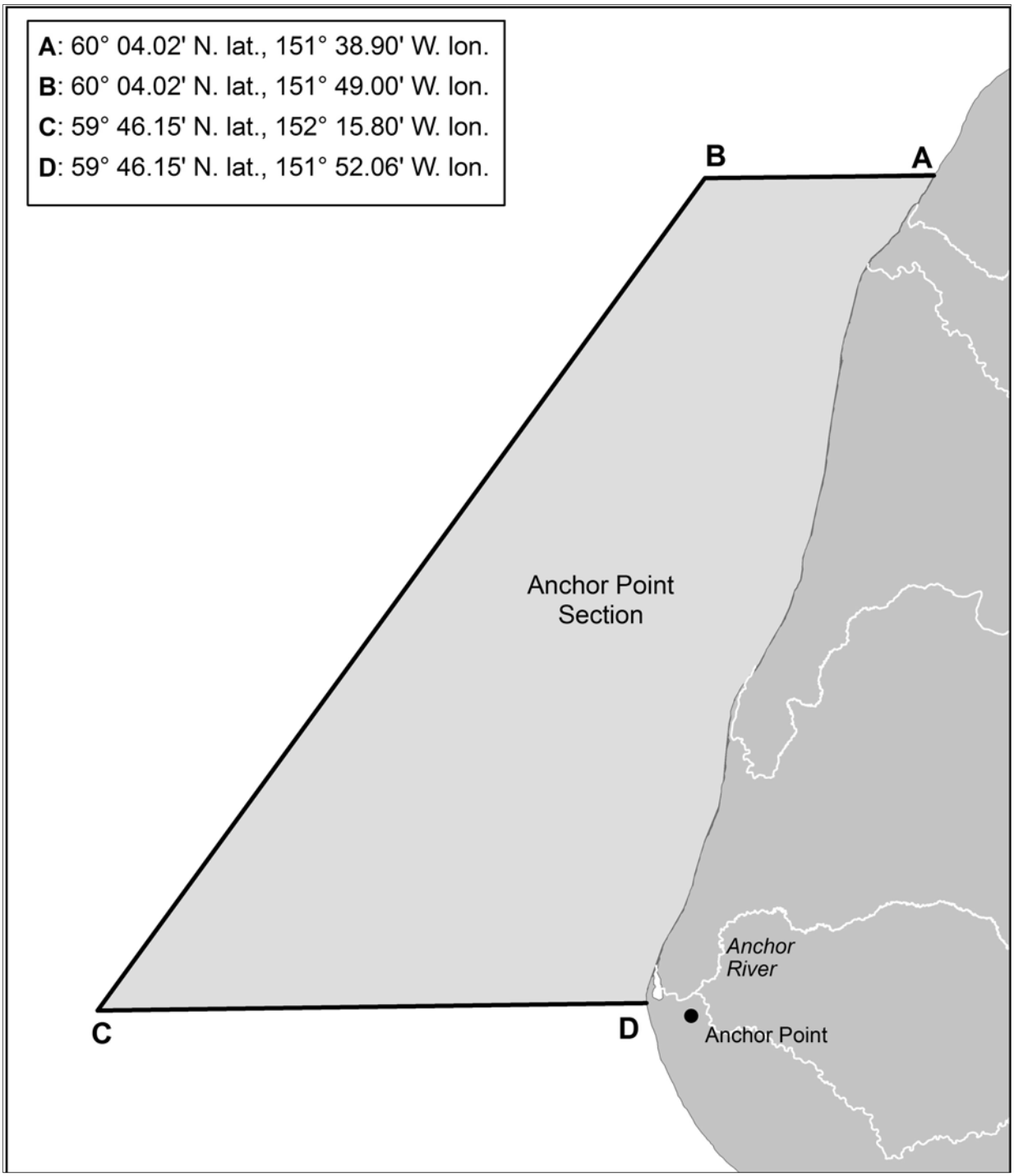

Latitude and Longitude are based on the North American Datum of 1983 (NAD 83), equivalent to the World Geodetic System 1984 (WGS 84).

Figure 3.–Map of the Anchor Point Section with waypoint descriptions.

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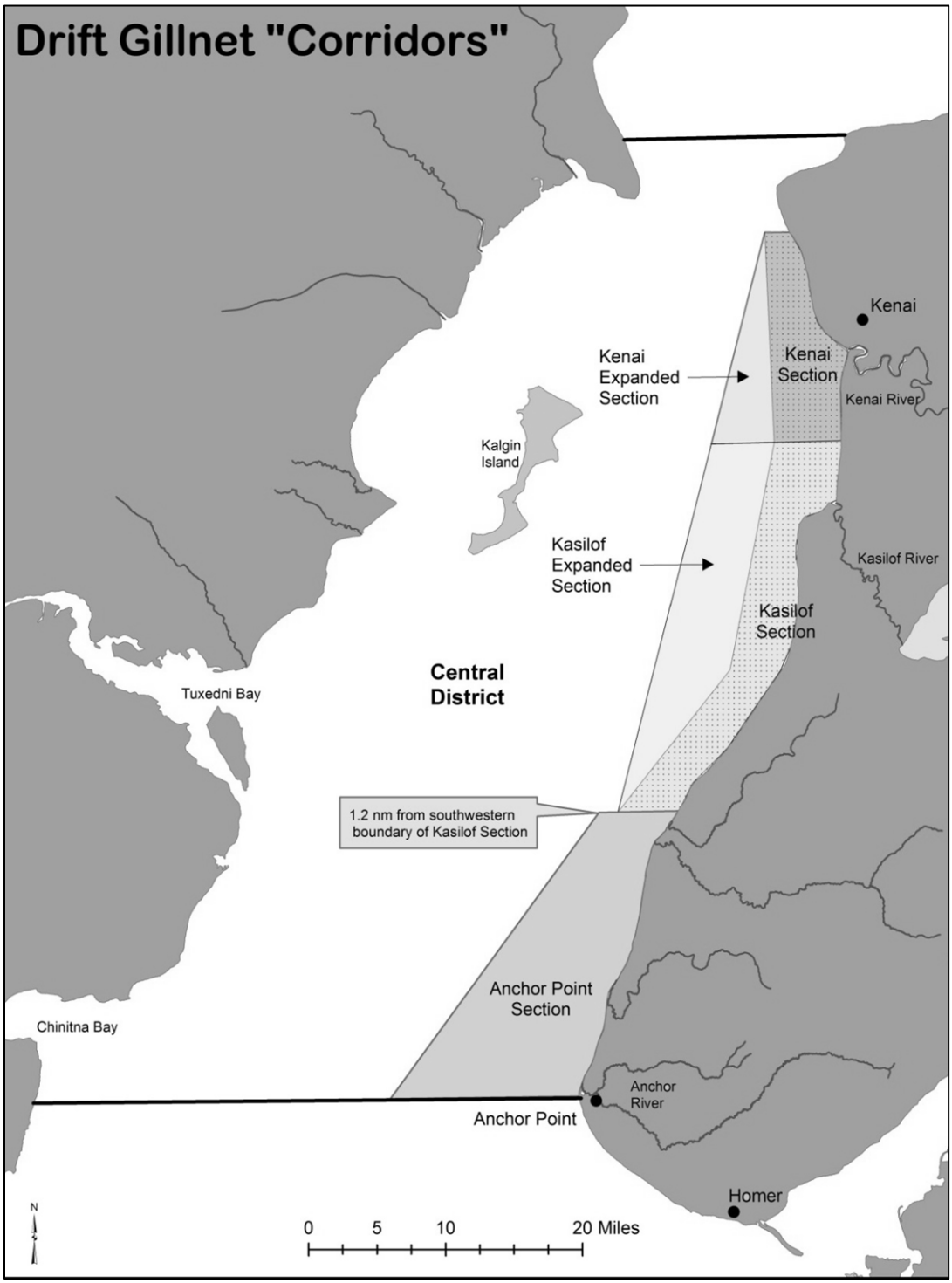

Figure 4.–Map of all drift gillnet "corridors" in Upper Cook Inlet.

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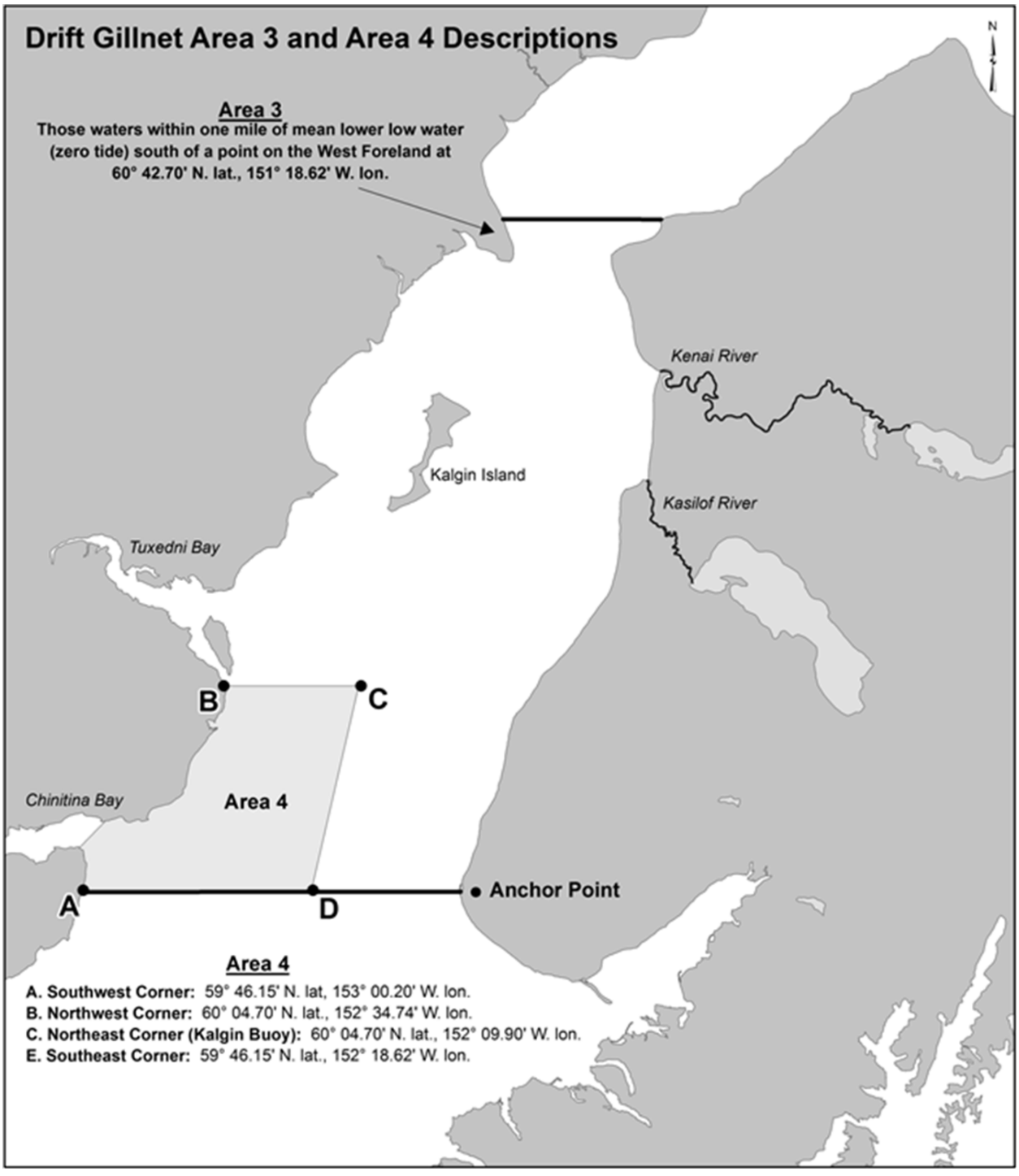


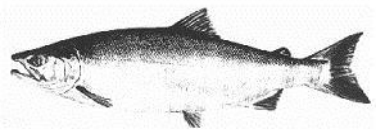
Latitude and Longitude are based on the North American Datum of 1983 (NAD 83), equivalent to the World Geodetic System 1984 (WGS 84).

Figure 5.–Map of the drift gillnet areas open beginning August 16.

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

NEWS RELEASE

Sam Cotten, Commissioner
Scott Kelly, Director



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Date Issued: Nov. 16, 2015

2017 UPPER COOK INLET SOCKEYE SALMON FORECAST

The forecast of the 2017 Upper Cook Inlet sockeye salmon run is as follows:

	Forecast Estimate (millions)	Forecast Range (millions)
TOTAL PRODUCTION:		
Total Run	4.0	3.2–4.8
Escapement	1.4	
Commercial Harvest	1.7	
Other Harvests	0.9	

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 2017: (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 2017 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 2016. A spawner-recruit model predicts the age-1.2 salmon return

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based upon the spawning escapement in 2013. The Kenai River returns of age-2.2 and -2.3 salmon were forecasted using sibling models based upon the abundances of age-2.1 and -2.2 salmon that returned in 2016. The returns of age-1.3, -2.2 and -2.3 Kasilof River sockeye salmon in 2017 were forecasted using sibling models based upon returns of age-1.2, -2.1 and -2.2 salmon in 2016. A smolt model based upon age-1 smolt abundances in 2015 was used to forecast the return of age-1.2 Kasilof River sockeye salmon in 2017.

The returns of age-0.3, -1.2, -2.2 and -2.3 Susitna River sockeye salmon were forecasted using mean return per spawner by age class for brood years 2006–2012. Mark–recapture estimates of inriver run and genetic estimates of commercial harvest were available for these brood years. A sibling model based upon the abundance of age-1.2 salmon returning in 2016 was used to forecast the return on age-1.3 Susitna River sockeye salmon.

The sockeye salmon forecast for unmonitored systems in UCI was estimated as 17% of the aggregate forecast for the 4 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. The harvest by all other user groups (sport, personal use, and subsistence) was estimated using a relationship between 'other harvests' and total run. Commercial harvest was estimated by subtracting 'other harvests' 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 2007 through 2016.

2016 Run and Forecast

In 2016, the harvest of sockeye salmon by all user groups in UCI (3.3 million) was 2.0 million less than the preseason forecast of 5.3 million. In 2016, the total run was 3.7 million to the Kenai River; 607,000 to the Kasilof River; 390,000 to the Susitna River; and 64,000 to Fish Creek. The 2016 run forecast was 4.7 million to the Kenai River; 861,000 to the Kasilof River; 372,000 to the Susitna River; and 110,000 to Fish Creek. Overall, the 2016 sockeye salmon run was 26% below forecast, largely due to the below forecast Kenai sockeye salmon run.

Forecast Discussion

In 2017, a run of approximately 4.0 million sockeye salmon is forecasted to return to UCI with a commercial harvest of 1.7 million. The forecasted commercial harvest in 2017 is 1.2 million less than the 20-year average harvest.

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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. A sibling model based upon the return of age-1.2 salmon in 2016 (239,000; 399,000 20-year average) predicted a return of 1.3 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 2013 (9.5 million; 17.7 million 20-year average) and the average weight of fall fry rearing in Skilak Lake predicted a return of 1.6 million age-1.3 salmon. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling (26%) than the fry model (27%). A sibling model based upon the return of age-2.2 salmon in 2016 (128,000; 249,000 20-year average) predicted a return of 322,000 age-2.3 salmon in 2016. A fry model based upon the abundance of age-1 fry rearing in Skilak Lake in fall 2013 (2.9 million) predicted a return of 625,000 age-2.3 salmon. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling (44%) than the fry model (52%). The predominant age classes in the 2017 run forecast are age 1.3 (60%), age 1.2 (16%), and age 2.3 (15%). The 10-year MAPE for the set of models used for the 2017 Kenai sockeye salmon run forecast is 20%.

The Kasilof River sockeye salmon run forecast is 825,000 which is 16% less than the 20-year average of 987,000. A sibling model based upon the abundance of age-1.2 salmon in 2016 (167,000; 306,000 20-year average) was used to forecast a return of 231,000 age-1.3 salmon in 2017. A spawner-recruit model predicted a return of 292,000 age-1.3 salmon, no smolt data was available for this forecast. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling (37%) than the spawner-recruit model (79%). A smolt model based upon the abundance of age-1 smolts emigrating from the Kasilof River in 2015 (5.3 million; 4.1 million 20-year average) was used to forecast a return of 282,000 age-1.2 salmon in 2017. A sibling model based upon the abundance of age-1.1 salmon in 2016 forecasted a return of 239,000 age-1.2 salmon. The smolt model was used for this forecast, because the 10-year MAPE was lower for the smolt (54%) than the sibling model (56%). A sibling model based upon the abundance of age-2.1 salmon in 2016 was used to forecast a return of 203,000 age-2.2 salmon in 2017. A smolt model forecast for age-2.2 salmon was 357,000. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling (16%) than the smolt model (35%). The predominant age classes in the 2017 run forecast are age 1.2 (34%), age 1.3 (28%), and age 2.2 (25%). The 10-year MAPE for the set of models used for the 2017 Kasilof sockeye salmon run forecast is 12%.

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 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 are age 1.2 (20%), age 1.3 (53%) and age 2.3 (12%).

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The Fish Creek sockeye salmon run forecast is 75,000, which is 11% less than the 20-year average of 84,000. A sibling model was used to forecast the return of age-1.3 salmon, and smolt models were used to forecast returns age-1.2, -2.2 and -2.3 salmon in 2017. 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%.

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

		Major Age Classes				Total	Escapement
System		1.2	1.3	2.2	2.3	Run	Goals[a]
Kenai River	**Forecast**	**345**	**1,299**	**161**	**322**	**2,164**	**900 – 1,100[b]**
	20-yr average	399	2,185	249	737	3,634	
Kasilof River	**Forecast**	**282**	**231**	**203**	**81**	**825**	**160 – 340**
	20-yr average	306	325	240	83	987	
Susitna River	**Forecast**	**75**	**194**	**12**	**44**	**366**	**See Below[c]**
	20-yr average	79	221	26	42	387	
Fish Creek	**Forecast**	**48**	**17**	**1**	**1**	**75**	**See Below[d]**
	20-yr average	44	22	6	3	84	
Unmonitored	**Forecast**	**128**	**298**	**65**	**76**	**586**	**No Goal**
	20-yr average	141	471	89	148	871	
Total Run	**Forecast**	**877**	**2,039**	**411**	**523**	**4,016**	
	20-yr average	968	3,223	610	1,013	5,961	

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

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

[b] This is the inriver sockeye salmon goal for runs less than 2.3 million measured using sonar at river mile 19 on the Kenai River.

[c] Susitna sockeye salmon are managed to achieve escapement goals at Larson, Chelatna and Judd lakes. Current escapement goals for these lakes are (in thousands of fish): Larson (15–50), Chelatna (20–65) and Judd (25–55), and recommended escapement goal ranges are: Larson (15–35), Chelatna (20–45) and Judd (15–40).

[d] The current escapement goal for Fish Creek sockeye salmon is (in thousands of fish): 20–70 and the recommended escapement goal range is 15–45.

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OTHER SALMON SPECIES

The forecast of the 2017 commercial harvest of other salmon species is as follows:

	Commercial Harvest Forecasts
Pink Salmon	98,000
Chum Salmon	184,000
Coho Salmon	167,000
Chinook Salmon	6,300

Forecast Methods

The recent 5-year average commercial harvest was used to forecast the harvest of chum, coho, and Chinook salmon in 2017. The forecast for pink salmon is based upon the average harvest during the past 5 odd-numbered years.

Forecast Discussion

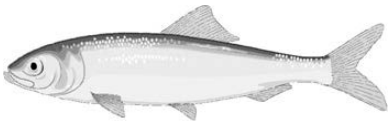
The recent 5-year average commercial harvest was used in the forecast, because regulatory changes have substantially restricted harvests of these species in recent years.

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



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Phone: (907) 262-9368 Fax: (907) 262-4709
Date Issued: March 30, 2016 Time: 10:00 a.m.

2016 UPPER COOK INLET COMMERCIAL SMELT (HOOLIGAN) AND HERRING FISHING SEASONS

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 2016, the season will open at 12:01 a.m. on Sunday, May, 1 and close no later than 11:59 p.m. on Thursday, June 30. However, the total harvest of smelt may not exceed 100 tons, and 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 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 a.m. on Mondays until 6:00 p.m. on Fridays. A fishing period may extend beyond May 31 if the fishing period began before May 31. In 2016, commercial fishing for herring will open at 12:01 a.m. on Wednesday, April 20, and close at 6:00 p.m. on Friday, June 3, 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 range is 0–20 tons.

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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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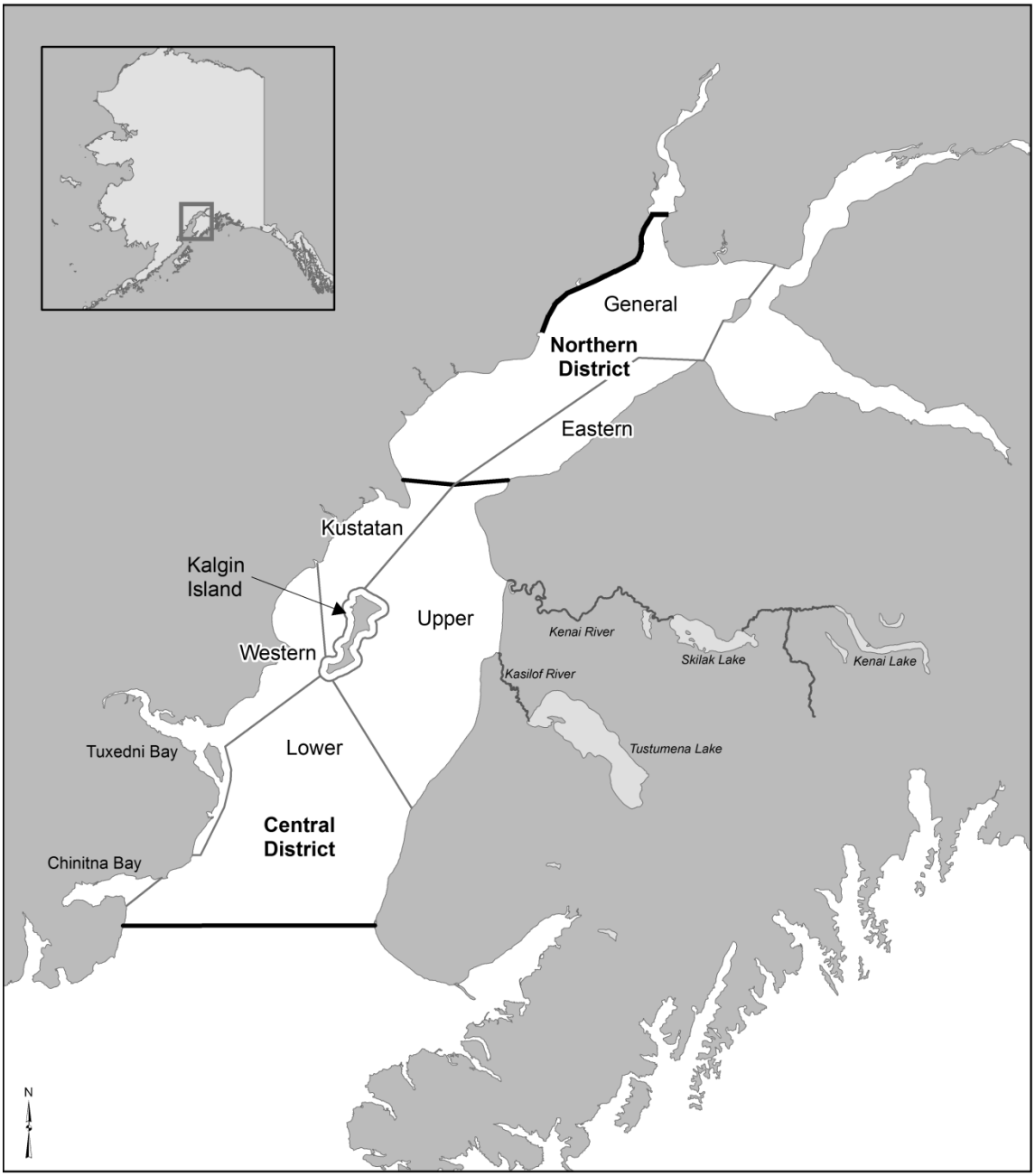

Figure 1.–Upper Cook Inlet commercial fisheries Subdistrict fishing boundaries.