Fishery Management Report No. 13-21

Upper Cook Inlet Commercial Fisheries Annual Management Report, 2012

by

Pat Shields

and

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May 2013

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 2012 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 is comprised of 6 subdistricts, while the Northern District includes 2 subdistricts. At present, 5 species of Pacific salmon (sockeye *Oncorhynchus nerka*, Chinook *O. tshawytscha*, chum *O. keta*, coho *O. kisutch*, and pink *O. gorbuscha*), razor clams (*Siliqua patula*), Pacific herring (*Clupea pallasii*), and eulachon or smelt (*Thaleichthys pacificus*) are subject to commercial harvest in UCI. The 2012 UCI harvest of 4.0 million salmon was approximately 2% less than the 1966–2011 average annual harvest of 4.1 million fish, while the commercial sockeye salmon harvest estimate of 3.1 million fish was approximately 7% above the 1966–2011 average annual harvest of 2.9 million fish. The 2012 estimated exvessel value of $34.6 million was 48% more than the 2002–2011 average annual exvessel value of $23.3 million, and approximately 50% more than the 1966–2011 average annual exvessel value of $23.0 million. For the 2012 season, 5 of 7 monitored sockeye salmon systems fell within established escapement goal ranges and 2 escapement estimates failed to achieve the minimum target. The timing of the 2012 sockeye salmon run was estimated to be one day early relative to the July 15 mean date, as measured at the UCI offshore test fish transect line.

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 (Figure 3).

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, while both set and drift gillnets are used in the Central District. The use of seine gear is restricted to the Chinitna Bay Subdistrict, where they have been employed sporadically. 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, the UCI salmon harvest represents approximately 5% of the statewide catch. 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 (Appendix B6). Since 1966, drift gillnets have accounted for approximately 6% of the average annual harvest of Chinook salmon (*O. tshawytscha*), as well as 55% of sockeye (*O. nerka*), 47% of coho (*O. kisutch*), 43% of pink (*O. gorbuscha*), and 88% of chum salmon (*O. keta*) (Appendices B1–B5); set gillnets have harvested virtually all of the remainder. However, in the last 10 years (2002–2011), the proportion of the total annual coho, pink, and

chum salmon harvest taken by drift gillnets has increased, while the average annual drift gillnet harvest (proportion of the total harvest) of sockeye salmon has decreased. For Chinook salmon, the average annual harvest during the last 10 years has remained fairly stable between commercial gear types. In terms of their recent economic value, sockeye salmon are the most important component 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, 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 emergency order (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 the 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. Prior to the 1999 season, 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 that they report their 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 prior to the 2002 fishing season, 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 that the years of closed fishing in these areas had resulted in an increase of younger-aged fish being recruited into the population. As a result of these analyses, and in accordance with the herring recovery management plan, the commercial fishery was reopened in 2002 in both the Chinitna Bay and Western subdistricts. The management plan allows for a very conservative harvest quota, not to exceed 40 and 50 tons, respectively. 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 a.m. until Friday at 6:00 p.m. 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. Gillnets are the only legal gear allowed in the UCI herring fisheries, with set gillnets being used almost exclusively. This gear type is significantly 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, while 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, 1980, 1998, and 1999, with catches of 300, 4,000, 18,900, and 100,000 pounds, respectively. 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 pounds, 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 the Susitna River smelt stocks.

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 nontarget 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 current *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. Legal gear for the fishery is limited to a hand-operated dip net, as defined in 5 AAC 39.105, with the 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

The commercial harvest of razor clams from UCI beaches dates back to 1919 (Appendix B9). Harvest levels have fluctuated from no fishery, for as many as 8 consecutive years, to production in excess of a half-million pounds (live weight) in 1922. 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, with particularly dense concentrations occurring 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 to 400,000 pounds (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 one-mile section of the Polly Creek beach. Numerous attempts to develop feasible dredging operations were largely unsuccessful due to excessive shell breakage or the limited availability of clams in the area open to this gear. Mechanical means of harvesting is no longer permitted in any area of Cook Inlet.

2012 COMMERCIAL SALMON FISHERY

The 2012 UCI commercial harvest of 4.0 million salmon (Appendix B6) was approximately 2% less than the 1966–2011 average annual harvest of 4.1 million fish. The 2012 sockeye salmon harvest estimate of 3.1 million fish was 7% greater than the 1966–2011 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 2012 UCI commercial fishery of $34.6 million dollars was approximately 48% more than the average annual exvessel value of $23.3 million dollars from the previous 10 years (2002–2011), and approximately 50% more than the 1966–2011 average annual exvessel value of $23.0 million dollars (Appendix B7).

The average price paid per pound for UCI salmon has remained fairly stable in recent years (Appendix B11). Determining an average annual price per pound for each species has become increasingly difficult to estimate, especially in recent years, because more fishermen are selling some or all of their catch to niche markets, where they often receive better prices. In addition, a trend observed for the past few seasons has continued. Early-season pricing for Chinook and

sockeye salmon is much higher than what is paid later in the season. Considering all of these factors, and based on the various prices that processors and catcher/sellers reported during the season; an estimate of $2.80/lb was paid for Chinook salmon and $1.50/lb for sockeye salmon in 2012. Prices paid for coho and pink salmon in 2012 were fairly similar to 2011 prices, while 2012 pink salmon prices were approximately 10 cents more than 2011 pricing.

In 2012, 5 of 7 monitored sockeye salmon systems fell within established escapement goal ranges (D. Westerman, Commercial Fisheries Biologist, ADF&G, Soldotna, personal communication). It is anticipated that the Kenai River will be within the escapement goal range when the 2012 sport harvest is included.. Two escapement estimates failed to achieve the minimum target (Table 1, Appendix A2, and Appendix B10). This marked the fourth year that sockeye salmon escapement in the Susitna River was not assessed via sonar in the Yentna River. Recent studies revealed that sockeye salmon species apportionment (using the proportion of salmon captured in fish wheels to apportion sonar counts) provided an unreliable estimate of daily and annual passage for this species (for a more detailed description, see the stock status section of this report). While studies continue in the Yentna River, with an important objective being to quantify fish wheel species selectivity, sockeye salmon escapement goals have been established on 2 lakes in the Yentna River drainage (Chelatna and Judd lakes) and one lake in the Talkeetna River drainage (Larson Lake). These lakes are the major producers of sockeye salmon in the Susitna watershed. Escapements were monitored at these lakes with weirs operated by Cook Inlet Aquaculture Association (CIAA). Sockeye salmon escapement was monitored at Packers Lake on Kalgin Island using a remote camera system, but a recording malfunction prevented a compete enumeration of the run in 2012.

Table 1.–Upper Cook Inlet sockeye salmon escapement goals and passage estimates, 2012.

		Goal Range		
System	Goal Type	Lower	Upper	2012 Passage
Crescent River	BEG	30,000	70,000	58,838
Fish Creek	SEG	20,000	70,000	18,813
Kasilof River	OEG	160,000	390,000	374,523
Kenai River	Inriver	1,100,000	1,350,000	1,581,555
Larson Lake	SEG	15,000	50,000	16,708
Chelatna Lake	SEG	20,000	65,000	36,577
Judd Lake	SEG	25,000	55,000	18,303
Packers Creek	SEG	15,000	30,000	NA

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

UCI commercial catch statistics refined to gear type, area, and date are available back to 1966. 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 2012 commercial catch 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 2012 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 most recent BOF regular triennial meeting to deliberate UCI finfish proposals occurred in Anchorage from February 20 through March 5, 2011. There were many regulatory changes that occurred at this meeting that affected the UCI commercial salmon fishery. For a detailed description of regulatory changes made at the 2011 BOF meeting, see Shields and Dupuis (2012).

At the BOF work session in October, 2012, a task force was created to identify a set of recommended adjustments to the *Kenai River Late-Run King Salmon Management Plan* (5 AAC 21.359) that would result in the best mix of inriver (sport, guided sport, and personal use) and Upper Subdistrict set gillnet fishing opportunity, while providing the best means of attaining the escapement goal for Kenai River late-run Chinook salmon during times of low abundance. The task force met three times during the winter of 2012–2013 and developed a list of discussion points for the full board to address at the March 2013 Statewide Finfish board meeting. After much deliberation, the BOF voted to keep the Chinook salmon management plan unchanged, other than accepting the new escapement goal developed by the ADF&G. The new sustainable escapement goal (SEG) for Kenai River Late-Run Chinook salmon was changed to 15,000–30,000 fish.

CHINOOK SALMON

The 2012 UCI harvest of 2,526 Chinook salmon was the smallest since 1966. The 2012 harvest was approximately 85% less than the previous 10-year (2002–2011) average annual harvest of 16,468 fish, and 84% less than the average annual harvest of 15,449 fish from the 1966–2011 time period (Appendices A3, B1, and B6). The exvessel value for UCI Chinook salmon in 2012 was estimated at $121,652 dollars, which represented approximately 0.4% of the total exvessel value for all salmon (Appendix B7).

The two fisheries where Chinook salmon are harvested in appreciable numbers are the set gillnet fisheries in the Northern District and in the Upper Subdistrict of the Central District. The decline in Chinook salmon harvest observed during the 2012 season was likely caused by a decreased abundance of Chinook salmon in UCI and subsequent 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 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 one 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 one 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 one mile south of the Chuitna River), to the Susitna River. Finally, if the Deshka River is closed to sport fishing, the Chinook salmon fishery in the entire Northern District will close for all periods provided for under this plan.

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 gear. 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 a.m. to 7:00 p.m.

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 for the 2012 season. In compliance with the *Northern District King Salmon Management Plan*, commercial fishing EO No. 1 was issued, which closed the area from the wood chip dock to the Susitna River to commercial fishing for the 2012 season. Additionally, because preseason projections anticipated poor Chinook salmon runs throughout the Northern District, EO No. 1 also reduced the open fishing time in the commercial set gillnet fishery from 12 to 6 hours each period. The fishing periods affected by this announcement were those on May 28, June 4, June 11, and June 28, 2012.

Approximately 38 commercial permit holders participated in the 2012 Northern District Chinook salmon fishery, with an estimated harvest of 1,030 fish (Table 2 and Appendix A3). This was the second smallest harvest in this fishery since its inception in 1986. The number of permit holders participating in this fishery rapidly declined beginning in 1993, which is the year that set gillnet fishermen were required to register (prior to fishing) to fish in 1 of 3 areas (Northern District, Upper Subdistrict, or Greater Cook Inlet) for the entire year. The registration requirement served to eliminate a common practice of fishing in multiple areas in UCI in the same year.

The relatively small harvests from the Northern District Chinook salmon commercial fishery can partly be attributed to 1) poor runs during the mid-1990s; 2) allowing only one fishing period to occur in the area from one mile south of the Theodore River to the mouth of the Susitna River; and 3) limitations on gear. The doubling of the fishing time from 6 hours to 12 hours per period beginning in 2005 (Shields and Fox 2005) likely resulted in additional Chinook salmon being harvested. However, the 10-year average annual harvest from 2002 to 2011 of 2,385 Chinook salmon remains significantly below the 12,500 cap placed on this fishery.

Table 2.–Chinook salmon harvest during the directed fishery in the Northern District, 1986–2012.

Year	Chinook	Permits	Periods	Year	Chinook	Permits	Periods
1986	13,771	135	3	2000	2,046	47	3
1987	11,541	129	4	2001	1,616	43	3
1988	11,122	142	3	2002	1,747	36	3
1989	11,068	137	3	2003	1,172	29	3
1990	8,072	130	3	2004	1,819	44	3
1991	6,305	140	4	2005	3,144	52	3
1992	3,918	137	3	2006	3,849	59	3
1993	3,072	80	4	2007	3,132	64	3
1994	3,014	73	2	2008	3,855	74	4
1995	3,837	65	1	2009	1,266	55	3
1996	1,690	45	1	2010	1,674	51	4
1997	894	51	2	2011	2,187	61	4
1998	2,240	56	2	2012	1,030	38	4
1999	2,259	51	2				

Note: For the total annual Chinook salmon harvest in the Northern District, see Appendices A3 and B1.

Upper Subdistrict

Approximately 27% of UCI Chinook salmon commercial harvest in 2012 occurred in the Upper Subdistrict set gillnet fishery. The estimated catch of 704 fish was the smallest recorded harvest in this fishery since 1966. The 1966 to 2011 average Chinook salmon harvest in this fishery is approximately 9,949 fish (Appendix B1).

In 2011, ADF&G revised the Kenai River late-run Chinook salmon escapement goal from a biological escapement goal (BEG) to an SEG because of the uncertainty in the estimates of escapement and lack of stock-specific information in the commercial harvest. The ADF&G also informed the public it would discontinue use of target strength-based (TS-based) estimates of the inriver run in favor of 5 abundance indices, and would also continue development of the new dual identification sonar (DIDSON)-based assessment. The 5 indices of abundance ADF&G used for assessing the 2012 Chinook salmon run in the Kenai River were 1) DIDSON cumulative passage estimates; 2) net-apportioned DIDSON estimates; 3) catch per unit effort (CPUE) of gillnets drifted at the Chinook salmon sonar site; 4) CPUE of sport anglers interviewed in the lower river creel survey; and 5) harvest of Chinook salmon in the Upper Subdistrict set gillnet fishery (Eskelin and Miller 2010; R. Begich, Sport Fish Biologist, ADF&G, Soldotna, personal communication).

The 2012 preseason outlook for Kenai River Chinook salmon indicated that runs would be below average and that conservative management would likely be needed to achieve adequate spawning escapements. The Kenai River early-run Chinook salmon run in 2012 was possibly the lowest run on record as indicated by DIDSON counts and indices of abundance and resulted in severe restrictions and a closure of the early-run sport fishery. Because of the poor performance of the early-run and a below average outlook, the late-run Chinook salmon sport fishery began conservatively with a restriction on the use of bait. In July, the indices of abundance and inseason projections of run strength for late-run Chinook salmon indicated that it was well below average and would likely not meet its escapement objective. This led to several more restrictive actions, and finally to a closure of the late-run sport fishery from July 19 to July 31 (EO 2-KS-1-42-12). Restrictive measures were also implemented in the Upper Subdistrict set gillnet fishery

to conserve Kenai River late-run Chinook salmon. Restrictions in the set gillnet fishery are discussed in detail in the sockeye salmon section that immediately follows this discussion.

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); escapement enumeration by sonar, weir, remote camera, and various mark–recapture studies (Shields and Dupuis 2012); comparative analyses of historical commercial harvest and effort levels; genetic stock identification (GSI); and age composition studies. Beginning in 2005, a comprehensive sampling program was initiated to estimate the stock composition of sockeye salmon harvested in UCI commercial fisheries using improved GSI analyses. For a complete review of the GSI data, see Habicht et al. (2007), which summarized the UCI sockeye salmon catch allocation from 2005 to 2007; Barclay et al. (2010a) updated the 2005 to 2007 report and also included analyses of data collected in 2008; and Barclay et al. (2010b), which summarized the GSI analysis of the 2009 UCI commercial harvest.

A chartered gillnet vessel is employed by the OTF program to fish 6 fixed stations along a transect crossing Cook Inlet from Anchor Point to the Red River delta (Shields and Willette 2011). The program provides an inseason estimate of sockeye salmon run strength by determining the passage rate, which is an estimate of the number of sockeye salmon that enter the district per index point or CPUE. The cumulative CPUE curve is then compared to historical run timing profiles so that an estimate can be made of the final CPUE; which in turn, provides for an inseason estimate of the total run to UCI. The timing of the 2012 sockeye salmon run was estimated to be one day early relative to the July 15 midpoint measured at the OTF Anchor Point transect line. Daily catch data from the test fish vessel can be found in Appendix A1.

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 recent years, ADF&G has been transitioning escapement monitoring projects from older Bendix sonar system to DIDSON (Westerman and Willette 2011). DIDSON is currently used at escapement monitoring projects on the Kenai and Kasilof rivers. The Bendix sonar system is still utilized to enumerate sockeye salmon in the Crescent River.

A DIDSON system is also used to enumerate sockeye salmon in the Yentna River; 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 likely cause for the biased sonar counts was fish wheel species selectivity. Because of this, in 2009, the Yentna River SEG was replaced with 3 lake-based SEGs monitored via weir at Chelatna Lake (20,000 to 65,000 fish) and Judd Lake (25,000 to 55,000 fish), in the Yentna River drainage, and Larson Lake (15,000 to 50,000 fish), in the Susitna River drainage (Fair et al. 2009). Please see the stock status section of this report for a detailed description of these changes.

In addition to the 3 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 has been in operation from 2005 to 2006 and

2009 to 2012. However, in 2006, an electronic malfunction did not allow for a complete census of the escapement. In 2010 and 2012, the batteries used to power the equipment were not kept adequately charged due to insufficient solar radiation. In 2011, technical difficulties prevented retrieval of data.

Inseason analyses of the age composition of sockeye salmon escapement into the principal watersheds of UCI provides 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). Approximately 19,777 sockeye salmon were examined for age, length, and sex determination from catch and escapement samples in 2012 (Wendy Gist, Commercial Fisheries Technician, ADF&G, Soldotna, personal communication). The age composition of adult sockeye salmon returning to monitored systems is provided in Appendix A13.

The UCI preseason forecast for 2012 projected a total run of 6.2 million sockeye salmon (Table 3; Appendix C1). At the time this report was published, harvest information from the 2012 sport fisheries was not available; therefore, sport fishery harvest data were estimated by comparing previous year's harvests from similar sized runs. The 2012 sockeye salmon run estimate of 6.4 million fish was approximately 3% greater than the preseason projection. Of the expected run of 6.2 million sockeye salmon, approximately 1.8 million fish were required for escapement objectives, which left 4.4 million sockeye salmon available for harvest to all users in 2012. Assuming that sport and personal use harvests would be slightly higher in proportion to that observed in 2011, the commercial catch in 2012 was projected to be approximately 3.4 million fish. The actual harvest was approximately 3.1 million fish (Appendix B2) or 8% less than preseason expectations. Drift gillnet fishermen accounted for approximately 93% of the 2012 commercial sockeye salmon harvest, or 2.9 million fish, while set gillnet fishermen caught 7% of the commercial harvest, or 209,000 fish (Appendix B2). The 2012 run was allocated to river system using a weighted age-composition catch allocation method, as described by Tobias and Tarbox (1999). GSI samples were collected from the 2012 commercial harvest and will be analyzed at a later date. The last reported commercial fishing activity in any area of UCI in 2012 was September 10.

Table 3.–2012 Upper Cook Inlet sockeye salmon forecast and return.

System	Forecast	Actual	Difference
Crescent River	81,000	88,768	10%
Fish Creek	84,000	33,102	-61%
Kasilof River	754,000	727,751	-3%
Kenai River	4,026,000	4,487,414	11%
Susitna River	443,000	312,498	-29%
Minor Systems	808,000	755,559	-6%
All Systems	6,196,000	6,405,092	3%

In 2012, the harvest from commercial, sport, personal use, subsistence, and educational fisheries was estimated at 4.2 million fish (Appendix A22), which was approximately 13% greater than the 1996–2011 average annual harvest of 3.7 million fish (for the Kenai River, these data include late-run sockeye salmon only). The 2012 sport harvests were estimated based on harvests from similar sized runs. The annual report for 2012 that details harvest survey results for sport harvest

of all salmon will not be finalized until later in 2013 (Jennings et al. 2011). The 2012 personal use harvest estimate of more than 629,000 sockeye salmon was approximately 108% greater than the average annual harvest of 301,200 fish from 1996 to 2011. For more details on the specifics of personal use harvests, including demographics, see Reimer and Sigurdsson (2004), Dunker and Lafferty (2007), and Dunker (2010).

Early in the fishing season, prices for sockeye salmon were much higher than in July. The price paid per pound seemed to stabilize at $1.50/lb by about mid-July. The estimated average price paid per pound for UCI salmon in 2012 can be found in Appendix B11. Based on these estimates, the 2012 UCI sockeye salmon exvessel value of $32.0 million was approximately 45% greater than the previous 10-year (2002–2011) average annual value of $22.0 million (Appendix B7). The 2012 sockeye salmon estimated exvessel value represented 92.3% of the total exvessel value for all UCI salmon.

Big River

The first commercial sockeye salmon fishery to open in UCI in 2012 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 allowed for a small set gillnet fishery in the northwest corner of the Central District beginning on June 1. 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 a.m. to 7:00 p.m. 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. While 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 515 fish; well below the 1,000 fish cap. The 2012 fishery began on Friday, June 1, with harvests reported from 11 different days, yielding a total catch of approximately 13,039 sockeye salmon and 420 Chinook salmon. Of the total harvest, 73% of the sockeye and 84% of the Chinook salmon were caught in the Kalgin Island west side waters, which is statistical area 246-10. There were 28 permit holders that reported participating in the fishery, which was up from recent years, but less than the peak level of effort of 41 permit holders in 1992 (Appendices A3 and A4; Figure 3).

Western Subdistrict

The next commercial fishery to open in 2012 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.

In 2012, the Crescent River sonar program monitored sockeye salmon escapement via Bendix sonar. By the end of June, the cumulative passage estimate indicated that without additional fishing, the upper end of the escapement goal (30,000–70,000 fish) would likely be surpassed. Therefore, EO No. 6 was issued, which opened that portion of the Western Subdistrict south of the latitude of Redoubt Point to continuous fishing beginning at 7:00 p.m. on Monday, July 2. Fishing remained open in this area 24 hours per day through 7:00 p.m. on Monday, July 30,

when EO No. 27 was issued, returning the fishery to its regular schedule of 2 fishing periods per week.

Approximately 29,930 sockeye salmon were harvested by 24 permit holders fishing in the Western Subdistrict set gillnet fishery in 2012 (Appendix A8). The estimated escapement into Crescent Lake was approximately 59,000 fish (Appendix B10). Since 1999, sockeye salmon escapements into Crescent Lake have exceeded the escapement goal range in 11 of 13 years, even with the additional fishing that has been allowed in this area.

Northern District

The set gillnet fishery in the Northern District opens by regulation on June 25 for regular Monday and Thursday 12-hour periods. This fishery is primarily managed through the 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.

Due to concerns over Chinook salmon abundance in northern Cook Inlet streams, the first 2 regular fishing periods in the Northern District set gillnet fishery, which occurred on Monday, June 25 and Thursday, June 28, were closed by EO (Appendix A10).

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. 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 this 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 compliance with the NDSMP and the SSSAP, EO No. 20 was issued, reducing legal gear to one set gillnet per permit, measuring no more than 35 fathoms in length, for all regular Monday and Thursday fishing periods, beginning at 7:00 a.m. on Monday, July 23, 2012. On Thursday, August 2, EO No. 30 modified EO No. 20 and changed legal gear for that portion of the General Subdistrict of the Northern District, south of the Susitna River, to no more than 2 set gillnets per permit, with either net measuring no more than 35 fathoms in length. Legal gear in the remainder of the Northern District remained limited to no more than one set gillnet per permit. By early August it was apparent that coho salmon returns to the Northern District were weak. Because of this, set gillnetting in the General Subdistrict was closed by EO on August 9 and August 13. On August 16, the EO closure was expanded to include all waters of the Northern District. Commercial fishing in the Northern District was closed until further notice on August 20 via EO No. 38. Due to the very weak run of coho salmon to the Little Susitna River, the commercial fishery in the Northern District never reopened after the total closure that began on

August 16. For the 2012 season, approximately 22,580 sockeye salmon were harvested by 71 permit holders in the Northern District set gillnet fishery (Appendices A4 and A8).

Upper Subdistrict Set Gillnet and Central District Drift Gillnet

Management of the set gillnet fishery in the Upper Subdistrict is guided primarily by 5 AAC 21.365 *Kasilof River Salmon Management Plan* (KRSMP) and 5 AAC 21.360 *Kenai River Late-Run Sockeye Salmon Management Plan* (KRLSSMP). There are 2 principal restrictions to the set gillnet fisheries within these plans: 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 times (windows) each week. By regulation, a week is defined as a period of time beginning at 12:00:01 a.m. Sunday and ending at 12:00 midnight the following Saturday (5 AAC 21.360 (i)). Weekly limitations vary according to the time of year and the size of the sockeye salmon run returning to the Kenai River. In light of the fact that the upper end of escapement goals were often exceeded in both the Kenai and Kasilof rivers, the BOF modified the *Upper Cook Inlet Salmon Management Plan* (5 AAC 21.363 (e)) at the 2008 meeting. The BOF stated that while it was their intent that, in most circumstances, ADF&G would 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 as the primary management objective.

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. According to the KRSMP, from the beginning of the fishing season through July 7, the fishery shall remain closed for at least one continuous 36-hour period per week, with the closure to begin between 7:00 p.m. on Thursday and 7:00 a.m. on Friday. In addition, no more than 48-hours of additional fishing beyond the 2 regular weekly periods may be allowed. The KRSMP also states that achieving the lower end of the Kenai River sockeye salmon escapement goal shall take priority over not exceeding the upper end of the Kasilof River optimum escapement goal (OEG) of 160,000 to 390,000 salmon. In essence, the BOF added 50,000 fish to the Kasilof River BEG (160,000 to 340,000 fish) for those years where achieving the lower end of the Kenai River goal (700,000) was in jeopardy.

The Kenai and East Forelands Sections are open from July 8 through August 15. Beginning July 8, the Kasilof Section is managed in combination with the Kenai and East Forelands sections per the KRLSSMP. Until an assessment of the Kenai River sockeye salmon run strength can be made, which in recent years has been around July 25, the Upper Subdistrict set gillnet fishery is to be managed based on the size of the Kenai River run that was projected in the preseason forecast. There are 3 options (or tiers) available for the management of this fishery. First, if the Kenai River sockeye salmon run is projected to be less than 2.3 million fish, there may be no more than 24-hours of additional fishing time per week in the Upper Subdistrict set gillnet fishery. If the Kenai and East Forelands sections are not open during regular or additional fishing periods, ADF&G may limit fishing in the Kasilof Section to an area within one-half mile of the shoreline. There are no mandatory window closures on Kenai River sockeye salmon runs of less than 2.3 million fish. For runs of this strength, if ADF&G projects the Kasilof River OEG of 390,000 may be exceeded, an additional 24 hours of fishing time per week may be allowed within one-half mile of the shoreline in the Kasilof Section after July 15. The second management tier is for Kenai River runs of between 2.3 and 4.6 million sockeye salmon. In this scenario, the Upper Subdistrict set gillnet fishery will fish regular weekly fishing periods, with

no more than 51 additional fishing hours allowed per management week. The fishery is also closed for one continuous 36-hour period per week, beginning between 7:00 p.m. Thursday and 7:00 a.m. Friday, and for an additional 24-hour period on Tuesday from 12:00 a.m. to 11:59 p.m. during the same management week. The third management tier is for Kenai River sockeye salmon runs exceeding 4.6 million fish. ADF&G may allow up to 84 hours of additional fishing time per week, in addition to regular fishing periods, but the fishery will also be closed for one continuous 36-hour period per week beginning between 7:00 p.m. Thursday and 7:00 a.m. Friday.

The KRLSSMP directs ADF&G to manage Kenai River late-run sockeye salmon stocks primarily for commercial uses based on abundance. The commercial, sport, and personal use fisheries harvesting this stock are to be managed to: 1) meet an OEG range of 700,000–1,400,000 late-run sockeye salmon; 2) achieve inriver goals that are dependent upon the size of the Kenai River run; and 3) distribute sockeye salmon escapements evenly within the OEG range, which is primarily achieved by meeting the second objective. At the 2011 BOF meeting, the inriver goal ranges for each of the 3 run-size tiers in the Kenai River were modified as follows: for runs less than 2.3 million fish, inriver goal range of 900,000–1,100,000 fish; at run strengths between 2.3 and 4.6 million fish, inriver goal range of 1,000,000–1,200,000 fish; and for runs greater than 4.6 million, inriver goal range of 1,100,000–1,350,000 sockeye salmon.

As stated earlier in this report, Susitna River sockeye salmon were found to be a stock of yield concern at the 2008 BOF meeting. A reduction in commercial harvest of Susitna River sockeye salmon stocks was to be accomplished through implementation of the *Central District Drift Gillnet Fishery Management Plan* (CDDGFMP) and NDSMP (5 AAC 21.358). Both management plans were modified at the 2008 BOF meeting (Shields 2010) and again at the 2011 BOF meeting. The CDDGFMP states that from July 9 to 15, ADF&G is to restrict the first regular drift fishing period to the Expanded Corridor (Figure 4), while the second regular period during this time frame should be restricted to the Drift Area 1 (Figure 5) and the regular (or narrow) Corridor. From July 16 to 31, there are fishing area restrictions to the drift gillnet fleet that are dependent on the size of the Kenai River sockeye salmon run. For Kenai River sockeye salmon runs less than 2.3 million, fishing during one regular 12-hour period must be restricted to the Expanded Corridor; for runs of 2.3 million to 4.6 million, fishing during one regular 12-hour fishing period per week will be restricted to Drift Area 1 or the Expanded Corridor, but not both together; and for runs greater than 4.6 million, there are no mandatory restrictions.

The purpose of the July 9–15 restrictions was to allow for the passage of northern-bound sockeye salmon, while the July 16–31 restrictions were primarily for conservation of northern-bound sockeye and coho salmon. The SSSAP also required ADF&G to limit the Northern District set gillnet fishery to no more than one 35-fathom set gillnet per permit holder from July 20 through August 6, which represents the time period when the majority of the sockeye salmon run is transiting the Northern District. At the 2011 BOF meeting, there was a modification to this gear restriction, which allowed setnetters in the General Subdistrict of the Northern District south of the Susitna River to fish with 2 nets per permit from July 31 through August 6. These drift and set gillnet commercial fishing restrictions were intended to meet the commercial fisheries conservation burden for protection of Susitna River sockeye salmon stocks as a result of the stock of yield concern status.

The 2012 sockeye salmon preseason forecast had estimated a total run to the Kenai River of between 2.3 and 4.6 million fish (Appendix C1). For runs of this size, the KRLSSMP allowed

no more than 51 hours of additional fishing time per week in the Upper Subdistrict set gillnet fishery; however, the KRSMP provided for an additional 24 hours of fishing time in the Kasilof Section one-half mile fishery after July 15, if ADF&G determined that the Kenai River late-run sockeye salmon run strength was projected to be less than 2.3 million fish and the 390,000 optimal escapement goal for the Kasilof River sockeye salmon may be exceeded. Additionally, from July 9 to 15, for Kenai River sockeye salmon runs of 2.3 to 4.6 million fish, the CDDGFMP required the first regular drift fishing period should be restricted to the Expanded Corridor (Figure 4) and the second regular period be restricted to the Kenai and Kasilof Sections (Figure 6) and Drift Gillnet Area One (Figure 5); and from July 16 to 31, fishing during one regular drift fishing period per week was to be restricted to the Expanded Corridor and Drift Area 1.

With that brief history as a background, a description of the 2012 Upper Subdistrict set gillnet fishery and Central District drift gillnet fishery will be summarized by actions taken each management week, including estimates of commercial harvest, and effects on sockeye salmon passage into monitored watersheds. The 2012 season was atypical due to the fact that poor Chinook salmon abundance in the Kenai River led to severe restrictions of the Upper Subdistrict set gillnet fishery. Because of this, the set gillnet fishery was restricted to a total of 7 fishing periods from June 20 to August 15. With the set gillnet fishery out of the water for most of the season, UCI management staff relied heavily on the drift gillnet fleet to control sockeye salmon escapements to the Kenai and Kasilof rivers. This created a disparity in the harvest and opportunity between the 2 gear groups that normally does not exist.

The regular season for drift gillnetting began on Thursday, June 21, as provided for in the CDDGFMP. The harvest of approximately 625 sockeye salmon from 33 boats was not atypical for early-season drift catches (Appendix A4). For the week of June 24 to June 30, the drift gillnet fleet fished 2 regular periods and harvested a total of 19,949 sockeye salmon. Effort increased throughout the week with 80 boats participating in the fishery on June 25 and 153 boats on June 28. Because of a potentially weak return of Kenai River late-run Chinook salmon, and lagging sockeye salmon passage to the Kasilof river, the regularly scheduled periods for set gillnetting on June 25 and June 28 were closed by EO (EO No. 3 and 4). By June 30, approximately 56,500 sockeye salmon had been enumerated at the Kasilof River sonar site, this level of passage was approximately 30% less than the average cumulative passage for this date (Appendix A2). The cumulative commercial sockeye salmon harvest through June 30 was 20,574 fish (Appendix A4).

For the management week of July 1–7, the drift gillnet fleet fished 2 regular districtwide (in all of the Central District) fishing periods and a 12-hour period in the Kasilof Section. Sockeye salmon harvest and participation from the July 2 (42,080 fish; 301 boats) and July 5 (51,161 fish; 330 boats) drift fishing periods was typical for this time of year (Appendix A4). Because of a much weaker than expected run of Kasilof River sockeye salmon though June 30, EO number 5 closed set gillnetting in the Kasilof Section for the July 2 regular period. However after reviewing catch and escapement data, ADF&G issued EO No. 7 which opened set and drift gillnetting in the Kasilof Section for an 11-hour period on Tuesday, July 3 (Table 4). The Kasilof Section set gillnet fishery was also open on July 5 for a regular 12-hour period (which was extended by 2 hours to facilitate an orderly closure). From July 1 to July 7, the set gillnet fleet harvested 13,792 sockeye salmon, and the drift gillnet fleet harvested 94,317 sockeye

salmon (Appendix A4). As of July 7, cumulative sockeye salmon passage was to the Kenai and Kasilof rivers was nearly 38,000 and 78,000 fish, respectively (Appendix A2).

Beginning July 8, the management of the Upper Subdistrict set gillnet fishery transitioned from the *Kasilof River Salmon Management Plan* to the *Kenai River Late-Run Sockeye Salmon Management Plan*. However, on July 6, all indices used to assess inriver abundance of Kenai River Chinook salmon indicated that the run was below average and would fail to meet inseason management objectives. Therefore, set gillnetting in the Upper Subdistrict was closed on July 9 and July 12 (EO No. 9 and 10) in order to pass Chinook salmon into the Kenai River. The drift gillnet fishing period on July 9 was restricted by regulation to the Expanded Kenai and Expanded Kasilof Sections, and the second period on July 12 was restricted to the Kenai and Kasilof Sections (Narrow Corridor) and Drift Gillnet Area 1. Test fishery indices at the Anchor Point OTF project indicated that a significant number of sockeye salmon were entering the southern part of UCI; because of this and the restrictive actions taken in the set gillnet fishery, a 12-hour period was opened on July 14 (EO No. 11) for drift gillnetting in the Kenai and Kasilof Sections and Drift Gillnet Area 1. Commercial harvest and participation in the drift gillnet fishery steadily increased throughout the week (Appendix A4) with a July8–14 total harvest of 351,249 sockeye salmon (Appendix A4). The cumulative commercial salmon harvest in the Upper Subdistrict set gillnet and drift gillnet fisheries totaled 479,932 sockeye salmon. As of July 14, cumulative sockeye salmon passage to the Kenai and Kasilof rivers was 108,700 and 104,500 fish, respectively (Appendix A2).

Table 4.–Upper Subdistrict set gillnet fishing hours, 2012.

	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 23–Jun 30	48	0	36	36	closed	closed	closed	closed
Jul 1–7	48	23	36	36	closed	closed	closed	closed
Jul 8–14	51	0	24	24	51	0	24	24
			36	36			36	36
Jul 15–21	51	12	24	24	51	12	24	24
			36	36			36	36
Jul 22–28	84	0	36	36	84	0	36	36
Jul 29–Aug 4	84	0	36	36	84	0	36	36
Aug 5–Aug 11	84	24	36	36	84	24	36	36
Aug 12–Aug 13	84	24	36	36	84	24	36	36
Totals	534	83	336	336	438	60	264	264

The management week of July 15 to July 21 produced the majority of commercial sockeye salmon harvest for the 2012 season; as well as large sockeye salmon passage estimates into the Kenai and Kasilof Rivers. Set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict was allowed for a 12-hour regular fishing period on Monday, July 16 (Table 4). However, EO No. 14 closed set gillnetting in the Upper Subdistrict on July 17 until further notice. This action was taken because all indices used to assess inriver abundance of Kenai River Chinook salmon continued to show the run was below average and would fail to meet inseason management objectives. The decision to close set gillnetting in the Upper Subdistrict was also

made in accordance with the *Kenai River Late-Run King Salmon Management Plan*. This was the first time in UCI history that a complete closure of the Upper Subdistrict set gillnet fishery was implemented due to poor Chinook salmon returns to the Kenai River. The Kenai River sport fishery for Chinook salmon was also closed at this time (EO No. 2-KS-1-42-12). With the set gillnet fleet closed by regulation, the drift gillnet fleet became the primary tool to control sockeye salmon passage into the Kenai and Kasilof Rivers. By regulation, anytime the Upper Subdistrict set gillnet fishery is closed, drift gillnetting is also closed within one and one-half miles of the Kenai Peninsula shoreline south of the Kenai River and within one mile north of the Kenai River. During the week, the drift gillnet fleet fished 2 regular 12-hour openings and 51 hours of additional fishing time. In accordance with the CDDGFMP, the first regular 12-hour drift gillnet fishing period on Monday, July 16 was restricted to Drift Gillnet Area 1; the second regular 12-hour period on Thursday, July 19 was open districtwide. The additional 12-hour fishing periods on July 17, 18, and 20 were limited to the Expanded Kenai and Expanded Kasilof Sections in order to reduce the rate of escapement of Kenai River and Kasilof River sockeye salmon, while conserving sockeye salmon bound for the Northern District. On Saturday, July 21, drift gillnetting was allowed for a 15-hour period in Drift Gillnet Area 1 and the Expanded Kenai and Kasilof Sections. Participation in the fishery peaked during this week, with an average of 392 boats participating in open periods (Figures 5 and 6). Sockeye salmon harvests in the drift gillnet fleet were high this week, with a total weekly harvest of 1,750,522 fish. The daily harvest for the regular districtwide opening on July 19 was 611,343 sockeye salmon, which is among the highest daily harvests in UCI history. The sockeye salmon harvest during the July 16 set gillnet opening in the Upper Subdistrict totaled 68,006 fish; a relatively small amount of fish given the magnitude of the drift fleet harvest. The cumulative commercial sockeye salmon harvest in the set gillnet and drift gillnet fisheries through July 21 was 2,298,460 fish. The cumulative estimates of sockeye salmon passage on July 21 to the Kenai and Kasilof rivers were approximately 695,558 and 219,060 fish, respectively (Appendices A2 and A4). The Kasilof River met the lower bound of its sockeye salmon OEG (160,000 fish) on July 17.

During the management week of July 22–28, UCI fishery managers faced the challenge of slowing the rate of sockeye salmon passage to the Kenai and Kasilof rivers with one gear group (the drift gillnet fleet) while conserving northern bound stocks of sockeye and coho salmon. Additionally, on July 25, commercial fisheries staff estimated the total Kenai River sockeye salmon run through July 23 to be 3.3 million fish; the final run to the Kenai River was expected to exceed 4.6 million fish. With the inseason assessment, commercial fisheries management now fell under the guidelines for run sizes greater than 4.6 million Kenai River sockeye salmon. Changes in management included: (1) an increase in the Kenai River sockeye salmon inriver goal range of 1.0–1.2 million fish to 1.1–1.35 million fish; and (2) no more mandatory restrictions on regular Monday and Thursday fishing periods. During the week, the drift gillnet fleet fished 2 regular 12-hour periods and 61 hours of additional fishing time in the Expanded Kenai and Expanded Kasilof Sections. The harvest and participation in the July 22 opening in the Expanded Kenai and Expanded Kasilof Sections was very low, with only 97 boats fishing harvesting 23,000 sockeye salmon. However, 434 boats participated in the districtwide regular period on July 23 and harvested approximately 370,000 sockeye salmon (Appendix A4). In order to slow the rate of passage to the Kenai and Kasilof rivers, the regular period on July 23 was extended by 4 hours in the Expanded Kenai and Kasilof Sections and a 16-hour period and a 14-hour period were allowed in the Expanded Corridor on July 24 and July 25, respectively. Although no mandatory restrictions were in place (due to the inseason run assessment) for the July 26 regular period, the drift fleet was

restricted to Drift Gillnet Areas 1 and 2 in order to conserve northern bound stocks of sockeye and coho salmon (Figures 5 and 6; Appendix A4). Additional fishing time was allowed in the Expanded Kenai and Expanded Kasilof Sections for July 27 (13 hours) and July 28 (13 hours). A decrease in sockeye salmon harvest and effort was observed for the July 27 (4,536 fish; 159 boats) and July 28 (1,745 fish; 46 boats) fishing periods; decreases in participation and harvest in the drift fishery is typical for late July as the sockeye salmon run begins to slow. For the management week, drifters harvested approximately 687,000 sockeye salmon. The total sockeye salmon harvest in UCI through July 28 was 2,989,426 fish Appendix A4). The cumulative sockeye salmon passage estimates through July 28 were 1,197,883 fish in the Kenai River and 327,155 fish in the Kasilof River (Appendix A2). The lower bound of the Kenai River inriver goal (1.1 million sockeye salmon) was met on July 27.

Drift gillnet fishing during the week of July 29 through August 4 was limited to two 12-hour regular periods and 12 hours of additional fishing time in the Expanded Kenai and Expanded Kasilof Sections. The regular period on Monday, July 30 was restricted to Drift Areas 1 and 2, and the Expanded Kenai and Expanded Kasilof Sections. This strategy was employed in order to harvest surplus Kenai and Kasilof river sockeye salmon while reducing harvest of northern bound coho salmon. While participation was relatively high during the July 30 period (314 boats), sockeye salmon harvest was relatively low (16,639 fish); the low harvest could be explained by poor weather conditions experienced in UCI on that day. The additional 12-hour period in the Expanded Corridor on July 31 was intended to harvest surplus Kenai River and Kasilof River sockeye salmon; however only 39 boats harvested 1,062 fish. The opening on Thursday, August 2, was restricted to Drift Area 1 and the Expanded Corridor, again, in order to protect northern bound coho salmon. Despite the significant restrictions placed on the set gillnet fishery, concerns over weak Kenai River Chinook salmon persisted as all inriver indices of abundance indicated the likelihood of ensuring minimum escapement levels without further restrictions was low. These concerns prompted the closure of the set gillnet fishery on the August 2 regular period. A total of 18,337 sockeye salmon were harvested in the drift gillnet fishery during this management week, with only 636 fish harvested in the August 2 regular period (Appendix A4). Throughout the week of July 29 to August 4, the rate of sockeye salmon passage to the Kenai River and Kasilof River slowed considerably. Through August 4, the cumulative passage of sockeye salmon to the Kenai River was 1,437,337 fish, which exceeded the upper bound of the inriver goal (1.35 million fish). The cumulative passage of sockeye salmon to the Kasilof River was 359,693 fish through August 4 (Appendix A2).

The management week of August 5–11 was limited to 2 regular 12-hour districtwide fishing periods for drift gillnetting. Participation and sockeye salmon harvest were low for both periods. On August 6, 111 boats harvested 1,654 sockeye salmon, while on August 9, 39 boats harvested 344 sockeye salmon (Appendix A4). By August 6, inriver indices of abundance for Kenai River Chinook salmon indicated passage to date would likely provide for an adequate spawning escapement. Based on this information, set gillnetting was allowed in the Upper Subdistrict for two 12-hour regular periods on August 6 and August 9. The sockeye salmon harvest for these 2 periods was 9,308 fish for August 6 and 3,074 fish for August 9. Similar to the previous week, sockeye salmon passage to the Kenai and Kasilof rivers slowed. Through August 11, the cumulative sockeye salmon passage to the Kenai River was 1,529,709 fish and 372,381 fish to the Kasilof River (Appendix A2).

By regulation, the Upper Subdistrict set gillnet fishery and the Central District drift gillnet districtwide fishery may fish regular periods only from August 11–15. However, at the 2011 BOF meeting, the *Cook Inlet Pink Salmon Management Plan* (5 AAC 21.354) was adopted, that allowed for up to 2 additional fishing periods to occur during the August 11–15 time frame, but only if specific harvest provisions were met (for specifics of this plan, please see the pink salmon section in this report). Per the new pink salmon plan, a fishing period was opened for drift gillnetting in the Kenai and East Forelands Sections and for setnetters in the Upper Subdistrict on Sunday, August 12. Due to the mesh size restriction for both gear types, and the limited area open to drifting, participation was limited. No sockeye salmon were harvested in the drift fleet and only 564 sockeye salmon were taken by setnetters. The regular fishing period on Monday, August 13, was opened for drifting districtwide and for all of the Upper Subdistrict set gillnet fishery. Only 15 drift boats fished, capturing 40 sockeye salmon, while setnetters caught about 1,900 fish (Appendix A4). The set gillnet fishery in the Upper Subdistrict closed by regulation after the August 13 open period. According to the CDDGFMP, regular fishing periods after August 15 will be restricted to Drift Areas 3 and 4 (Figure 7). The drift gillnet fleet harvested only 50 sockeye salmon from August 16 to September 10 (Appendix A4).

Chinitna Bay was opened by emergency order to drift gillnetting for 12-hour fishing periods on Mondays, Wednesdays, and Fridays, beginning on Monday, August 27. This action was taken after aerial census surveys revealed the chum salmon escapement goal for Chinitna Bay had been achieved. The total sockeye salmon harvest in 2012 from drifters in Chinitna Bay was only 4 fish (Appendix A4).

For the 2012 season, the drift gillnet fishery harvested approximately 2,924,144 sockeye salmon in all of UCI, while the set gillnet fishery in the Upper Subdistrict harvested 96,637 sockeye salmon (Appendix A4). The enumeration of Kenai River sockeye salmon ended on August 16 with a final passage estimate of 1,581,555 fish; the enumeration of Kasilof River sockeye salmon ended on August 13 with a final passage estimate of 374,523 fish (Appendix A2).

Kalgin Island Subdistrict

The estimated sockeye salmon harvest in the Kalgin Island Subdistrict in 2012 was approximately 56,688 fish, with roughly 9,479 fish being taken on the west side of the island (Statistical Area 246-10) during the Big River sockeye salmon fishery (Appendix A4). No additional openings beyond the Monday and Thursday regular periods were provided in the Kalgin Island Subdistrict in 2012. A remote video system used to estimate sockeye salmon escapement at Packers Lake was not operational for the entire run; the likely cause was a failure to recharge batteries due to inadequate solar radiation.

COHO SALMON

The 2012 commercial coho salmon harvest of approximately 107,000 fish was the fifth lowest catch in UCI since 1966. The harvest was approximately 43% less than the previous 10-year average annual harvest of 187,000 fish, and nearly 65%, or 193,000 fish less than the 1966–2011 average annual harvest of 302,000 fish (Appendix B3). The stock status and outlook section of this report has additional discussion on coho salmon stocks.

Drift gillnetters were allowed to fish beyond August 13, but only in Drift Areas 3 and 4, and in Chinitna Bay, beginning on August 29. Fishing periods in Drift Areas 3 and 4 were 12 hours in duration and occurred on Monday and Thursday (Drift Area 3 is comprised of waters only within

one mile of mean lower-low water on the west side of Cook Inlet), while Chinitna Bay 12-hour openings occurred on Monday, Wednesday, and Thursday. The estimated coho salmon harvest by drift gillnetters after August 13 was approximately 2,830 fish (Appendix A5). The total coho salmon harvest in the UCI drift gillnet fishery for 2012 was 74,678 fish, which is 29% less than the 2002–2011 average of 105,243 fish (Appendix B3).

The exvessel value of coho salmon from the 2012 UCI commercial fishery was approximately $480,000 or 1.4% of the total exvessel value (Appendix B7). This was the ninth lowest coho salmon exvessel value since 1995. The average price paid for coho salmon was estimated at $0.75/lb (Appendix B11), which was the third highest price since 1988.

PINK SALMON

The 2012 UCI harvest of approximately 469,411 pink salmon was 42% less than the average even-year harvest since 1966 (Appendices A6 and B4). A likely cause for the less than expected harvest in 2012 was the lack of fishing time in the set gillnet fishery in the Upper Subdistrict. Normally, pink salmon are taken in significant quantities in UCI between late July and early August. In 2012, an additional 12-hour fishing period was allowed on Sunday, August 12 for set gillnetting in the Kenai, Kasilof, and East Foreland Sections of the Upper Subdistrict and drift gillnetting in the Kenai and East Foreland Sections under the *Cook Inlet Pink Salmon Management Plan*, which was adopted at the 2011 BOF meeting. According to this new management plan, from August 11 to 15, the commissioner may, by EO, open a commercial pink salmon fishery in an even-numbered year for up to two 12-hour fishing periods, if sockeye salmon escapement goals are being met in the Kenai River and Kasilof rivers and coho salmon run strength is sufficient to withstand additional harvest. The first period will be fished if, during the regular fishing periods from August 6 to 10, the daily harvest of pink salmon meets or exceeds 50,000 fish or the cumulative harvest is 100,000 or more pink salmon. The second period will be fished only if 50,000 or more pink salmon and no more than 2,500 coho salmon are harvested during the first period. Additionally, set and drift gillnets may not have a mesh size greater than four and three-quarters inches and may not be operated within 600 feet of the shoreline. The term shoreline is defined as the point where the water meets the shore at any stage of the tide. The August 12 pink salmon commercial fishery was warranted because 1) the pink salmon harvest from the regular fishing period on August 9 exceeded 50,000 fish; 2) sockeye salmon goals had been met in the Kenai and Kasilof rivers; and 3) coho salmon run strength was sufficient to withstand additional harvest. Pink salmon harvest from the drift and east side set gillnet fisheries was approximately 60,000 fish on August 9; cumulative sockeye salmon passage through August 9 was approximately 1,506,000 in the Kenai River and 369,000 in the Kasilof River; and the average east side set gillnet coho salmon harvest from the August 6 and 9 fishing periods averaged 2,298 fish per period with less than average effort. This was greater than the average coho salmon harvest of 1,820 fish per regular fishing period in August during the previous 10 years (2002–2011). The harvest of pink salmon (14,036 fish) and coho salmon (534 fish) from the August 12 period was much lower than expected, and was due in part to low participation. Because of the low pink salmon harvest from the first period, the second period was not warranted. The average price paid for pink salmon in 2012 was approximately $0.30/lb (Appendix B11), resulting in an exvessel value for this species of $624,000, or 1.8% of the total exvessel value (Appendix B7).

CHUM SALMON

Approximately 269,000 chum salmon were harvested by UCI commercial fishermen in 2012, which was the largest harvest in the past 10 years and nearly 123% more than the previous 10-year average annual harvest of 120,000 fish; however, the 2012 harvest was 40% less than the average annual harvest of 446,000 fish taken from 1966 to 2011 (Appendix B5). Assessing chum salmon stocks based only on recent harvest trends is dubious. For example, the drift gillnet fleet is the primary harvester of chum salmon, but drift gillnet fishing time in the Central District varies greatly from year to year. Restrictions to the drift gillnet fleet are implemented primarily to conserve northern bound sockeye and coho salmon, but these restrictions also result in harvest reductions of chum salmon. While, area restrictions were implemented to conserve northern bound salmon stocks, the drift fleet was fished extensively in the Expanded Kenai and Expanded Kasilof Sections in an attempt to control sockeye salmon escapement to the Kenai and Kasilof rivers. The estimated chum salmon harvest in the Expanded Corridor during 2012 was only 29,000 fish (Appendix A7). On July 21, an additional fishing period for drift gillnetting was provided in Drift Area 1 and the Expanded Corridor, with a chum salmon harvest of 35,000 fish. Again, making definitive statements about chum salmon stocks based solely on harvest data must always be viewed with the understanding that fishing time and areas fished are often regulated to conserve harvest of other species, which can affect the number of chum salmon that are harvested.

Emergency Order No. 39 opened drift gillnetting in the Chinitna Bay Subdistrict of the Central District on Mondays, Wednesdays, and Fridays from 7:00 a.m. until 7:00 p.m., beginning Monday August 27, in order to harvest surplus chum salmon bound for Clearwater Creek and the Chinitna River. The status of chum salmon will be discussed further in the stock status and outlook section of this report.

The 2012 exvessel value for chum salmon was approximately $1,457,916, or 4.2% of the overall exvessel value of the 2012 fishery (Appendix B7). This was the highest exvessel value since 1995. The average price paid for chum salmon in 2012 was estimated to be $0.80/lb (Appendix B11), the second highest average price per pound since 1970.

PRICE, AVERAGE WEIGHT, AND PARTICIPATION

The estimated average price per pound paid to UCI commercial fishermen for their catch in 2012 was very similar to prices paid in 2011 (Appendix B11). For sockeye salmon, the estimate of $1.50/lb was the third highest price ever paid. As mentioned earlier in this report, it must be noted that calculating the average price for what fishermen receive for their catch is becoming more difficult to estimate. Since the late 1990s, farmed salmon have been finding a niche in global markets. In 1998 and 2000, the UCI sockeye salmon harvests were some of the poorest catches on record. These factors led to a marked reduction in the prices paid for wild-caught salmon, forcing many fishermen to search for markets where they could receive higher prices for their catches. Additionally, in recent years, there has been a marked increase in the price paid for salmon caught early in the season, because local markets have kept demand high for early-season fresh fish. A combination of these various market forces have helped expedite a change in the way that UCI salmon are handled at the time of catch. In recent years, the UCI commercial salmon fishing industry has emphasized quality of the final product. Many fishermen now bleed and ice their catch immediately upon harvest. This emphasis on quality has played an important

role in an increase in the price that fishermen are receiving from processors, as well as in individual markets.

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 2012.

The average weight by species from the 2012 commercial harvest was comparable to historical averages, other than for Chinook salmon (Appendices A14 and B12). The 17.2 pound average weight of Chinook salmon from all commercial fisheries in 2012 was 33% less than the 1970–2011 average of 25.7 pounds and was the smallest average weight since 1970. The primary explanation for the decline in Chinook salmon average weight can be attributed to the fact that the Upper Subdistrict set gillnet fishery was so highly restricted in 2012. This gear group is the primary commercial harvester of UCI Chinook salmon, taking approximately 66% of the total Chinook salmon catch each year (Appendix B1). In 2012, the Upper Subdistrict harvest fell to only 28% of the total. The remaining 62% of the Chinook salmon harvest came from areas where Chinook salmon average weights are significantly smaller than those in the Upper Subdistrict set gillnet fishery (Appendix A14).

From 2002 to 2011, the average annual age composition (percentage of total harvest) of the Upper Subdistrict set gillnet commercial harvest of Chinook salmon that had spent 2 years or less in salt water was 42%, nearly twice the 1987–2001 average of 24% (Appendix A15). The 2012 age composition data was much closer to the historical average; with approximately 27% of the Upper Subdistrict set gillnet harvest comprised of fish that had spent 2 years or less in salt water (Figure 8).

Commercial Fisheries Entry Commission (CFEC) showed 569 active drift gillnet permits in the Cook Inlet area in 2012, with 72% issued to Alaskan residents (Appendix B13). Of this total, 496 reported fishing in 2012 (Appendix A8). CFEC also showed 736 active set gillnet permits in Cook Inlet, with 83% being issued to Alaskan residents. From this total, 457 reported fishing in Cook Inlet in 2012, with 442 fishing in UCI and 15 permits fished in Lower Cook Inlet. A total of 20 shore-based processors purchased UCI fishery products in 2012, as well as 10 direct marketing vessels, one floating processor, and 24 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 2011 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 commercially-oriented hatchery that is fully operational in UCI, the Trail Lakes facility operated by 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 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.

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 benefits UCI commercial, personal use, educational, and recreational fisheries. In 2012, CIAA released approximately 948,000 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 17 to July 8, 2012, CIAA enumerated approximately 312,000 sockeye salmon smolt emigrating Hidden Lake, of which approximately 66% were estimated to be of hatchery origin (Wendy Gist, Commercial Fisheries Technician, ADF&G, Soldotna, Alaska, personal communication). Adult salmon are also sampled and examined for hatchery otolith marks when they swim through the weir at Hidden Creek.

Since 1975, a sockeye salmon enhancement project has been conducted at Big Lake, located in the Matanuska-Susitna Valley, approximately 15 miles west of Wasilla (Figure 1). AFD&G directed the stocking program through 1992, but beginning in 1993 CIAA conducted gamete collection, incubation, and release activities. After the 2008 season, CIAA ceased stocking fry and smolt in Big Lake (see the stock status section of this report for further details on Big Lake sockeye salmon). Thus, there were no juvenile salmon released at Big Lake in 2012. As a result of terminating enhancement activities in Big Lake, CIAA also ceased the smolt enumeration project at Fish Creek, which drains out of Big Lake. ADF&G is currently conducting the smolt enumeration project at Fish Creek. In 2012, approximately 190,000 sockeye salmon smolt were enumerated emigrating from Big Lake (Table 5).

Table 5.–Production of sockeye salmon in Big Lake, 1997–2012.

	Total			Spring Fry	Fall Fry	Smolt	Smolt Emigration	
Year	Run	Weir	Spawners	Release	Release	Release	Age-1	Age-2
1997	131,814	54,656	48,513	4,018,000				
1998	45,622	22,859	18,789	5,000,000				
1999	45,714	26,749	25,199		197,000			
2000	37,635	19,533	16,704	846,000				
2001	70,013	43,486	39,093					
2002	133,640	90,483	86,181	4,316,000				
2003	149,586	91,743	86,858	3,589,000			114,654	2,340
2004	42,160	22,157	20,065	5,000,000			251,195	25,632
2005	21,967	14,215	12,140	1,742,300			135,739	22,623
2006	36,567	32,562	26,712	444,200	426,000		205,135	19,307
2007	48,277	27,948	23,845	3,812,400	702,500	315,700	278,351	30,928
2008	26,872	19,339	19,314	3,610,000		433,000	592,919	38,785
2009	121,965	83,477	83,477					
2010	209,000	126,826	126,826					
2011	119,528	66,183	66,183					
2012	32,460	18,813	18,713				178,081	11,857

Due to a ruling issued by the U.S. Ninth Circuit Court of Appeals in 2003 (Shields 2007), stocking activities were terminated in Tustumena Lake after the sockeye salmon fry release in 2004. Therefore, 2010 was the first year since the late 1970s that no hatchery-produced sockeye salmon returned to Tustumena Lake.

CIAA conducts other activities that benefit wild salmon production, such as removal of beaver dams, installation and monitoring of flow control structures, and other seasonal barrier modifications.

STOCK STATUS AND OUTLOOK

Overall, the status of UCI monitored salmon stocks is positive; however, some stocks warrant detailed review. These stocks include Susitna River and Fish Creek (Big Lake) sockeye salmon and 6 Northern District Chinook salmon stocks.

Sockeye Salmon

A run of 6.2 million sockeye salmon was forecast to return to UCI in 2012, with an expected harvest by all user groups of approximately 4.4 million fish (Appendix C1). This forecast was about 0.4 million fish above the 20-year average harvest by all user groups of 4.0 million fish. The actual run was approximately 6.4 million fish (Table 6), resulting in a total harvest of approximately 4.2 million fish, with 3.1 million caught by commercial gillnets and an estimated 1.1 million fish taken by sport, personal use, educational, and subsistence fisheries (Appendix A22). The total harvest includes an estimate of the number of fish taken in sport fisheries; the sport harvest is published as *Estimates of participation, catch, and harvest in Alaska sport fisheries* (e.g., Jennings et al. 2011).

Table 6.–Upper Cook Inlet sockeye salmon run, 2012.

System	Commercial Harvest	Escapement	Other Harvest	Total
Crescent River	29,930	58,838	0	88,768
Fish Creek	14,039	18,713	350	33,102
Kasilof River	257,220	372,523	98,008	727,751
Kenai River	2,276,692	1,261,455	949,267	4,487,414
Susitna River	148,785	157,719	5,995	312,499
All Others	407,135	321,284	27,140	755,559
Totals	3,133,801	2,190,532	1,080,760	6,405,093

Susitna River

Since 1976, Susitna River sockeye salmon total annual runs were estimated to have ranged from 147,000 to 773,000 fish (Fair et al. 2009). Total run size estimates were arrived at by summing 1) the number of fish harvested in the various commercial fisheries using a weighted age-composition catch allocation method, as described by Tobias and Tarbox (1999); 2) the number of fish harvested in recreational and subsistence fisheries; and 3) the number of fish escaping into the entire watershed, which was estimated with Bendix sonar and fish wheel species apportionment in the Yentna River, that was multiplied by 1.95 to represent the entire Susitna River drainage escapement (Fried 1996). From 1986 to 2001, the escapement goal for Susitna River sockeye salmon was a BEG, which was predicated on an escapement of 100,000 to

150,000 fish in the Yentna River (Appendix B10). Beginning in 2002, ADF&G changed the BEG for the Susitna River to an SEG range of 90,000–160,000 sockeye salmon for the Yentna River, because stock-specific estimates of the harvest and total run to the Susitna River were considered unreliable.[1] In 2005, the BOF added a Yentna River sockeye salmon OEG of 75,000–180,000 fish for years when the Kenai River total sockeye salmon run exceeded 4 million fish. For more details on previous studies pertaining to sockeye salmon in the Susitna River drainage, see Tarbox and Kyle (1989); Kyle et al. (1994); King and Walker (1997); Edmundson et al. (2000); and Todd et al. (2001).

The 2007 UCI annual management report (Shields 2007) provided details about the declining sockeye salmon runs to the Susitna River drainage over the past decade (using the method just described to enumerate the runs). In response to diminishing runs, research objectives were defined and studies were funded beginning in 2006 to help ADF&G better understand sockeye salmon production in the watershed. These studies included: 1) mark–recapture and radiotelemetry projects intended to estimate the number of sockeye salmon entering the system, which also allowed for the identification of spawning areas in the drainage; 2) limnological investigations of numerous lakes throughout the drainage to assess production potential; 3) fry and smolt population estimates in as many as 7 different lakes; 4) evaluation of the effects of northern pike (*Esox lucius*) predation and beaver dams on production; and 5) a comprehensive GSI study of sockeye salmon fisheries in UCI to determine the river of origin of all harvested fish. Based upon the results from the 2006 season, minor modifications to the GSI project were implemented.

Although the final summary report from these studies was not available at the time this report was published (please see Yanusz et al. 2007 for results from the first 2 years of the study), preliminary population estimates, which included the number of adult salmon counted through weirs at lakes in the Yentna River drainage upstream of the sonar site, revealed the Bendix sonar/fish wheel species apportionment program was significantly underestimating sockeye salmon passage in the Yentna River (Appendix A12). Deployment of a DIDSON resulted in substantially more fish targets being ensonified than with the Bendix sonar, but the improved sonar technology could not resolve the species apportionment issue. This became evident when escapements counted through weirs at 2 lakes (Chelatna and Judd) in the Yentna River drainage exceeded the Bendix passage estimate for the entire river. In addition, mark–recapture population estimates for the Susitna drainage corroborated the fact that the Bendix sonar passage estimates were significantly biased low. Moreover, data from 2009 would seem to indicate that the Bendix sonar/fish wheel species apportionment program was likely not a reliable index of escapement. A closer look at the most recent data will illustrate this.

In 2009, the total sockeye salmon escapement estimate into the Susitna River drainage was 275,000 fish. This number was derived by summing the weir counts at Chelatna, Judd, and Larson lakes and then using the average ratio of cumulative weir counts to mark–recapture population estimates to expand to a drainagewide estimate. In 2009, DIDSON was used instead of Bendix sonar at the Yentna River to estimate the daily and annual sockeye salmon passage. The DIDSON estimates were then converted to Bendix-equivalent units using the ratio between the 2 sonar units from previous years when they operated side-by-side. Using the DIDSON-Bendix converted estimate, the ratio between the Bendix count and the drainagewide escapement estimate in 2009

[1] Bue, B. G., and J. J. Hasbrouck. *Unpublished*. Escapement goal review of salmon stocks of Upper Cook Inlet. Alaska Department of Fish and Game, Report to the Alaska Board of Fisheries, November 2001 (and February 2002), Anchorage.

was approximately 9.7. The mean ratio between the sockeye salmon mark–recapture abundance estimates for the entire Susitna River drainage and the Yentna River Bendix sonar estimates from 2006 to 2008 was 4.2. That is, the mark–recapture population estimates were more than four times higher than the Bendix sonar counts during this 3-year time frame. Therefore, it appears the sonar estimate was biased even lower in 2009 than in earlier years; most likely due to fish wheel selectivity and the large number of odd-year pink salmon migrating up the Yentna River. These data support the conclusion that the sonar estimates, without proper correction for fish wheel selectivity, may not be an index of the actual escapement. These data also suggest that achievement of the Yentna River sockeye salmon goal in previous years may have been obtained more often than was originally stated. It is possible that escapements exceeded the goal range in some years when the Bendix sonar/fish wheel passage estimate had indicated otherwise.

At the 2008 BOF meeting, when it was reported that the Bendix sonar/fish wheel species apportionment program had likely been underestimating sockeye salmon passage for years, a debate ensued about the origins of the escapement goal and how salmon escapements were enumerated. It was generally acknowledged that Susitna River sockeye salmon production had declined, but questions were raised about the escapement goal, including 1) how it was originally set; 2) whether or not Yentna River sockeye salmon passage estimates were an index of abundance; and 3) how fisheries (sport and commercial) should be managed with respect to the new information about undercounting bias. It was during this meeting that the SSSAP, outlined earlier in this report, was developed and adopted.

In May 2008, Senate Concurrent Resolution No. 21 was adopted, forming the Cook Inlet Sockeye Salmon Task Force. The task force, composed of 5 members from the Alaska Senate and 5 members from the House of Representatives, was established to 1) examine the conservation and allocation issues in fisheries management of Cook Inlet; 2) scrutinize the economic effect of Cook Inlet salmon and the maximum benefit of those salmon to the people of Alaska; and 3) investigate the legal and constitutional issues of a permit buyback program, thus reducing the number of commercial fishing permits in Cook Inlet. Between May 2008 and January 2009, the task force held 5 public meetings during which ADF&G provided a substantial amount of reports and written material, as well as oral testimony, which included a historical perspective of sockeye salmon research and management of Susitna River sockeye salmon stocks. Public testimony was also heard at meetings held in Soldotna and in Wasilla. The task force committed to summarize its findings in a report that would be submitted to the legislature on the first day of the 26th Alaska State Legislature (January 2009). The report was to include 1) the short-term and long-term uses of Cook Inlet salmon consistent with the maximum benefit principle contained within Article VIII, Section 2, Constitution of the State of Alaska; 2) specific proposals to address the conservation issues in the Northern District; and 3) options to reduce allocative conflicts in Cook Inlet, which may have included a buyback program.

As a result of the data revealing that sockeye salmon were being undercounted in the Yentna River, ADF&G commissioner Denby Lloyd initiated an out-of-cycle Susitna River sockeye salmon escapement goal review in late 2008 (Fair et al. 2009). This analysis concluded that the existing escapement goal for the Susitna River drainage was inappropriate. The report from these analyses recommended the Yentna River sockeye salmon SEG be eliminated and replaced with 3 lake SEGs, as described earlier in this report. Fair et al. (2009) also recommended the research studies that were initiated in the Susitna River drainage in 2006 be continued, with 2 additional objectives: 1) add fish wheel selectivity experiments that might allow historical

Bendix estimates of passage to be adjusted to more accurately reflect past escapements in the Yentna River; and 2) test sources of error with the DIDSON system at the Yentna River sonar site to help improve sockeye salmon passage estimates. These and other studies were continued through the 2012 field season.

The formation of individual lake sockeye salmon escapement goals within the Susitna River drainage represented a departure from approximately 30 years of management with a Yentna River drainage sonar escapement objective. Some stakeholders expressed concerns that the new escapement goals provided no inseason direction to commercial fisheries management. It must be noted, though, that when the sonar project was in operation, there was a lag time of 2 to 3 weeks for sockeye salmon to swim from the Central District to the sonar site at the Yentna River. Therefore, any savings from a closure or restriction to the drift fleet in the Central District could not be measured for weeks, and accurate correlation of the number of fished saved from a restriction or closure was not possible. Thus, when the SSSAP was developed it maintained the mandatory restrictions to both the Central District drift gillnet fishery and the Northern District set gillnet fishery that were believed to provide for adequate conservation of northern-bound sockeye salmon stocks. In contrast, the SSSAP required no mandatory restrictions for any of the sockeye salmon sport fisheries in the Susitna River drainage. The mandatory restrictions to commercial fishing in the SSSAP (and CDDGFMP) include 4 regular period restrictions to the drift gillnet fleet in July for Kenai River sockeye salmon runs of less than 4.6 million fish (77% of all Kenai River runs since 1978). Furthermore, the Northern District set gillnet fishery was limited to fishing no more than one-third of its full allotment of gear from July 20 through August 6, which is the time period when the bulk of the Susitna River sockeye salmon run is transiting the Northern District marine waters. There was a moderate relaxation of this restriction for part of the Northern District beginning in 2011 (see the Regulatory Changes section of this report for specifics).

The 2009 season marked the first year where the sonar project in the Yentna River was not used for inseason management of sport and commercial fisheries. All restrictions just outlined in the CDDGFMP and SSSAP were observed in 2009–2012. At the 2011 BOF meeting, ADF&G recommended continued designation of Susitna River sockeye salmon as a stock of yield concern. The BOF accepted this recommendation. The impetus behind this endorsement was to provide more time for the studies, just described, to provide critical information needed to formulate management strategies that will, hopefully, lead to increased yields from these stocks. At the 2011 meeting, modifications were made to the CDDGFMP in order to further reduce drift gillnet harvest of northern-bound sockeye salmon (Shields and Dupuis 2012).

The 2012 sockeye salmon run forecast for the Susitna River was 443,000 fish, which was 50% less than the 20-year average run of 881,000 fish. This forecast was derived from historical aggregate weir counts, rather than sonar and age composition allocation models. This was the third year a weir-based method was used for the forecast. The 20-year average run was calculated by expanding sonar abundance estimates using mark–recapture and genetic stock composition estimates. The 2012 total sockeye salmon run was estimated to be approximately 312,000 fish (using the escapement and the mean harvest rate estimated from genetic stock composition of the commercial harvest in 2007–2010). Two of three lake escapement goals were achieved (Larson and Chelatna lakes), with the goal of 25,000–55,000 fish at Judd Lake being missed by approximately 7,600 fish (Table 1).

In summary, the status of Susitna River sockeye salmon stocks is somewhat pessimistic. Recent data show the sonar program that was used to estimate passage in the Yentna River for

approximately 30 years was biased significantly low. Transition to the DIDSON resulted in more targets being ensonified, but issues with fish wheel selectivity made passage estimates by species unreliable. Studies are continuing in an attempt to quantify fish wheel selectivity so that corrections can be made to species apportionment of sonar passage estimates. In the meantime, escapements goals have been established and are being monitored at three lakes that are known to be the major producers of sockeye salmon in the drainage. Sockeye salmon production from these three lakes appears to be very stable. However, there are numerous lakes within the Susitna River drainage that are experiencing low production. Northern pike predation, in combination with partial to total blockage of adult salmon migration by beaver dams in some drainages, have resulted in significant negative impacts on sockeye salmon yields.

Shell Lake, located near Skwentna in the Susitna River drainage, has experienced declines in adult sockeye salmon returns since 2009 (http://www.ciaanet.org/). In 2011 and 2012, large numbers of pre-spawn, adult sockeye salmon were found dead in the lake. A pathology analysis from samples collected in 2012 revealed that *Loma salmonae*, a parasite that usually causes disease in a hatchery setting, was the main pathogen associated with the pre-spawning mortality. In addition to a decline in adult salmon returns, estimates of smolt emigration have declined over the same time period; only 24 smolt were counted leaving Shell Lake in 2012 (http://www.ciaanet.org/). In response to the observed decline, CIAA spawned 34 pairs of Shell Lake sockeye salmon with the intent of rearing the fish in a hatchery setting and releasing them back into the lake (Caroline Cherry, CIAA, personal communication).

Current restrictions to commercial fishing time, gear, and areas fished per the SSSAP have reduced exploitation on all Susitna River sockeye salmon stocks. However, numerous lakes in the system continue to produce few to no sockeye salmon smolt, which means adult yields will continue to be negligible. Therefore, unless the impacts from pike predation, disease, and beaver dams can be significantly reduced, the total sockeye salmon production in the Susitna River drainage will continue to suffer, regardless of the amount of restrictions placed on commercial fisheries.

Crescent River

After experiencing record-level runs through the mid to late 1980s, Crescent River sockeye salmon runs declined dramatically and remained depressed throughout most of the 1990s. Since 2000, however, sockeye salmon runs to Crescent Lake have revealed marked improvement (Table 7). For a more thorough review of sockeye salmon production at Crescent Lake, please see Edmundson and Edmundson (2002) and the 2009 UCI annual management report (Shields 2010).

Table 7.–Crescent Lake sockeye salmon average escapement, harvest and run, 1976–2012.

Decade	Average Annual Escapement (thousands)	Average Annual Commercial Harvest (thousands)	Average Annual Total Run (thousands)
1976–1979	75	56	130
1980–1989	87	82	169
1990–1999	50	23	73
2000–2012	87	45	132

[a] Sonar project was not run in 2009; escapement data for this year was estimated based on catch statistics.

Since 1999, an aggressive fishing schedule with set gillnets in the Western Subdistrict south of Redoubt Point has occurred in an attempt to keep escapements within the BEG range for this system. In 2012, this area was opened 24 hours per day from July 2 through July 30 (Appendix A11). Many fishermen and nearly all processors abandoned the fishery during the 1990s because of diminished returns and considerable restrictions placed on the fishery in order to achieve escapement goals. Since then, participation in this fishery has remained relatively low, resulting in an average annual exploitation rate on Crescent River sockeye salmon stocks from 2000 to 2012 of 34%.

Approximately 30,000 sockeye salmon were harvested by set gillnetters in the immediate area around the Crescent River terminus in 2012. The BEG for Crescent Lake sockeye salmon is set at 30,000–70,000 fish. Since 1999, escapements in 12 of 14 years have exceeded the upper end of the escapement goal range (Appendix B10). At this time, the outlook for Crescent Lake sockeye salmon is positive.

Fish Creek

From 1997 to 2012, sockeye salmon runs to Fish Creek, which drains Big Lake and flows into Knik Arm, have been highly variable, as evidenced by the inconsistent achievement of meeting the escapement goal for this system (Appendix B10). ADF&G forecasted a total sockeye salmon run to Fish Creek in 2012 of 84,000 fish (Table 3, Appendix C1). The estimated run, however, was closer to 32,000 fish, resulting in an escapement of 18,813 sockeye salmon (Table 5; Appendix A2). At this level of escapement, the lower bound of the sockeye salmon SEG (20,000 fish) was not achieved. Commercial fishery exploitation of Big Lake sockeye salmon for the past 10 years has averaged 32% (based on the age-composition allocation method of allocating the commercial harvest to stock of origin).

During the past 16 years, escapements were below the goal 7 years, within the goal range 5 years, and exceeded the goal in 4 years. The average annual total sockeye salmon run to Big Lake from 1980–1997 was 212,000 fish. But, from 1998–2001 and 2004–2008 (8 total years), the average annual return fell to 42,000 fish (Tobias and Willette 2004). Conversely, the total sockeye salmon run to Fish Creek in 1997, 2002–2003, and 2009–2012 (6 total years) averaged nearly 144,000 fish annually. The number of smolt emigrating Big Lake from 2003 to 2008 ranged from 117,000 to 632,000 fish (http://www.ciaanet.org/). CIAA ended fry releases and smolt enumeration projects in Fish Creek in 2008. Each year, otoliths are collected from adults escaping the weir at Fish Creek. These otoliths are analyzed for hatchery thermal marks, which allows for an estimate of the hatchery contribution to the run to be made. 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 Technician, ADF&G, Soldotna, personal communication).

A technical review assessing Big Lake sockeye salmon production was completed prior to the 2002 BOF meeting (Litchfield and Willette 2001). This 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.

The ADF&G recommended removing Big Lake sockeye salmon as a stock of yield concern at the 2005 BOF meeting. However, sockeye salmon production from Big Lake remains somewhat of a mystery. Even when the recommended number of spawners for the system has been met, the production of wild-produced smolt has been poor. Furthermore, CIAA stocked the lake with sockeye salmon fry for a number of years, but fry-to-smolt survival was also very poor (Dodson 2006). In an attempt to try and isolate the mechanisms leading to poor juvenile survival, CIAA released fish at 3 different time intervals: spring fry, fall fry, and spring smolt. Unfortunately, the number of smolt emigrating Big Lake did not increase, even with the stocking of larger juveniles. As a result of the poor sockeye salmon smolt survival in Big Lake, CIAA ceased enhancement activities after the fry release in 2008.

2013 Sockeye Salmon Outlook

A run of 6.7 million sockeye salmon is forecasted to return to UCI in 2013, with a harvest by all user groups of 4.9 million. The harvest forecast for 2012 is about 1.1 million fish above the 20-year average harvest by all user groups of 3.8 million (Appendix C2).

The run forecast for the Kenai River is 4.4 million, which is 13% greater than the 20-year average run of 3.8 million. Age-1.3 sockeye salmon typically comprise about 56% of the run to the Kenai River. Age-2.3 sockeye salmon typically comprise about 20% of the run to the Kenai River. The predominant age classes in the 2012 run should be age 1.3 (45%), age 1.2 (9%), and age 2.3 (34%). The 10-year mean absolute percent error (MAPE) for the set of models used for the 2013 Kenai sockeye salmon run forecast was 23% (Appendix C2).

The sockeye salmon run forecast for the Kasilof River is 903,000, which is 5% less than the 20-year average run of 947,300. Age-1.3 sockeye salmon typically comprise about 34% of the run to the Kasilof River. The forecast for age-1.3 sockeye salmon is 274,000, which is 15% less than the 20-year average return (322,000) for this age class. Age-1.2 sockeye salmon typically comprise about 30% of the run. The forecast for age-1.2 sockeye salmon is 248,000, which is 13% less than the 20-year average return (285,000) for this age class. Age-2.2 sockeye salmon typically comprise about 24% of the run. The forecast for age-2.2 sockeye salmon is 307,000, which is 34% greater than the 20-year average return (228,000) for this age class. The predominant age classes in the 2012 run should be age 1.2 (27%), age 1.3 (30%), and age 2.2 (34%). The 10-year MAPE for the set of models used for the 2013 Kasilof sockeye salmon run forecast was 21% (Appendix C2).

The sockeye salmon run forecast for the Susitna River is 363,000, which is 20% less than the 6-year average run of 452,000 (Appendix C2). This forecast was derived using mean return per spawner by age class for brood years 2006–2007 and mark–recapture estimates of spawner abundance in 2007 2009. Sonar and age composition catch allocation models 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. This is the first year this forecast method has been used, so MAPE is not available. The 6-year average run (2006–

2011) was calculated using mark–recapture estimates of inriver run and genetic estimates of commercial harvests.

The sockeye salmon run forecast for Fish Creek is 61,000, which is 52% less than the 20-year average run of 127,000. Age-1.2 and -1.3 sockeye salmon typically comprise 72% of the run to Fish Creek. The age-1.2 forecast is 12% less than the 20-year average return (60,000) for this age class, while the age-1.3 forecast is 80% less than the 20-year average return (31,000) for this age class. The predominant age classes in the 2012 run should be age 1.2 (76%) and age 1.3 (10%) (Appendix C2).

The sockeye salmon run forecast for Crescent River is 110,000, which is equal to the 20-year average run. Age-1.3 and -2.3 sockeye salmon typically comprise 63% of the run to Crescent River. The predominant age classes in the 2012 run should be age 1.3 (54%) and age 2.3 (26%) (Appendix C2).

Pink Salmon

Pink salmon runs in UCI are even-year dominant, with odd-year average annual harvests typically less than one-seventh of even-year harvests (Appendix B4). Pink salmon are generally taken in significant quantities in UCI beginning in late July and early August. The 2012 UCI harvest of approximately 469,000 pink salmon was 44% more than the 1996–2010 average even-year harvest of 326,000 fish. This follows the 2011 harvest of 34,000 pink salmon, which was 61% less than the 1997–2009 odd-year average annual harvest of 88,000 fish (Appendix B4). As noted throughout this report, however, it is difficult to gauge the status of various stocks based solely on commercial harvest data.

Prior to 2009, pink salmon were enumerated at a weir on the Deshka River (Table 8). Although pink salmon are still counted there, the weir is taken down 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 that are designed to enumerate other species (i.e., Deshka River weir). In general, pink salmon stocks in UCI have maintained their even-year dominance, albeit the 2007 and 2009 harvests were much above average for odd-year runs. Although pink salmon enumeration data are limited, ADF&G did conduct a marine tagging project designed to estimate the total population size, escapement, and exploitation rates for coho, pink, and chum salmon returning to UCI in 2002 (Willette et al. 2003). This study estimated the exploitation rate on pink salmon by the UCI commercial fishery to range between 1% and 12%, with a point estimate of 2%, indicating this stock is in no apparent danger from overfishing.

Table 8.–Upper Cook Inlet pink salmon commercial harvests and Deshka River escapements, 1996–2012.

	UCI Pink Salmon			
	Commercial Harvest		Deshka River Enumeration	
Year	Even-Year	Odd-Year	Even-Year	Odd-Year
1996	242,911		37,482	
1997		70,933		1,101
1998	551,260		541,946	
1999		16,174		766
2000	146,482		1,248,498	
2001		72,559		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	168,890		12,947	
2009		214,321		26,077
2010	289,000		9,328	
2011		34,030		4,489[a]
2012	469,411		78,853	

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

Chum Salmon

Chum salmon runs to UCI are concentrated predominately in the western and northern watersheds, with the most significant harvest coming from the Central District drift gillnet fleet. The 2012 UCI commercial chum salmon harvest of approximately 269,000 fish was 124% greater than the 2002–2011 average annual harvest of 120,000 fish (Appendix B5). However, the 2012 harvest was approximately 40% less than the 1966–2011 average annual harvest of 446,000 fish (Appendix B5). An evaluation of chum salmon runs is made difficult because of the 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 OTF project, but this project was designed temporally and spatially to assess UCI sockeye salmon stocks. The only chum salmon escapement goal in all of UCI is an aerial survey SEG in Chinitna Bay (Clearwater Creek) set at 3,800–8,400 fish (Fair et al. 2007). This SEG has been met or exceeded every year since it was established in 2002. As a result, drift gillnetting has been opened by EO in Chinitna Bay each of the past 6 years per 5 AAC 21.320(c)(1).

While 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) the 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). The

commercial chum salmon harvest in 2009 was better than the previous few years, but was still considered below average. It appears the 2012 chum salmon run, however, was above average. This characterization was corroborated by commercial harvest data and the OTF project. The 2012 OTF cumulative chum salmon CPUE of 527 was 12% greater than the 1988-2011 average CPUE of 472. Based on the 2002 tagging study, which estimated the commercial fishing exploitation rate on chum salmon at approximately 6%, and considering the escapement objective in Chinitna Bay has been consistently achieved, these limited data reveal no ostensible concerns for UCI chum salmon stocks.

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 coho salmon commercial harvests. For example, coho salmon runs in 1997 and 1999 were viewed as mediocre to poor, prompting BOF measures 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 one 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, the 2000 and 2001 coho salmon runs appeared to be much improved, with the 2002 run being exceptional, perhaps even a record run[2] (Table 9). Therefore, at the 2005 BOF meeting, the restrictions on fishing in August in the Upper Subdistrict set gillnet fishery and Central District drift gillnet fishery were moderately 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 in light of data revealing good coho salmon runs and low Kenai River coho salmon exploitation by commercial fishermen during this extended time period.

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) and was met or exceeded each year from 2000 to 2008, but has not been achieved the past 4 years (Table 9). 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, very strong" and the SEG was likely 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 unknown escapement. In 2012, the Little Susitna River was moved downstream approximately 40 miles to its current location at river mile 32.5. This will provide managers with more timely inseason information of coho salmon passage.

[2] Yanusz, R., J. Carlon, D. Bosch, and R. Clark. *Unpublished* (2002). 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.

In most years since 1969, ADF&G has enumerated coho salmon at a weir at Fish Creek (Fair et al. 2010). In 1994, an escapement goal of 2,700 (point goal) was established, which was changed in 2002 to an SEG of 1,200–4,400 (Bue and Hasbrouck[3]). However, this goal was dropped in 2005 (Hasbrouck and Edmundson 2007) because the weir was not operated during the entire coho salmon run. In 2009 and 2010, funding obtained by a grant from the U.S. Fish and Wildlife Service allowed the weir to be operated through the entire coho salmon run. Therefore, at the 2011 BOF meeting, the previous SEG of 1,200–4,400 fish was reinstated. Since the goal was reinstated, it has been met every year (Table 9).

While there are several regulatory management plans pertinent to the Susitna River that direct ADF&G how to manage for 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[4]. Coho salmon runs to many watersheds in 2012, especially the Little Susitna River and Knik Arm streams, appear to have been poor, as was commercial coho salmon harvest. Given the recent downturn in coho salmon runs to northern district streams, escapements will be monitored very closely during the 2013 season in case management actions are needed to ensure that escapement goals are achieved.

Table 9.–Coho salmon escapement and enumeration, 1996–2012.

Year	Cottonwood Creek	Fish Creek	L. Susitna River	Wasilla Creek	Deep Creek	OTF CPUE
1996			15,803			534
1997	936	2,578[a]	9,894	670	2,017	362
1998	2,114	5,463	15,159	3,777	1,541	403
1999	478	1,766	3,017	1,587	2,267	294
2000	1,888	5,979	14,436	6,154	3,408	766
2001	3,525	10,047	30,587	6,784	3,747	838
2002	4,270	15,187	47,938	12,657	6,132	798
2003	791	2,142	10,877	2,962		368
2004	2,004	3,255[a]	40,199			785
2005		3,836[a]	16,839[b]			367
2006		5,723[a]	8,786[b]			1,034
2007		9,618[a]	17,573			482
2008		9,603[a]	18,485			718
2009		8,666	9,523			283
2010		7,034	9,214			454
2011		1,428[a]	4,826			264
2012		1,237	6,770			154

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

[b] Weir washed out; count incomplete.

[3] Bue, B. G., and J. J. Hasbrouck. *Unpublished*. Escapement goal review of salmon stocks of Upper Cook Inlet. Alaska Department of Fish and Game, Report to the Alaska Board of Fisheries, November 2001 (and February 2002), Anchorage.

[4] 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, Anchorage.

Kenai River

From 1999 to 2004, the total return of Kenai River adult coho salmon was estimated annually by: 1) population-specific harvest in marine commercial fisheries, 2) inriver sport and personal use harvest, and 3) spawning escapement (Carlon and Evans 2007; Massengill and Evans 2007). The sum of these 3 components provided the estimates of annual adult production, although no escapement goal exists for this system. Smolt enumeration studies were conducted in the Moose River, a Kenai River tributary that has been shown to be a very important rearing environment for juvenile coho salmon, from 1992 to 2007 (Massengill and Carlon 2007). As a result of increasing sport and commercial harvest levels in the early 1990s, combined with a decreasing trend in Moose River smolt production from 1993 to 1997, the BOF implemented conservation measures at its 1997 and 2000 meetings to reduce sport and commercial exploitation of Kenai River coho salmon. Since 1997, the drainagewide coho salmon smolt emigrations have stabilized. The 1999 record low adult escapement estimate of 7,364 fish produced a smolt emigration in 2001 that was only slightly below the historical average. Conversely, the record low smolt emigration in 1997 of 374,225 fish produced what was believed to be a very weak return of adults in 1998, although the total return strength for that year is unknown.

Since 2000, Kenai River adult coho salmon runs have been considered good to excellent. In response to an emergency petition from the Kenai-Soldotna Fish and Game Advisory Committee in 2004, the BOF extended the Kenai River sport fishing season for coho salmon from September 30 to October 31. This decision was based upon ADF&G data that projected an escapement of Kenai River coho salmon above the 1999–2003 average. In 2005, the BOF repealed the *Kenai River Coho Salmon Conservation Management Plan* (5 AAC 21.357) and extended the Kenai River coho salmon sport fishing season in regulation through October 31. This latter change was based on an expectation of low October fishing effort and recent (2000–2004) exploitation estimates, which indicated that Kenai River coho salmon returns were exploited at a rate deemed sustainable. Unfortunately, 2004 was the final year that mark–recapture abundance estimates were generated for Kenai River adult coho salmon. In 2008, the BOF extended the Upper Subdistrict set gillnet fishing season from a closing date of August 10 to no later than August 15, with the caveat that from August 11 to August 15, the fishery was to be open for regular periods only. The Central District drift gillnet fishery was also extended to August 15 with the same regular period restriction only from August 11 to August 15. This additional commercial fishing time was granted in response to reports the BOF received at its 2008 meeting showing that during the 6 years that the total annual run of Kenai River coho salmon was estimated, the Upper Subdistrict set gillnet fishery harvested between 0.3% to 6.0% of the run annually. Estimates were also provided to the BOF that showed the combined additional daily exploitation rate by both set and drift gillnet fisheries on Kenai River coho salmon stocks at this time in August was estimated to range between 0.78% to 1.43% for each additional day fished.

Beginning in 2005, fish wheel catch rate data provided a tool to index Kenai River coho salmon abundance into 1 of 3 general classes (low<50K; 50K<med<120K; high>120K) by utilizing inseason fish wheel catch rate data plotted into a regression of historical fish wheel catch rates to abundance estimates. The index level assigned to the 2005 and 2006 Kenai River adult coho salmon returns arriving at the fish wheel site (rm 28) was characterized as "medium," while the 2007 run was characterized as "low"; however, the 2007 index may have been biased low as an

unexpected drop in fish wheel efficiency for sockeye salmon was detected (Massengill[5]). This project was last active in 2007. Current regulations for Kenai River coho salmon are believed to be providing for sustainable harvest and recent inriver harvest estimates (2007–2009) are stable and near the historical average.

In 2012, the Upper Subdistrict set gillnet fishery was closed at 9:00 p.m. on August 13, and the last districtwide drift gillnet opening occurred on Monday, August 13 (Appendix A11). The one percent rule requires the Upper Subdistrict set gillnet fishery to be closed any time after July 31, if ADF&G determines that less than one percent of the season's total sockeye salmon harvest has been taken per fishing period for 2 consecutive fishing periods. In 2011 the BOF redefined a fishing period as a 24-hour day. The Upper Subdistrict set gillnet fishery fished 2 periods between August 11 and August 15 (August 12 and August 13). The total coho salmon harvest from these 2 periods was approximately 2,337 fish (Appendix A5).

At this time, there are no specific concerns relating to Kenai River coho salmon.

Chinook Salmon

Northern District

The *Northern District King Salmon Management Plan* (5 AAC 21.366) was first adopted in 1986. In response to low escapements in the Theodore and Chuitna rivers, fishing area restrictions were implemented beginning in 1997 in the area from an ADF&G regulatory marker located one mile south of the Theodore River to the Susitna River. This area was restricted to a single 12-hour fishing period each year. The Northern District has approximately 345 streams and rivers where Chinook salmon are present and the estimated total annual return is between 100,000 and 200,000 fish (http://www.adfg.alaska.gov/static-sf/Region2/pdfpubs/MatSuKingSalmon.pdf). The average harvest in the Northern District commercial fishery for the last 10 years (2002–2011) is approximately 2,400 fish (Table 2), or about 10% of the total Northern District Chinook salmon harvest, which equates to an annual harvest rate of between 1.2% and 2.4%. The commercial Chinook salmon harvest has not met the 12,500 harvest cap since 1986. This is due, in large part, to declining participation in this fishery as a result of preseason registration requirements.

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 have not been achieved the past 4 years. Escapements are evaluated with a single aerial census flight each year. The 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 have declined drastically over the past 5 years despite closure of the sport fishery beginning in 2008. The ADF&G memo also recommended that Willow and Goose Creeks' Chinook salmon be considered as stocks of yield concern in response to the SEGs not being met over several consecutive years. The BOF reviewed these ADF&G recommendations at the 2011 UCI finfish meeting in Anchorage and agreed with ADF&G staff to list Chinook salmon stocks in

[5] Massengill, R. L. *Unpublished*. 2007 smolt abundance and summary statistics for Kenai River coho salmon. Alaska Department of Fish and Game, Fishery Data Series, Anchorage.

Alexander, Willow, and Goose creeks, and the Chuitna, Theodore, and Lewis rivers as stocks of concern. As a result of this decision, sport fishing in the Theodore, Lewis, and Chuitna rivers was closed by regulation prior to the 2012 season. Because of the sport fishing closures, the area from the wood chip dock to the Susitna River was closed for the directed Chinook salmon commercial fishery per the *Northern District King Salmon Management Plan*. Additionally, prior to the 2012 commercial fishery, weekly periods were reduced in duration from 12 to 6 hours (Appendix A10). As a result, the Northern District was opened for four 6-hour periods between May 28 and June 18. The total harvest of Chinook salmon in 2012 was 1,030 fish. The final escapement estimate for Chinook salmon in the Deshka River in 2012 totaled a little more than 14,000 fish (Table 10).

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 10). From 1999 through 2006, the upper end of the Deshka River BEG of 13,000 to 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 EOs. In addition, in 2005, the BOF lengthened fishing periods for the commercial fishery from 6 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, albeit less than originally anticipated, 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 10.–Deshka River Chinook salmon passage, 1995–2012.

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

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

The poor returns that were experienced in 2008, 2009, and 2010 resulted in restrictions to the sport and commercial fisheries that harvest these fish (Shields and Dupuis 2012). For the 2012 season, because run projections predicted that the Deshka River would not meet minimum escapement levels, EO No. 2 was issued closing the first regular season commercial opening in the Northern District on June 25. Additionally, on June 25, the Division of Sport Fish released an EO (2-KS-2-20-12), which closed the Susitna River drainage to sport fishing for Chinook salmon and limited sport fishing gear in Units 1–6 of the Susitna River drainage in those waters

normally open to Chinook salmon fishing. In 2012, the final Chinook salmon escapement estimate for the Deshka River was above the minimum value.

The forecast for Deshka River Chinook salmon in 2013 is a total run of 26,800 fish, which is below average. A total return of this size would rank 25th out of 35 years and be below the 1979–2012 average run of 35,406 fish. The projected 2013 harvest of Deshka River Chinook salmon in all fisheries is around 6,000 fish (2000–2011 average). This level of harvest would result in a 2013 escapement of about 20,800 fish, which is within the SEG range of 13,000 to 28,000 fish.

Kenai River

The early-run Kenai River Chinook salmon return migrates through Cook Inlet in May and June, and therefore, receives very little to no commercial exploitation.

Since 1986, Kenai River late-run Chinook salmon estimates of inriver passage have been completed via traditional TS-sonar by the Division of Sport Fish. The original escapement goal was developed in 1989 and set a minimum escapement at 15,500 and an optimum escapement of 22,300 (McBride et al. 1989). In 1999, this goal was revised to a BEG of 17,800 to 35,700 (Fried 1999). In 2011, ADF&G again revised the escapement goal from a BEG to an SEG 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. As stated earlier in this report, on October 4–5, 2011, the Division of Sport Fish presented a memo (RC 7) to the BOF summarizing ADF&G's current knowledge regarding the inriver run strength of late run Kenai River Chinook salmon in 2010 and 2011. The memo provided escapement estimates, properly converted to the currency of TS-based sonar estimates for comparison with the SEG goal of 17,800–35,700. The estimates were developed from information from all 5 indices of abundance. For 2010, the expected TS-based estimate of Chinook salmon passing the sonar site was 33,600 fish. After subtracting estimates of harvest and mortality above the sonar, the corresponding estimate of escapement was 26,600. The estimate of passage for late run Chinook salmon in 2011 was 36,000 fish, and after subtracting for harvest and mortality, the estimate of escapement was 29,800.

In both 2011 and 2012, ADF&G managed the Kenai River late-run Chinook salmon fishery primarily on indices of abundance, rather than use of traditional sonar technology. In 2011, TS-based sonar was still being used, but questions about its reliability resulted in the use of indices of abundance to determine relative inriver abundance. Numerous restrictions to sport and commercial fisheries were enacted in 2011 (Shields and Dupuis 2012) in response to inseason assessments that indicated harvest rate reductions were needed in order to ensure escapement objectives would be met. However, the restrictions became a matter of public debate because of the uncertainty regarding how many Chinook salmon actually escaped in 2011.

For the 2012 season, the TS-based sonar was not used; it was replaced with the DIDSON technology. Since the current escapement goals were not DIDSON-based goals, estimation of late-run Chinook salmon passage was completed using several indices of abundance. The two most reliable indices, sport fishing CPUE and Upper Subdistrict set gillnet CPUE, were unavailable due to restrictions and closures of these fisheries. This left ADF&G with one index of abundance (the inriver netting CPUE) as well as DIDSON passage estimates to enumerate the

Chinook salmon run. These 2 estimates of Chinook salmon abundance showed low fish passage, which prompted concerns over ensuring adequate escapement. This led the ADF&G to close the inriver fishery on July 19 (the announcement was made on July 17), which also triggered a closure of the Upper Subdistrict set gillnet fishery beginning on July 17. By August 6, Chinook salmon passage in the Kenai River, as estimated by DIDSON, indicated that enough fish had now entered the river to ensure escapement objectives would be met. It was estimated that approximately 36% of the 2012 run occurred in August; typically, 10–16% of the run enters the Kenai River in August. The preliminary uncorrected DIDSON-based Chinook salmon passage estimate for 2012 was 21,914 fish.

After the 2012 season, the BOF, at their annual work session meeting in October, formed the Cook Inlet task force with the objective of reviewing the *Kenai River Late-Run Chinook Salmon Management Plan*. The mission of the task force was to identify a set of recommended adjustments to the management plan that would result in the best mix of inriver and Upper Subdistrict set gillnet fishing opportunity, while providing the best means of attaining the escapement goal for Kenai River Chinook salmon 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 Webster and Kluberton) met three different times (November 2012, and January and February 2013) to address proposals submitted by task force members suggesting modifications to the Chinook salmon management plan. A list of suggested changes was developed, but there was no consensus from the panel on how to proceed. 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 to 30,000 fish be adopted for the Kenai River late-run Chinook salmon. This run reconstruction analysis of late-run Chinook salmon in the Kenai River estimated the 2012 escapement at approximately 27,700 fish. Because the Chinook salmon sonar site will be changing locations in the near future, ADF&G recommended a reevaluation of the new escapement goal when the sites are changed. Kenai River Chinook salmon runs continue to be very closely monitored, as this stock supports one of the most popular sport fisheries in the state of Alaska.

COMMERCIAL HERRING FISHERY

The 2012 UCI herring fishery produced a harvest of 23.8 tons (Appendix B8), with all but 7.0 tons of the harvest coming from the Upper Subdistrict. A total of 13 permit holders reported fishing, which was very close to the average annual number of participants from the previous 10 years (2002–2011). Although open to both set and drift gillnets, all of the harvest was taken by set gillnets. Samples of the harvest are obtained annually to assess age, weight, size and sex distribution (Appendix A19). It must be noted that these samples are obtained from the set gillnet fishery and may reflect biases in the gear type used to collect the samples. In the Upper Subdistrict, 5 age classes dominated the population in 2012, comprising 95% of the 284 samples collected from 3 sample dates. The average by age-class was age-4 (5%), age-5 (15%), age-6

(20%), age-7 (45%), and age-8 (10%). A sample of herring was also collected from Chinitna Bay in 2012, with the age-6 and age-7 component comprising 63% of the sample.

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 approximately $1.00/lb or $2,000/ton. Based on this price, the estimated exvessel value of the 2012 commercial herring fishery was approximately $47,600.

COMMERCIAL SMELT FISHERY

Commercial smelt harvests in UCI have ranged from 300 pounds to 100.8 tons (Table 11). 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 2012, 18 people obtained commissioner's permits enabling them to participate in the fishery, with 4 CFEC permit holders reporting harvests on fish tickets. The total herring harvest in UCI in 2012 was approximately 98.0 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 catch to a location where the smelt could be processed (boxed and frozen) prior to shipment, rather than abundance of fish.

Table 11.–Commercial smelt harvest, 1978, 1980, 1998–1999, and 2006–2012.

Year	Lbs	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

Estimating the exvessel value of this fishery is very difficult. Participants catch and market all of their harvest. Most of the product is transported via 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 it easily exceeds $1.00/lb, for an exvessel value in excess of $200,000.

Age-composition analyses (determined from otoliths) of samples collected from the 2006–2012 harvests show that age-4 smelt are the most abundant age class, ranging from 45% to 84% of the population (Appendix A20). Fork length from the 2012 harvest ranged from 169 to 222 mm, with an overall average of 204 mm, which was very similar to the average lengths from previous years. The percent female in 2012 was 61% while the 2006–2011average percent female was

43%. 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.

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. 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.

The 2012 harvest, taken primarily from the Polly Creek/Crescent River area, was approximately 307,409 pounds (in the shell; Appendices A23 and B9). A total of 23 diggers initially participated during the season; however, the number of diggers declined to approximately 16 individuals in late June. Harvest was reported from 66 different days spanning the time period from May 17 to August 6. Diggers were paid an average of $.65 per pound for their harvest, resulting in an exvessel value for this fishery of $200,000. The average clam size from the 2012 harvest was 139 mm, or 5.5 inches (Figure 9). The 2012 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 or 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 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), and Dunker and Lafferty (2007).

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 a.m. to 8:00 p.m. each Tuesday, Thursday, and Friday from May 15 to June 15. The late-season permit allows for

fishing from 6:00 a.m. to 6:00 p.m. 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, the BOF specified 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.

In 2012, 106 permits were issued for the Tyonek Subdistrict subsistence fishery (Appendix B15). Annual Chinook salmon harvests have ranged from a low of 554 in 2011 to as many as 2,665 in 1983. The preliminary total harvest for the 2012 Tyonek Subdistrict subsistence fishery was 565 Chinook, 162 sockeye, 46 coho, and one pink salmon; as reported from 48 permits that were returned from the 106 permits issued.

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 a.m. to 8:00 p.m. each Monday, Wednesday, and Friday during this timeframe. The preliminary harvest for the 2012 Yentna River subsistence fisheries was below average, and included 279 sockeye, 24 coho, 21 pink and 19 chum salmon taken by 24 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: 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 2012 was 6,538 fish. The average annual harvest from 1994 through 2011 was approximately 6,452 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 VFW, Kasilof 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 2012, the Kenaitze Tribe harvested 14 Chinook, 3,445 sockeye, 553 coho, and 140 pink salmon, for a total of 4,152 salmon, which was their smallest harvest in the past 10 years. From 1994 through 2011, the average annual harvest of all salmon by the Kenaitze Indian Tribe has been 4,549 fish. The total fish harvest quota for this group is 8,000 fish (Appendix B16).

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 one 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 2012, the NTC harvested 67 Chinook, 247 sockeye, 406 coho, 253 pink and 1 chum salmon. The NND reported a harvest of 17 Chinook, 65 sockeye, 145 coho, 25 pink, and 0 chum salmon in 2012 (Appendix B16).

In 2003, another group from Ninilchik, the Ninilchik Emergency Services (NES), applied for and was granted an educational fishery. In 2012, the NES harvested 1 Chinook salmon, 37 sockeye salmon, and 2 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 2012 fishing activities: 66 sockeye, 25 coho, and 15 pink salmon. In 2011, the Homer VFW applied for and was granted an educational fishery permit. The Homer VFW group reported a harvest of 65 sockeye, and 39 coho salmon in 2012 (Appendix B16).

The Kasilof Historical Association applied for an educational permit beginning with the 2008 season. For 2012, they reported the following harvest: 2 Chinook, 81 sockeye, 27 coho, and 2 pink 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 2012 was 76 sockeye and 36 coho salmon (Appendix B16).

NORTHERN DISTRICT EDUCATIONAL FISHERIES

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

The Knik Tribal Council began an educational fishery in 1994 (Sweet et al. 2004). Its harvest in 2012 totaled 48 Chinook salmon and 6 coho salmon. The peak harvest from this group of 823 fish occurred in 2003 (Appendix B16).

In 2012, Big Lake Cultural Outreach group did not report harvesting any fish (Appendix B16).

The Eklutna Village group was also issued an educational fisheries permit beginning in 1994. They reported a harvest in 2012 of 218 sockeye, 242 coho, 10 pink and 63 chum salmon (Appendix B16).

The village of Tyonek did not report any harvest in their educational fishery in 2012.

The Territorial Homestead Lodge also 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 2012, the harvest from this fishery was 4 Chinook, 70 sockeye, 14 coho, 1 pink, and 10 chum salmon, for a total of 99 fish (Appendix B16).

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 one mile on either side of the Kasilof River terminus, extending out from shore for one 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), opens 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, expanding the days and hours that the fishery was open. The fishery now opens on June 15 and takes place from 6:00 a.m. until 11:00 p.m. daily. Instead of being managed for a harvest goal of 10,000 to 20,000 fish, the fishery remains open until 11:00 p.m. 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 a.m. to 11:00 p.m. daily, subject to the requirement of achieving the lower end of the OEG. However, 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 one 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 one Chinook salmon may be retained per household. The fishery will close, by emergency order, 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, one Chinook salmon may be retained per household. There is no Chinook salmon harvest restrictions in the Kasilof River gillnet personal use fishery. 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 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 2012 personal use harvest data can be found in Appendices A17 and A18, while 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 Friday, June 15, 2012 and closed at 11:00 p.m. on Sunday, June 24, 2012, as stipulated in the personal use management plan. The estimated harvest in the gillnet fishery was 15,970 salmon, with 15,638 being sockeye salmon (Appendices A17 and A18). This was the third largest harvest recorded in this fishery. The average annual sockeye salmon harvest since the BOF modified the management plan in 2002 has been 22,177 fish.

KASILOF RIVER DIP NET

The Kasilof River dip net fishery was open from June 25 through August 7, 2012 (44 days). The estimated harvest for the year was 75,648 salmon, with 73,419 (97%) being sockeye salmon (Appendix A18). This was the largest harvest ever recorded for this fishery, and was approximately 17,502 fish more than the 2002–2011 average annual harvest of 55,917 fish. The number of household days fished in 2012 of 6,536 was the fourth highest number of days fished

in the fishery, exceeding the 2002–2011 annual average of 5,458 days fished by nearly 1,100 days.

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 a.m. to 11:00 p.m. daily through July 20, and then was open 24 hours per day from 11:00 p.m. on July 20 through July 31. The *Upper Cook Inlet Personal Use Salmon Fishery Management Plan* states that the personal use fishery may be expanded to 24 hours per day if ADF&G determines that the abundance of the Kenai River late-run sockeye salmon will be greater than 2.3 million fish. By July 20, it was evident the run had already exceeded this number, thereby warranting the liberalization of additional hours (see Division of Sport Fish EO No. 2-RS-1-46-12). The 2012 total harvest estimate was 535,235 fish, of which 526,992 (98%) were sockeye salmon. The 2012 harvest estimate was very similar to the amount taken in 2011, which is the highest harvest ever recorded. The average annual harvest from 1996 to 2011 was approximately 232,000 fish. In 2012, the Division of Sport Fish issued EO No. 2-KS-1-35-12, prohibiting the retention of Chinook salmon in the Kenai River dip net fishery. Nevertheless, participants in this fishery reported harvesting 40 Chinook salmon in 2012.

FISH CREEK DIP NET FISHERY

The Fish Creek personal use dip net fishery was not opened in 2012. According to 5 AAC 77.540 *Upper Cook Inlet Personal Use Salmon Fishery Management Plan*, the Fish Creek personal use dip net fishery may open from July 10 through July 31 if ADF&G projects that the escapement of sockeye salmon will be more than 50,000 fish. The final escapement estimate for Fish Creek in 2012 was approximately 18,000 sockeye salmon.

BELUGA RIVER SENIOR CITIZEN DIP NET FISHERY

The estimated harvest from the 2012 Beluga River senior citizen dip net fishery shows that 7 permit holders participated in the fishery, with a total harvest of 16 salmon (9 sockeye, and 7 coho; Appendix A17).

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FIGURES

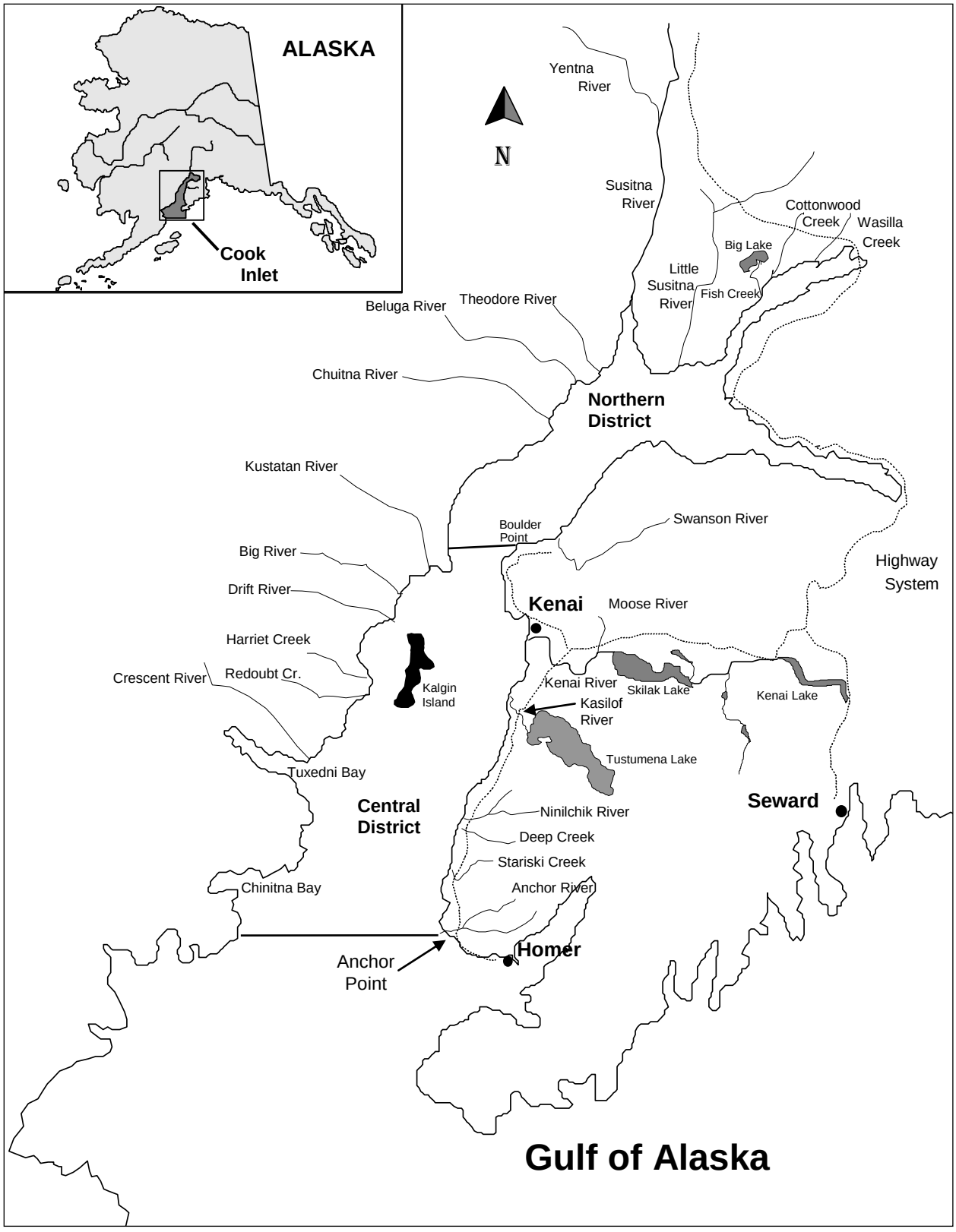

Figure 1.–Major tributaries of the Cook Inlet basin.

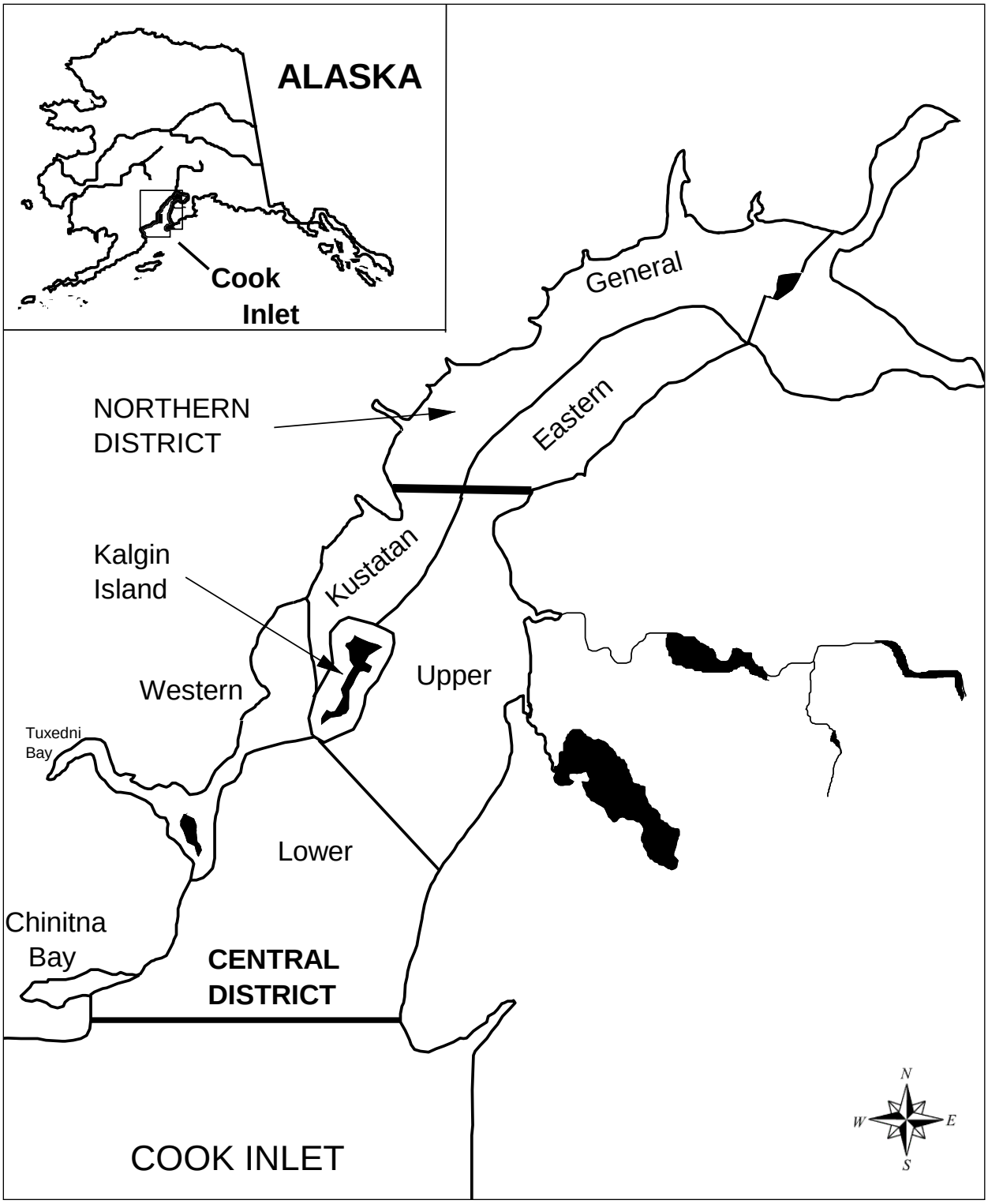

Figure 2.–Upper Cook Inlet commercial fisheries subdistrict fishing boundaries.

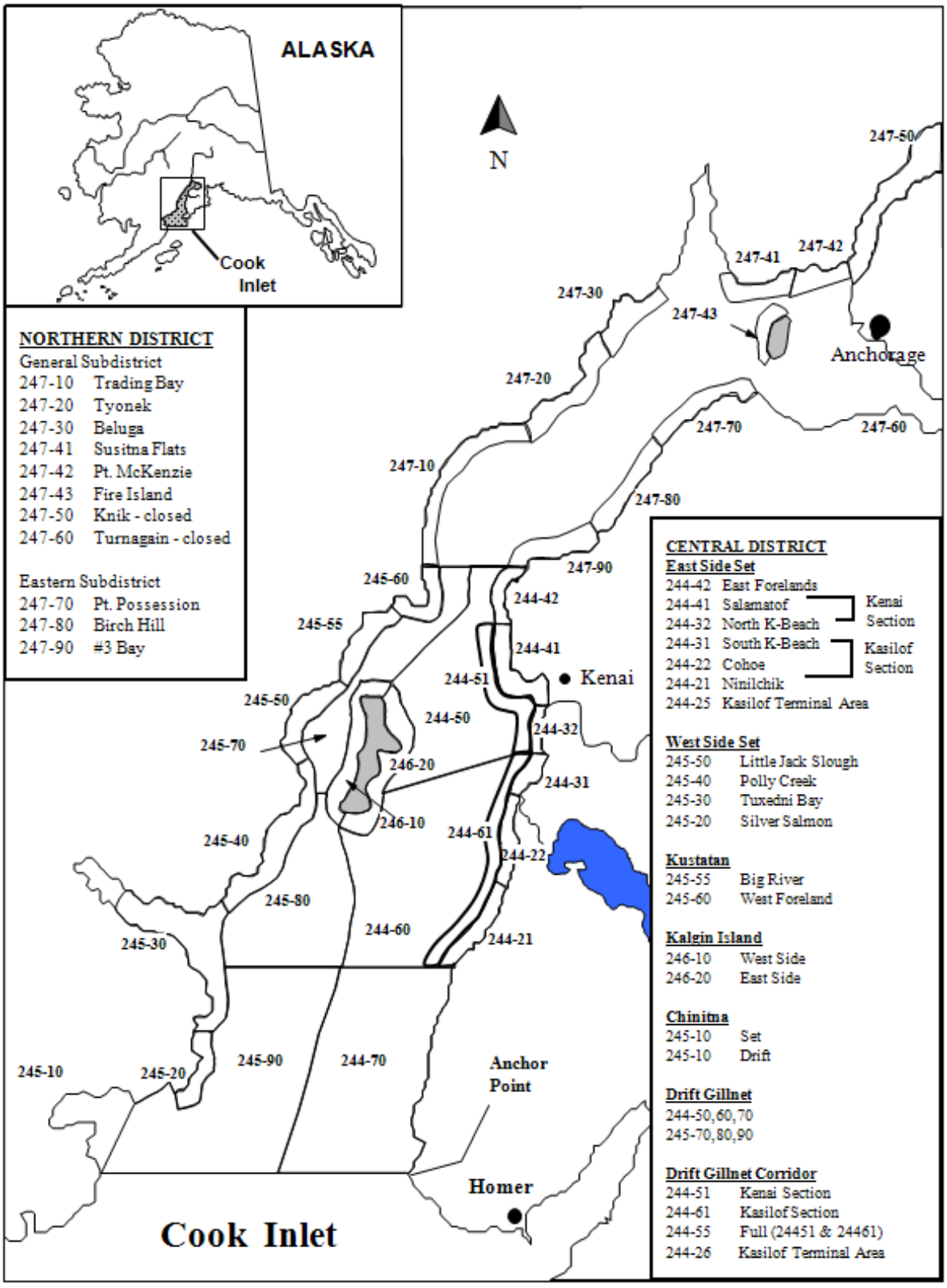

Figure 3.–Upper Cook Inlet commercial fisheries statistical areas.

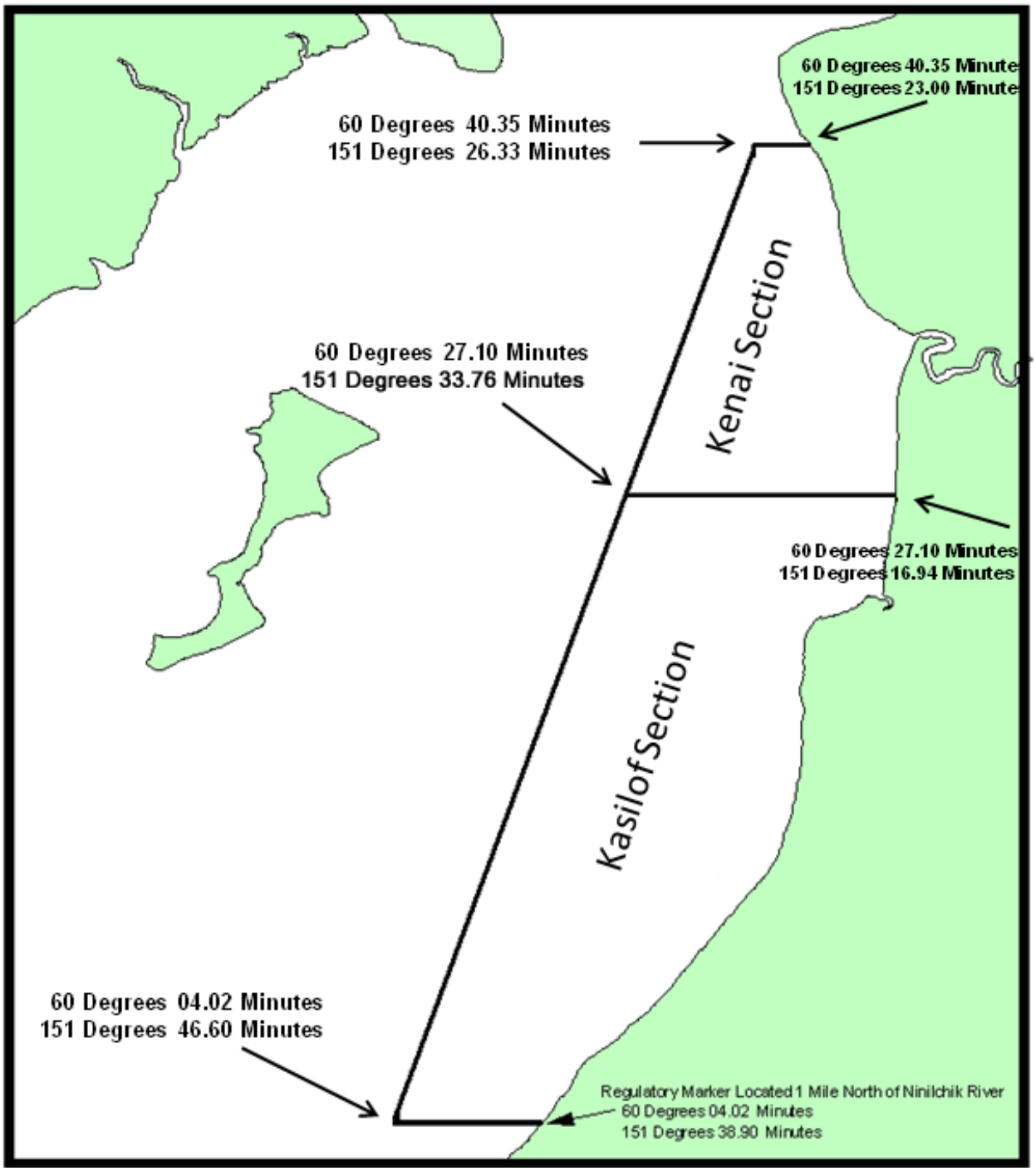

Figure 4.–Map of the Expanded Kenai and Expanded Kasilof Sections with waypoint descriptions.

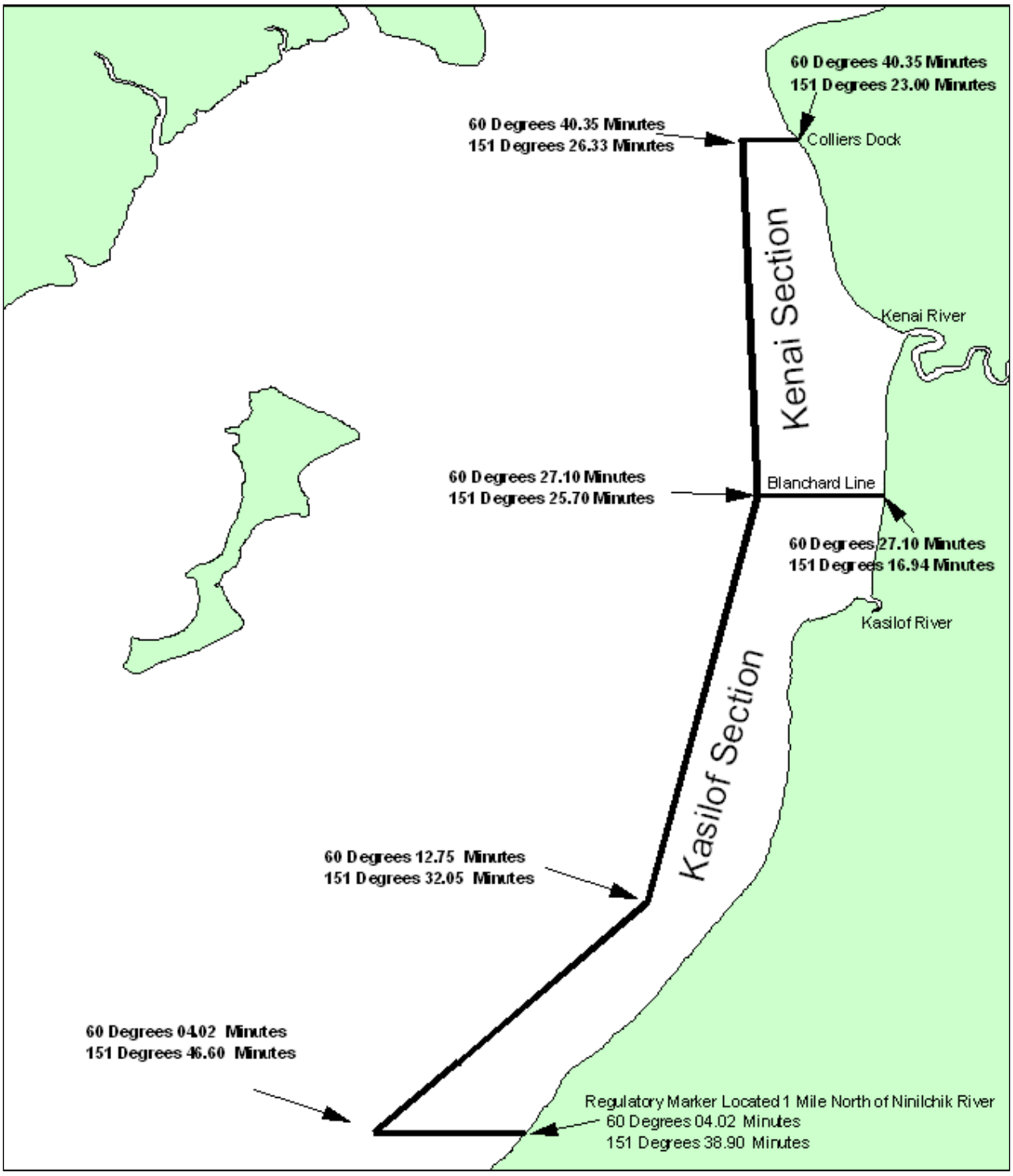

Figure 5.–Map of the Kenai and Kasilof Sections with waypoint descriptions.

Drift Gillnet Area 1 & Area 2 Descriptions

AREA 2 DESCRIPTION	COORDINATES
A. Southwest Corner	60° 20.43' N. lat., 151 ° 54.83' W. long.
B. Northwest Corner	60° 41.08' N. lat., 151 ° 39.00' W. long.
C. Northeast Corner	60° 41.08' N. lat., 151 ° 24.00' W. long.
D. Blanchard Line Corridor Boundary	60° 27.10' N. lat., 151 ° 25.70' W. long.
E. Southeast Corner	60° 20.43' N. lat., 151 ° 28.00' W. long.

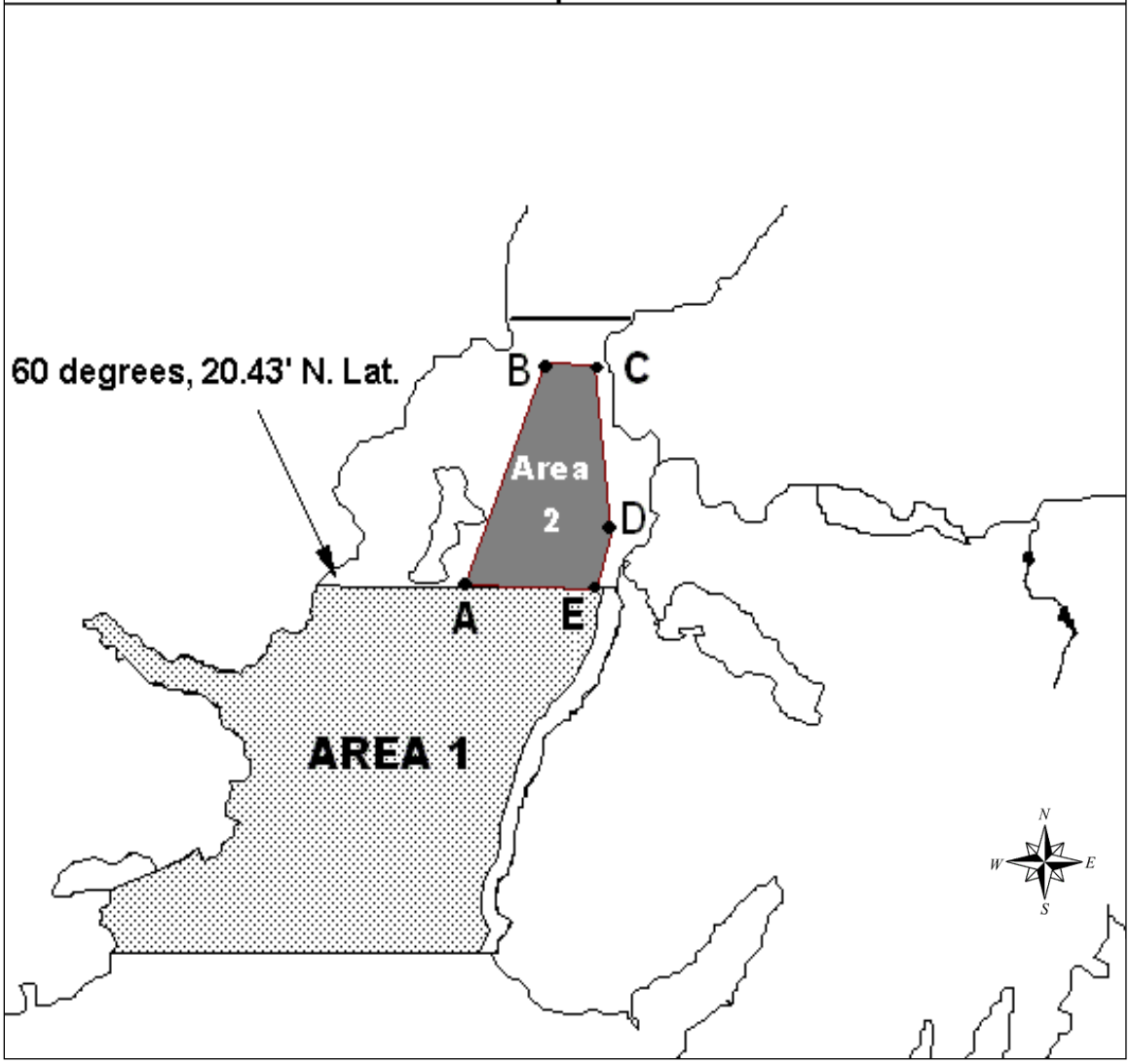

Figure 6.–Drift gillnet boundaries for fishing areas 1 and 2.

AREA 4 LOCATION	COORDINATES
A. Southwest Corner	59° 46.15' N. lat., 153 ° 00.20' W. long.
B. Northwest Corner	60° 04.70' N. lat., 152 ° 34.74' W. long.
C. Northeast Corner (Kalgin Buoy)	60° 04.70' N. lat., 152 ° 09.90' W. long.
D. Southeast Corner	59° 46.15' N. lat., 152 ° 18.62' W. long.

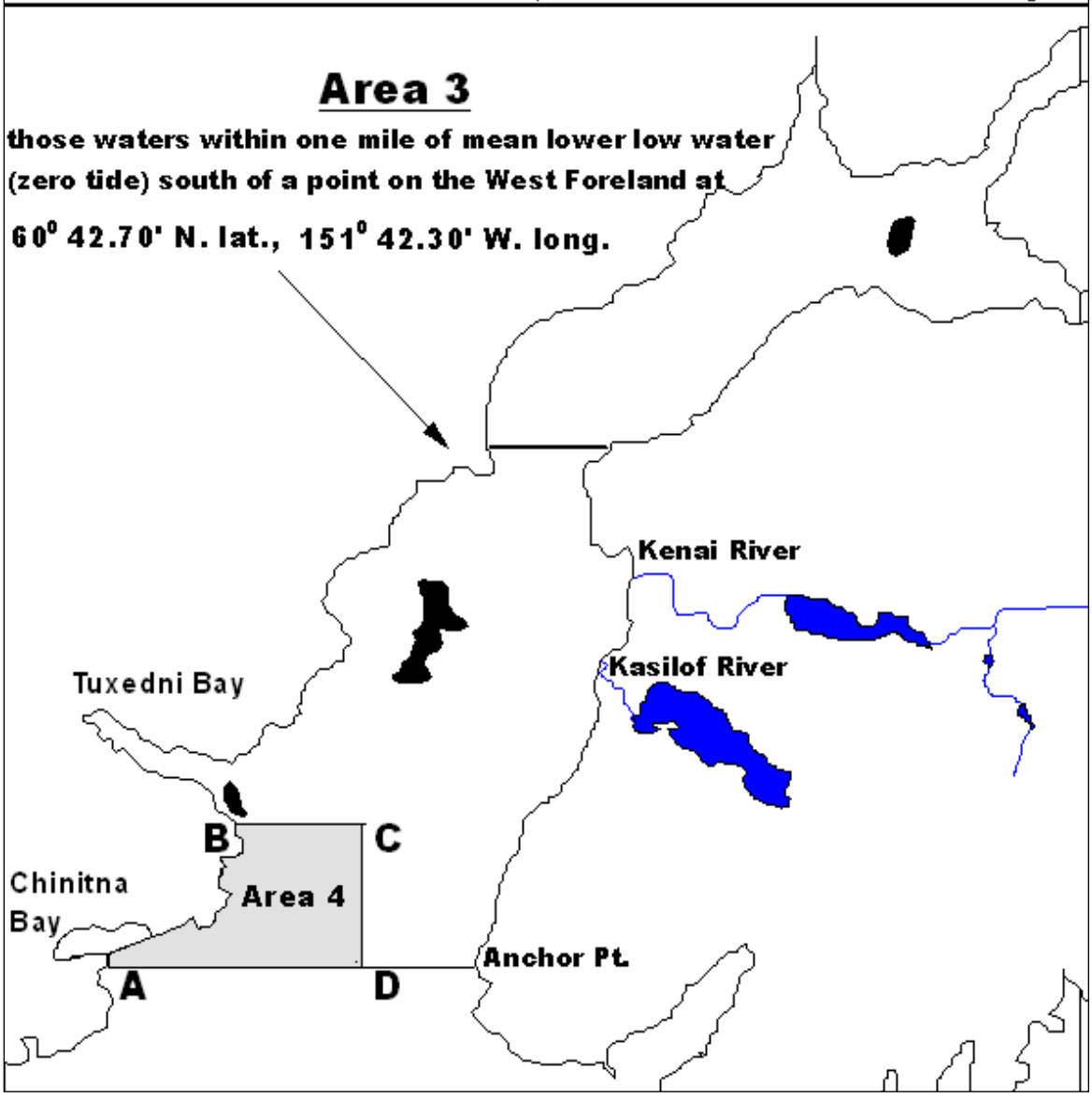

Figure 7.–Map of drift gillnet areas 3 and 4.

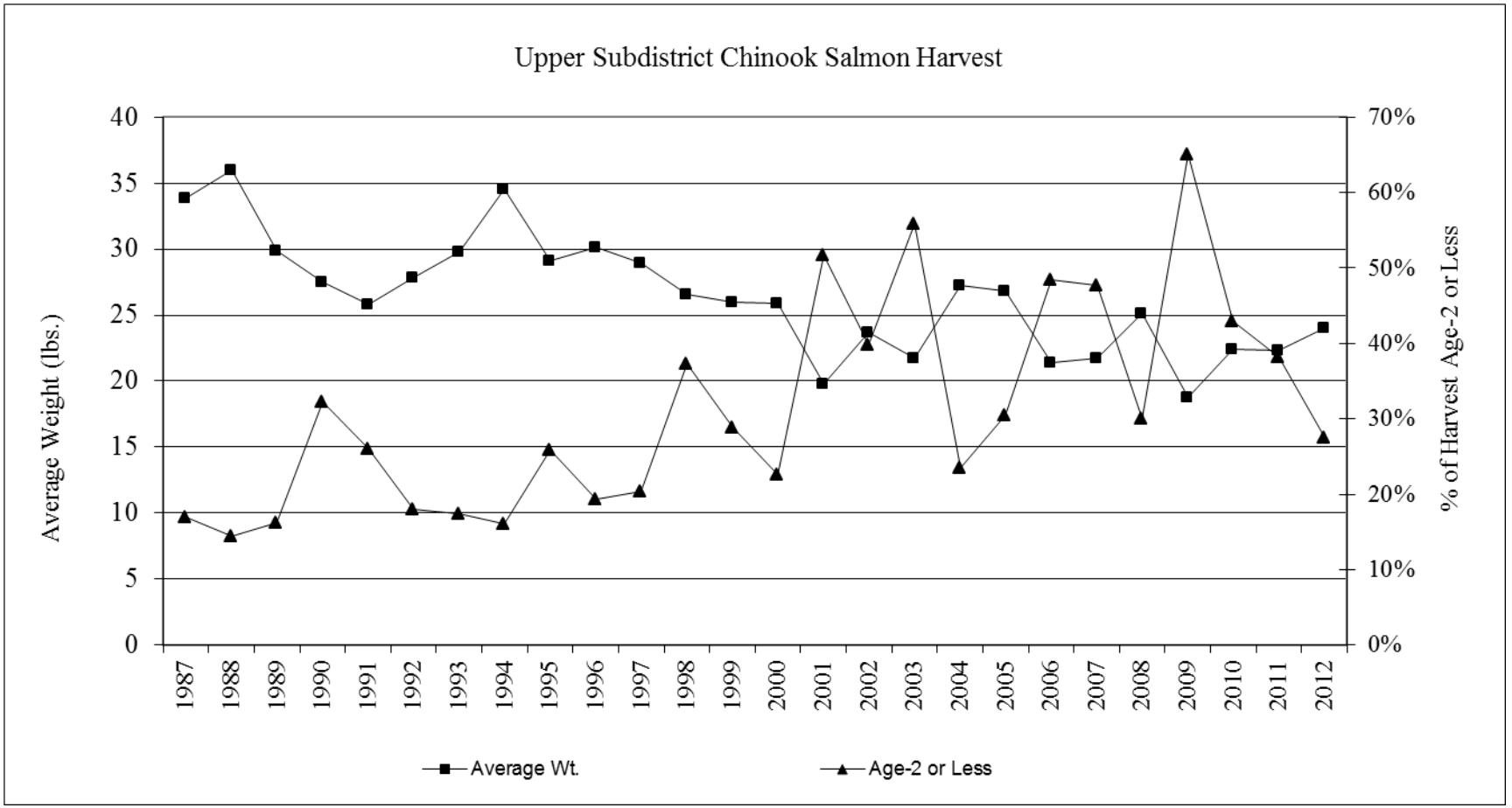

Figure 8.–Chinook salmon average weight (all fish) and percentage of the harvest comprised of ocean-age-2 or less fish in the Upper Subdistrict set gillnet commercial fishery, 1987–2012.

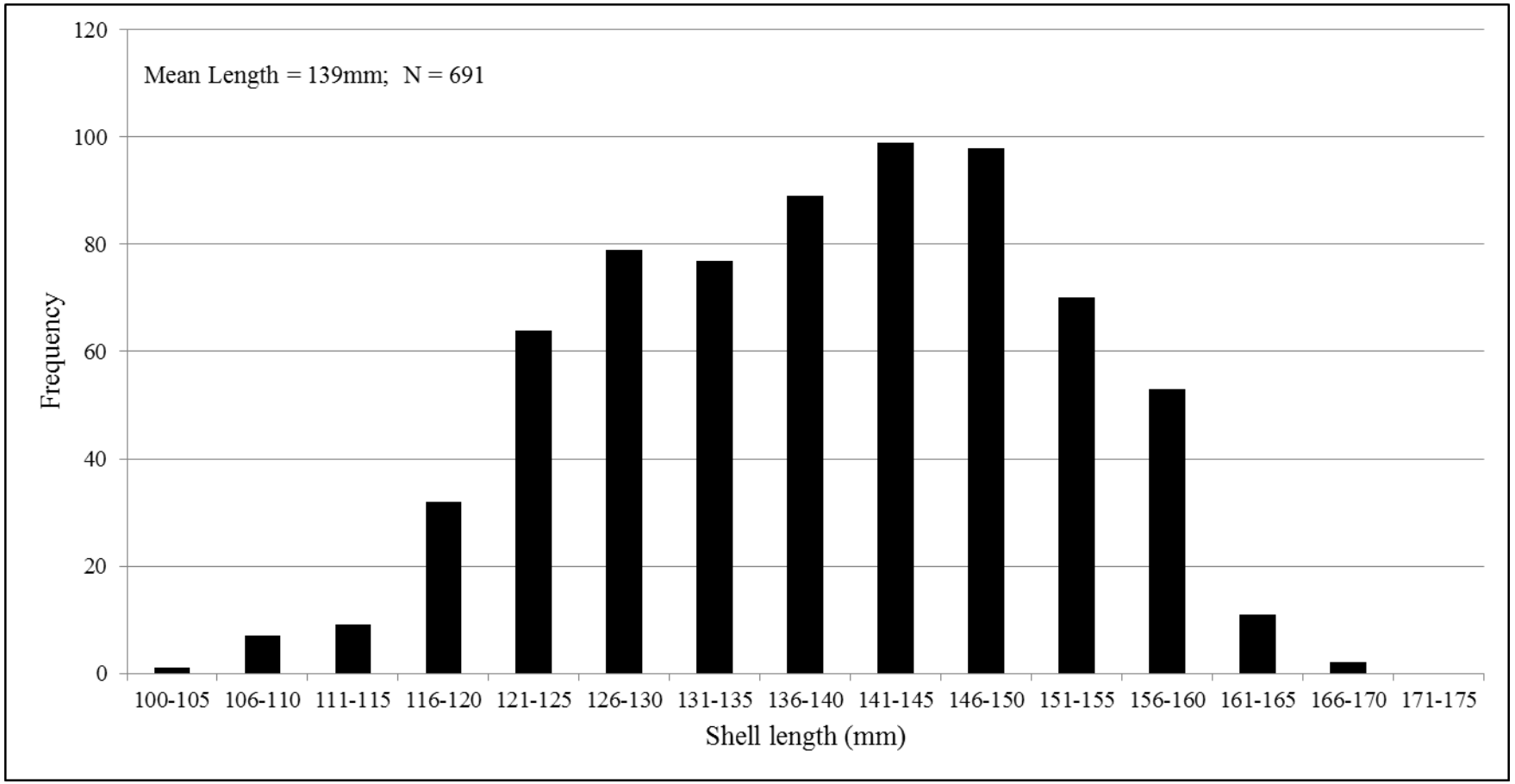

Figure 9.–Length frequency of razor clam shells sampled from the 2012 Polly Creek commercial razor clam fishery.

APPENDIX A: 2012 SEASON DATA

Appendix A1.–Offshore test fish sockeye salmon catch results and environmental data, 2012.

Date	No. of Station	Fishing Time (min)	Catch	Cum Catch	Index	Cum Index	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	227.5	85	85	66	66	598	9.5	12.5	28.8	7	SW	9	SW
7/2	6	215.5	31	116	25	90	594	9.1	10.2	29.6	4	SW	9	SE
7/3	6	216.5	50	166	45	135	588	9.2	11.0	29.5	4	S	4	S
7/4	6	217.0	61	227	49	184	589	8.9	9.2	29.9	6	E	6	E
7/5	6	217.5	79	306	64	249	584	9.2	10.0	29.5	7	N	17	NW
7/6	6	220.5	72	378	58	306	583	9.1	9.8	29.9	8	N	9	N
7/7	6	210.0	67	445	70	377	603	9.4	12.5	29.3	7	NW	3	NE
7/8	6	223.0	79	524	62	439	593	8.9	12.3	29.7	3	SW	0	na
7/9	6	214.0	13	537	11	450	590	9.0	12.2	29.6	2	NW	2	SW
7/10	6	223.5	65	602	53	502	581	9.4	10.2	29.4	7	SW	6	S
7/11	4a	164.5	208	810	151	653	593	9.3	10.0	29.6	9	NE	11	NE
7/12	2a	86.5	254	1,064	181	835	587	9.4	8.0	30.4	23	N	24	N
7/13	6	225.5	161	1,225	127	961	561	9.1	11.3	30.2	2	N	8	SW
7/14	6	229.0	189	1,414	136	1,097	581	9.9	10.8	28.7	7	SW	2	W
7/15	6	224.0	79	1,493	67	1,164	576	9.7	10.5	29.1	9	N	1	N
7/16	6	217.5	20	1,513	16	1,180	584	9.8	10.8	28.6	3	SW	4	SW
7/17	6	209.0	253	1,766	196	1,376	592	9.7	11.7	29.5	0	na	2	SW
7/18	6	206.5	74	1,840	84	1,459	583	10.0	10.8	28.2	7	SW	2	S
7/19	6	235.0	199	2,039	137	1,597	571	9.7	11.2	29.4	6	S	5	SE
7/20	6	262.5	377	2,416	217	1,814	578	9.8	11.2	29.0	8	E	4	E
7/21	6	218.5	116	2,532	91	1,905	559	9.4	10.5	30.0	5	NE	3	NE
7/22	6	210.5	54	2,586	43	1,948	560	9.2	10.3	29.9	6	NW	3	E
7/23	6	211.5	19	2,605	15	1,963	567	9.6	11.0	29.2	0	na	4	N
7/24	6	209.5	6	2,611	5	1,968	559	9.8	12.7	29.6	1	S	1	S
7/25	6	214.0	4	2,615	3	1,971	562	10.0	12.3	29.6	0	na	2	S
7/26	6	212.0	8	2,623	7	1,978	562	10.2	11.0	29.3	4	SE	2	S
7/27	6	196.5	64	2,687	47	2,024	561	10.2	11.5	29.7	1	S	3	S
7/28	6	214.0	19	2,706	15	2,039	566	10.5	11.5	29.0	3	SW	8	SE
7/29	6	212.5	11	2,717	9	2,049	551	10.4	11.0	29.2	2	NE	2	SW
7/30	6	211.5	4	2,721	3	2,052	558	10.6	10.8	28.5	2	SW	5	NE

Appendix A2.–Upper Cook Inlet sockeye salmon enumeration by watershed and date, 2012.

	Kenai River		Kasilof River		Fish Creek		Crescent River		Chelatna Lake		Judd Lake		Larson Lake	
Date	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum
15 Jun			2,658	2,658										
16 Jun			672	3,330										
17 Jun			672	4,002										
18 Jun			1434	5,436										
19 Jun			1,974	7,410										
20 Jun			2,598	10,008										
21 Jun			3,552	13,560										
22 Jun			2,382	15,942									3	3
23 Jun			2,310	18,252									0	3
24 Jun			3,414	21,666			191	191					0	3
25 Jun			2,898	24,564			189	380					0	3
26 Jun			3,714	28,278			424	804					4	7
27 Jun			6,492	34,770			153	957					0	7
28 Jun			8,700	43,470			1,642	2,599					0	7
29 Jun			5,190	48,660			4,709	7,308					0	7
30 Jun			6,840	55,500			2,001	9,309					0	7
1 Jul	3,970	3,970	5,610	61,110			7,407	16,716					0	7
2 Jul	8,970	12,940	5,904	67,014			3,463	20,179					0	7
3 Jul	7,067	20,007	5,100	72,114			2,112	22,291					0	7
4 Jul	5,514	25,521	1,302	73,416			625	22,916					1	8
5 Jul	4,913	30,434	1,776	75,192			1,283	24,199					0	8
6 Jul	3,426	33,860	630	75,822			3,003	27,202					0	8
7 Jul	3,648	37,508	2,154	77,976			4,132	31,334					0	8
8 Jul	5,466	42,974	2,772	80,748			2,351	33,685					0	8
9 Jul	6,470	49,444	2,952	83,700			851	34,536					0	8
10 Jul	6,774	56,218	4,026	87,726			644	35,180					0	8

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Appendix A2.–Page 2 of 3.

	Kenai River		Kasilof River		Fish Creek		Crescent River		Chelatna Lake		Judd Lake		Larson Lake	
Date	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum
11 Jul	12,054	68,272	3,228	90,954			649	35,829					0	8
12 Jul	9,726	77,998	2,736	93,690			680	36,509					0	8
13 Jul	10,548	88,546	4,224	97,914			841	37,350					0	8
14 Jul	20,214	108,760	6,612	104,526			1,844	39,194					0	8
15 Jul	119,274	228,034	25,146	129,672			1,073	40,267					0	8
16 Jul	196,356	424,390	29,100	158,772			1,630	41,897					0	8
17 Jul	72,726	497,116	3,030	161,802	262	262	963	42,860					2	10
18 Jul	31,606	528,722	7,824	169,626	35	297	643	43,503					0	10
19 Jul	28,722	557,444	7,416	177,042	548	845	1,240	44,743					0	10
20 Jul	40,230	597,674	12,756	189,798	638	1,483	2,450	47,193					128	138
21 Jul	97,914	695,588	29,262	219,060	1,106	2,589	4,024	51,217					775	913
22 Jul	110,898	806,486	19,278	238,338	1,842	4,431	972	52,189					939	1,852
23 Jul	88,255	894,741	6,264	244,602	1,260	5,691	1,875	54,064					189	2,041
24 Jul	51,222	945,963	7,098	251,700	1,401	7,092	1,814	55,878	5,087	5,087			231	2,272
25 Jul	61,420	1,007,383	26,598	278,298	249	7,341	817	56,695	2,940	8,027	1	1	273	2,545
26 Jul	61,812	1,069,195	20,890	299,188	2,987	10,328	487	57,182	10	8,037	18	19	834	3,379
27 Jul	65,250	1,134,445	18,312	317,500	1,120	11,448	544	57,726	2,036	10,073	966	985	582	3,961
28 Jul	63,438	1,197,883	9,655	327,155	1,584	13,032	574	58,300	3,307	13,380	840	1,825	701	4,662
29 Jul	69,870	1,267,753	7,152	334,307	820	13,852	538	58,838	2,182	15,562	516	2,341	1,481	6,143
30 Jul	43,494	1,311,247	5,844	340,151	349	14,201			2,980	18,542	1,926	4,267	1,380	7,523
31 Jul	40,920	1,352,167	5,316	345,467	127	14,328			2,069	20,611	927	5,194	810	8,333
1 Aug	24,876	1,377,043	4,332	349,799	114	14,442			2,173	22,784	499	5,693	2,198	10,531
2 Aug	25,284	1,402,327	3,420	353,219	2,575	17,017			2,054	24,838	1,873	7,566	1,389	11,920

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Appendix A2.–Page 3 of 3.

	Kenai River		Kasilof River		Fish Creek		Crescent River		Chelatna Lake		Judd Lake		Larson Lake	
Date	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum
3 Aug	18,102	1,420,429	3,024	356,243	78	17,095			2,645	27,483	1,070	8,636	830	12,750
4 Aug	16,908	1,437,337	3,450	359,693	456	17,551			1104	28,587	993	9,629	758	13,508
5 Aug	22,080	1,459,417	2,922	362,615	1,017	18,568			606	29,193	721	10,350	638	14,146
6 Aug	14,604	1,474,021	2,149	364,764	16	18,584			1,071	30,264	968	11,318	426	14,572
7 Aug	10,278	1,484,299	2,172	366,936	9	18,593			591	30,855	1,089	12,407	307	14,879
8 Aug	10,764	1,495,063	1,602	368,538	5	18,598			743	31,598	821	13,228	361	15,240
9 Aug	11,118	1,506,181	1,335	369,873	36	18,634			963	32,561	943	14,171	454	15,694
10 Aug	13,968	1,520,149	1,320	371,193	11	18,645			975	33,536	1,026	15,197	105	15,799
11 Aug	9,560	1,529,709	1,188	372,381	0	18,645			511	34,047	879	16,076	94	15,893
12 Aug	10,309	1,540,018	1,044	373,425	9	18,654			839	34,886	678	16,754	265	16,158
13 Aug	8,273	1,548,291	1,098	374,523	7	18,661			393	35,279	343	17,097	102	16,260
14 Aug	13,338	1,561,629			10	18,671			537	35,816	286	17,383	115	16,375
15 Aug	13,709	1,575,338			18	18,689			203	36,019	48	17,431	29	16,404
16 Aug	6,217	1,581,555			6	18,695			103	36,122	0	17,431	62	16,466
17 Aug					14	18,709			212	36,334	33	17,464	66	16,532
18 Aug					2	18,711			243	36,577	19	17,483	23	16,555
19 Aug					4	18,715					56	17,539	26	16,581
20 Aug					28	18,743					409	17,948	84	16,665
21 Aug					31	18,774					125	18,073	43	16,708
22 Aug					0	18,774					40	18,113		
23 Aug					13	18,787					72	18,185		
24 Aug					2	18,789					47	18,232		
25 Aug					2	18,791					45	18,277		

Note: Days without data indicate days when the project was not operational.

Appendix A3.–Commercial Chinook salmon catch by area and date, Upper Cook Inlet, 2012.

Upper Subdistrict Set Gillnet														
	244-21 Ninilchik		244-22 Cohoe		244-31 South K-Beach		244-32 North K-Beach		244-41 Salamatof		244-42 E. Forelands		Total	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
3 Jul	12	12	12	12	5	5							29	29
5 Jul	21	33	30	42	16	21							67	96
16 Jul	44	77	53	95	69	90	118	118	39	39	3	3	326	422
6 Aug	11	88	9	104	43	133	36	154	61	100	10	13	170	592
9 Aug	4	92	7	111	19	152	13	167	31	131	1	14	75	667
12 Aug	2	94	1	112	3	155		167		131		14	6	673
13 Aug	6	100	1	113	3	158	2	169	19	150		14	31	704

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											35	35			158	158			193	193
4 Jun															37	195			37	230
6 Jun															23	218			23	253
8 Jun											7	42			34	252			41	294
11 Jun											4	46			22	274			26	320
13 Jun											5	51			42	316			47	367
15 Jun											12	63			12	328			24	391
18 Jun					15	15			1	1	2	65			26	354			44	435
20 Jun															1	355			1	436
21 Jun					3	18													3	439
22 Jun																				439
25 Jun					3	21									6	361	2	2	11	450
28 Jun					9	30									2	363			11	461
2 Jul					13	43									1	364			14	475
3 Jul					4	47													4	479
4 Jul					10	57													10	489
5 Jul																				489
6 Jul					4	61													4	493
7 Jul																				493
8 Jul					7	68													7	500
9 Jul					1	69											1	3	2	502
10 Jul					5	74													5	507

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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
11 Jul					2	76													2	509
12 Jul					2	78													2	511
13 Jul					4	82													4	515
14 Jul					2	84													2	517
15 Jul					9	93													9	526
16 Jul					2	95									4	368	1	4	7	533
17 Jul					5	100													5	538
18 Jul					1	101													1	539
19 Jul					5	106									3	371			8	547
20 Jul					2	108													2	549
21 Jul																				549
22 Jul																				549
23 Jul															2	373			2	551
24 Jul																				551
26 Jul					2	110													2	553
30 Jul															1	374			1	554
2 Aug					1	111													1	555
6 Aug																				555
9 Aug																				555
13 Aug																				555
16 Aug																				555
20 Aug																				555

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Northern District - Set Gillnet

	247-10 Trading Bay		247-20 Tyonek		247-30 Beluga		275-41 Su. Flats.		247-42 Pt. McKenzie		247-43 Fire Island		247-70 Pt. Possession		246-10 Birch Hill		246-20 #3 Bay		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
28 May	129	129	20	20			7	7	5	5	2	2	32	32	9	9	8	8	212	212
4 Jun	35	164	27	47			36	43	26	31	44	46	40	72			6	14	214	426
11 Jun	252	416	101	148			16	59	29	60	11	57	58	130	19	28	5	19	491	917
18 Jun	10	426	34	182			12	71	14	74	16	73	20	150			7	26	113	1,030
2 Jul			2	184							1	74					1	27	4	1,034
5 Jul																				
9 Jul			1	185	1	1			1	75							2	29	5	1,039
12 Jul	1	427							1	76									2	1,041
16 Jul			1	186					1	77	1	75							4	1,045
19 Jul																				
23 Jul																				
26 Jul																				
30 Jul											1	76							1	1,046
2 Aug																	1	31	1	1,047
6 Aug																				
9 Aug															1	29			1	1,048
13 Aug																	1	32	1	1,049

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Central District Drift Gillnet

		244-61 Kasilof Section		244-56 Exp. Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
21 Jun	33										
25 Jun	80							4	4	4	4
28 Jun	153							25	29	25	29
2 Jul	301							24	53	24	53
3 Jul	13										
5 Jul	330							24	77	24	77
9 Jul	188			5	5					5	82
12 Jul	286							10	87	10	92
14 Jul	438							10	97	10	102
16 Jul	444							29	126	29	131
17 Jul	389			14	19					14	145
18 Jul	321			2	21					2	147
19 Jul	437							16	142	16	163
20 Jul	332			5	26					5	168
21 Jul	427							2	144	2	170
22 Jul	97			3	29					3	173
23 Jul	434							2	146	2	175
24 Jul	334			7	36					7	182

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Central District Drift Gillnet

		244-61 Kasilof Section		244-56 Exp. Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
25 Jul	365			3	39					3	185
26 Jul	427							6	152	6	191
27 Jul	159			14	53					14	205
28 Jul	46			1	54					1	206
30 Jul	314							8	160	8	214
31 Jul	39			1	55					1	215
2 Aug	25							2	162	2	217
6 Aug	111							1	163	1	218
9 Aug	39										
13 Aug	15										
16 Aug	9										
20 Aug	4										
23 Aug	4										
29 Aug	1										
30 Aug	2										
31 Aug	1										
10 Sep	1										

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

Appendix A4.–Commercial sockeye salmon catch by area and date, Upper Cook Inlet, 2012.

Upper Subdistrict Set Gillnet														
	244-21 Ninilchik		244-22 Cohoe		244-31 South K-Beach		244-32 North K-Beach		244-41 Salamatof		244-42 E. Forelands		Total	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
3 Jul	3,344	3,344	2,600	2,600	2,768	2,768							8,712	8,712
5 Jul	2,320	5,664	1,661	4,261	1,099	3,867							5,080	13,792
16 Jul	2,801	8,465	2,278	6,539	7,083	10,950	5,625	5,625	45,958	45,958	4,261	4,261	68,006	81,798
6 Aug	722	9,187	953	7,492	717	11,667	882	6,507	4,649	50,607	1,385	5,646	9,308	91,106
9 Aug	390	9,577	419	7,911	276	11,943	328	6,835	1,356	51,963	305	5,951	3,074	94,180
12 Aug	159	9,736	97	8,008	201	12,144	76	6,911	31	51,994			564	94,744
13 Aug	294	10,030	211	8,219	292	12,436	110	7,021	812	52,806	174	6,125	1,893	96,637

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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											918	918			2,673	2,673			3,591	3,591
4 Jun											328	1,246			642	3,315			970	4,561
6 Jun											383	1,629			680	3,995			1,063	5,624
8 Jun											738	2,367			1,366	5,361			2,104	7,728
11 Jun											376	2,743			1,118	6,479			1,494	9,222
13 Jun											363	3,106			665	7,144			1,028	10,250
15 Jun											380	3,486			563	7,707			943	11,193
18 Jun					427	427			105	105	65	3,551			775	8,482			1,372	12,565
20 Jun											9	3,560			243	8,725			252	12,817
21 Jun					1,005	1,432			32	137									1,037	13,854
22 Jun															754	9,479			754	14,608
25 Jun					1,813	3,245			9	146					892	10,371	648	648	3,362	17,970
28 Jun					1,410	4,655									997	11,368	134	782	2,541	20,511
2 Jul					1,457	6,112			51	197					851	12,219	87	869	2,446	22,957
3 Jul					929	7,041													929	23,886
4 Jul					880	7,921													880	24,766
5 Jul					199	8,120									515	12,734			714	25,480
6 Jul					1,893	10,013													1,893	27,373
7 Jul					357	10,370													357	27,730
8 Jul					2,087	12,457													2,087	29,817
9 Jul					1,477	13,934			11	208					1,802	14,536	515	1,384	3,805	33,622
10 Jul					1,047	14,981													1,047	34,669

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Central District - West Side Set Gillnet

Date	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	
	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
11 Jul					482	15,463													482	35,151
12 Jul					729	16,192									13	14,549			742	35,893
13 Jul					1,555	17,747													1,555	37,448
14 Jul					935	18,682													935	38,383
15 Jul					1,269	19,951													1,269	39,652
16 Jul					227	20,178			295	503			80	80	2,227	16,776	550	1,934	3,379	43,031
17 Jul					1,358	21,536													1,358	44,389
18 Jul					494	22,030													494	44,883
19 Jul					1,262	23,292			414	917			21	101	17,382	34,158	1,751	3,685	20,830	65,713
20 Jul					387	23,679													387	66,100
21 Jul					1,315	24,994													1,315	67,415
22 Jul					115	25,109													115	67,530
23 Jul					196	25,305			994	1,911			86	187	8,088	42,246	2,274	5,959	11,638	79,168
24 Jul					23	25,328													23	79,191
26 Jul					149	25,477			1,003	2,914			74	261	2,724	44,970	692	6,651	4,642	83,833
30 Jul					96	25,573			392	3,306					1,389	46,359	728	7,379	2,605	86,438
2 Aug					5	25,578			577	3,883					936	47,295			1,518	87,956
6 Aug					6	25,584			191	4,074					911	48,206	142	7,521	1,250	89,206
9 Aug	1	1			14	25,598			114	4,188					238	48,444	83	7,604	450	89,656
13 Aug					14	25,612			65	4,253					309	48,753	66	7,670	454	90,110
16 Aug					1	25,613			31	4,284					182	48,935	83	7,753	297	90,407
20 Aug									33	4,317									33	90,440

-continued-

Northern District - Set Gillnet

	247-10 Trading Bay		247-20 Tyonek		247-30 Beluga		275-41 Su. Flats.		247-42 Pt. McKenzie		247-43 Fire Island		247-70 Pt. Possession		246-10 Birch Hill		246-20 #3 Bay		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
28 May			2	2			5	5	12	12	1	1	153	153	38	38	110	110	321	321
4 Jun	14	14	1	3			7	12	2	14	8	9	97	250	5	43	45	155	179	500
11 Jun	51	65	4	7			1	13	6	20	1	10	205	455	10	53	142	297	420	920
18 Jun	1	66	6	13			1	14	2	22	3	13	51	506			36	333	100	1,020
2 Jul			415	428							28	41	214	720	41	94	249	582	947	1,967
5 Jul									6	28	15	56	19	739					40	2,007
9 Jul	10	76	226	654	13	13	11	25	25	53	4	60	168	907	38	132	88	670	583	2,590
12 Jul	27	103	197	851	25	38	19	44	13	66			191	1,098					472	3,062
16 Jul	223	326	1,271	2,122	2,418	2,456	661	705	229	295	383	443	1,893	2,991	334	466	427	1,097	7,839	10,901
19 Jul	79	405	697	2,819	491	2,947	172	877	219	514	184	627	259	3,250	227	693	463	1,560	2,791	13,692
23 Jul			381	3,200	346	3,293	269	1,146	307	821	397	1,024	725	3,975	293	986	234	1,794	2,952	16,644
26 Jul	35	440	176	3,376	446	3,739	266	1,412	169	990	230	1,254	422	4,397	639	1,625	1,127	2,921	3,510	20,154
30 Jul			24	3,400	33	3,772	32	1,444	146	1,136	94	1,348	333	4,730	192	1,817	334	3,255	1,188	21,342
2 Aug									16	1,152	97	1,445	166	4,896	161	1,978	80	3,335	520	21,862
6 Aug	6	446	64	3,464			14	1,458	26	1,178	52	1,497	51	4,947	117	2,095	51	3,386	381	22,243
9 Aug													58	5,005	108	2,203	77	3,463	243	22,486
13 Aug													26	5,031	41	2,244	27	3,490	94	22,580

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Central District Drift Gillnet

		244-61 Kasilof Section		244-56 Exp. Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
21 Jun	33							625	625	625	625
25 Jun	80							4,633	5,258	4,633	5,258
28 Jun	153							15,316	20,574	15,316	20,574
2 Jul	301							42,980	63,554	42,980	63,554
3 Jul	13	176	176							176	63,730
5 Jul	330							51,161	114,715	51,161	114,891
9 Jul	188			3,584	3,584					3,584	118,475
12 Jul	286							136,923	251,638	136,923	255,398
14 Jul	438							210,742	462,380	210,742	466,140
16 Jul	444							300,904	763,284	300,904	767,044
17 Jul	389			185,659	189,243					185,659	952,703
18 Jul	321			37,032	226,275					37,032	989,735
19 Jul	437							611,343	1,374,627	611,343	1,601,078
20 Jul	332			159,330	385,605					159,330	1,760,408
21 Jul	427							456,254	1,830,881	456,254	2,216,662
22 Jul	97			22,762	408,367					22,762	2,239,424
23 Jul	434							370,775	2,201,656	370,775	2,610,199
24 Jul	334			100,907	509,274					100,907	2,711,106

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Central District Drift Gillnet

		244-61 Kasilof Section		244-56 Exp. Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
25 Jul	365			70,186	579,460					70,186	2,781,292
26 Jul	427							116,146	2,317,802	116,146	2,897,438
27 Jul	159			4,536	583,996					4,536	2,901,974
28 Jul	46			1,745	585,741					1,745	2,903,719
30 Jul	314							16,639	2,334,441	16,639	2,920,358
31 Jul	39			1,062	586,803					1,062	2,921,420
2 Aug	25							636	2,335,077	636	2,922,056
6 Aug	111							1,654	2,336,731	1,654	2,923,710
9 Aug	39							344	2,337,075	344	2,924,054
13 Aug	15							40	2,337,115	40	2,924,094
16 Aug	9							20	2,337,135	20	2,924,114
20 Aug	4							17	2,337,152	17	2,924,131
23 Aug	4							6	2,337,158	6	2,924,137
29 Aug	1					1	1			1	2,924,138
30 Aug	2							3	2,337,161	3	2,924,141
31 Aug	1					3	4			3	2,924,144
10 Sep	1										

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

Appendix A5.–Commercial coho salmon catch by area and date, Upper Cook Inlet, 2012.

Upper Subdistrict Set Gillnet														
	244-21 Ninilchik		244-22 Cohoe		244-31 South K-Beach		244-32 North K-Beach		244-41 Salamatof		244-42 E. Forelands		Total	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
3 Jul	1	1	1	1									2	2
5 Jul	1	2		1									1	3
16 Jul	3	5	2	3			3	3	13	13	22	22	43	46
6 Aug	437	442	249	252	87	87	167	170	502	515	244	266	1,686	1,732
9 Aug	333	775	507	759	136	223	365	535	752	1,267	372	638	2,465	4,197
12 Aug	154	929	109	868	188	411	62	597	21	1,288			534	4,731
13 Aug	370	1,299	283	1,151	224	635	109	706	564	1,852	253	891	3,037	6,534

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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																				
4 Jun																				
6 Jun																				
8 Jun																				
11 Jun																				
13 Jun																				
15 Jun																				
18 Jun																				
20 Jun																				
21 Jun																				
22 Jun																				
25 Jun																				
28 Jun																				
2 Jul																				
3 Jul																				
4 Jul					5	5													5	5
5 Jul																				
6 Jul																				
7 Jul																				
8 Jul					13	18													13	18
9 Jul					14	32									21	21			35	53
10 Jul					18	50													18	71

-continued-

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
11 Jul					10	60													10	81
12 Jul					28	88													28	109
13 Jul					16	104													16	125
14 Jul					7	111													7	132
15 Jul					63	174													63	195
16 Jul					4	178			26	26			27	27	317	338	61	61	435	630
17 Jul					64	242													64	694
18 Jul					28	270													28	722
19 Jul					72	342			10	36			19	46	525	863	73	134	699	1,421
20 Jul					26	368													26	1,447
21 Jul					124	492													124	1,571
22 Jul					37	529													37	1,608
23 Jul					28	557			43	79			63	109	1,109	1,972	370	504	1,613	3,221
24 Jul					72	629													72	3,293
26 Jul					13	642			178	257			91	200	1,684	3,656	163	667	2,129	5,422
30 Jul					141	783			85	342					1,988	5,644	868	1,535	3,082	8,504
2 Aug					58	841			35	377					417	6,061			510	9,014
6 Aug					58	899			381	758					745	6,806	70	1,605	1,254	10,268
9 Aug	12	12			36	935			290	1,048					414	7,220	35	1,640	787	11,055
13 Aug	50	62			19	954			281	1,329					154	7,374	56	1,696	560	11,615
16 Aug					8	962			241	1,570					96	7,470	53	1,749	398	12,013
20 Aug									341	1,911									341	12,354

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Appendix A5.–Page 4 of 6.

Northern District - Set Gillnet

	247-10 Trading Bay		247-20 Tyonek		247-30 Beluga		275-41 Su. Flats.		247-42 Pt. McKenzie		247-43 Fire Island		247-70 Pt. Possession		246-10 Birch Hill		246-20 #3 Bay		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
28 May																				
4 Jun																				
11 Jun																				
18 Jun																				
2 Jul																				
5 Jul																				
9 Jul			27	27	2	2	2	2					2	2			1	1	34	34
12 Jul	40	40	101	128	31	33	3	5	6	6			20	22					201	235
16 Jul	25	65	48	176	149	182	69	74	29	35	92	92	43	65			2	3	457	692
19 Jul	100	165	351	527	108	290	39	113	39	74	70	162	38	103	4	4	32	35	781	1,473
23 Jul			478	1,005	167	457	43	156	63	137	70	232	126	229	94	98	53	88	1,094	2,567
26 Jul	146	311	931	1,936	288	745	246	402	106	243	243	475	89	318	33	131	88	176	2,170	4,737
30 Jul			439	2,375	263	1,008	152	554	235	478	190	665	771	1,089	514	645	397	573	2,961	7,698
2 Aug									25	503	203	868	304	1,393	74	719	25	598	631	8,329
6 Aug	220	531	764	3,139	281	1,289	112	666	253	756	462	1,330	200	1,593	173	892	45	643	2,510	10,839
9 Aug													337	1,930	706	1,598	213	856	1,256	12,095
13 Aug													354	2,284	480	2,078	277	1,133	1,111	13,206

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Central District Drift Gillnet

		244-61 Kasilof Section		244-56 Exp. Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
21 Jun	33							1	1	1	1
25 Jun	80										
28 Jun	153							20	21	20	21
2 Jul	301							48	69	48	69
3 Jul	13										
5 Jul	330							53	122	53	122
9 Jul	188										
12 Jul	286							240	362	240	362
14 Jul	438							1,146	1,508	1,146	1,508
16 Jul	444							3,944	5,452	3,944	5,452
17 Jul	389			1,483	1,483					1,483	6,935
18 Jul	321			240	1,723					240	7,175
19 Jul	437							7,583	13,035	7,583	14,758
20 Jul	332			1,021	2,744					1,021	15,779
21 Jul	427							9,992	23,027	9,992	25,771
22 Jul	97			638	3,382					638	26,409
23 Jul	434							12,324	35,351	12,324	38,733
24 Jul	334			1,411	4,793					1,411	40,144

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Central District Drift Gillnet

		244-61 Kasilof Section		244-56 Exp. Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
25 Jul	365			1,465	6,258					1,465	41,609
26 Jul	427							16,374	51,725	16,374	57,983
27 Jul	159			316	6,574					316	58,299
28 Jul	46			155	6,729					155	58,454
30 Jul	314							9,089	60,814	9,089	67,543
31 Jul	39			273	7,002					273	67,816
2 Aug	25							489	61,303	489	68,305
6 Aug	111							2,246	63,549	2,246	70,551
9 Aug	39							1,297	64,846	1,297	71,848
13 Aug	15							325	65,171	325	72,173
16 Aug	9							585	65,756	585	72,758
20 Aug	4							318	66,074	318	73,076
23 Aug	4							498	66,572	498	73,574
29 Aug	1					436	436			436	74,010
30 Aug	2							312	66,884	312	74,322
31 Aug	1					253	689			253	74,575
10 Sep	1					103	792			103	74,678

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

Appendix A6.–Commercial pink salmon catch by area and date, Upper Cook Inlet, 2012.

Upper Subdistrict Set Gillnet														
	244-21 Ninilchik		244-22 Cohoe		244-31 South K-Beach		244-32 North K-Beach		244-41 Salamatof		244-42 E. Forelands		Total	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
3 Jul			2	2	5	5							7	7
5 Jul	2	2	1	3		5							3	10
16 Jul	50	52	18	21	8	13	3	3	34	34	68	68	181	191
6 Aug	9,944	9,996	8,343	8,364	4,182	4,195	4,485	4,488	12,179	12,213	2,544	2,612	41,677	41,868
9 Aug	15,561	25,557	10,328	18,692	7,034	11,229	7,813	12,301	13,734	25,947	970	3,582	55,440	97,308
12 Aug	3,265	28,822	1,779	20,471	5,517	16,746	2,464	14,765	1,011	26,958			14,036	111,344
13 Aug	13,968	42,790	9,021	29,492	8,892	25,638	4,038	18,803	11,051	38,009	583	4,165	46,319	158,897

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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																				
4 Jun																				
6 Jun																				
8 Jun																				
11 Jun																				
13 Jun																				
15 Jun																				
18 Jun																				
20 Jun																				
21 Jun																				
22 Jun																				
25 Jun																				
28 Jun																				
2 Jul															2	2			2	2
3 Jul					1	1													1	3
4 Jul					1	2													1	4
5 Jul																				
6 Jul																				
7 Jul																				
8 Jul					3	5													3	7
9 Jul					1	6									4	6			5	12
10 Jul																				

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Central District - West Side Set Gillnet

Date	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	
	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
11 Jul																				
12 Jul																				
13 Jul					1	7													1	13
14 Jul																				
15 Jul																				
16 Jul															76	82	5	5	81	94
17 Jul					2	9													2	96
18 Jul																				
19 Jul					2	11							3	3	260	342	3	8	268	364
20 Jul																				
21 Jul					2	13													2	366
22 Jul																				
23 Jul													21	24	131	473	24	32	176	542
24 Jul																				
26 Jul					1	14			10	10			19	43	1,236	1,709	50	82	1,316	1,858
30 Jul					1	15			1	11					203	1,912	31	113	236	2,094
2 Aug					1	16									138	2,050			139	2,233
6 Aug					1	17			32	43					463	2,513	26	139	522	2,755
9 Aug									64	107					176	2,689	7	146	247	3,002
13 Aug					15	32			64	171					133	2,822	2	148	214	3,216
16 Aug					3	35			17	188					133	2,955			153	3,369
20 Aug									7	195									7	3,376

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Northern District - Set Gillnet

Date	247-10 Trading Bay		247-20 Tyonek		247-30 Beluga		275-41 Su. Flats.		247-42 Pt. McKenzie		247-43 Fire Island		247-70 Pt. Possession		246-10 Birch Hill		246-20 #3 Bay		Total	
	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
28 May																				
4 Jun																				
11 Jun																				
18 Jun																				
2 Jul																				
5 Jul																				
9 Jul													2	2					2	2
12 Jul							1	1					16	18					17	19
16 Jul	1	1			2	2	3	4			1	1	39	57			10	10	56	75
19 Jul			66	66	2	4	5	9					138	195	27	27	58	68	296	371
23 Jul			2	68			3	12					121	316	199	226	169	237	494	865
26 Jul	32	33	5	73	4	8	29	41					114	430	95	321	139	376	418	1,283
30 Jul							4	45	1	1	14	15	682	1,112	521	842	550	926	1,772	3,055
2 Aug									3	4			129	1,241	127	969	45	971	304	3,359
6 Aug					4	12	2	47			2	17	76	1,317	83	1,052	76	1,047	243	3,602
9 Aug													40	1,357	41	1,093	84	1,131	165	3,767
13 Aug													32	1,389	43	1,136	80	1,211	155	3,922

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Central District Drift Gillnet

		244-61 Kasilof Section		244-56 Exp. Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
21 Jun	33										
25 Jun	80							1	1	1	1
28 Jun	153							8	9	8	9
2 Jul	301							35	44	35	44
3 Jul	13										
5 Jul	330							51	95	51	95
9 Jul	188			11	11					11	106
12 Jul	286							902	997	902	1,008
14 Jul	438							1,852	2,849	1,852	2,860
16 Jul	444							6,140	8,989	6,140	9,000
17 Jul	389			5,456	5,467					5,456	14,456
18 Jul	321			819	6,286					819	15,275
19 Jul	437							24,007	32,996	24,007	39,282
20 Jul	332			9,086	15,372					9,086	48,368
21 Jul	427							29,114	62,110	29,114	77,482
22 Jul	97			4,668	20,040					4,668	82,150
23 Jul	434							62,819	124,929	62,819	144,969
24 Jul	334			17,741	37,781					17,741	162,710

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Central District Drift Gillnet

		244-61 Kasilof Section		244-56 Exp. Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
25 Jul	365			13,689	51,470					13,689	176,399
26 Jul	427							84,934	209,863	84,934	261,333
27 Jul	159			3,120	54,590					3,120	264,453
28 Jul	46			976	55,566					976	265,429
30 Jul	314							19,296	229,159	19,296	284,725
31 Jul	39			1,019	56,585					1,019	285,744
2 Aug	25							1,680	230,839	1,680	287,424
6 Aug	111							9,225	240,064	9,225	296,649
9 Aug	39							5,429	245,493	5,429	302,078
13 Aug	15							1,083	246,576	1,083	303,161
16 Aug	9							33	246,609	33	303,194
20 Aug	4							15	246,624	15	303,209
23 Aug	4							6	246,630	6	303,215
29 Aug	1										
30 Aug	2							1	246,631	1	303,216
31 Aug	1										
10 Sep	1										

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

Appendix A7.–Commercial chum salmon catch by area and date, Upper Cook Inlet, 2012.

Upper Subdistrict Set Gillnet														
	244-21 Ninilchik		244-22 Cohoe		244-31 South K-Beach		244-32 North K-Beach		244-41 Salamatof		244-42 E. Forelands		Total	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
3 Jul														
5 Jul														
16 Jul	1	1	4	4					3	3	1	1	9	9
6 Aug	1	2	2	6			6	6	1	4	4	5	14	23
9 Aug	3	5	3	9			1	7	1	5	2	7	10	33
12 Aug	2	7	1	10	4	4				5			7	40
13 Aug	3	10		10		4	1	8	4	9	1	8	9	49

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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																				
4 Jun																				
6 Jun																				
8 Jun																				
11 Jun																				
13 Jun																				
15 Jun																				
18 Jun																				
20 Jun																				
21 Jun																				
22 Jun																				
25 Jun					1	1													1	1
28 Jun					2	3													2	3
2 Jul																				
3 Jul																				
4 Jul					1	4													1	4
5 Jul																				
6 Jul					3	7													3	7
7 Jul					1	8													1	8
8 Jul					4	12													4	12
9 Jul					5	17									9	9			14	26
10 Jul					14	31													14	40

-continued-

Central District - West Side Set Gillnet

Date	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	
	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
11 Jul					6	37													6	46
12 Jul					8	45													8	54
13 Jul					33	78													33	87
14 Jul					35	113													35	122
15 Jul					92	205													92	214
16 Jul					20	225									14	23			34	248
17 Jul					62	287													62	310
18 Jul					31	318													31	341
19 Jul					63	381							1	1	167	190			231	572
20 Jul					30	411													30	602
21 Jul					64	475													64	666
22 Jul					15	490													15	681
23 Jul					63	553			6	6			1	2	16	206	2	2	88	769
24 Jul					6	559													6	775
26 Jul					91	650			20	26					94	300			205	980
30 Jul					347	997			4	30					38	338	7	9	396	1,376
2 Aug					12	1,009			3	33					30	368			45	1,421
6 Aug					66	1,075			17	50					67	435	11	20	161	1,582
9 Aug	247	260			192	1,267			2	52					199	634	17	37	657	2,239
13 Aug	555	358			242	1,509			4	56					25	659	6	43	585	2,824
16 Aug					18	1,527			4	60					16	675	8	51	46	2,870
20 Aug									2	62									2	2,872

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Northern District - Set Gillnet

	247-10 Trading Bay		247-20 Tyonek		247-30 Beluga		275-41 Su. Flats.		247-42 Pt. McKenzie		247-43 Fire Island		247-70 Pt. Possession		246-10 Birch Hill		246-20 #3 Bay		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
28 May																				
4 Jun																				
11 Jun																				
18 Jun																				
2 Jul																				
5 Jul													1	1					1	1
9 Jul					2	2	1	1	3	3									6	7
12 Jul			10	10	28	30	13	14					8	9					59	66
16 Jul	6	6	4	14	84	114	48	62	73	76	76	76	22	31					313	379
19 Jul			30	44	189	303	187	249	167	243	180	256	7	38					760	1,139
23 Jul			2	46	12	315	128	377	14	257	118	374	10	48					284	1,423
26 Jul			12	58	43	358	127	504	13	270	256	630	15	63	2	2			468	1,891
30 Jul					4	362	13	517	26	296	27	657	51	114	6	8			127	2,018
2 Aug									2	298	37	694	7	121			2	2	48	2,066
6 Aug					1	363	1	518	21	319	39	733	4	125					66	2,132
9 Aug													6	131	1	9	1	3	8	2,140
13 Aug													9	140	2	11			11	2,151

-continued-

Central District Drift Gillnet

		244-61 Kasilof Section		244-56 Exp. Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
21 Jun	33							26	26	26	26
25 Jun	80							150	176	150	176
28 Jun	153							1,267	1,443	1,267	1,443
2 Jul	301							3,696	5,139	3,696	5,139
3 Jul	13										
5 Jul	330							8,871	14,010	8,871	14,010
9 Jul	188			55	55					55	14,065
12 Jul	286							9,568	23,578	9,568	23,633
14 Jul	438							9,979	33,557	9,979	33,612
16 Jul	444							36,041	69,598	36,041	69,653
17 Jul	389			7,713	7,768					7,713	77,366
18 Jul	321			1,962	9,730					1,962	79,328
19 Jul	437							48,210	117,808	48,210	127,538
20 Jul	332			6,743	16,473					6,743	134,281
21 Jul	427							34,913	152,721	34,913	169,194
22 Jul	97			2,960	19,433					2,960	172,154
23 Jul	434							28,562	181,283	28,562	200,716
24 Jul	334			3,838	23,271					3,838	204,554

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Central District Drift Gillnet

		244-61 Kasilof Section		244-56 Exp. Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
25 Jul	365			4,331	27,602					4,331	208,885
26 Jul	427							31,732	213,015	31,732	240,617
27 Jul	159			662	28,264					662	241,279
28 Jul	46			267	28,531					267	241,546
30 Jul	314							17,387	230,402	17,387	258,933
31 Jul	39			450	28,981					450	259,383
2 Aug	25							883	231,285	883	260,266
6 Aug	111							3,168	234,453	3,168	263,434
9 Aug	39							637	235,090	637	264,071
13 Aug	15							126	235,216	126	264,197
16 Aug	9							119	235,335	119	264,316
20 Aug	4							41	235,376	41	264,357
23 Aug	4							12	235,388	12	264,369
29 Aug	1					64	64			64	264,433
30 Aug	2							20	235,408	20	264,453
31 Aug	1					51	115			51	264,504
10 Sep	1					9	124			9	264,513

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

Appendix A8.–Commercial salmon catch by gear, statistical area and species, Upper Cook Inlet, 2012.

Gear	District	Subdistrict	Stat Area	Permits[a]	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	496	218	2,924,144	74,678	303,216	264,513	3,566,769
Setnet	Central	Upper	24421	80	100	10,030	1,299	42,790	10	54,229
			24422	65	113	8,219	1,151	29,492	10	38,985
			24431	63	158	12,436	635	25,638	4	38,871
			24432	40	169	7,021	706	18,803	8	26,707
			24441	51	150	52,806	1,852	38,009	9	92,826
			24442	21	14	6,125	891	4,165	8	11,203
			All	315	704	96,637	6,534	158,897	49	262,821
		Kalgin Is.	24610	24	374	48,935	7,470	2,955	675	60,409
			24620	<4	4	7,753	1,749	148	51	9,705
			All	25	378	56,688	9,219	3,103	726	70,114
		Chinitna	24510	<4	0	1	62	0	555	618
		Western	24520	0						0
			24530	21	111	25,613	962	35	1,527	28,248
			24540	0						0
			24550	<4	1	4,317	1,911	195	62	6,486
			All	24	112	29,930	2,873	230	1,589	34,734
		Kustatan	24555	7	65	3,560	0	0	0	3,625
			24560	<4	0	261	200	43	2	506
			All	8	65	3,821	200	43	2	4,131
		All	All	371	1,259	187,077	18,888	162,273	2,921	372,418
	Northern	General	24710	8	427	446	531	33	6	1,443
			24720	11	186	3464	3,139	73	58	6,920
			24730	9	1	3,772	1,289	12	363	5,437
			24741	7	71	1,458	666	47	518	2,760
			24742	8	77	1,178	756	4	319	2,334
			24743	5	76	1,497	1,330	17	733	3,653
			All	44	838	11,815	7,711	186	1,997	22,547
		Eastern	24770	14	150	5,031	2,284	1389	140	8,994
			24780	9	29	2244	2,078	1136	11	5,498
			24790	7	32	3,490	1,133	1211	3	5,869
			All	29	211	10,765	5,495	3,736	154	20,361
		All	All	71	1,049	22,580	13,206	3,922	2,151	42,908
	All	All	All	442	2,308	209,657	32,094	166,195	5,072	415,326
Seine	All	All	All	0	0	0	0	0	0	0
All	All	All	All	938	2,526	3,133,801	106,772	469,411	269,585	3,982,095

[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 catch per permit by statistical area, Upper Cook Inlet, 2012.

Gear	District	Subdistrict	Stat Area	Permits[a]	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	496	0	5,895	151	611	533	7,191
Set	Central	Upper	24421	80	1	125	16	535	0	678
			24422	65	2	126	18	454	0	600
			24431	63	3	197	10	407	0	617
			24432	40	4	176	18	470	0	668
			24441	51	3	1,035	36	745	0	1,820
			24442	21	1	292	42	198	0	533
			All	315	2	307	21	504	0	834
		Kalgin Is.	24610	24	16	2,039	311	123	28	2,517
			24620	<4	na	na	na	na	na	na
			All	25	15	2,268	369	124	29	2,805
		Chinitna	24510	<4	na	na	na	na	na	na
		Western	24520	0	na	na	na	na	na	na
			24530	21	5	1,220	46	2	73	1,345
			24540	<4	na	na	na	na	na	na
			24550	<4	na	na	na	na	na	na
			All	24	5	1,247	120	10	66	1,447
		Kustatan	24555	7	9	509	0	0	0	518
			24560	<4	na	na	na	na	na	na
			All	8	8	478	25	5	0	516
		All	All	371	3	504	51	437	8	1,004
	Northern	General	24710	8	53	56	66	4	1	180
			24720	11	17	315	285	7	5	629
			24730	9	0	419	143	1	40	604
			24741	7	10	208	95	7	74	394
			24742	8	10	147	95	1	40	292
			24743	5	15	299	266	3	147	731
			All	44	19	269	175	4	45	512
		Eastern	24770	14	11	359	163	99	10	642
			24780	9	3	249	231	126	1	611
			24790	7	5	499	162	173	0	838
			All	29	7	371	189	129	5	702
		All	All	71	15	318	186	55	30	604
	All	All	All	442	5	474	73	376	11	940
Seine	All	All	All	–	–	–	–	–	–	–
All	All	All	All	938	3	3,341	114	500	287	4,245

[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 2012 Upper Cook Inlet fishing season.

Emergency Order No.	Effective Date	Action	Reason
1	27 Mar	Reduced the open fishing time from twelve to six hours per day for the four commercial king salmon fishing periods scheduled in the Northern District of Upper Cook Inlet for the 2012 season. 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° 02.56' N. lat., 151° 14.36' W. long., to the Susitna River to commercial king salmon fishing for the 2012 directed king salmon fishery. The fishing periods affected by this announcement occurred on May 28, June 4, June 11, and June 18, 2012.	The AK Board of Fisheries found Chuitna River king salmon to be 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 2012 season.
2	25 Jun	Closed commercial salmon fishing in the Northern District of Upper Cook Inlet on Monday, June 25, 2012 from 7:00 a.m. until 7:00 p.m.	To conserve Northern District king salmon due to low abundance estimates through this date.
3	25 Jun	Closed set gillnetting in the Kasilof Section of the Upper Subdistrict of Upper Cook Inlet on Monday, June 25, 2012 from 7:00 a.m. to 7:00 p.m.	To conserve Kenai River late-run king salmon and other king salmon stocks in Cook Inlet.
4	28 Jun	Closed set gillnetting in the Kasilof Section of the Upper Subdistrict and the Northern District of Upper Cook Inlet on Thursday, June 28, 2012 from 7:00 a.m. to 7:00 p.m.	To conserve Kenai River late-run king salmon, Northern District king salmon, and Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
5	2 Jul	Closed set gillnetting in the Kasilof Section of the Upper Subdistrict of Upper Cook Inlet on Monday, July 2, 2012, from 7:00 a.m. to 7:00 p.m.	To conserve Kasilof River sockeye salmon.
6	2 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 7:00 p.m on Monday, July 2, 2012, until further notice.	To reduce the escapement rate of Crescent River sockeye salmon.
7	3 Jul	Opened set gillnetting in the Kasilof Section of the Upper Subdistrict on Tuesday, July 3, 2012 1:00 p.m. until 12:00 midnight. Drift gillnetting was opened in the Kasilof Section of the Upper Subdistrict on Tuesday, July 3, 2012, from 1:00 p.m. until 12:00 midnight.	To harvest surplus Kasilof River sockeye salmon.
8	5 Jul	Extended set gillnetting in the Kasilof Section of the Upper Subdistrict on Thursday, July 5 2012 from 7:00 p.m. until 9:00 p.m. Drift gillnetting was extended in the Kasilof Section of the Upper Subdistrict on Thursday, July 5 2012 from 7:00 p.m. until 9:00 p.m.	To facilitate an orderly closure in the Kasilof Section
9	9 Jul	Closed set gillnetting in the Kasilof Section of the Upper Subdistrict of Upper Cook Inlet on Monday, July 9, 2012, from 7:00 a.m. to 7:00 p.m.	To conserve Kenai River late-run king salmon.
10	12 Jul	Closed set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Thrusday, July 12, 2012, from 7:00 a.m. until 7:00 p.m.	To conserve Kenai River late-run king salmon.
11	14 Jul	Opened drift gillnetting in Drift Gillnet Area 1 and in the Kenai and Kasilof Sections of the Upper Subdistrict on Saturday, July 14, 2012, from 7:00 a.m. until 7:00 p.m.	To harvest sockeye salmon bound for the Kenai and Kasilof Rivers.

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Emergency Order No.	Effective Date	Action	Reason
12	16 Jul	Opened drift gillnetting in Drift Gillnet Area 1 on Monday, July 16, 2012, from 7:00 a.m. until 7:00 p.m.	To comply with the Central District Drift Gillnet Fishery Management Plan
13	17 Jul	Opened drift gillnetting in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Tuesday, July 17, 2012, from 7:00 a.m. until 7:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
14	17 Jul	Closed set gillneting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict until further notice. Closed drift gillnetting within one mile of the Kenai Peninsula shoreline north of the Kenai River and within one and one-half miles of the Kenai Peninsula south of the Kenai River until further notice. This action was in response to the closure of the Kenai River late-run king salmon sport fishery (see 5AAC 21.359(3)(B)).	To comply with the Kenai River late-run king salmon management plan.
15	18 Jul	Opened drift gillneting in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Wednesday, July 18, 2012, from 8:00 a.m. until 8:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
16	19 Jul	Opened drift gillnetting in all waters of the Central District of Upper Cook Inlet normally open to drift gillnetting (see 5AAC 21.200(b) and 5AAC 21.350(b)) on Thursday, July 19, 2012 from, 7:00 a.m. until 7:00 p.m.	To comply with the Central District Drift Gillnet Fishery Management Plan.
17	20 Jul	Open drift gillnetting in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Friday, July 20, 2012, from 9:00 a.m. until 9:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
18	21 Jul	Opened commercial fishing with drift gillnets in Drift Gillnet Area 1 and in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Saturday, July 21, 2012, from 7:00 a.m. until 10:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
19	22 Jul	Opened commercial fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof Sections of the the Upper Subdistrict on Sunday, July 22, 2012, from 8:00 a.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
20	23 Jul	Reduced legal gear to one set gillnet per permit, measuring no more than 35 fathoms in length, in the Northern District of Upper Cook Inlet during all regular Monday and Thursday fishing periods until further notice, beginning at 7:00 a.m. on Monday, July 23, 2012.	To comply with the Northern District Salmon Management Plan and the Susitna River Sockeye Salmon Action Plan.
21	23 Jul	Opened drift gillnetting in all waters of the Central District of Upper Cook Inlet normally open to drift gillnetting (see 5AAC 21.200(b) and 5AAC 21.350(b)) on Monday, July 23, 2012, from 7:00 a.m. until 7:00 p.m.	To comply with the Central District Drift Gillnet Fishery Management Plan.
22	23 Jul	Opened drift gillnetting in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Monday, July 23, 2012, from 7:00 p.m. until 11:00 p.m. and on Tuesday, July 24, 2012, from 7:00 a.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
23	25 Jul	Opened drift gillnetting in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Wednesday, July 25, 2012, from 9:00 a.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
24	26 Jul	Opened drift gillnetting in Drift Gillnet Area 1 and Drift Gillnet Area 2 on Thursday, July 26, 2012, from 7:00 a.m. until 7:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon and protect northern-bound salmon stocks.

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Emergency Order No.	Effective Date	Action	Reason
25	27 Jul	Opened drift gillnetting in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Friday, July 27, 2012, from 10:00 a.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
26	28 Jul	Opened drift gillnetting in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Saturday, July 28, 2012, from 10:00 a.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
27	30 Jul	Rescinded Emergency Order 2S-06-12 and closed set gillnetting in that portion of the Western Subdistrict south of the latitude of Redoubt Point at 7:00 p.m. on Monday, July 30, 2012. This area reopened to set gillnetting during regular fishing periods only, on Mondays and Thursdays from 7:00 a.m. to 7:00 p.m., beginning on Thursday, August 2, 2012.	To reduce the exploitation rate of coho salmon in the Western Subdistrict.
28	30 Jul	Opened drift gillnetting in Drift Gillnet Area 1 and Drift Gillnet Area 2 and in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Monday, July 30, 2012, from 7:00 a.m. until 7:00 p.m.	To harvest Kenai River and Kasilof River sockeye salmon, while conserving northern-bound sockeye and coho salmon stocks.
29	31 Jul	Opened drift gillnetting in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Tuesday, July 31, 2012, from 5:00 a.m. until 7:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
30	2 Aug	Modified Emergency Order 2S-20-12, issued on July 22, 2012, which reduced legal gear to one set gillnet per permit, measuring no more than 35 fathoms in length, in the Northern District of Upper Cook Inlet beginning at 7:00 a.m. on Monday, July 23, 2012. Beginning at 7:00 a.m. on Thursday, August 2, 2012, until further notice, legal gear for that portion of the General Subdistrict of the Northern District, south of the Susitna River, will be limited to no more than two set gillnets per permit, with either net measuring no more than 35 fathoms in length. Legal gear in the remainder of the Northern District will be limited to no more than one set gillnet per permit, measuring no more than 35 fathoms in length, until further notice.	To comply with the Northern District Salmon Management Plan and the Susitna River Sockeye Salmon Action Plan.

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Emergency Order No.	Effective Date	Action	Reason
31	2 Aug	Closed set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Thursday, August 2, 2012, from 7:00 a.m. until 7:00 p.m. Restricted drift gillnetting to Drift Gillnet area 1 and the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Thursday August 2, 2012, from 7:00 a.m. until 7:00 p.m.	To conserve Kenai River late-run king salmon and northern-bound coho salmon stocks.
32	9 Aug	Closed set gillnetting in the General Subdistrict of the Northern District of Upper Cook Inlet on Thursday, August 9, 2012, from 7:00 a.m. until 7:00 p.m.	To conserve Little Susitna River coho salmon.
33	9 Aug	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Thursday, August 9, 2012, from 11:00 a.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon and to provide for an orderly fishery.
34	12 Aug	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Sunday, August 12, 2012, from 8:00 a.m. until 8:00 p.m. Opened drift gillnetting in the Kenai and East Forelands Sections on Sunday, August 12, 2012, from 8:00 a.m. until 8:00 p.m. Set and drift gillnets were restricted to a mesh size not greater than four and three-quarters inches.	To harvest pink salmon and comply with the Cook Inlet Pink Salmon Management Plan.
35	13 Aug	Closed set gillnetting in the General Subdistrict of the Northern District of Upper Cook Inlet on Monday, August 13, 2012, from 7:00 a.m. until 7:00 p.m.	To conserve Little Susitna River coho salmon.

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Emergency Order No.	Effective Date	Action	Reason
36	13 Aug	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Monday, August 13, 2012, from 9:00 a.m. until 9:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon and to provide for an orderly fishery.
37	16 Aug	Closed set gillnetting in all waters of the Northern District of Upper Cook Inlet on Thursday, August 16, 2012, from 7:00 a.m. until 7:00 p.m.	To conserve Northern District coho salmon stocks.
38	20 Aug	Closed set gillnetting in all waters of the Northern District of Upper Cook Inlet on Monday, August 20, 2012, from 7:00 a.m. until further notice.	To conserve Northern District coho salmon stocks.
39	27 Aug	Opened drift gillnetting in the Chinitna Bay Subdistrict of the Central District on Mondays, Wednesdays, and Fridays from 7:00 a.m. until 7:00 p.m., beginning on Monday, August 27, 2012, for the remainder of the 2012 season.	To harvest surplus Clearwater Creek and Chinitna River chum salmon.

Appendix A11.–Commercial salmon fishing periods, Upper Cook Inlet, 2012.

Date	Day	Time	Set Gill Net	Drift Gill Net
28 May	Mon	0700–1300	Northern District	
1 Jun	Fri	0700–1900	Kustatan - Big River - Kalgin Island	
4 Jun	Mon	0700–1900	Kustatan - Big River - Kalgin Island	
		0700–1300	Northern District	
6 Jun	Wed	0700–1900	Kustatan - Big River - Kalgin Island	
8 Jun	Fri	0700–1900	Kustatan - Big River - Kalgin Island	
11 Jun	Mon	0700–1900	Kustatan - Big River - Kalgin Island	
		0700–1300	Northern District	
13 Jun	Wed	0700–1900	Kustatan - Big River - Kalgin Island	
15 Jun	Fri	0700–1900	Kustatan - Big River - Kalgin Island	
18 Jun	Mon	0700–1300	Northern District	
		0700–1900	Kustatan - Big River - Kalgin Isl - W. Subdist.	
20 Jun	Wed	0700–1900	Kustatan - Big River - Kalgin Island	
21 Jun	Thu	0700–1900	Western Subdistrict	All
22 Jun	Fri	0700–1900	Kustatan - Big River - Kalgin Island	
25 Jun	Mon	0700–1900	All except Upper Subdistrict & Northern District	All
28 Jun	Thu	0700–1900	All except Upper Subdistrict	All
2 Jul	Mon	0700–2400	Western Subdistrict south of Redoubt Pt.	All
		0700–1900	All except Upper Subdistrict	
3 Jul	Tue	0000–2400	Western Subdistrict south of Redoubt Pt.	
		1300–2400	Kasilof Section	Kasilof Section
4 Jul	Wed	0000–2400	Western Subdistrict south of Redoubt Pt.	
5 Jul	Thu	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Kenai & E. Forelands Sections	All
		1900–2100	Kasilof Section	Kasilof Section
6 Jul	Fri	0000–2400	Western Subdistrict south of Redoubt Pt.	
7 Jul	Sat	0000–2400	Western Subdistrict south of Redoubt Pt.	
8 Jul	Sun	0000–2400	Western Subdistrict south of Redoubt Pt.	
9 Jul	Mon	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Upper Subdistrict	Expanded Kenai/Kasilof Sections
10 Jul	Tue	0000–2400	Western Subdistrict south of Redoubt Pt.	
11 Jul	Wed	0000–2400	Western Subdistrict south of Redoubt Pt.	
12 Jul	Thu	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Upper Subdistrict	Drift Area 1 & Narrow Corridor
13 Jul	Fri	0000–2400	Western Subdistrict south of Redoubt Pt.	
14 Jul	Sat	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–1900		Drift Area 1 & Narrow Corridor

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Date	Day	Time	Set Gill Net	Drift Gill Net
15 Jul	Sun	0000–2400	Western Subdistrict south of Redoubt Pt.	
16 Jul	Mon	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All	Drift Area 1
17 Jul	Tue	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–1900		Expanded Kenai/Kasilof Sections
18 Jul	Wed	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0800–2000		Expanded Kenai/Kasilof Sections
19 Jul	Thu	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Upper Subdistrict	All
20 Jul	Fri	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0900–2100		Expanded Kenai/Kasilof Sections
21 Jul	Sat	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–2200		Drift Area 1 & Expanded Corridor
22 Jul	Sun	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0800–2300		Expanded Kenai/Kasilof Sections
23 Jul	Mon	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Upper Subdistrict	All
		1900–2300		Expanded Kenai/Kasilof Sections
24 Jul	Tue	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–2300		Expanded Kenai/Kasilof Sections
25 Jul	Wed	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0900–2300		Expanded Kenai/Kasilof Sections
26 Jul	Thu	0000–2400	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Upper Subdistrict	Drift Areas 1 & 2
27 Jul	Fri	0000–2400	Western Subdistrict south of Redoubt Pt.	
		1000–2300		Expanded Kenai/Kasilof Sections
28 Jul	Sat	0000–2400	Western Subdistrict south of Redoubt Pt.	
		1000–2300		Expanded Kenai/Kasilof Sections
29 Jul	Sun	0000–2400	Western Subdistrict south of Redoubt Pt.	
30 Jul	Mon	0000–1900	Western Subdistrict south of Redoubt Pt.	
		0700–1900	All except Upper Subdistrict	DA 1 & 2 & Exp. Kenai/Kasilof
31 Jul	Tue	0500–1900		Expanded Kenai/Kasilof Sections
2 Aug	Thu	0700–1900	All except Upper Subdistrict	DA 1 & Exp. Kenai/Kasilof
6 Aug	Mon	0700–1900	All	All
9 Aug	Thu	0700–1900	Western, Kalgin, Kustatan, & Eastern Subdistricts	All
		1100–2300	Kenai, Kasilof, & East Forelands Sections	
12 Aug	Sun	0800–2000	Kenai, Kasilof, & East Forelands Sections	Kenai & East Forelands Sections

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Date	Day	Time	Set Gill Net	Drift Gill Net
13 Aug	Mon	0700–1900	Western, Kalgin, Kustatan, & Eastern Subdistricts	All
		0900–2100	Kenai, Kasilof, & East Forelands Sections	
16 Aug	Thu	0700–1900	Western, Kalgin, Kustatan Subdistricts	Drift Areas 3 & 4
20 Aug	Mon	0700–1900	Western, Kalgin, Kustatan Subdistricts	Drift Areas 3 & 4
23 Aug	Thu	0700–1900	Western, Kalgin, Kustatan Subdistricts	Drift Areas 3 & 4
27 Aug	Mon	0700–1900	Western, Kalgin, Kustatan Subdistricts	Drift Areas 3, 4 & Chinitna
29 Aug	Wed	0700–1900		Chinitna Bay
30 Aug	Thu	0700–1900	Western, Kalgin, Kustatan Subdistricts	Drift Areas 3 & 4
31 Aug	Fri	0700–1900		Chinitna Bay
3 Sep	Mon	0700–1900	Western, Kalgin, Kustatan Subdistricts	Drift Areas 3, 4 & Chinitna
5 Sep	Wed	0700–1900		Chinitna Bay
6 Sep	Thu	0700–1900	Western, Kalgin, Kustatan Subdistricts	Drift Areas 3 & 4
7 Sep	Fri	0700–1900		Chinitna Bay
10 Sep	Mon	0700–1900	Western, Kalgin, Kustatan Subdistricts	Drift Areas 3, 4 & Chinitna

Appendix A12.–Susitna River sockeye salmon studies, 2006–2012.

Yentna River Passage	2006	2007	2008	2009	2010	2011	2012
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

Weir Data	2006	2007	2008	2009	2010	2011	2012
Chelatna	18,433	41,290	73,469	17,865	37,784	70,353	36,577
Judd	40,633	58,134	54,304	43,153	18,361	39,997	18,303
Larson	57,411	47,736	35,040	41,929	20,324	12,413	16,708
Weir Totals	116,477	147,160	162,813	102,947	76,469	122,763	71,588

Susitna Population Estimates	2006	2007	2008	2009	2010	2011	2012
Mark–recapture	418,197	327,732	359,760	236,534[a]	192,370[a]	265,460[a]	NA[b]
MR : Weirs ratio	3.6	2.2	2.2	2.3	2.5	2.2	NA[b]
MR : Bendix ratio	4.5	4.1	4.0	9.7	ND	ND	ND

[a] Mark–recapture estimates from 2009 to 2011 are preliminary values.

[b] Data not available at the time this report was published.

Appendix A13.–Age composition (in percent) of sockeye salmon escapements, Upper Cook Inlet, 2012.

	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
Kenai River			0.5	12.4	0.2	45.1	15.5	1.7	24.6					100.0
Kasilof River			6.8	34.0	4.4	10.6	37.6		6.6					100.0
Yentna River	2.0	2.8	2.0	19.4	4.5	43.7	10.7	2.0	12.6		0.3			100.0
Crescent River		0.4	1.0	8.3	1.1	52.1	10.8	0.4	25.9					100.0
Fish Creek			2.9	51.0	0.5	39.6	3.6		2.4					100.0
Hidden Creek				79.1		12.9	7.8		0.2					100.0

Appendix A14.–Upper Cook Inlet salmon average weights (in pounds) by area, 2012.

Fishery	Chinook	Sockeye	Coho	Pink	Chum
Upper Cook Inlet Total	17.2	6.8	6.0	3.8	8.0
A. Northern District Total	12.8	6.1	5.4	4.2	8.4
1. Northern District West	12.8	6.1	5.1	3.6	8.4
a. Trading Bay 247-10	13.0	6.3	5.5	3.8	6.7
b. Tyonek 247-20	12.0	6.0	4.9	3.9	8.7
c. Beluga 247-30	7.0	6.7	5.3	4.1	9.4
d. Susitna Flat 247-41	13.4	5.7	5.2	2.5	7.8
e. Pt. Mackenzie 247-42	13.0	5.0	5.4	4.3	8.6
f. Fire Island 247-43	12.8	5.6	5.2	4.4	8.2
2. Northern District East	12.7	6.1	5.9	4.2	7.8
a. Pt. Possession 247-70	12.8	6.5	5.7	4.1	7.9
b. Birch Hill 247-80	12.9	5.2	6.2	4.8	6.6
c. Number 3 Bay 247-90	12.2	6.2	5.6	3.7	7.0
B. Central District Total	20.3	6.8	6.0	3.8	8.0
1. East Side Set Total	24.0	6.4	5.6	4.0	6.3
a. Salamatof/EastForelands	25.5	7.1	6.1	4.1	6.1
1. Salamatof 244-41	25.1	7.2	6.2	4.0	5.6
2. East Forelands 244-42	29.7	6.4	5.8	4.5	6.8
b. Kalifonsky Beach	26.7	5.2	4.6	4.1	6.8
1. South K. Beach 244-31	27.0	4.7	5.9	4.0	7.0
2. North K. Beach 244-32	26.5	6.0	4.1	4.1	6.8
d. Cohoe/Ninilchik	18.7	5.6	6.3	4.0	6.1
1. Cohoe 244-22	17.7	5.5	6.2	3.9	6.1
2. Ninilchik 244-21	19.8	5.7	6.4	4.0	6.0

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Fishery	Chinook	Sockeye	Coho	Pink	Chum
2. West Side Set Total	22.7	6.1	5.3	3.4	7.6
a. Little Jack Slough 245-50	48.0	4.7	5.5	3.4	7.4
b. Polly Creek 245-40					
c. Tuxedni Bay 245-30	22.5	6.4	5.0	3.5	7.6
3. Kustatan Total	20.9	5.3	7.8	4.0	7.5
a. Big River 245-55	20.9	5.2			
b. West Foreland 245-60		5.9	7.8	4.0	7.5
4. Kalgin Island Total	18.2	6.1	5.4	3.9	7.7
a. West Side 246-10	18.2	6.0	5.4	3.9	7.8
b. East Side 246-20	14.8	6.5	5.7	4.9	7.0
5. Chinitna Bay Total		5.8	7.0		9.7
a. Set 245-10		9.0	7.1		10.4
b. Drift 245-10		5.0	6.9		6.9
5. Central District Set Total	22.0	6.3	5.5	4.0	8.1
6. Central District Drift Total	10.5	6.9	6.2	3.7	8.0
a. Districtwide 244-60	10.0	6.9	6.2	3.7	8.0
b. Kasilof Section 244-61		7.1			
c. Expanded Corridor 244-56	12.0	6.8	6.1	3.6	8.0

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, Upper Cook Inlet, Alaska, 1987–2012.

	Sample	Percent Composition by Age Class (%)														
Year	Size	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	1.5	2.4	2.5	1.6	Total
1987	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		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	11.75	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		11.68		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
Mean		0.05	6.14	0.02	24.73	0.12	0.05	26.95	0.24	38.83	0.29	2.27	0.31	0.00	0.00	100

Appendix A16.–Major buyers and processors of Upper Cook Inlet fishery products, 2012.

Buyer/Processor	Code	Plant Site	Contact	Address
Alaska Salmon Purchasers	F4665	Kenai	Mark Powell	46655 Kenai Spur Hwy. Kenai, AK 99611
The Auction Block	F8162	Homer	Heather Binster	4501 Ice Dock Rd. Homer, AK 99603
BeachM Fishery	F7424	Kenai	Liz Chase	2101 Bowpicker Ln Kenai, AK 99611
Coal Point Seafood Co.	F8772	Homer	Nancy Hilstrand	PO Box 674 Homer, AK 99603
Copper R. Seafoods/Anchorage	F6426	Kasilof	Chris Lacroix	1118 E. 5th Ave. Anchorage, AK 99501
Echo Lake Meats	F4732	Soldotna	James Clark	P.O. Box 346 Soldotna, AK 99669
Favco	F0398	Anchorage	Bill Buck	P.O. Box 190968 Anchorage, AK 99519
Fish Factory	F4449	Homer	Mike McCune	800 Fish Dock Rd. Homer, AK 99603
Fishhawk Fisheries	F1540	Kenai	Steve Fick	P.O. Box 715 Astoria Or. 97103
Great Pacific Seafoods	F2857	Anchorage	Paula Cairns	4201 W. Old Intl. Airport Rd. Anchorage, AK 99502
Icicle Seafoods	F0135	Seward	Kelly Glidden	P.O. Box 79003 Seattle Wa. 98119
Inlet Fisheries Inc.	F4682	Kenai	Perry Hendricks	P.O. Box 114 Kenai Ak. 99611
Inlet Fish Producers	F2806	Kenai	Robert Utrup	P.O. Box 114 Kenai, AK 99611
Pacific Star Seafoods	F1834	Kenai	Dan Foley	P.O. Box 190 Kenai, AK 99611
Peninsula Processing	F6618	Soldotna	Carrie Collins	720 K. Beach Rd. Soldotna, AK 99669
Snug Harbor Seafoods	F3894	Kenai	Paul Dale	P.O. Box 701 Kenai, AK 99611
Sought Out Salmon	F8445	Kenai	Melissa Litke	46199 Birch Lane Kenai, AK 99611
Tanner Fresh Fish	F9070	Ninilchik		PO Box 39752 Ninilchik, AK 99639
Wild Alaska Salmon Products	F7524	Big Lake	Brenda Charles	PO Box 521131 Big Lake, Alaska 99652

Appendix A17.–Number of salmon harvested by gear, area, and species in personal use fisheries, Upper Cook Inlet, 2012.

	Harvest					
Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
Kasilof Gillnet	103	15,638	161	53	15	15,970
Kasilof Dip Net	16	73,419	1,170	896	147	75,648
Kenai Dip Net	40	526,992	4,008	3,770	425	535,235
Fish Creek Dip Net	–	–	–	–	–	–
Beluga Dip Net	0	9	7	0	0	16
No Site Reported	4	13,295	173	127	36	13,635
Total	163	629,353	5,519	4,846	623	640,504

Note: Preliminary estimates.

Appendix A18.–Personal use sockeye salmon harvest by day, 2012.

	Kasilof Gillnet		Kasilof Dip Net		Kenai Dip Net		Fish Creek Dip Net	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
15 Jun	1,133	1,133						
16 Jun	688	1,821						
17 Jun	637	2,458						
18 Jun	1,053	3,511						
19 Jun	1,237	4,748						
20 Jun	1,114	5,862						
21 Jun	2,065	7,927						
22 Jun	1,874	9,801						
23 Jun	1,888	11,689						
24 Jun	1,318	13,007						
25 Jun			357	357				
26 Jun			304	661				
27 Jun			528	1,189				
28 Jun			312	1,501				
29 Jun			495	1,996				
30 Jun			859	2,855				
1 Jul			598	3,453				
2 Jul			653	4,106				
3 Jul			384	4,490				
4 Jul			245	4,735				
5 Jul			132	4,867				
6 Jul			331	5,198				
7 Jul			814	6,012				
8 Jul			682	6,694				
9 Jul			315	7,009				

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	Kasilof Gillnet		Kasilof Dip Net		Kenai Dip Net		Fish Creek Dip Net	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
10 Jul			500	7,509	1,512	1,512		
11 Jul			493	8,002	1,045	2,557		
12 Jul			707	8,709	2,638	5,195		
13 Jul			1548	10,257	4,145	9,340		
14 Jul			4,699	14,956	19,564	28,904		
15 Jul			5,332	20,288	31,561	60,465		
16 Jul			1,355	21,643	21,084	81,549		
17 Jul			2,813	24,456	15,550	97,099		
18 Jul			2,530	26,986	16,177	113,276		
19 Jul			2,344	29,330	18,464	131,740		
20 Jul			6,090	35,420	62,484	194,224		
21 Jul			8182	43,602	64,942	259,166		
22 Jul			2,152	45,754	34,762	293,928		
23 Jul			1,274	47,028	24,800	318,728		
24 Jul			2,051	49,079	24,519	343,247		
25 Jul			2,137	51,216	21,696	364,943		
26 Jul			950	52,166	15,011	379,954		
27 Jul			1746	53,912	15,789	395,743		
28 Jul			1579	55,491	13,767	409,510		
29 Jul			818	56,309	9,666	419,176		
30 Jul			418	56,727	6,868	426,044		
31 Jul			332	57,059	6,073	432,117		
1 Aug			266	57,325				
2 Aug			195	57,520				
3 Aug			226	57,746				
4 Aug			423	58,169				
5 Aug			346	58,515				
6 Aug			136	58,651				
7 Aug			74	58,725				

Note: Data presented are for “known” permits during legal harvest dates only.

Appendix A19.–Age, weight, sex, and size distribution of Pacific herring sampled by gillnet in Upper Cook Inlet, 2012.

Sample date = May 17, 2012

Sample Period	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	3	–	–	–	–	–	–	–	–	–	–	–	–	-
	4	4	–	9	–	–	13	11	96	10.0	13	196	7.3	13
	5	11	–	18	–	–	29	25	121	19.9	29	210	11.0	29
	6	8	–	14	1	–	23	20	129	21.9	23	216	10.0	23
	7	15	–	29	–	–	44	38	141	28.6	44	226	42.2	44
	8	2	–	3	–	–	5	4	152	21.4	5	224	9.1	5
	9	1	–	–	–	–	1	1	163	–	1	230	–	1
Sample Total		41	0	73	1	0	115	100	129	20.4	115	216	15.9	115
Sex Composition		36%	0%	63%	1%	0%								

Sample date = May 22, 2012

Sample Period	Age	No. of Fish: Male	Imm. Female	Ripe Female	Spawned Female	Unknown	Total	Percent of Total	Weight: Mean (g)	SD	Number Weighed	Length: Mean (mm)	SD	Number Measured
ESSN	4	–	–	–	–	–	–	–	–	–	–	–	–	-
	5	–	–	2	–	–	2	3	142	2.4	2	212	2.1	2
	6	6	–	5	–	–	11	15	141	25.9	11	221	7.9	11
	7	13	–	32	3	–	48	67	159	24.4	48	227	8.5	48
	8	2	–	5	1	–	8	11	151	24.0	8	222	10.4	8
	9	1	–	1	–	–	2	3	177	12.6	2	238	7.1	2
	10	–	–	1	–	–	1	1	143	–	1	224	–	1
Sample Total		22	0	46	4	0	72	100	155	17.9	72	225	7.2	72
Sex Composition		31%	0%	64%	6%	0%								

-continued-

Sample date = May 28, 2012

Sample Period	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	3		–	1	–	–	1	1	90	–	1	191	–	1
	4	3	–	4	–	–	7	7	95	15.9	7	192	15.8	7
	5	7	–	4	1	–	12	12	111	13.7	12	204	8.7	12
	6	18	–	2	9	–	29	30	127	18.8	29	217	8.2	29
	7	20	–	4	13	–	37	38	133	23.7	37	221	10.7	37
	8	5	–	1	2	–	8	8	143	9.6	8	224	6.4	8
	9	-	–	1	2	–	3	3	136	10.6	3	217	7.2	3
Sample Total		53	0	17	27	0	97	100	127	15.4	97	216	9.5	97
Sex Composition		55%	0%	18%	28%	0%								

Sample date = June 1, 2012

Sample Period	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
Chinitna	3	–	–	–	–	–	–	–	–	–	–	–	–	-
Bay	4	–	–	–	–	–	–	–	–	–	–	–	–	-
	5	8	–	30	–	–	38	19	170	29.7	38	226	11.6	38
	6	17	–	24	–	–	41	21	191	25.8	41	236	9.0	41
	7	40	–	50	1	–	91	47	199	24.1	91	237	23.5	91
	8	11	–	9	–	–	20	10	198	45.8	20	243	7.7	20
	9	3	–	2	–	–	5	3	205	15.2	5	247	6.3	5
Sample Total		79	0	115	1	0	195	100	192	28.1	195	236	11.6	195
Sex Composition		41%	0%	59%	1%	0%								

Appendix A20.–Age, sex, and size distribution of eulachon (smelt) from Upper Cook Inlet commercial dip net fishery, 2006–2012.

2006

Age	Sex	Length (mm)	No. Sampled	%
3	Male	185	1	1%
	Female	–	–	–
4	Male	194	46	54%
	Female	186	22	26%
5	Male	200	14	16%
	Female	203	2	2%
Avg	Male	196	61	72%
	Female	187	24	28%
Avg - All		193		

2007

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

2008

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

2009

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

-continued-

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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		

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		

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		

Appendix A21.–Seldovia District tide tables, May through August, 2012.

May

		High Tide						Low Tide			
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Tue	11:10A	13.9	11:48P	16.1	1	Tue	5:06A	4.5	5:22P	2.8
2	Wed	-	-	12:18P	15.3	2	Wed	6:07A	2.3	6:19P	2.0
3	Thu	12:35A	17.7	1:16P	16.9	3	Thu	6:59A	**-0.1**	7:09P	1.1
4	Fri	1:20A	19.4	2:08P	18.3	4	Fri	7:46A	**-2.4**	7:57P	0.4
5	Sat	2:04A	20.08	2:57P	19.4	5	Sat	8:32A	**-4.3**	8:43P	**-0.1**
6	Sun	2:48A	21.8	3:45P	20.0	6	Sun	9:17A	**-5.4**	9:29P	**-0.2**
7	Mon	3:33A	22.1	4:33P	19.9	7	Mon	10:03A	**-5.8**	10:16P	0.1
8	Tue	4:19A	21.7	5:22P	19.3	8	Tue	10:50A	**-5.4**	11:05P	0.8
9	Wed	5:06A	20.7	6:14P	18.3	9	Wed	11:39A	**-4.3**	11:56P	1.8
10	Thu	5:57A	19.1	7:09P	17.2	10	Thu	-	-	12:30P	**-2.6**
11	Fri	6:53A	17.2	8:08P	16.2	11	Fri	12:52A	2.9	1:25P	**-0.8**
12	Sat	7:56A	15.4	9:12P	15.5	12	Sat	1:57A	3.8	2:27P	1.0
13	Sun	9:10A	14.0	10:18P	15.3	13	Sun	3:11A	4.2	3:35P	2.4
14	Mon	10:31A	13.4	11:18P	15.5	14	Mon	4:30A	3.9	4:43P	3.2
15	Tue	11:47A	13.5	-	-	15	Tue	5:39A	3.0	5:44P	3.6
16	Wed	12:08A	16.0	12:48P	14.2	16	Wed	6:33A	1.9	6:33P	3.7
17	Thu	12:49A	16.6	1:36P	15.0	17	Thu	7:17A	0.8	7:16P	3.7
18	Fri	1:25A	17.2	2:16P	15.8	18	Fri	7:55A	**-0.2**	7:53P	3.5
19	Sat	1:58A	17.7	2:53P	16.4	19	Sat	8:29A	**-0.9**	8:29P	3.4
20	Sun	2:31A	18.2	3:28P	16.9	20	Sun	9:03A	**-1.5**	9:05P	3.3
21	Mon	3:04A	18.4	4:04P	17.0	21	Mon	9:37A	**-1.8**	9:41P	3.3
22	Tue	3:38A	18.4	4:40P	16.9	22	Tue	10:11A	**-1.8**	10:17P	3.5
23	Wed	4:13A	18.1	5:18P	16.6	23	Wed	10:45A	**-1.6**	10:54P	3.8
24	Thu	4:49A	17.6	5:56P	16.1	24	Thu	11:22A	**-1.1**	11:34P	4.3
25	Fri	5:28A	16.8	6:37P	15.6	25	Fri	-	-	12:00P	**-0.4**
26	Sat	6:10A	15.8	7:22P	15.2	26	Sat	12:17A	4.7	12:41P	0.5
27	Sun	7:01A	14.7	8:10P	15.0	27	Sun	1:07A	5.0	1:28P	1.4
28	Mon	8:03A	13.8	9:04P	15.2	28	Mon	2:06A	5.0	2:24P	2.3
29	Tue	9:18A	13.3	10:00P	15.7	29	Tue	3:15A	4.4	3:27P	2.9
30	Wed	10:37A	13.5	10:57P	16.7	30	Wed	4:28A	3.2	4:34P	3.2
31	Thu	11:51A	14.4	11:53P	17.9	31	Thu	5:34A	1.3	5:39P	3.0

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June

		High Tide						Low Tide			
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Fri	-	-	12:56P	15.8	1	Fri	6:34A	**-0.8**	6:37P	2.5
2	Sat	12:46A	19.2	1:53P	17.2	2	Sat	7:27A	**-2.8**	7:31P	1.8
3	Sun	1:37A	20.4	2:46P	18.3	3	Sun	8:17A	**-4.4**	8:23P	1.1
4	Mon	2:27A	21.2	3:36P	19.1	4	Mon	9:05A	**-5.5**	9:13P	0.7
5	Tue	3:17A	21.6	4:24P	19.5	5	Tue	9:51A	**-5.8**	10:01P	0.6
6	Wed	4:05A	21.3	5:12P	19.4	6	Wed	10:38A	**-5.4**	10:50P	0.8
7	Thu	4:54A	20.4	5:59P	18.9	7	Thu	11:24A	**-4.4**	11:40P	1.3
8	Fri	5:43A	19.0	6:47P	18.1	8	Fri	-	-	12:10P	**-2.9**
9	Sat	6:35A	17.3	7:36P	17.2	9	Sat	12:33A	2.1	12:58P	**-1.0**
10	Sun	7:30A	15.5	8:28P	16.4	10	Sun	1:30A	2.8	1:49P	0.9
11	Mon	8:34A	13.9	9:22P	15.7	11	Mon	2:33A	3.4	2:43P	2.7
12	Tue	9:46A	12.8	10:16P	15.3	12	Tue	3:42A	3.6	3:42P	4.2
13	Wed	11:04A	12.5	11:08P	15.3	13	Wed	4:53A	3.3	4:44P	5.1
14	Thu	12:14P	12.8	11:56P	15.6	14	Thu	5:55A	2.6	5:44P	5.5
15	Fri	-	-	1:10P	13.6	15	Fri	6:46A	1.6	6:36P	5.4
16	Sat	12:40A	16.1	1:56P	14.5	16	Sat	7:29A	0.7	7:22P	5.1
17	Sun	1:22A	16.8	2:37P	15.4	17	Sun	8:06A	**-0.2**	8:04P	4.6
18	Mon	2:02A	17.5	3:14P	16.1	18	Mon	8:42A	**-1.0**	8:43P	4.1
19	Tue	2:40A	18.0	3:50P	16.7	19	Tue	9:17A	**-1.7**	9:22P	3.7
20	Wed	3:19A	18.4	4:25P	17.1	20	Wed	9:51A	**-2.0**	10:00P	3.4
21	Thu	3:57A	18.4	5:00P	17.3	21	Thu	10:26A	**-2.1**	10:38P	3.2
22	Fri	4:35A	18.2	5:35P	17.3	22	Fri	11:02A	**-1.9**	11:18P	3.2
23	Sat	5:15A	17.6	6:11P	17.1	23	Sat	11:38A	**-1.3**	-	-
24	Sun	5:58A	16.7	6:50P	17.0	24	Sun	12:01A	3.2	12:18P	**-0.5**
25	Mon	6:46A	15.7	7:32P	16.8	25	Mon	12:48A	3.3	1:01P	0.6
26	Tue	7:43A	14.6	8:20P	16.7	26	Tue	1:42A	3.2	1:49P	1.8
27	Wed	8:51A	13.7	9:14P	16.8	27	Wed	2:45A	2.9	2:47P	3.1
28	Thu	10:10A	13.4	10:15P	17.1	28	Thu	3:55A	2.2	3:53P	3.9
29	Fri	11:31A	13.8	11:19P	17.8	29	Fri	5:07A	1.0	5:04P	4.2
30	Sat	-	-	12:44P	15.0	30	Sat	6:14A	**-0.6**	6:13P	3.8

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July											
High Tide						Low Tide					
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Sun	12:21A	18.7	1:44P	16.4	1	Sun	7:13A	**-2.3**	7:15P	2.9
2	Mon	1:20A	19.7	2:38P	17.8	2	Mon	8:05A	**-3.7**	8:10P	1.9
3	Tue	2:15A	20.6	3:26P	18.9	3	Tue	8:54A	**-4.7**	9:01P	1.0
4	Wed	3:06A	21.1	4:11P	19.5	4	Wed	9:39A	**-5.1**	9:49P	0.5
5	Thu	3:54A	21.0	4:54P	19.8	5	Thu	10:22A	**-4.8**	10:36P	0.3
6	Fri	4:41A	20.4	5:35P	19.6	6	Fri	11:04A	**-3.9**	11:22P	0.6
7	Sat	5:26A	19.2	6:15P	19.0	7	Sat	11:44A	**-2.5**	-	-
8	Sun	6:11A	17.7	6:56P	18.1	8	Sun	12:08A	1.2	12:25P	**-0.7**
9	Mon	6:59A	15.9	7:36P	17.1	9	Mon	12:57A	2.0	1:06P	1.3
10	Tue	7:51A	14.2	8:20P	16.1	10	Tue	1:49A	2.9	1:50P	3.3
11	Wed	8:54A	12.8	9:09P	15.2	11	Wed	2:47A	3.6	2:41P	5.0
12	Thu	10:11A	12.0	10:05P	14.8	12	Thu	3:55A	4.0	3:41P	6.3
13	Fri	11:36A	12.0	11:05P	14.7	13	Fri	5:09A	3.7	4:52P	7.0
14	Sat	-	-	12:46P	12.7	14	Sat	6:14A	2.9	6:00P	6.9
15	Sun	12:05A	15.2	1:38P	13.8	15	Sun	7:05A	1.9	6:57P	6.2
16	Mon	12:57A	16.1	2:18P	15.0	16	Mon	7:46A	0.7	7:43P	5.3
17	Tue	1:42A	17.1	2:54P	16.1	17	Tue	8:23A	**-0.4**	8:25P	4.3
18	Wed	2:24A	18.0	3:28P	17.1	18	Wed	8:57A	**-1.3**	9:04P	3.4
19	Thu	3:04A	18.8	4:01P	17.9	19	Thu	9:31A	**-2.0**	9:42P	2.6
20	Fri	3:42A	19.2	4:34P	18.5	20	Fri	10:05A	**-2.3**	10:20P	1.9
21	Sat	4:21A	19.2	5:06P	18.9	21	Sat	10:40A	**-2.3**	10:59P	1.5
22	Sun	5:01A	18.9	5:40P	19.0	22	Sun	11:15A	**-1.7**	11:40P	1.3
23	Mon	5:43A	18.0	6:16P	18.8	23	Mon	11:52A	**-0.7**	-	-
24	Tue	6:30A	16.9	6:55P	18.4	24	Tue	12:24A	1.3	12:33P	0.6
25	Wed	7:23A	15.5	7:41P	17.9	25	Wed	1:15A	1.5	1:20P	2.2
26	Thu	8:30A	14.2	8:36P	17.3	26	Thu	2:14A	1.8	2:15P	3.8
27	Fri	9:51A	13.4	9:43P	17.0	27	Fri	3:26A	1.8	3:25P	5.0
28	Sat	11:20A	13.7	11:00P	17.2	28	Sat	4:45A	1.3	4:44P	5.3
29	Sun	-	-	12:36P	14.8	29	Sun	6:01A	0.1	6:01P	4.7
30	Mon	0:12A	18.0	1:37P	16.4	30	Mon	7:03A	**-1.3**	7:06P	3.4
31	Tue	1:14A	19.1	2:27P	17.9	31	Tue	7:56A	**-2.6**	8:02P	2.0

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August											
High Tide						Low Tide					
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Wed	2:09A	20.1	3:10P	19.2	1	Wed	8:40A	**-3.5**	8:52P	0.8
2	Thu	2:58A	20.8	3:50P	20.0	2	Thu	9:22A	**-3.8**	9:36P	0.0
3	Fri	3:42A	20.9	4:27P	20.4	3	Fri	10:01A	**-3.6**	10:19P	**-0.4**
4	Sat	4:24A	20.5	5:02P	20.3	4	Sat	10:38A	**-2.7**	11:00P	**-0.2**
5	Sun	5:05A	19.5	5:36P	19.7	5	Sun	11:14A	**-1.4**	11:40P	0.4
6	Mon	5:45A	18.2	6:09P	18.8	6	Mon	11:49A	0.3	-	-
7	Tue	6:26A	16.6	6:43P	17.6	7	Tue	12:18A	1.3	12:24P	2.1
8	Wed	7:10A	14.9	7:19P	16.4	8	Wed	1:01A	2.5	1:02P	4.0
9	Thu	8:04A	13.3	8:03P	15.3	9	Thu	1:51A	3.6	1:45P	5.8
10	Fri	9:17A	12.1	9:01P	14.4	10	Fri	2:52A	4.5	2:43P	7.3
11	Sat	10:54A	11.8	10:16P	14.0	11	Sat	4:12A	4.9	4:04P	8.1
12	Sun	12:18P	12.5	11:32P	14.5	12	Sun	5:37A	4.3	5:30P	7.9
13	Mon	-	-	1:15P	13.7	13	Mon	6:38A	3.1	6:35P	6.8
14	Tue	12:33A	15.6	1:51P	15.2	14	Tue	7:21A	1.8	7:24P	5.5
15	Wed	1:22A	16.9	2:25P	16.6	15	Wed	7:58A	0.4	8:05P	4.0
16	Thu	2:06A	18.2	2:57P	17.9	16	Thu	8:31A	**-0.7**	8:43P	2.5
17	Fri	2:46A	19.4	3:29P	19.1	17	Fri	9:05A	**-1.6**	9:20P	1.2
18	Sat	3:26A	20.1	4:00P	20.0	18	Sat	9:39A	**-2.0**	9:58P	0.1
19	Sun	4:05A	20.4	4:33P	20.6	19	Sun	10:14A	**-2.0**	10:36P	**-0.6**
20	Mon	4:46A	20.1	5:06P	20.7	20	Mon	10:50A	**-1.4**	11:17P	**-0.8**
21	Tue	5:28A	19.2	5:42P	20.4	21	Tue	11:28A	**-0.2**	11:59P	**-0.6**
22	Wed	6:15A	17.9	6:22P	19.6	22	Wed	-	-	12:09P	1.3
23	Thu	7:09A	16.3	7:09P	18.6	23	Thu	12:49A	0.1	12:57P	3.0
24	Fri	8:16A	14.7	8:08P	17.4	24	Fri	1:50A	1.1	1:55P	4.7
25	Sat	9:42A	13.8	9:24P	16.5	25	Sat	3:03A	1.8	3:10P	5.9
26	Sun	11:14A	14.1	10:51P	16.5	26	Sun	4:30A	1.9	4:38P	5.9
27	Mon	12:28P	-	12:28P	15.4	27	Mon	5:51A	1.0	5:59P	4.8
28	Tue	12:10A	17.3	1:26P	17.0	28	Tue	6:53A	**-0.2**	7:03P	3.2
29	Wed	1:12A	18.5	2:08P	18.5	29	Wed	7:42A	**-1.2**	7:53P	1.6
30	Thu	2:03A	19.6	2:46P	19.7	30	Thu	8:23A	**-1.9**	8:37P	0.2
31	Fri	2:47A	20.3	3:21P	20.5	31	Fri	9:00A	**-2.1**	9:16P	**-0.7**

Appendix A22.–Total sockeye salmon harvest from all sources in Upper Cook Inlet, 1996–2012.

	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.[e]	Educ.[e]	Total
1996	2,205,067	1,683,855	2,424	3,891,346	205,959	16,863	222,822	9,506	11,197	102,821	22,021	145,545	259	2,405	4,262,377
1997	2,197,736	1,979,002	2,301	4,179,039	190,629	23,591	214,220	17,997	9,737	114,619	6,587	148,940	593	3,076	4,545,868
1998	599,202	620,040	5,456	1,224,698	190,159	23,477	213,636	15,975	45,161	103,847	11,598	176,581	636	3,567	1,619,118
1999	1,413,995	1,266,515	11,766	2,692,276	233,768	26,078	259,846	12,832	37,176	149,504	9,077	208,589	599	3,037	3,164,347
2000	656,427	666,055	9,450	1,331,932	261,902	32,194	294,096	14,774	23,877	98,262	12,354	149,267	442	2,933	1,778,670
2001	846,257	980,576	3,381	1,830,214	219,507	30,953	250,460	17,201	37,612	150,766	13,109	218,688	686	4,633	2,304,681
2002	1,367,251	1,405,867	37,983	2,811,101	259,829	21,770	281,599	17,980	46,769	180,028	14,846	259,623	623	3,722	3,356,668
2003	1,593,638	1,882,521	13,968	3,490,127	314,603	36,076	350,679	15,706	43,870	223,580	15,675	298,831	544	5,993	4,146,174
2004	2,528,910	2,397,310	10,677	4,936,897	317,561	28,823	346,384	25,417	48,315	262,831	13,527	350,090	484	5,237	5,639,092
2005	2,520,300	2,717,868	12,064	5,250,232	312,871	21,826	334,697	26,609	43,151	295,496	4,520	369,776	238	7,134	5,962,077
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	326,009	28,504	354,513	14,943	43,293	291,270	6,729	356,235	567	5,773	4,044,516
2008	983,303	1,396,832	16,957	2,397,092	253,881	30,155	284,036	23,432	54,051	234,109	6,890	318,482	450	4,761	3,004,821
2009	968,075	1,077,544	13,948	2,059,567	287,375	29,790	317,165	26,646	73,035	339,993	18,006	457,680	253	7,064	2,841,729
2010	1,587,682	1,240,685	6,670	2,835,037	315,907	23,589	339,496	21,924	70,774	389,552	32,052	514,302	865	5,652	3,695,352
2011	3,201,035	2,076,405	5,660	5,283,100	395,840	22,507	418,347	26,780	49,766	537,765	16,068	630,379	700	11,166	6,343,692
2012	2,924,144	209,657	11,839	3,145,640	410,100	25,000	435,100	15,638	73,419	526,992	13,304	629,353	441	4,370	4,214,904

[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 annual harvest surveys (Gretchen Jennings, Project Leader, Division of Sport Fish, ADF&G; Anchorage).

[c] Sport harvest in 2012 is unknown until harvest surveys are finalized; these figures are estimates based on size of 2011 sockeye salmon run.

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

[e] See Appendices B15 and B16 for individual fishery harvests.

Appendix A23.–Daily commercial harvest of razor clams, Upper Cook Inlet, 2012.

Date	Lbs	No. Diggers	Date	Lbs	No. Diggers
5/17/2012	3,085	16	6/26/2012	3,156	16
5/18/2012	4,034	23	6/29/2012	3,976	17
5/19/2012	3,981	20	6/30/2012	5,282	17
5/20/2012	3,087	17	7/1/2012	5,277	17
5/21/2012	4,110	17	7/2/2012	6,192	17
5/22/2012	4,781	17	7/3/2012	5,275	17
5/23/2012	4,899	17	7/4/2012	5,291	17
5/24/2012	5,198	17	7/5/2012	4,108	16
5/25/2012	4,301	17	7/6/2012	4,244	17
5/26/2012	5,179	17	7/7/2012	4,388	17
5/27/2012	2,944	17	7/8/2012	4,361	17
6/1/2012	5,160	17	7/9/2012	3,329	17
6/2/2012	5,228	17	7/15/2012	3,090	15
6/3/2012	4,650	18	7/16/2012	5,476	16
6/4/2012	3,153	16	7/17/2012	6,426	16
6/5/2012	6,328	18	7/18/2012	7,086	16
6/6/2012	6,825	23	7/19/2012	7,308	16
6/7/2012	5,999	18	7/20/2012	5,138	16
6/8/2012	5,280	18	7/21/2012	4,080	15
6/9/2012	4,926	22	7/22/2012	3,887	16
6/10/2012	4,892	23	7/23/2012	3,985	16
6/11/2012	3,365	16	7/24/2012	3,257	16
6/15/2012	3,718	18	7/25/2012	3,787	16
6/16/2012	3,323	15	7/28/2012	4,006	16
6/17/2012	5,288	20	7/29/2012	3,812	15
6/18/2012	6,073	21	7/30/2012	3,928	15
6/19/2012	6,131	21	7/31/2012	6,020	16
6/20/2012	4,805	20	8/1/2012	4,849	16
6/21/2012	5,294	15	8/2/2012	4,080	16
6/22/2012	5,400	15	8/3/2012	5,971	16
6/23/2012	6,413	16	8/4/2012	4,022	16
6/24/2012	4,000	16	8/5/2012	4,092	16
6/25/2012	3,095	16	8/6/2012	3,285	16
Total for Year = 307,409 lbs					

APPENDIX B: HISTORICAL DATA

Appendix B1.–Upper Cook Inlet commercial Chinook salmon harvest by gear type and area, 1966–2012.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		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	8.5	17,723	73.6	2,427	10.1	1,890	7.8	24,088
1986	1,834	4.7	19,824	50.5	2,108	5.4	15,488	39.5	39,254
1987	4,561	11.6	21,159	53.6	1,029	2.6	12,700	32.2	39,449

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Appendix B1.–Page 2 of 2.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	Total
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
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	80.1	770	4.2	1,670	9.0	18,490
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	704	27.9	555	22.0	1,049	41.5	2,526
1966-11 Avg [a]	1,009	6.4	9,949	66.2	1,293	9.0	3,198	18.4	15,449
2002-11 Avg	1,105	6.7	11,773	69.9	928	5.9	2,661	17.5	16,468

Note: Harvest data prior to 2011 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, 1966–2012.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	Total
1966	1,103,261	60	485,330	26	132,443	7	131,080	7	1,852,114
1967	890,152	65	305,431	22	66,414	5	118,065	9	1,380,062
1968	561,737	51	317,535	29	85,049	8	140,575	13	1,104,896
1969	371,747	54	210,834	30	71,184	10	38,050	6	691,815
1970	460,690	63	142,701	19	62,723	9	66,458	9	732,572
1971	423,107	66	111,505	18	61,144	10	40,533	6	636,289
1972	506,281	58	204,599	23	83,176	9	85,755	10	879,811
1973	375,695	56	188,816	28	59,973	9	45,614	7	670,098
1974	265,771	53	136,889	28	52,962	11	41,563	8	497,185
1975	368,124	54	177,336	26	73,765	11	65,526	10	684,751
1976	1,055,786	63	476,376	29	62,338	4	69,649	4	1,664,149
1977	1,073,098	52	751,178	37	104,265	5	123,750	6	2,052,291
1978	1,803,479	69	660,797	25	105,767	4	51,378	2	2,621,421
1979	454,707	49	247,359	27	108,422	12	113,918	12	924,406
1980	770,247	49	559,812	36	137,882	9	105,647	7	1,573,588
1981	633,380	44	496,003	34	60,217	4	249,662	17	1,439,262
1982	2,103,429	65	971,423	30	66,952	2	118,060	4	3,259,864
1983	3,222,428	64	1,508,511	30	134,575	3	184,219	4	5,049,733
1984	1,235,337	59	490,273	23	162,139	8	218,965	10	2,106,714
1985	2,032,957	50	1,561,200	38	285,081	7	181,191	4	4,060,429
1986	2,837,857	59	1,658,671	35	153,714	3	141,830	3	4,792,072
1987	5,638,916	60	3,457,724	37	208,036	2	164,572	2	9,469,248

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Appendix B2.–Page 2 of 2.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	Total
1988	4,139,358	60.5	2,428,385	35.5	146,377	2.1	129,713	1.9	6,843,833
1989	3	0.0	4,543,492	90.7	186,828	3.7	280,801	5.6	5,011,124
1990	2,305,331	64.0	1,117,581	31.0	84,949	2.4	96,398	2.7	3,604,259
1991	1,118,119	51.3	844,156	38.8	99,855	4.6	116,201	5.3	2,178,331
1992	6,069,495	66.6	2,838,076	31.2	131,304	1.4	69,478	0.8	9,108,353
1993	2,558,732	53.8	1,941,783	40.8	108,181	2.3	146,633	3.1	4,755,329
1994	1,901,452	53.3	1,458,162	40.9	85,830	2.4	120,142	3.4	3,565,586
1995	1,773,873	60.1	961,216	32.6	107,640	3.6	109,098	3.7	2,951,827
1996	2,205,067	56.7	1,483,008	38.1	96,719	2.5	104,128	2.7	3,888,922
1997	2,197,736	52.6	1,832,824	43.9	48,723	1.2	97,455	2.3	4,176,738
1998	599,202	49.1	512,225	42.0	47,165	3.9	60,650	5.0	1,219,242
1999	1,413,995	52.8	1,092,946	40.8	114,454	4.3	59,115	2.2	2,680,510
2000	656,427	49.6	529,747	40.1	92,477	7.0	43,831	3.3	1,322,482
2001	846,257	46.3	870,019	47.6	59,709	3.3	50,848	2.8	1,826,833
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	48,487	1.4	3,476,159
2004	2,529,332	51.3	2,235,810	45.4	134,356	2.7	27,276	0.6	4,926,774
2005	2,520,300	48.1	2,534,345	48.4	157,612	3.0	26,415	0.5	5,238,672
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	60.7	1,877,442	35.6	163,539	3.1	35,424	0.7	5,277,440
2012	2,924,144	93.3	96,637	3.1	90,440	2.9	22,580	0.7	3,133,801
1966-11 Avg [a]	1,629,602	54.9	1,081,724	35.5	104,526	5.0	89,058	4.6	2,904,910
2002-11 Avg	1,735,884	49.1	1,564,716	46.4	114,209	3.5	30,786	1.0	3,445,594

Note: Harvest data prior to 2011 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, 1966–2012.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		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	74,930	16.6	97,062	21.9	449,479

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Appendix B3.–Page 2 of 2.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	Total
1988	278,828	49.6	54,975	9.9	77,403	13.8	149,742	26.7	560,948
1989	743	0.2	82,333	24.1	81,004	23.9	175,738	51.8	339,818
1990	247,357	49.3	40,351	8.0	73,429	14.6	140,506	28.0	501,643
1991	176,235	41.2	30,435	7.1	87,515	20.6	132,302	31.0	426,487
1992	267,300	57.0	57,078	12.2	53,419	11.4	91,133	19.4	468,930
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	44,750	10.0	71,431	16.0	89,300	20.0	446,954
1996	171,434	53.3	40,724	12.6	31,405	9.8	78,105	24.3	321,668
1997	78,662	51.6	19,668	12.9	16,705	11.0	37,369	24.5	152,404
1998	83,338	51.9	18,677	11.6	24,286	15.1	34,359	21.4	160,660
1999	64,814	51.5	11,923	9.3	17,725	14.1	31,446	25.1	125,908
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	199,585	64.2	30,154	9.7	36,498	11.7	44,819	14.4	311,056
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	38,015	18.3	207,254
2011	40,858	42.9	15,560	16.3	16,760	17.6	22,098	23.2	95,276
2012	74,678	69.1	6,534	6.1	12,354	11.4	13,206	12.2	106,772
1966-11 Avg [a]	148,515	46.9	37,160	13.4	50,881	17.4	65,041	22.3	301,596
2002-11 Avg	105,243	55.0	22,230	12.1	26,002	14.3	33,180	18.6	186,655

Note: Harvest data prior to 2011 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, 1966–2012.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		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	530,955	40.8	15,460	1.2	139,002	10.7	1,300,939
1987	38,714	35.4	47,243	43.2	5,229	4.8	18,203	16.6	109,389

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	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	Total
1988	227,885	48.4	176,043	37.4	12,938	2.7	54,210	11.5	471,076
1989	1	0.0	37,982	56.3	5,580	8.3	23,878	35.4	67,441
1990	323,759	53.7	225,429	37.4	10,302	1.7	43,944	7.3	603,434
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
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	3,810	2.9	11,713	8.8	133,575
1996	122,728	50.5	95,717	39.4	3,792	1.6	20,674	8.5	242,911
1997	29,917	42.2	32,046	45.2	4,701	6.6	4,269	6.0	70,933
1998	200,382	36.3	332,092	60.2	7,231	1.3	11,555	2.1	551,260
1999	3,552	22.0	9,355	57.8	2,674	16.5	593	3.7	16,174
2000	90,508	61.8	23,746	16.2	11,983	8.2	20,245	13.8	146,482
2001	31,218	43.0	32,998	45.5	3,988	5.5	4,355	6.0	72,559
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	3,743	1.3	292,671
2011	15,333	45.1	15,527	45.6	2,424	7.1	746	2.2	34,030
2012	303,216	64.8	158,897	33.9	3,376	0.7	3,922	0.8	469,411
1966-11 Avg [a]	210,244	43.8	175,815	37.5	13,269	4.4	72,709	14.3	472,038
2002-11 Avg	122,445	56.9	86,042	38.2	4,841	3.1	3,035	1.8	216,363

Note: Harvest data prior to 2011 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, 1966–2012.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		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	53,558	15.3	66,901	19.2	348,937

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	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	Total
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	289,447	82.4	4,611	1.3	21,355	6.1	35,710	10.2	351,123
1991	215,469	76.9	2,387	0.9	22,974	8.2	39,393	14.1	280,223
1992	232,955	84.9	2,867	1.0	13,180	4.8	25,301	9.2	274,303
1993	88,826	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	13,820	2.6	43,667	8.2	529,422
1996	140,968	90.1	1,448	0.9	2,314	1.5	11,771	7.5	156,501
1997	92,163	89.4	1,222	1.2	1,770	1.7	7,881	7.6	103,036
1998	88,036	92.0	688	0.7	2,953	3.1	3,977	4.2	95,654
1999	166,612	95.5	373	0.2	3,567	2.0	3,989	2.3	174,541
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	137,040	93.8	2,019	1.4	4,957	3.4	2,148	1.5	146,164
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	94.9	3,035	1.3	4,947	2.2	3,703	1.6	228,662
2011	111,082	86.0	1,612	1.2	9,995	7.7	6,513	5.0	129,202
2012	264,513	98.1	49	0.0	2,872	1.1	2,151	0.8	269,585
1966-11 Avg [a]	396,075	88.2	2,593	0.8	22,418	5.2	24,941	5.9	446,027
2002-11 Avg	111,971	92.6	1,272	1.0	4,618	4.0	2,827	2.3	120,688

Note: Harvest data prior to 2011 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, 1966–2012.

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	1,104,896	468,160	2,276,993	1,107,903	4,962,488
1969	12,386	691,815	100,684	32,499	267,686	1,105,070
1970	8,336	732,572	275,205	814,760	750,774	2,581,647
1971	19,765	636,289	100,362	35,590	323,945	1,115,951
1972	16,086	879,811	80,896	628,566	626,414	2,231,773
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	684,751	227,376	336,330	951,588	2,204,832
1976	10,865	1,664,149	208,663	1,256,728	469,180	3,609,585
1977	14,790	2,052,291	192,593	553,855	1,233,436	4,046,965
1978	17,299	2,621,421	219,193	1,688,442	571,779	5,118,134
1979	13,738	924,406	265,164	72,980	649,758	1,926,046
1980	13,798	1,573,588	271,416	1,786,421	387,815	4,033,038
1981	12,240	1,439,262	484,405	127,143	831,977	2,895,027
1982	20,870	3,259,864	792,224	790,644	1,432,940	6,296,542
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	39,254	4,792,072	757,353	1,300,939	1,134,817	8,024,401
1987	39,449	9,469,248	449,479	109,389	348,937	10,416,502
1988	29,080	6,843,833	560,948	471,076	710,615	8,615,552
1989	26,737	5,011,121	339,818	67,441	122,051	5,567,168
1990	16,105	3,604,259	501,643	603,434	351,123	5,076,564

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Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1991	13,542	2,178,331	426,487	14,663	280,223	2,913,246
1992	17,171	9,108,353	468,930	695,861	274,303	10,564,618
1993	18,871	4,755,329	306,882	100,934	122,770	5,304,786
1994	19,962	3,565,586	583,793	523,434	303,177	4,995,952
1995	17,893	2,951,827	446,954	133,575	529,422	4,079,671
1996	14,306	3,888,922	321,668	242,911	156,501	4,624,308
1997	13,292	4,176,738	152,404	70,933	103,036	4,516,403
1998	8,124	1,219,242	160,660	551,260	95,654	2,034,940
1999	14,383	2,680,510	125,908	16,174	174,541	3,011,516
2000	7,350	1,322,482	236,871	146,482	127,069	1,840,254
2001	9,295	1,826,833	113,311	72,559	84,494	2,106,492
2002	12,714	2,773,118	246,281	446,960	237,949	3,717,022
2003	18,490	3,476,159	101,756	48,789	120,767	3,765,961
2004	26,922	4,926,774	311,056	357,939	146,164	5,768,855
2005	27,667	5,238,672	224,657	48,419	69,740	5,609,155
2006	18,029	2,192,730	177,853	404,111	64,033	2,856,756
2007	17,625	3,316,779	177,339	147,020	77,240	3,736,003
2008	13,333	2,380,135	171,869	169,368	50,315	2,785,020
2009	8,750	2,045,794	153,210	214,321	82,811	2,504,886
2010	9,900	2,828,342	207,254	292,671	228,662	3,566,829
2011	11,248	5,277,440	95,276	34,030	129,202	5,547,196
2012	2,526	3,133,801	106,772	469,411	269,585	3,982,095
1966-2011 Avg	15,449	2,904,910	301,596	472,038	446,027	4,140,020
2002-2011 Avg	16,468	3,445,594	186,655	216,363	120,688	3,985,768

Note: Catch statistics prior to 2012 reflect minor adjustments to harvest database.

Appendix B7.–Approximate exvessel value of Upper Cook Inlet commercial salmon harvest by species, 1960–2012.

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

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Appendix B7.–Page 2 of 2.

Year	Chinook	%	Sockeye	%	Coho	%	Pink	%	Chum	%	Total
1985	$ 799,318	2.3%	$ 27,497,929	80.0%	$ 3,359,824	9.8%	$ 57,412	0.2%	$ 2,644,995	7.7%	$ 34,359,478
1986	$ 915,189	2.0%	$ 38,683,950	83.3%	$ 2,909,043	6.3%	$ 724,367	1.6%	$ 3,197,973	6.9%	$ 46,430,522
1987	$ 1,609,777	1.6%	$ 95,915,522	94.9%	$ 2,373,254	2.3%	$ 84,439	0.1%	$ 1,116,165	1.1%	$ 101,099,156
1988	$ 1,120,885	0.9%	$ 111,537,736	91.3%	$ 4,738,463	3.9%	$ 650,931	0.5%	$ 4,129,002	3.4%	$ 122,177,017
1989	$ 803,494	1.4%	$ 56,194,753	95.0%	$ 1,674,393	2.8%	$ 86,012	0.1%	$ 415,535	0.7%	$ 59,174,188
1990	$ 436,822	1.1%	$ 35,804,485	88.0%	$ 2,422,214	6.0%	$ 512,591	1.3%	$ 1,495,827	3.7%	$ 40,671,938
1991	$ 348,522	2.3%	$ 12,249,200	80.4%	$ 1,996,049	13.1%	$ 5,478	0.0%	$ 643,400	4.2%	$ 15,242,649
1992	$ 634,466	0.6%	$ 96,026,864	96.0%	$ 2,261,862	2.3%	$ 404,772	0.4%	$ 740,294	0.7%	$ 100,068,258
1993	$ 617,092	2.1%	$ 27,969,409	93.1%	$ 1,081,175	3.6%	$ 36,935	0.1%	$ 322,205	1.1%	$ 30,026,815
1994	$ 642,291	1.9%	$ 29,441,442	85.5%	$ 3,297,865	9.6%	$ 240,545	0.7%	$ 831,121	2.4%	$ 34,453,264
1995	$ 474,475	2.2%	$ 19,168,077	87.1%	$ 1,295,353	5.9%	$ 53,114	0.2%	$ 1,023,926	4.7%	$ 22,014,944
1996	$ 402,980	1.4%	$ 28,238,578	95.0%	$ 800,423	2.7%	$ 44,386	0.1%	$ 225,751	0.8%	$ 29,712,117
1997	$ 365,316	1.1%	$ 31,439,536	97.1%	$ 434,327	1.3%	$ 12,004	0.0%	$ 143,244	0.4%	$ 32,394,427
1998	$ 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	$ 337,482	1.6%	$ 20,095,838	95.5%	$ 329,164	1.6%	$ 5,995	0.0%	$ 265,026	1.3%	$ 21,033,505
2000	$ 183,368	2.2%	$ 7,115,614	87.2%	$ 626,287	7.7%	$ 47,065	0.6%	$ 186,385	2.3%	$ 8,158,719
2001	$ 169,634	2.2%	$ 7,136,523	92.3%	$ 297,328	3.8%	$ 20,317	0.3%	$ 111,093	1.4%	$ 7,734,894
2002	$ 326,051	2.8%	$ 10,682,051	91.7%	$ 329,031	2.8%	$ 84,922	0.7%	$ 224,148	1.9%	$ 11,646,203
2003	$ 358,688	2.8%	$ 12,284,746	95.3%	$ 132,079	1.0%	$ 8,660	0.1%	$ 99,850	0.8%	$ 12,884,023
2004	$ 662,550	3.2%	$ 19,406,563	93.8%	$ 416,193	2.0%	$ 65,861	0.3%	$ 129,794	0.6%	$ 20,680,961
2005	$ 688,908	2.2%	$ 30,159,035	95.2%	$ 708,793	2.2%	$ 12,783	0.0%	$ 101,123	0.3%	$ 31,670,641
2006	$ 617,133	4.4%	$ 12,301,215	88.5%	$ 679,754	4.9%	$ 174,576	1.3%	$ 121,343	0.9%	$ 13,894,021
2007	$ 629,521	2.7%	$ 21,905,667	93.6%	$ 683,110	2.9%	$ 53,074	0.2%	$ 141,156	0.6%	$ 23,412,528
2008	$ 544,120	3.3%	$ 15,525,621	93.0%	$ 482,608	2.9%	$ 64,529	0.4%	$ 75,774	0.5%	$ 16,692,652
2009	$ 266,548	1.8%	$ 13,720,261	94.1%	$ 399,704	2.7%	$ 71,582	0.5%	$ 115,899	0.8%	$ 14,573,994
2010	$ 349,102	1.0%	$ 32,112,265	93.1%	$ 943,472	2.7%	$ 235,962	0.7%	$ 836,855	2.4%	$ 34,477,655
2011	$ 634,617	1.2%	$ 51,358,878	96.7%	$ 406,613	0.8%	$ 27,436	0.1%	$ 687,785	1.3%	$ 53,115,329
2012	$ 121,652	0.4%	$ 31,964,770	92.2%	$ 480,474	1.4%	$ 624,317	1.8%	$ 1,457,916	4.2%	$ 34,653,040

Appendix B8.–Commercial herring harvest by fishery, Upper Cook Inlet, 1973–2012.

	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	86.5	–	143.9
1981	86.2	50.5	84.9	–	221.6
1982	60.2	91.8	50.2	–	202.2
1983	165.3	49.2	238.2	–	452.7
1984	117.5	90.6	159	–	367.1
1985	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	–	18.1
2003	3.7	0	0	–	3.7
2004	6.7	0.1	0	–	6.8
2005	17.1	0.2	0	0	17.3
2006	14.4	0	0	0	14.4
2007	12.6	0	0	0	12.6
2008	13.5	0	0	0	13.5
2009	9.2	0	0	0	9.2
2010	16.4	0.2	0	0	16.6
2011	13.7	2.5	0	0	16.2
2012	16.7	7.0	0	0	23.8

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

Appendix B9.–Commercial harvest of razor clams in Upper Cook Inlet, 1919–2012.

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

Appendix B10.–Enumeration goals and counts of sockeye salmon in selected streams of Upper Cook Inlet, 1978–2012.

	Kenai River		Kasilof River		Fish Creek	
Year	Enumeration Goal[a]	Enumeration Estimate[a,b]	Enumeration Goal	Enumeration Estimate[a,b]	Enumeration Goal	Enumeration Estimate[b,c]
1978	350,000–500,000	398,900	75,000–150,000	116,600	–	3,555
1979	350,000–500,000	285,020	75,000–150,000	152,179	–	68,739
1980	350,000–500,000	464,038	75,000–150,000	184,260	–	62,828
1981	350,000–500,000	407,639	75,000–150,000	256,625	–	50,479
1982	350,000–500,000	619,831	75,000–150,000	180,239	50,000	28,164
1983	350,000–500,000	630,340	75,000–150,000	210,271	50,000	118,797
1984	350,000–500,000	344,571	75,000–150,000	231,685	50,000	192,352
1985	350,000–500,000	502,820	75,000–150,000	505,049	50,000	68,577
1986	350,000–500,000	501,157	75,000–150,000	275,963	50,000	29,800
1987	400,000–700,000	1,596,871	150,000–250,000	249,250	50,000	91,215
1988	400,000–700,000	1,021,469	150,000–250,000	204,000[d]	50,000	71,603
1989	400,000–700,000	1,599,959	150,000–250,000	158,206	50,000	67,224
1990	400,000–700,000	659,520	150,000–250,000	144,289	50,000	50,000
1991	400,000–700,000	647,597	150,000–250,000	238,269	50,000	50,500
1992	400,000–700,000	994,798	150,000–250,000	184,178	50,000	71,385
1993	400,000–700,000	813,617	150,000–250,000	149,939	50,000	117,619
1994	400,000–700,000	1,003,446	150,000–250,000	205,117	50,000	95,107
1995	450,000–700,000	630,447	150,000–250,000	204,935	50,000	115,000
1996	550,000–800,000	797,847	150,000–250,000	249,944	50,000	63,160
1997	550,000–825,000	1,064,818	150,000–250,000	266,025	50,000	54,656
1998	550,000–850,000	767,558	150,000–250,000	273,213	50,000	22,853
1999	750,000–950,000	803,379	150,000–250,000	312,587	50,000	26,667
2000	600,000–850,000	624,578	150,000–250,000	256,053	50,000	19,533
2001	600,000–850,000	650,036	150,000–250,000	307,570	50,000	43,469
2002	750,000–950,000	957,924	150,000–250,000	226,682	20,000–70,000	90,483
2003	750,000–950,000	1,181,309	150,000–250,000	359,633	20,000–70,000	92,298
2004	850,000–1,100,000	1,385,981	150,000–250,000	577,581	20,000–70,000	22,157
2005	850,000–1,100,000	1,376,452	150,000–250,000	348,012	20,000–70,000	14,215
2006	750,000–950,000	1,499,692	150,000–250,000	368,092	20,000–70,000	32,566
2007	750,000–950,000	867,572	150,000–250,000	336,866	20,000–70,000	27,948
2008	650,000–850,000	614,946	150,000–250,000	301,469	20,000–70,000	19,339
2009	650,000–850,000	745,170	150,000–250,000	297,125	20,000–70,000	83,477
2010	750,000–950,000	970,662	150,000–250,000	267,013	20,000–70,000	126,829
2011	1,100,000–1,350,000	1,599,217	160,000–390,000	245,721	20,000–70,000	66,678
2012	1,100,000–1,350,000	1,581,555	160,000–390,000	374,523	20,000–70,000	18,813

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Appendix B10.–Page 2 of 2.

Year	Yentna River Enumeration Goal[e]	Yentna River Enumeration Estimate[b]	Crescent River Enumeration Goal	Crescent River Enumeration Estimate[b,g]	Packers Creek Enumeration Goal	Packers Creek Enumeration Estimate[b,h]
1978	100,000	–	–	–	–	–
1979	100,000	–	50,000	86,654	–	–
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	–	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	62,030	15,000–30,000	25,247
2009	–[f]	–[f]	30,000–70,000	–	15,000–30,000	1,6473[i]
2010	–[f]	–[f]	30,000–70,000	86,333	15,000–30,000	–
2011	–[f]	–[f]	30,000–70,000	81,952	15,000–30,000	–
2012	–[f]	–[f]	30,000–70,000	58,838	15,000–30,000	–

[a] From 1978 to 2010 enumeration and goals were derived from Bendix sonar; from 2011 to 2012 enumeration and goals were derived from DIDSON.

[b] Enumeration estimates prior to 2012 reflect minor adjustments to the escapement database.

[c] Weir counts.

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

[e] Yentna River escapement goal only.

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

[g] Derived from Bendix sonar.

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

[i] Counts through 16 July only.

Appendix B11.–Average price paid for commercially-harvested salmon, Upper Cook Inlet, 1970–2012.

Year	Chinook	Sockeye	Coho	Pink	Chum
1970	0.40	0.28	0.25	0.14	0.14
1971	0.37	0.30	0.21	0.15	0.15
1972	0.47	0.34	0.27	0.19	0.20
1973	0.62	0.65	0.50	0.30	0.42
1974	0.88	0.91	0.66	0.46	0.53
1975	0.54	0.63	0.54	0.35	0.41
1976	0.92	0.76	0.61	0.37	0.54
1977	1.26	0.86	0.72	0.38	0.61
1978	1.16	1.32	0.99	0.34	0.51
1979	1.63	1.41	0.98	0.34	0.88
1980	1.15	0.85	0.57	0.34	0.53
1981	1.46	1.20	0.83	0.38	0.65
1982	1.27	1.10	0.72	0.18	0.49
1983	0.97	0.74	0.45	0.18	0.36
1984	1.08	1.00	0.64	0.21	0.39
1985	1.20	1.20	0.70	0.20	0.45
1986	0.90	1.40	0.60	0.15	0.38
1987	1.40	1.50	0.80	0.22	0.45
1988	1.30	2.47	1.20	0.37	0.76
1989	1.25	1.70	0.75	0.40	0.47
1990	1.20	1.55	0.75	0.25	0.60
1991	1.20	1.00	0.77	0.12	0.35
1992	1.50	1.60	0.75	0.15	0.40
1993	1.20	1.00	0.60	0.12	0.45
1994	1.00	1.45	0.80	0.12	0.40
1995	1.00	1.15	0.45	0.12	0.27
1996	1.00	1.15	0.40	0.05	0.19
1997	1.00	1.15	0.45	0.05	0.19
1998	1.00	1.15	0.45	0.09	0.19
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

Note: Price is expressed as dollars per pound. Data source: 1969–1983: Commercial Fisheries Entry Commission; 1984–2012: random fish ticket averages, which do not include bonuses or postseason adjustments.

Appendix B12.–Average weight (pounds) of commercially-harvested salmon, Upper Cook Inlet, 1970–2012.

Year	Chinook	Sockeye	Coho	Pink	Chum
1970	26.8	5.8	6.8	4.0	7.2
1971	25.9	6.6	6.5	3.4	9.3
1972	29.7	6.2	6.3	4.0	6.7
1973	37.6	7.4	6.1	3.7	7.6
1974	36.1	6.8	6.4	4.1	7.2
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	7.1	3.7	7.7
1989	24.0	6.6	6.6	3.2	7.2
1990	22.6	6.4	6.5	3.4	7.1
1991	21.5	5.6	6.1	3.1	6.6
1992	24.6	6.6	6.4	3.9	6.8
1993	27.5	5.9	5.9	3.1	5.8
1994	31.6	5.7	7.1	3.9	6.9
1995	26.6	5.7	6.4	3.3	7.2
1996	28.3	6.3	6.2	3.7	7.6
1997	27.6	6.6	6.3	3.4	7.3
1998	22.8	5.5	6.9	3.8	7.3
1999	23.9	5.8	5.8	3.1	8.0
2000	22.7	6.3	6.6	3.6	7.7
2001	18.3	6.0	6.6	3.5	6.9
2002	22.3	6.4	6.7	3.8	7.9
2003	20.4	5.9	6.5	3.6	6.9
2004	24.6	6.1	6.7	3.7	7.4
2005	24.9	6.1	6.3	3.3	7.3
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
1970-2011 Avg	25.8	6.3	6.5	3.6	7.4
2012	17.2	6.8	6.0	3.8	8.0

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, 1974–2012.

	Drift Gillnet			Set Gillnet			
Year	Resident	Non-Resident	Subtotal	Resident	Non-Resident	Subtotal	Total
1974	436	149	585	698	54	752	1,337
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

Source: 1974–2012 Commercial Fisheries Entry Commission. http://www.cfec.state.ak.us/pstatus/14052012.htm

Appendix B14.–Forecast and projected commercial harvests of salmon by species, Upper Cook Inlet, 1985–2012.

	Sockeye			Coho			Pink			Chum			Chinook		
	Forecast[a]	Actual[b,c]	Error	Projected	Actual[c,d]	Error	Projected	Actual[c,d]	Error	Projected	Actual[c,d]	Error	Projected	Actual[c,d]	Error
1985	3,700,000	4,248,506	15%	250,000	667,213	167%	112,500	87,828	-22%	700,000	772,849	10%	17,500	24,088	38%
1986	4,200,000	4,981,255	14%	450,000	757,319	68%	1,250,000	1,300,939	4%	900,000	1,134,817	26%	32,500	39,254	21%
1987	4,800,000	9,859,418	98%	500,000	449,479	-10%	150,000	109,389	-27%	1,000,000	348,937	-65%	30,000	39,440	32%
1988	5,300,000	7,087,976	29%	400,000	560,948	40%	400,000	471,076	17%	800,000	710,615	-11%	35,000	29,080	-17%
1989	2,500,000	5,443,946	100%	400,000	339,818	-15%	100,000	67,441	-33%	800,000	122,051	-85%	30,000	26,737	-11%
1990	4,300,000	3,822,864	-16%	250,000	501,643	101%	600,000	603,434	1%	400,000	351,123	-12%	25,000	16,105	-36%
1991	3,200,000	2,472,589	-32%	400,000	426,487	7%	90,000	14,663	-84%	500,000	280,223	-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	446,954	12%	100,000	133,575	34%	250,000	529,422	112%	15,000	17,893	19%
1996	3,300,000	4,312,193	18%	400,000	321,668	-20%	600,000	242,911	-60%	350,000	156,501	-55%	15,000	14,306	-5%
1997	5,300,000	4,565,608	-21%	400,000	152,404	-62%	100,000	70,933	-29%	250,000	103,036	-59%	15,000	13,292	-11%
1998	2,500,000	1,626,594	-51%	300,000	160,660	-46%	300,000	551,260	84%	200,000	95,654	-52%	17,000	8,124	-52%
1999	2,000,000	3,179,342	59%	300,000	125,908	-58%	75,000	16,174	-78%	200,000	174,541	-13%	16,000	14,383	-10%
2000	3,000,000	1,786,241	-40%	150,000	236,871	58%	500,000	146,482	-71%	200,000	127,069	-36%	15,000	7,350	-51%
2001	2,700,000	2,312,491	-14%	300,000	113,311	-62%	50,000	72,559	45%	250,000	84,494	-66%	13,000	9,295	-29%
2002	2,200,000	3,369,760	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	4,161,766	73%	170,000	101,756	-40%	80,000	48,789	-39%	140,000	120,767	-14%	10,000	18,490	85%
2004	3,700,000	5,641,384	52%	160,000	311,056	94%	380,000	357,939	-6%	150,000	146,164	-3%	10,000	26,922	169%
2005	4,100,000	5,962,869	45%	200,000	224,657	12%	70,000	48,419	-31%	140,000	69,740	-50%	10,000	28,171	182%
2006	2,100,000	2,659,901	27%	200,000	177,853	-11%	350,000	404,111	15%	140,000	64,033	-54%	20,000	18,029	-10%
2007	3,300,000	4,048,996	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	3,005,226	-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	2,841,999	-5%	210,000	153,210	-27%	70,000	214,321	206%	80,000	82,811	4%	20,000	8,750	-56%
2010	2,300,000	3,650,546	59%	179,000	207,254	16%	305,000	292,671	-4%	70,000	228,662	227%	17,000	9,900	-42%
2011	3,500,000	5,277,440	51%	178,000	95,276	-46%	106,000	34,030	-68%	101,000	129,202	28%	14,000	11,248	-20%
2012	3,400,000	3,133,801	-8%	159,000	108,006	-32%	334,000	468,177	40%	113,000	269,585	139%	12,000	2,526	-79%
Avg.	3,267,857	4,323,161	30%	292,000	306,959	7%	276,696	280,025	20%	322,643	256,002	-5%	18,179	17,736	4%

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

[d] Actual harvests prior to 2012 reflect minor adjustments to the harvest database.

Appendix B15.–Upper Cook Inlet subsistence fisheries salmon harvest, 1980–2012.

	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

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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	28	21	0	473	147	33	20	673
1999	NR	21	0	455	43	15	11	524
2000	NR	20	0	379	92	4	7	482
2001	NR	16	0	514	47	9	4	574
2002	NR	25	0	414	116	14	28	572
2003	NR	15	0	433	76	2	13	524
2004	NR	22	0	391	132	0	2	525
2005	NR	21	0	177	42	24	25	268
2006	26	23	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	17	16	0	253	14	0	6	273
2010	20	18	0	675	52	41	18	786
2011	25	25	0	598	90	3	21	712
2012	24	24	0	279	24	21	19	343

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

Appendix B16.–Upper Cook Inlet educational fisheries salmon harvest, 1994–2012.

Year	Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
1994	Kenaitze	57	1,907	829	134		2,927
	NTC			119			119
	NND						0
	Knik						29
	Eklutna						172
	Total	57	1,907	948	134	0	3,247
1995	Kenaitze	40	1,498	868	35		2,441
	NTC			85			85
	NND						0
	Knik	5	21	1	0	1	28
	Eklutna	14	55	37	6	42	154
	Total	59	1,574	991	41	43	2,708
1996	Kenaitze	105	2,242	592	211		3,150
	NTC			56			56
	NND						0
	Knik	5	163	45	3	62	278
	Eklutna						0
	Total	110	2,405	693	214	62	3,484
1997	Kenaitze	142	2,410	191	5		2,748
	NTC	94	474	99	55		722
	NND						0
	Knik	19	153	34	0	15	221
	Eklutna	7	39	14	16	7	83
	Total	262	3,076	338	76	22	3,774
1998	Kenaitze	133	2,621	638	58		3,450
	NTC	67	506	95	57		725
	NND	52	139	110	20		321
	Knik	31	186	153	0	85	455
	Eklutna	32	104	116	6	51	309
	Tyonek	0	11	41	3	1	56
	Total	315	3,567	1,153	144	137	5,316

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Year	Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
1999	Kenaitze	118	1,944	530	5	0	2,597
	NTC	109	442	84	5	0	640
	NND	56	302	76	18	0	452
	Knik	42	177	120	0	55	394
	Eklutna	11	80	25	3	20	139
	Tyonek	0	100	0	0	0	100
	Total	336	3,047	835	31	75	4,322
2000	Kenaitze	130	2,088	656	617	0	3,491
	NTC	50	439	59	57	0	605
	NND	51	199	96	15	0	361
	Knik	65	34	63	0	18	180
	Eklutna	17	76	85	21	51	250
	Tyonek	0	97	0	0	0	97
	Total	302	2,920	983	701	69	4,984
2001	Kenaitze	204	3,441	572	107	0	4,324
	NTC	75	760	123	42	0	1,000
	NND	74	309	110	17	0	510
	Knik	32	71	34	0	0	137
	Eklutna	58	52	95	56	34	295
	Tyonek	0	0	0	0	0	0
	Total	443	4,633	934	222	34	6,266
2002	Kenaitze	70	2,889	921	482	0	4,362
	NTC	65	339	106	52	0	562
	NND	65	138	95	11	0	309
	Knik	55	136	99	5	36	331
	Eklutna	58	220	156	40	76	550
	Tyonek	0	0	0	0	0	0
	Total	313	3,722	1,377	590	112	6,114
2003	Kenaitze	151	4,651	439	63		5,304
	NTC	87	426	100	15		628
	NND	69	98	77	13		257
	Knik	34	654	87	3	45	823
	Eklutna	69	160	49	14	21	313
	Tyonek	0	0	0	0	0	0
	Total	410	5,985	752	108	66	7,329

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Year	Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
2004	Kenaitze	10	4,113	765	417		5,305
	NTC	73	395	83	0		551
	NND	78	199	79	14		370
	NES	1	77	0	9		87
	Knik	105	142	207	20	29	503
	Eklutna	50	311	297	4	71	733
	Tyonek	0	0	0	0	0	0
	Total	317	5,237	1,431	464	100	7,549
2005	Kenaitze	100	6,317	490	12	0	6,919
	NTC	70	264	83	0	0	417
	NND	88	84	78	15	0	265
	NES	0	5	0	0	0	5
	Knik	25	200	80	9	16	330
	Eklutna	72	166	242	8	29	517
	Tyonek						0
	Big Lake	61	98	99	56	34	348
	Total	416	7,134	1,072	100	79	8,801
2006	Kenaitze	85	4,380	223	702	0	5,390
	NTC	75	550	100	0	0	725
	NND	64	55	99	10	0	228
	NES	0	0	0	0	0	0
	Knik	24	197	75	12	7	315
	Eklutna	43	59	199	11	7	319
	Tyonek	0	0	0	0	0	0
	Big Lake	8	68	12	1	3	92
	Intertribal	12	135	95	85	21	348
	Total	311	5,444	803	821	38	7,417
2007	Kenaitze	25	3,941	543	119		4,628
	NTC	300	1,363	483	2	0	2,148
	NND	65	210	102	12	0	389
	NES	0	0	0	0	0	0
	APVFW	0	77	76	0	0	153
	Knik	19	7	75		16	117
	Eklutna						0
	Tyonek	0	0	0	0	0	0
	Big Lake	17	100	46	14		177
	Intertribal						0
	O'Brien	49	104	126	8	4	291
	Total	475	5,773	1,428	156	20	7,903

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Year	Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
2008	Kenaitze	58	3,374	525	503	0	4,460
	NTC	199	857	200	248	0	1,504
	NND	69	192	150	69	0	480
	NES	0	0	0	0	0	0
	APVFW	1	106	79	15	0	201
	Kasilof H.A.	3	20	42	12	0	77
	Knik	12	79	70	0	0	161
	Eklutna	16	19	178	3	0	216
	Tyonek	2	0	0	0	0	2
	Big Lake	20	9	62	0	6	97
	Intertribal	0	0	0	0	0	0
	O'Brien	8	82	105	6	0	201
	Fish Creek	8	23	200	0	17	248
	Total	396	4,761	1,611	856	23	7,647
2009	Kenaitze	53	5,683	769	63	0	6,568
	NTC	32	788	454	123	0	1,397
	NND	20	276	56	34	0	386
	NES	0	0	0	0	0	0
	APVFW	0	103	75	6	0	184
	Kasilof H.A.	4	61	32	0	0	97
	Knik	0	66	79	1	8	154
	Big Lake	0	35	70	4	1	110
	Eklutna	0	135	221	20	23	399
	Tyonek	3	0	0	0	0	3
	O'Brien	10	43	30	12	4	99
	Total	122	7,190	1,332	263	36	9,397
2010	Kenaitze	60	5,382	839	170	0	6,451
	NTC	83	643	500	263		1,489
	NND						0
	NES						0
	APVFW		46	47	25	1	119
	Kasilof H.A.	1	9	37	0	0	47
	SCF	0	3	27	0	0	30
	Knik	0	72	94	21	61	248
	Big Lake		94	100	6	16	216
	Eklutna						0
	Tyonek	0	1	0	0	0	1
	O'Brien	14	45	30	19	0	108
	Total	75	5,652	1,174	241	78	8,709

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Year	Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
2011	Kenaitze	47	6,873	439	5		7,364
	NTC	64	500	181	131	876	1,752
	NND	29	185	84	37	335	670
	NES						0
	Homer VFW	39	35	74			148
	APVFW	47	41	21	109		218
	Kasilof H.A.	3	25	39			67
	SCF	34	5	39			78
	Knik	0	8	61	1	0	70
	Big Lake	0	6	4	3	3	16
	Eklutna		343	282	32	57	714
	Tyonek						0
	O'Brien	6	27	32	4		69
	Total	269	8,048	1,256	322	1,271	11,166
Year	Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
2012	Kenaitze	14	3,445	553	140	0	4,152
	NTC	67	247	406	253	1	974
	NND	17	65	145	25	0	252
	NES	1	37	0	2	0	40
	Homer VFW	0	65	39	0	0	104
	APVFW	0	66	25	15	0	106
	Kasilof H.A.	2	81	27	2	0	112
	SCF	0	76	36	0	0	112
	Knik	48	0	6	0	0	54
	Big Lake						0
	Eklutna	0	218	242	10	63	533
	Tyonek						0
	O'Brien	4	70	14	1	10	99
	Total	153	4,370	1,493	448	74	6,538

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, 1996–2012.

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	1,864	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	15,970	199
Min.	5	582		9,506		46		0		2		0		9,561	
Mean	9	1,354		19,543		207		88		23		7		19,867	
Max.	13	1,864		28,867		514		420		102		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	75,648	452
Min.	27	1,091		9,737		16		90		19		17		9,900	
Mean	38	4,502		45,138		64		801		665		100		46,768	
Max.	44	7,650		73,419		138		1,768		1,862		279		75,957	

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Kenai 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	10,503	60	102,821	367	295	5	1,932	29	2,404	33	175	10	107,627	375
1997	22	11,023	87	114,619	439	364	13	559	21	619	14	58	5	116,219	448
1998	18	10,802	59	103,847	716	254	10	1,011	62	1,032	62	85	3	106,229	724
1999	22	13,738	79	149,504	1,084	488	13	1,009	108	1,666	64	102	13	152,769	1,094
2000	22	12,354	69	98,262	752	410	18	1,449	62	1,457	75	193	31	101,771	762
2001	22	14,772	66	150,766	909	638	15	1,555	105	1,326	37	155	19	154,440	926
2002	22	14,840	56	180,028	844	606	11	1,721	64	5,662	102	551	36	188,568	874
2003	22	15,263	50	223,580	891	1,016	18	1,332	68	1,647	98	249	22	227,824	905
2004	22	18,513	35	262,831	583	792	7	2,661	66	2,103	27	387	12	268,774	905
2005	22	20,977	18	295,496	273	997	3	2,512	24	1,806	12	321	2	301,132	275
2006	20	12,685	16	127,630	183	1,034	3	2,235	15	11,127	37	551	9	142,577	203
2007	22	21,908	23	291,270	335	1,509	4	2,111	24	1,939	23	472	17	297,301	337
2008	22	20,772	27	234,109	338	1,362	10	2,609	21	10,631	49	504	8	249,215	343
2009	22	26,171	35	339,993	524	1,189	7	2,401	29	5,482	27	285	7	349,350	525
2010	22	28,342	44	389,552	702	865	7	2,870	56	3,655	28	508	15	397,451	705
2011	22	32,818	60	537,765	1,105	1,243	10	4,745	107	3,914	86	915	47	548,583	1,115
2012	22	34,374	61	526,992	1,109	40	3	4,008	117	3,770	102	425	15	535,235	1,120
Min.	18	10,503		98,262		40		559		619		58		101,771	
Mean	22	18,815		242,886		771		2,160		3,544		349		249,710	
Max.	27	34,374		537,765		1,509		4,745		11,127		915		548,583	

Unknown Fishery

	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	-	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
Min.		270		3,310		0		39		28		4		3,429	
Mean		819		8,681		61		163		195		38		9,137	
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
Min.	3	131		436		0		17		2		0		457	
Mean	11	1,462		7,984		7		961		278		68		9,298	
Max.	22	3,749		23,705		37		3,576		1,721		290		29,303	

Beluga River Dip Net

Year	Days Open	Days Fished Est.	Days Fished SE	Sockeye Est.	Sockeye SE	Chinook Est.	Chinook SE	Coho Est.	Coho SE	Pink Est.	Pink SE	Chum Est.	Chum SE	Total Est.	Total SE
2008	43			31		0		35		0		0		66	
2009	43			140		0		78		7		0		225	
2010	43			47		0		1		0		5		53	
2011	43			137		0		17		0		5		159	
2012	43			9		0		7		0		0		16	
Min.	43			9		0		1		0		0		16	
Mean	43			73		0		28		1		2		104	
Max.	43			140		0		78		7		5		225	

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Upper Cook Inlet Personal Use Fisheries Total

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	-	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	318,513	412	1,600	11	3,284	24	11,865	52	728	10	335,990	416
2009	-	37,754	46	457,680	629	1,385	7	4,282	45	6,976	34	559	13	470,882	631
2010	-	41,387	56	514,302	808	1,059	8	8,406	113	6,482	47	1,095	20	531,344	818
2011	-	43,450	72	630,379	1,176	1,453	11	6,754	122	4,880	100	1,169	50	644,635	1,187
2012	-	43,543	74	629,344	1,232	164	5	5,512	128	4,846	111	623	19	640,489	1,244
Min.		14,923		145,545		164		777		844		88		151,113	
Mean		26,267		320,524		1,107		3,728		4,574		529		330,461	
Max.		43,543		630,379		1,924		8,406		12,434		1,169		644,635	

APPENDIX C: SALMON OUTLOOK AND FORECAST

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

NEWS RELEASE

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Date Issued: 4/3/2012

UPPER COOK INLET
2012 OUTLOOK FOR COMMERCIAL SALMON FISHING
SALMON FISHING

SOCKEYE SALMON

A run of 6.2 million sockeye salmon is forecasted to return to UCI in 2012, with a harvest by all user groups of 4.4 million. The forecasted harvest in 2012 is about 0.4 million fish above the 20-year average harvest by all user groups of 4.0 million.

The run forecast for the Kenai River is 4.0 million, which is 6% greater than the 20-year average run of 3.8 million. Age-1.3 sockeye salmon typically comprise about 63% of the run to the Kenai River. Age-2.3 sockeye salmon typically comprise about 19% of the run to the Kenai River. The predominant age classes in the 2012 run should be age 1.3 (50%), age 1.2 (8%), and age 2.3 (35%). The 10-year Mean Absolute Percent Error (MAPE) for the set of models used for the 2012 Kenai sockeye salmon run forecast was 23%.

The sockeye salmon run forecast for the Kasilof River is 754,000, which is 21% less than the 20-year average run of 950,000. Age-1.3 sockeye salmon typically comprise about 35% of the run to the Kasilof River. The forecast for age-1.3 sockeye salmon is 255,000, which is 23% less than the 20-year average return (332,000) for this age class. Age-1.2 sockeye salmon typically comprise about 30% of the run. The forecast for age-1.2 sockeye salmon is 148,000, which is 47% less than the 20-year average return (280,000) for this age class. Age-2.2 sockeye salmon typically comprise about 24% of the run. The forecast for age-2.2 sockeye salmon is 253,000, which is 12% greater than the 20-year average return (227,000) for this age class. The predominant age classes in the 2012 run should be age 1.2 (20%), age 1.3 (34%), and age 2.2 (34%). The 10-year MAPE for the set of models used for the 2012 Kasilof sockeye salmon run forecast was 17%.

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The sockeye salmon run forecast for the Susitna River is 443,000, which is 50% less than the 20-year average run of 881,000. This forecast was derived from historical aggregate weir counts rather than sonar and age composition catch allocation models, because recent mark-recapture studies have shown that the Yentna sonar project underestimated sockeye salmon escapement, causing estimates of adult returns to also be underestimated. Although, this is only the third year a weir-based method has been used, the MAPE for this method based on 2010-2011 data was 41%. The 20-year average run was calculated by expanding sonar abundance estimates using mark–recapture and genetic stock composition estimates.

The sockeye salmon run forecast for Fish Creek is 84,000, which is 27% less than the 20-year average run of 116,000. Age-1.2 and -1.3 sockeye salmon typically comprise 78% of the run to Fish Creek. The age-1.2 forecast is 38% less than the 20-year average return (61,000) for this age class, while the age-1.3 forecast is 5% less than the 20-year average return (30,000) for this age class. The predominant age classes in the 2012 run should be age 1.2 (44%), age 1.3 (34%), and age 2.2 (14%).

The sockeye salmon run forecast for Crescent River is 81,000, which is 27% less than the 20-year average run of 110,000. Age-1.3 and -2.3 sockeye salmon typically comprise 75% of the run to Crescent River. The predominant age classes in the 2012 run should be age 1.3 (46%) and age 2.3 (26%).

Forecast runs to individual freshwater systems are as follows:

System	Run	Goals [a]
Crescent River	81,000	30,000–70,000
Fish Creek	84,000	20,000–70,000
Kasilof River [b, c]	754,000	160,000–390,000
Kenai River [b]	4,026,000	1,000,000–1,200,000
Susitna River	443,000	
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	808,000	N/A
Total	6,196,000	

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

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

[c] Kasilof River biological escapement goal is 160,000 to 340,000 sockeye salmon.

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OTHER SPECIES' HARVEST PROJECTIONS

Very little information is available on which to base outlooks for the commercial harvests of the other salmon species. Using recent harvest trends and factoring in the expected intensity of the sockeye-based fishery, the following numbers represent our best estimate of the 2012 harvest:

Pink Salmon	334,000
Chum Salmon	113,000
Coho Salmon	159,000
Chinook Salmon	12,000

REGULATORY CHANGES AND FISHING STRATEGY

There were several regulatory changes made by the Alaska Board of Fisheries (board) during the 2011 meeting, with additional modifications made after the 2011 season. The following summary is for informational purposes only and is not a comprehensive review. Regulation booklets covering the UCI commercial fishery are currently available at the Anchorage, Soldotna, and Homer ADF&G offices. Fishermen should consult the new regulations to see how their specific fishery may have changed.

Northern District Set Gillnet

- The Northern District king salmon fishery will open on the first Monday on or after May 25. The area from a point at the wood chip dock located approximately at 61° 02.56' N. lat., 151° 14.36' W. long., to the Susitna River is closed to commercial king salmon fishing for 2012. Furthermore, the four commercial king salmon fishing periods scheduled in 2012 have been reduced in duration from 12 hours per fishing period to 6 hours per period, and will be from 7:00 a.m. to 1:00 p.m. All of the Northern District will return to a regular fishing schedule beginning on June 25.
- Susitna River sockeye salmon remain a stock of yield concern. *The Susitna River Sockeye Salmon Action Plan* requires the Northern District set gillnet fishery to fish with no more than one net per permit from July 20 through August 6. At the 2011 board meeting, the board modified this restriction, allowing for that portion of the General Subdistrict south of the Susitna River to fish with no more than two nets per permit after July 30. All areas in the Northern District return to a full complement of gear after August 6.

Central District Fisheries

Upper Subdistrict Set Gillnet Fishery

Kasilof Section Prior to July 8

- The Kasilof Section opens on the first regular period on or after June 25, unless ADF&G 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.

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- From June 25 through July 7, the ADF&G may not allow more than 48 hours of additional fishing time per week (Sunday through Saturday) and must close the fishery for 36 consecutive hours per week, which will begin between 7:00 p.m. on Thursdays and 7:00 a.m. on Fridays.
- Beginning July 8, or after the Kenai and East Forelands Sections open, the Kasilof Section will be managed in combination with the Kenai and East Forelands Sections.

Kenai, Kasilof and East Forelands Sections

After July 8, or after the Kenai and East Forelands Sections fishing season opens, the following fishing scenarios are possible depending on the sockeye salmon run strength to the Kenai River. For 2012, the projection to the Kenai River is 4.0 million sockeye salmon. Therefore, the season will be managed with guidelines outlined below for runs between 2.3 and 4.6 million sockeye salmon. The Kenai River sockeye salmon run will then be reassessed after July 20 to verify inseason run strength

- If the Kenai assessment shows the run to be **less than 2.3 million Kenai sockeye salmon,** there will be no more than 24 hours of additional fishing time per week in the Upper Subdistrict and there are no mandatory window closures. If the Kenai and East Forelands Sections are not fished during regular or additional openings, ADF&G may limit regular and additional periods in the Kasilof Section to within one-half mile of shore. If the Kasilof escapement is projected to exceed 390,000 fish, 24-hours of additional fishing time per week is available after July 15 within one-half mile of shore in the Kasilof Section.
- If the Kenai assessment is **between 2.3 and 4.6 million Kenai sockeye salmon**, the ADF&G may allow up to 51 hours of additional fishing time per week and will close the Upper Subdistrict for a 36-hour closed period per week, which will begin between 7:00 p.m. on Thursdays and 7:00 a.m. on Fridays. In addition there will be a second 24-hour closed period per week on Tuesdays. If the Kenai and East Forelands Sections are not fished, ADF&G may limit regular and extra periods in the Kasilof Section to within one-half mile of shore.
- If the Kenai assessment changes to a run of **more than 4.6 million Kenai sockeye salmon**, ADF&G may allow up to 84 hours of additional fishing time per week and will close the Upper Subdistrict for a 36-hour closed period each week, which will begin between 7:00 p.m. on Thursdays and 7:00 a.m. on Fridays. There are no other mandatory windows at this run strength. If the Kenai and East Forelands Sections are not fished, ADF&G may limit regular and extra periods in the Kasilof Section to within one-half mile of shore.
- The Upper Subdistrict set gillnet fishery will close no later than August 15 and all restrictions and additional time regulations from July carry over into August, except that the fishery is restricted to regular periods only from August 11–15. However, the season will close any time after July 31, if during two consecutive fishing periods (defined as a calendar day); the sockeye salmon harvest is less than 1% of the season total.

Central District Drift Gillnet Fishery

- The drift fishery opens the third Monday in June or June 19, whichever is later.
- From July 9 through July 15,

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- Drift gillnet fishing is restricted for the first regular fishing period to the Expanded Kenai and Expanded Kasilof Sections (Figure 1) described below.
- Drift gillnet fishing is restricted for the second regular fishing period to the Kenai and Kasilof Sections (Figure 2) and Drift Area One (Figure 3) described below.
- Additional fishing time between the first restricted period and the second period during this time frame may be allowed in the Expanded Kenai and Expanded Kasilof Sections.
- In runs of over 2.3 million sockeye salmon to the Kenai River, there may be one additional 12-hour period in the Kenai and Kasilof Sections of the Upper Subdistrict and in Drift Area One.

- From July 16 through July 31,
  - In runs of less than 2.3 million sockeye salmon to the Kenai River, there will be one regular 12-hour fishing period restricted to the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict;
  - In runs of between 2.3 and 4.6 million sockeye salmon to the Kenai River, there will be one regular 12-hour fishing period per week restricted to either or both the Expanded Kenai or the Expanded Kasilof Sections of the Upper Subdistrict, or the fishery will be restricted to Drift Area One, but drifting may not occur in both Drift Area One and the Expanded corridors together during this restricted fishing period;
  - In runs of greater than 4.6 million sockeye salmon to the Kenai River, there are no mandatory restrictions.
- From August 16 until closed by emergency order,
  a. Drift Areas three & four (Figure 4) are open for regular periods;
  b. Chinitna Bay may be opened by emergency order.

New Drift Gillnet Fishing Areas

1.) Expanded Kenai Section: all waters enclosed by a line from a point located on the shore at 60° 40.35' N. lat., 151° 23.00' W. long. then west to a point located at 60° 40.35' W. long., south to a point at the latitude of the Blanchard line located at 60° 27.10' N. lat., 151° 33.76' W. long. east to a point on the beach at 60° 27.10' N. lat., 151° 16.94' W. long.

2.) Expanded Kasilof Section: all waters enclosed by a line from a point on the beach at 60° 27.10' N. lat., 151° 16.94' W. long., west to a point at the Blanchard line located at 60° 27.10' N. lat., 151° 33.76' W. long., south to a point located at 60° 04.02' N. lat., 151° 46.60' W. long., east to an ADF&G regulatory marker located at 60° 04.02' N. lat., 151° 38.90' W. long.

Other regulatory changes include:

- Permit stacking for set gillnets was authorized.
- A pink salmon fishery may occur during even years for both drift and set gillnets; mesh size restriction not to exceed 4¾" apply; in the Upper Subdistrict, fishing is not allowed within 600' of shore.

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- After July 8, the Kasilof River Special Harvest Area may be fished for up to 48 hours, followed by a 24-hour closure, without an escapement trigger, if fish are present in sufficient numbers.
- The sockeye salmon escapement trigger for opening the Kasilof River Special Harvest Area to commercial fishing without limitation is now 365,000 fish.
- In the Kasilof Section, after July 8, if further restrictions beyond the one-half mile fishery are necessary to aid in achieving the lower end of the Kenai River escapement goal, this area may be further restricted to fishing within 600 feet of the high tide mark in the Kasilof Section.
- The board redefined what constitutes a fishing period for determining when the Upper Subdistrict set gillnet fishery may close after July 31 based on the 1% rule. A fishing period is now defined as a time period open to commercial fishing not to exceed 24-hours per calendar day.

SET NET 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 ADF&G's homepage at http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareauci.salmon. Fishermen wishing to register in the Upper Subdistrict must register in the **Soldotna ADF&G office only,** and must purchase buoy stickers at the time of registering.

SEASON OPENING DATES

Season opening dates in 2012 for the various fisheries around the inlet are as follows:

- *Big River Fishery:* June 1 and continuing through June 24, unless the 1,000 Chinook salmon harvest limit is reached prior to that date. Weekly fishing periods are Mondays, Wednesdays, and Fridays from 7:00 a.m. to 7:00 p.m.
- *Northern District King Salmon Fishery:* May 28. There will be up to four fishing periods in 2012, with the remaining periods scheduled for June 4, 11, and 18. Weekly fishing periods are Mondays only from 7:00 a.m. to 1:00 p.m. The area from a point at the wood chip dock, located approximately at 61° 02.56' N. lat., 151° 14.36' W. long., to the Susitna River, is closed for the directed king salmon fishery in 2012.
- *Northern District Regular Season Salmon Fishery*: June 25,
- *Western Subdistrict Set Net Fishery:* June 18
- *All remaining set gillnet fisheries, except the Upper Subdistrict:* June 25.

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- *Upper Subdistrict Set Net Fishery:* June 25 for the Kasilof Section (that portion south of the Blanchard Line), unless opened earlier by EO (based on 50,000 sockeye salmon estimated in the Kasilof River 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 July 9. All sections of the Upper Subdistrict will close for the season on or before August 15.
- *Drift Gillnet Fishery*: June 21.

GENERAL INFORMATION

The UCI commercial fisheries information line will again be available by calling 262-9611. The most recent emergency order announcement is always available on the recorded message line and catch, escapement and test fishing information is included whenever possible. All emergency order announcements are also faxed to processors as quickly as possible and posted to the Upper Cook Inlet web page at http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareauci.main. 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) which is equilivalent to the World Geodetic System 1984 (WGS 84).

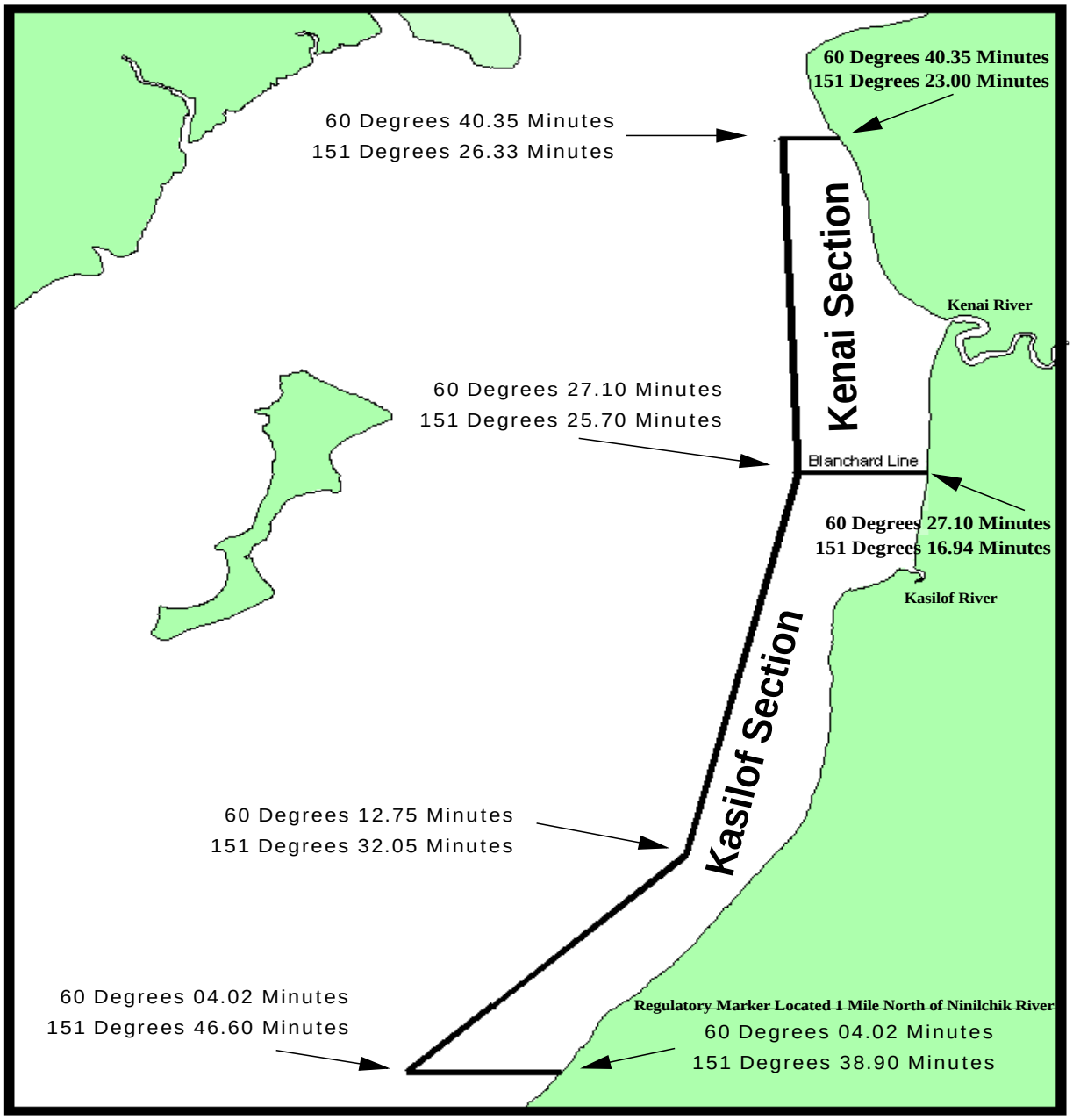

Figure 1. Map of the Kenai and Kasilof Sections with waypoint descriptions.

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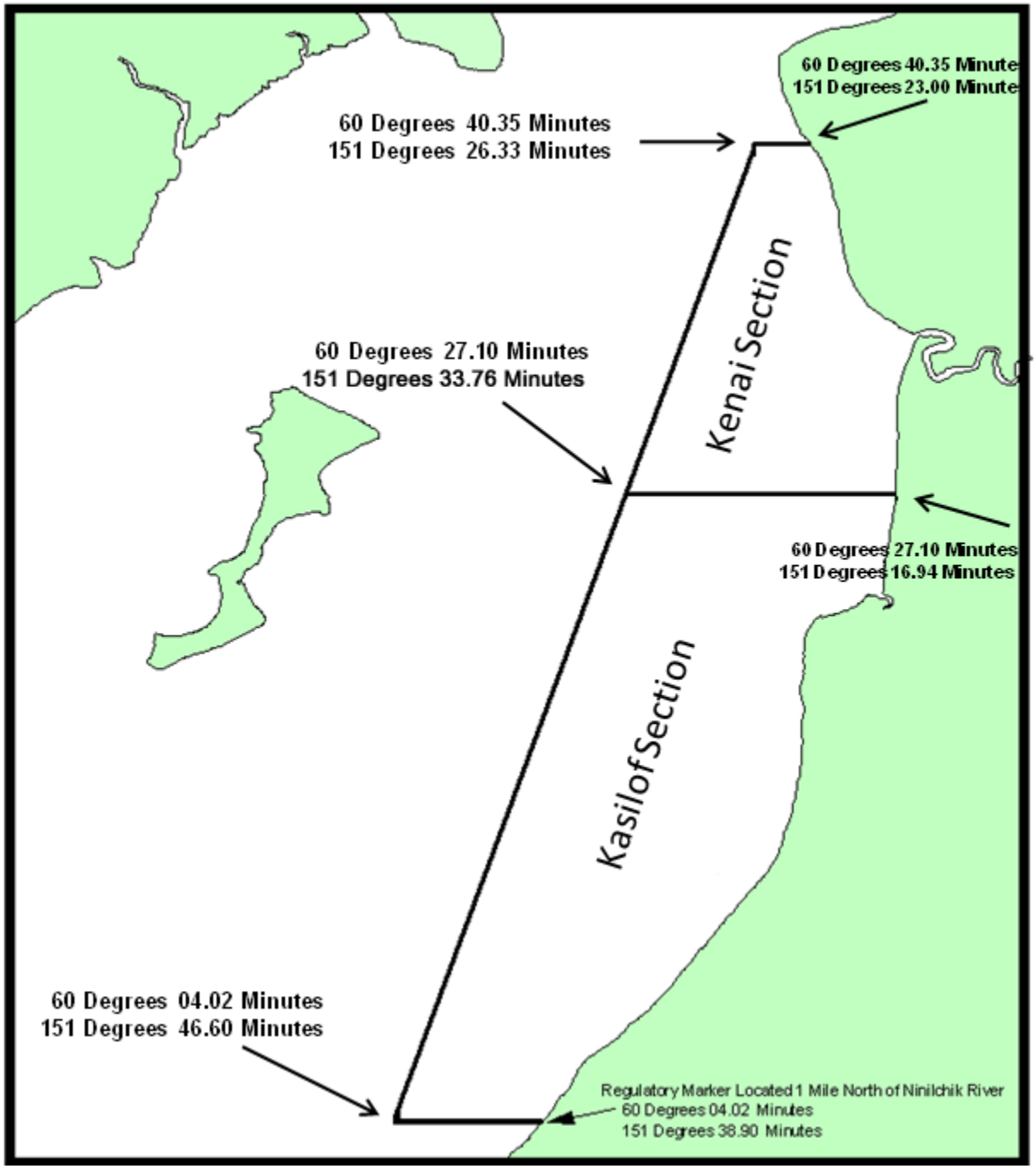

Figure 2. Map of the expanded Kenai and expanded Kasilof Section with waypoint descriptions.

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Drift Gillnet Area 1 & Area 2 Descriptions

AREA 2 DESCRIPTION	COORDINATES
1. Southwest Corner	60^0 20.43' N. lat., 151^0 54.83' W. long.
2. Northwest Corner	60^0 41.08' N. lat., 151^0 39.00' W. long.
3. Northeast Corner	60^0 41.08' N. lat., 151^0 24.00' W. long.
4. Blanchard Line Corridor Boundary	60^0 27.10' N. lat., 151^0 25.70' W. long.
5. Southeast Corner	60^0 20.43' N. lat., 151^0 28.55' W. long.

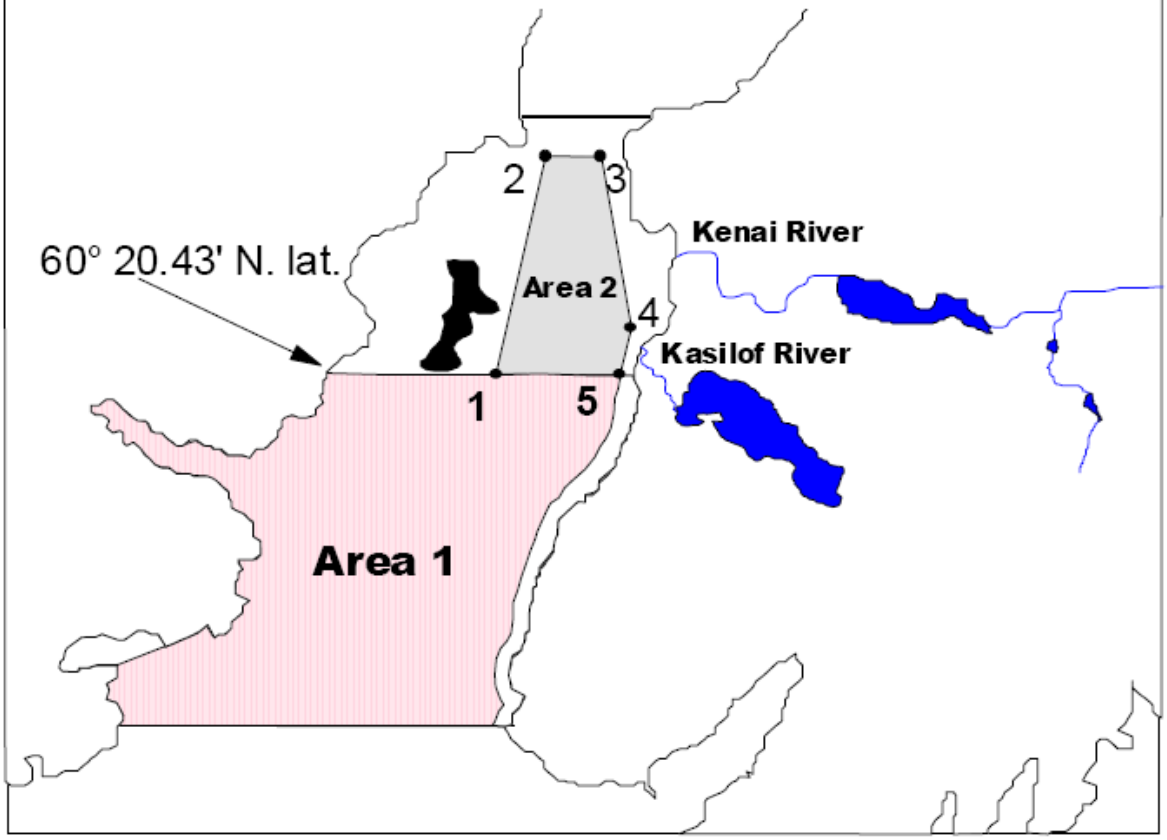

Figure 3. Map of drift gillnet fishing areas one and two.

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AREA 4 LOCATION	COORDINATES
A. Southwest Corner	59° 46.15' N. lat., 153 ° 00.20' W. long.
B. Northwest Corner	60° 04.70' N. lat., 152 ° 34.74' W. long.
C. Northeast Corner (Kalgin Buoy)	60° 04.70' N. lat., 152 ° 09.90' W. long.
D. Southeast Corner	59° 46.15' N. lat., 152 ° 18.62' W. long.

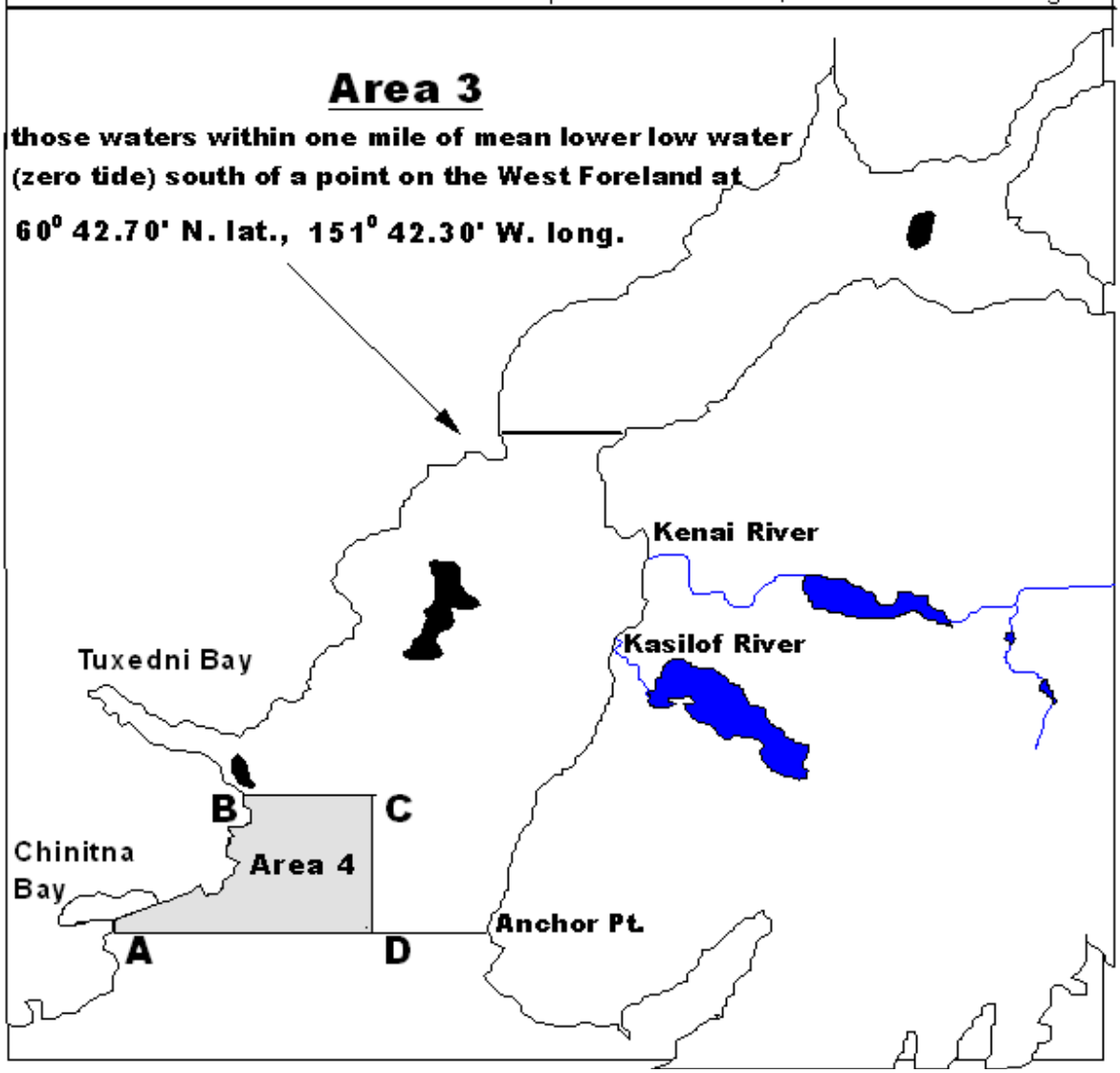
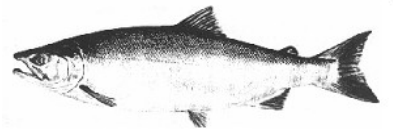


Figure 4. Map of the drift gillnet areas open beginning August 16.

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

NEWS RELEASE

Cora Campbell, Commissioner
Sue Aspelund, Acting Director



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

Soldotna ADF&G
43961 Kalifornsky Beach Rd.
Suite B
Soldotna, AK 99669
Date Issued: 1/13/2011

2013 UPPER COOK INLET SOCKEYE SALMON FORECAST

The preliminary forecast of the 2013 Upper Cook Inlet sockeye salmon run is as follows:

	Forecast Estimate (millions)	Forecast Range (millions)
TOTAL PRODUCTION:		
Total Run	6.7	4.3–10.8
Escapement	1.8	
Harvest	4.9	

Forecast Methods

The major sockeye salmon systems in Upper Cook Inlet (UCI) are the Kenai, Kasilof, Susitna, and Crescent rivers, and Fish Creek. Escapement (spawner abundance), return, sibling, fry, and smolt data, if available, were examined for each system. Four models were used to forecast the run of sockeye salmon to UCI in 2013: (1) the relationship between adult returns and spawners, (2) the relationship between adult returns and 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 generally used. In most cases, these were sibling models. Forecast model predictions based on spawners, fry, smolt, or siblings were compared to evaluate uncertainty.

The returns of ages 1.3 and 2.2 sockeye salmon to the Kenai River in 2013 were forecasted using sibling models. For example, the sibling-model prediction of the return of age-1.3 salmon was based on the abundance of age-1.2 salmon in 2012. A spawner-recruit model prediction of the

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age-1.2 salmon return was based upon escapement in 2009. The return of age-2.3 salmon to the Kenai River was forecasted using a fry-smolt model based upon age-1 fall fry abundance in Skilak and Kenai lakes and smolt data when available (after brood year 2002). The returns of age-1.3 and 2.2 sockeye salmon to the Kasilof River were forecasted using sibling models based upon the abundance of age-1.2 and 2.1 salmon in 2012. A spawner-recruit model was used to forecast the return of age-1.2 salmon, and a smolt model was used to forecast the return of age-2.3 salmon to the Kasilof River.

The total run of Susitna River sockeye salmon was forecasted using mean return per spawner by age class for brood years 2006–2007. Mark–recapture estimates of inriver run and genetic estimates of commercial harvest were available for these brood years.

The sockeye salmon forecast for unmonitored systems in UCI was estimated as 15% of the aggregate forecast for the 5 major stocks. 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 2013 total harvest by all user groups was estimated by subtracting the aggregate escapement from the total run forecast for all stocks. Aggregate escapements were estimated from the sum of the midpoints of the escapement goal ranges for each of the major sockeye salmon-producing systems in UCI and the escapement into unmonitored systems (estimated as 15% of the aggregate escapement into monitored systems). The estimated sport harvest upstream of the sonar at river mile 19 on the Kenai River was subtracted from the aggregate escapement into monitored systems. The total run forecast range was calculated by multiplying the forecast with the upper and lower values of the percent error of the actual runs from published forecast runs from 2003 through 2012.

Forecast Discussion

In 2012, the harvest of sockeye salmon by all user groups in UCI was equal to the preseason forecast of 4.4 million. In 2012, the total run was 4.7 million to the Kenai River: 788,000 to the Kasilof River; 305,000 to the Susitna River; 89,000 to the Crescent River; and 32,000 to Fish Creek. The 2012 run forecast was 4.0 million to the Kenai River: 754,000 to the Kasilof River; 443,000 to the Susitna River; 81,000 to the Crescent River; and 84,000 to Fish Creek.

A run of 6.7 million sockeye salmon is forecasted to return to UCI in 2013, with a harvest by all user groups of 4.9 million. The forecasted harvest in 2013 is 1.1 million fish above the 20-year average harvest of 3.8 million by all user groups.

The run forecast for the Kenai River is approximately 4.4 million, which is 13% greater than the 20-year average run of 3.8 million. Age-1.3 salmon typically comprise about 56% of the run to the Kenai River. A sibling model based upon the return of age-1.2 salmon in 2012 (423,000; 20-year average is 371,000) predicted a return of 2.0 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 2009 (10.7 million; 20-year average is 18.2 million) 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 model (26%) than the fry model (53%). Age-2.3 salmon typically comprise about 20%

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of the run to the Kenai River. A sibling model based upon the return of age-2.2 salmon in 2012 (513,000; 20-year average is 256,000) predicted a return of 1,227,000 age-2.3 salmon in 2013. A fry-smolt model based upon the abundance of age-2 smolt emigrating from the Kenai River in spring 2010 (5.9 million: 95% confidence interval 5.0–6.7 million) predicted a return of 1.5 million age-2.3 salmon. The fry-smolt model was used for this forecast due to the high age-2 smolt abundance in 2010 and the failure of the sibling model to accurately predict large returns of age-2.3 salmon like that seen in 2011–2012. The forecasted age-2.3 return is 194% greater than the 20-year average return for this age class (760,800). The predominant age classes in the 2013 run should be age 1.3 (45%), age 1.2 (9%), and age 2.3 (34%). The 10-year MAPE for the set of models used for the 2013 Kenai sockeye salmon run forecast was 23%.

The sockeye salmon run forecast for the Kasilof River is 903,000, which is 5% less than the 20-year average run of 947,300. Age-1.3 salmon typically comprise about 34% of the run to the Kasilof River. The forecast for age-1.3 salmon is 274,000, which is 15% less than the 20-year average return (322,000) for this age class. A sibling model based upon the abundance of

age-1.2 salmon in 2012 was used to forecast the return of age-1.3 salmon in 2013. The abundance of age-1.2 salmon in 2012 was 256,000, which is 10% less than the 20-year average abundance (285,000) for this age class. A smolt model predicted a return of 236,000 age-1.3 salmon. The sibling model was used for this forecast because the 10-year MAPE was lower for the sibling model (27%) than the smolt model (31%). Age-1.2 salmon typically comprise about 30% of the run. The forecast for age-1.2 salmon is 248,000, which is 13% less than the 20-year average return (285,000) for this age class. A spawner-recruit model based upon the abundance of spawners (325,000) in 2009 was used to forecast the return of age-1.2 salmon in 2013. A sibling model based upon the abundance of age 1.1 salmon (36,000) in 2012 forecasted a return of 241,000 age-1.2 salmon. The spawner-recruit model was used for this forecast because the 10-year MAPE was lower for the spawner-recruit model (64%) than the sibling model (104%). Age-2.2 salmon typically comprise about 24% of the run. The forecast for age-2.2 salmon is 307,000, which is 34% greater than the 20-year average return (228,000) for this age class. A sibling model based upon the abundance of age-2.1 salmon in 2012 was used to forecast the return of age-2.2 salmon in 2013. The spawner-recruit model forecast for age 2.2 salmon was 254,000. The sibling model was used for this forecast because the 10-year MAPE was lower for the sibling model (33%) than the spawner-recruit model (34%). The predominant age classes in the 2013 run should be age 1.2 (27%), age 1.3 (30%), and age 2.2 (34%). The 10-year MAPE for the set of models used for the 2013 Kasilof sockeye salmon run forecast was 21%.

The sockeye salmon run forecast for the Susitna River is 363,000, which is 20% less than the 6-year average run of 452,000. This forecast was derived using mean return per spawner by age class for brood years 2006–2007 and mark–recapture estimates of spawner abundance in 2007-2009. Sonar and age composition catch allocation models 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. This is the first year this forecast method has been used, so MAPE is not available. The 6-year average run (2006–2011) was calculated using mark–recapture estimates of inriver run and genetic estimates of commercial harvests.

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The sockeye salmon run forecast for Fish Creek is 61,000, which is 52% less than the 20-year average run of 127,000. Age-1.2 and -1.3 salmon typically comprise 72% of the run to Fish Creek. A smolt model based upon the estimated abundance of age-1 smolt emigrating from Fish Creek in 2011 (269,000; 12-year average: 438,000) predicted a return of 47,000 age-1.2 salmon. A sibling model based upon the abundance of age-1.2 salmon returning in 2012 predicted a return of 6,200 age-1.3 salmon in 2013. The age-1.2 forecast is 12% less than the 20-year average return (60,000) for this age class, while the age-1.3 forecast is 80% less than the 20-year average return (31,000) for this age class. The predominant age classes in the 2013 run should be age 1.2 (76%) and age 1.3 (10%).

The sockeye salmon run forecast for Crescent River is 110,000, which is equal to the 20-year average run. Age-1.3 and -2.3 salmon typically comprise 63% of the run to Crescent River. Sibling models based upon returns of age-1.2 and -2.2 salmon in 2012 were used to forecast returns of age-1.3 (60,000) and -2.3 (28,000) salmon in 2013. The predominant age classes in the 2013 run should be age 1.3 (54%) and age 2.3 (26%).

Run forecasts to individual freshwater systems are as follows:

System	Run	Escapement Goals
Crescent River	110,000	30,000–70,000
Fish Creek	61,000	20,000–70,000
Kasilof River	903,000	160,000–340,000
Kenai River	4,374,000	1,000,000–1,200,000[1]
Susitna River	363,000	NA[2]
Larson Lake	NA	15,000–50,000
Chelatna Lake	NA	20,000–65,000
Judd Lake	NA	25,000–55,000
Unmonitored Systems	872,000	NA
Total	6,683,000	

[1] This is the inriver sockeye salmon escapement goal measured using sonar at river mile 19 on the Kenai River.

[2] Susitna sockeye salmon are managed to achieve escapement goals at Larson, Chelatna, and Judd lakes.

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OTHER SALMON SPECIES

The preliminary forecast of the 2013 commercial harvest of other salmon species is as follows:

	Commercial Harvest Forecasts
Natural Production:	
Pink Salmon	99,000
Chum Salmon	152,000
Coho Salmon	147,000
Chinook Salmon	9,000

Forecast Methods

The recent 5-year average commercial harvest was used to forecast the harvest of chum, coho, and Chinook salmon in 2013. The forecast for pink salmon was 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

Cora Campbell, Commissioner
Jeff Regnart, Director

Contact: Pat Shields, Area Management Biologist;
Aaron Dupuis, Asst. Area Management Biologist

43961 Kalifornsky Beach Rd, Suite B — Soldotna, AK 99669
Phone: (907) 262-9368 — Fax: (907) 262-4709
Date Issued: April 12, 2012 — Time: 2:30 p.m.

2012 UPPER COOK INLET COMMERCIAL SMELT (HOOLIGAN) AND HERRING FISHING SEASONS

5 AAC 21.505 Cook Inlet Smelt Fishery Management Plan allows for a small commercial fishery for smelt in the Northern District of Upper Cook Inlet. This fishery occurs in those waters located between the Chuit River and the Little Susitna River (in salt water only). The season is open from May 1 to June 30. Legal gear for the fishery is a hand-operated dip net, as defined in 5 AAC 39.105. The total harvest may not exceed 100 tons of smelt. 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 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 Subdistrict, Upper Subdistrict, Western Subdistrict, and Chinitna Bay Subdistrict, 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, from 6:00 a.m. on Monday until 6:00 p.m. on Friday; however, a fishing period may extend beyond May 31 if the fishing period began before May 31. In 2012, commercial fishing for herring will open at 12:01 a.m. on Friday, April 20 and close no later than 6:00 p.m. on Friday, June 1, 2012. 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 ADF&G 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.

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 ADF&G'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 directly from your fishing site (beach or vessel), you must first obtain a catcher-seller permit from ADF&G.