Fishery Management Report No. 12-25

Upper Cook Inlet Commercial Fisheries Annual Management Report, 2011

by

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and

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

Symbols and Abbreviations

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

Weights and measures (metric)

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

Weights and measures (English)

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

Time and temperature

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

Physics and chemistry

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

General

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

Mathematics, statistics

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

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

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ABSTRACT

The 2011 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 2011 UCI commercial harvest of 5.5 million salmon was approximately 34% greater than the 1966–2010 average annual harvest of 4.1 million fish, while the commercial sockeye salmon harvest estimate of 5.3 million fish was more than 82% above the 1966–2010 average annual harvest of 2.9 million fish. The 2011 estimated exvessel value of $53.1 million represented a 183% increase from the average annual exvessel value of $18.8 million from the previous 10 years, and approximately 112% more than the 1966–2010 average annual exvessel value of $25.0 million. For the 2011 season, 3 of 7 monitored sockeye salmon systems fell within established escapement goal ranges, with 3 escapement estimates exceeding the upper goal range, and one failing to achieve the minimum target. The timing of the 2011 sockeye salmon run was estimated to be 2 days late relative to the July 15 mean date, as measured at the UCI Offshore Test Fish transect line.

Key words: Upper Cook Inlet, commercial fishery, personal use fishery, gillnet, escapement, 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*, 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. 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 (2001–2010), the proportion of the total annual coho (*O. kisutch*), 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.

Detailed commercial salmon harvest statistics for UCI specific to gear type and area are available only back to 1966 (Appendix B6). Run timing and migration routes utilized by all species overlap to such a degree that the commercial fishery is largely mixed-stock and mixed-species in nature. Typically, the UCI salmon harvest represents approximately 5% of the statewide catch. Nearly 10% of all salmon permits issued statewide are for the Cook Inlet area.

In terms of their recent economic value, sockeye are by far the most important component of the catch, 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 (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. While no quantitative assessment of the Susitna River smelt stocks has been conducted, it undoubtedly would be measured in thousands of tons, perhaps even tens of thousands of tons.

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 nontarget species harvest. 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 board 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.

2011 COMMERCIAL SALMON FISHERY

The 2011 UCI commercial harvest of 5.5 million salmon (Appendix B6) was approximately 34% more than the 1966–2010 average annual harvest of 4.1 million fish, ranking it as the eleventh highest harvest during this 46 year time span. However, the 2011 sockeye salmon harvest estimate of 5.3 million fish was more than 82% greater than the 1966–2010 average annual harvest of 2.9 million fish, and ranked as the fourth highest during this time period. 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 2011 UCI commercial fishery of $53.1 million was approximately 183% more than the average annual exvessel value of $18.8 million from the previous 10 years (2001–2010), and approximately 112% more than the 1966–2010 average annual exvessel value of $25.0 million (Appendix B7).

The average price paid per pound for UCI salmon has remained fairly stable in recent years (Appendix B11). However, there was a significant increase of approximately $1.00/lb paid for Chinook salmon in 2011; which represents the highest price ever recorded in UCI. 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 2011. Prices paid for coho and pink salmon in 2011 were fairly similar to 2010 prices, while 2011 chum salmon prices were approximately 25 cents more than 2010 pricing.

In 2011, 3 of 7 monitored sockeye salmon systems (Westerman and Willette 2011) fell within established escapement goal ranges; with 3 escapement estimates exceeding the upper goal range, and one failing to achieve the minimum target (Table 1, Appendix A2, and Appendix B10). This marked the third 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 Susitna River (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 2011.

Table 1.–Upper Cook Inlet sockeye salmon goals and escapement objectives, 2011.

		Goal Range		
System	Goal Type	Lower	Upper	2011 Escapement
Crescent River	BEG	30,000	70,000	81,952
Fish Creek	SEG	20,000	70,000	66,683
Kasilof River	OEG	160,000	390,000	245,721
Kenai River	Inriver	1,100,000	1,350,000	1,599,217
Larson Lake	SEG	15,000	50,000	12,393
Chelatna Lake	SEG	20,000	65,000	70,353[a]
Judd Lake	SEG	25,000	55,000	39,997
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.

[a] Weir flooded from August 3 to 10; escapement for these days a minimum estimate.

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 2011 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 2011 can be found in Appendix A10, and a summary of fishing periods by gear type and area is summarized in Appendix A11.

REGULATORY CHANGES

The BOF's regular triennial meeting to deliberate UCI finfish proposals occurred in Anchorage from February 20 through March 5, 2011. During the meeting, there were many regulatory changes adopted by the board, which will be summarized here. For a complete listing of regulations for the UCI area, please see Chapter 21 of the Alaska Administrative Code.

Escapement Goals

Beginning in 2003, ADF&G began a transition phase from Bendix sonar to Dual-frequency Identification Sonar (DIDSON[1]) for monitoring sockeye salmon escapements in UCI (Maxwell et al. 2011). From 2005 to 2009, comparison studies were conducted in the Kenai and Kasilof rivers, where both Bendix sonar and DIDSON units were run concurrently. After converting historic escapement data from Bendix sonar units to DIDSON units, ADF&G recommended new escapement goals for these two river systems at the 2011 BOF meeting (Fair et al. 2010). The new goals would now be in DIDSON-based units. In the Kasilof River, the BEG was changed from 150,000–250,000 fish in Bendix units to 160,000–340,000 fish in DIDSON units. The BOF added an OEG for the Kasilof River of 160,000–390,000 fish. In the Kenai River, the SEG range was changed from 500,000–800,000 fish in Bendix units to 700,000–1,200,000 fish in DIDSON units. The BOF added an OEG for the Kenai River of 700,000 to 1.4 million fish. The abundance based, 3-tiered escapement goal (inriver goal) for the Kenai River was also modified. The 3 tiers were set at (1) less than 2.3 million fish; (2) 2.3 to 4.6 million fish; and (3) over 4.6 million fish. Specific actions were tied to each of these tiers, which will be discussed under the Upper Subdistrict Set Gillnet Fishery section below. The escapement goal at Crescent River remained a BEG of 30,000–70,000 fish, enumerated with Bendix sonar. While in the Susitna River drainage, the 3 sockeye salmon SEG's at Judd, Chelatna, and Larson lakes, enumerated by weir, remained unchanged.

Northern District Set Gillnet

- The BOF found the following Chinook salmon stocks to be stocks of management concern: Chuitna, Theodore, Lewis, Alexander, and Beluga rivers, as well as Willow and Goose creeks. As a result of this finding, specific management actions were implemented to reduce sport and commercial harvest of these stocks. In the commercial fishery, the area from a point at the wood chip dock (near Tyonek) located approximately at 61° 02.56' N lat, 151° 14.36' W long, to the Susitna River was closed to commercial king salmon fishing for all of 2011. This area reopened for the regular season beginning on or after June 25.
- Susitna River sockeye salmon remained a stock of yield concern. Accordingly, the *Susitna River Sockeye Salmon Action Plan* (SSSAP)[2] limited the Northern District set gillnet fishery

[1] Product names used in this publication are included for completeness, but do not constitute product endorsement.

[2] http://www.adfg.alaska.gov/index.cfm?adfg=fisheriesBOF.pastmeetinginfo2007_2008 (RC154)

to fish with no more than one net per permit from July 20 through August 6. At the 2011 meeting, the BOF 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 returned to a full complement of gear after August 6. Additional conservation measures for Susitna River sockeye salmon were implemented in the Central District Drift Gillnet fishery (see below).

Upper Subdistrict Set Gillnet Fishery

There were a number of changes made at the 2011 BOF meeting affecting the Upper Subdistrict set gillnet fishery. Briefly, they include:

- The BOF modified the abundance based 3-tiered management system in the Kenai River to reflect the new DIDSON-based inriver goal for this system. The 3 tiers were delineated at (a) less than 2.3 million fish; (b) 2.3–4.6 million fish; and (c) over 4.6 million fish.
- The sockeye salmon escapement trigger for opening the Kasilof River Special Harvest Area (KRSHA) to commercial fishing without limitation was changed to 365,000 fish.
- In the Kasilof Section, after July 8, if further restrictions beyond the one-half mile fishery were necessary to aid in achieving the lower end of the Kenai River escapement goal, this area could be further restricted to fishing within 600 feet of the high tide mark in the Kasilof Section.
- After July 8, if the Kasilof Section has been limited to fishing within one-half mile of shore, the KRSHA may be opened to set and drift gillnetting for up to 48 hours, followed by a 24-hour closure, without an escapement trigger.
- The BOF redefined what constituted a fishing period for determining when the Upper Subdistrict set gillnet fishery closed based on the 1% rule. A fishing period was now defined as a time period open to commercial fishing not to exceed 24-hours per calendar day.

Central District Drift Gillnet Fishery

There were a number of regulatory changes made by the BOF at the 2011 meeting affecting the drift fleet. One of the more noteworthy modifications was the establishment in regulation of two new drift gillnet fishing areas. Identified as the Expanded Kenai Section and the Expanded Kasilof Section (Figure 4); these new areas were an extension of the regular Kenai and Kasilof Sections (Figure 5). Hereafter in this report, these new areas will be referred to as the Expanded Corridor.

In addition, the BOF made significant changes to 5 AAC 21.353 *Central District Drift Gillnet Fishery Management Plan* (CDDGFMP) at the 2011 meeting. In summary:

- From July 9 through July 15,
    a. fishing during the first regular fishing period was restricted to the Expanded Corridor (Figure 4).
    b. fishing during the second regular fishing period was restricted to the Expanded Corridor and Drift Gillnet Area 1 (Figures 4 and 6) described below (for regulatory changes made after the fishing season, see postseason regulatory changes below).
    c. additional fishing time during this period was to occur in the Expanded Corridor.

d. in runs exceeding 2.3 million sockeye salmon to the Kenai River, an additional 12-hour period may be fished in the Expanded Corridor of the Upper Subdistrict and in Drift Area 1.

- From July 16 through July 31,
  a. in runs of less than 2.3 million sockeye salmon to the Kenai River, one regular 12-hour fishing period was to be restricted to the Expanded Corridor of the Upper Subdistrict;
  b. in runs between 2.3 and 4.6 million sockeye salmon to the Kenai River, one regular 12-hour fishing period per week was to be restricted to the Expanded Corridor of the Upper Subdistrict and in Drift Gillnet Area 1 (please see postseason regulatory changes below);
  c. in runs greater than 4.6 million sockeye salmon to the Kenai River, there were no mandatory restrictions.
- After July 8, if the Kasilof Section set gillnet fishery had already been limited to fishing within one-half mile of shore, the KRSHA may be opened to set and drift gillnetting for up to 48 hours, followed by a 24-hour closure, without an escapement trigger, if fish are there in sufficient numbers.
- The area open to drift gillnet fishing in the Central District when two permit holders were on BOF one vessel (see 5 AAC 21.333) was modified to include all waters in the Central District, except for in Chinitna Bay and in the KRSHA, as described in 5 AAC 21.365.

Other regulatory changes

- Permit stacking for set gillnets was authorized; meaning that one person may now own and operate two set gillnet limited entry permits (S04H) with two full complements of gear. A Commercial Fisheries Entry Commission (CFEC) permit holder who operates two complements of gear was required to mark their buoys, as specified in 5 AAC 21.334 with both of the permit holder's 5-digit CFEC permit serial numbers followed by the letter "D" on the identification buoy.
- A *Cook Inlet Pink Salmon Management Plan* (5 AAC 21.354) was adopted by the BOF to allow for the harvest of pink salmon by both set and drift gillnet gear during even years only. The plan allowed for up to two regular 12-hour fishing periods between August 11 and 15, but only if sockeye salmon escapement goals in the Kenai and Kasilof rivers were being achieved and if coho salmon run strength was sufficient to withstand additional harvest. The first pink salmon commercial fishing period may occur only if, during the regular fishing periods from August 6–10, the daily harvest of pink salmon exceeds 50,000 fish or if the cumulative harvest is 100,000 or more pink salmon. The second fishing period may occur only if 50,000 or more pink salmon and no more than 2,500 coho salmon (total by both gear groups) are harvested during the first pink salmon commercial fishing period. During either or both of the pink salmon commercial fishing periods, both set and drift gillnets may not have a mesh size greater than four and three-quarters inches and set gillnets may only be operated 600 feet or greater from shore. Drift gillnet fishing may only occur in the Kenai and East Foreland Sections of the Upper Subdistrict.

Postseason regulatory changes

Due to the complexities of modifications made to the various management plans, it took several weeks for staff to summarize and codify changes made at the February 20–March 5, 2011 BOF meeting. On June 13, 2011, shortly after the new regulations had been adopted into law and released to the public; two groups, Kenai River Sport Fishing Association and the Mat-Su Mayor's Blue Ribbon Sportsmen's Committee, filed an emergency petition with the board, contending that there were errors in the new regulations. On June 30, 2011, the board addressed the emergency petition (via teleconference) and ruled that an emergency existed. At this meeting, they adopted an emergency regulation, specifically making 3 changes to the CDDGFMP. The changes modified areas where drifters were allowed to fish.

- 5 AAC 21.353(a)(2)(A)(ii) was amended to read that fishing during the second regular fishing period was restricted to the Kenai and Kasilof Sections (not the Expanded Corridor) of the Upper Subdistrict and Drift Gillnet Area ;
- 5 AAC 21.353(a)(2)(A)(iii) was amended to read that at run strengths greater than 2,300,000 sockeye salmon to the Kenai River, the commissioner may, by emergency order, open one additional 12-hour fishing period in the Kenai and Kasilof Sections (not the Expanded corridor) of the Upper Subdistrict and Drift Gillnet Area 1;
- 5 AAC 21.353(a)(2)(B)(ii) was amended to read that at run strengths of 2,300,000–4,600,000 sockeye salmon to the Kenai River, fishing during one regular 12-hour fishing period per week was to be restricted to either the Expanded Corridor of the Upper Subdistrict or to Drift Gillnet Area 1, but not to both areas concurrently.

In response to the BOF issuing the emergency regulations, Stephen Vanek, Erik Huebsch, Ian Pitzman, United Cook Inlet Drift Association (UCIDA), and Copper River Seafoods filed suit, seeking a temporary restraining order to halt the effect of the emergency regulations passed by the BOF. This group of litigants argued that an emergency did not exist and asked the court for an expedited consideration of their request. The court agreed to this request and issued their judgment on the matter on July 12. In this ruling, it was stated that the court presumed that a regulation promulgated under the Administrative Procedures Act (APA) is both procedurally and substantively valid and places the burden of proving otherwise on the challenging party. The court concluded that while the plaintiffs did not contest that the BOF, in good faith, perceived an emergency existed, a decision permitting the enactment of the regulations in this case would expand emergency rulemaking beyond the BOF's authority as granted by the legislature. Therefore, the court determined that an emergency did not exist, and a temporary restraining order (TRO) was issued and the motion for preliminary injunction was granted. This meant that ADF&G was to defer back to the regulations as signed by the Lt. Governor in June. The TRO would expire on October 27, 2011. Therefore, the 2011 commercial fishery was prosecuted from the beginning of the season through July 12 under the emergency regulations, while after July 12 it was prosecuted under the regulations originally signed by the Lt. Governor. In August, the BOF met again to discuss the TRO, as it was due to expire in October, and their annual work session was also scheduled for October. At this meeting, the BOF, after checking with the Department of Law, provided the commissioner with authority to draft a regulation outside of the regular BOF process. The new regulations were to mirror the emergency regulations they had passed via the emergency petition in June. The public was allowed to provide written comment on the suggested regulatory changes. At the BOF's October annual work session in Anchorage,

the commissioner reported to the BOF that per their request, the new regulations had been drafted and would be sent to the Lt. Governor for his signature. The new regulation would be in effect for the 2012 season, unless modified before that time.

CHINOOK SALMON

The 2011 UCI harvest of 11,248 Chinook salmon was approximately 31% less than the previous 10-year (2001–2010) average annual harvest of 16,323 fish, and 28% less than the average annual harvest of 15,556 fish from the 1966–2010 time period (Appendices A3, B1 and B6). The exvessel value for UCI Chinook salmon in 2011 was estimated at $634,617, which represented approximately 1.2% 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.

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 at 61° 02.56’ N lat, 151° 14.36’W long (approximately one mile south of the Chuitna River), to the Susitna River. Finally, if the Deshka River is closed to sport fishing, the king 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. Prior to the 2005 season, fishing periods were 6 hours long, or from 7:00 a.m. to 1:00 p.m. each Monday (Shields and Fox 2005). At the 2005 BOF meeting, fishing periods were expanded to 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 2011 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 2011 season. The fishing periods closed by this announcement were those on May 30, June 6, June 13, and June 20, 2011.

Approximately 61 commercial permit holders participated in the 2011 Northern District Chinook salmon fishery, with an estimated harvest of 2,187 fish (Table 2 and Appendix A3). This was the tenth 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, which are not strongly correlated with Northern District Chinook salmon run strength, 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 likely resulted in additional Chinook salmon being harvested. However, the 10-year average annual harvest from 2002 to 2011 of 2,389 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, 1986–2011.

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

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

Upper Subdistrict

Approximately 68% of UCI's Chinook salmon commercial harvest in 2011 occurred in the Upper Subdistrict set gillnet fishery. The estimated catch of 7,697 fish was 23% less than the average annual harvest of 10,012 fish from 1966 to 2010, and 34% below the previous 10-year (2001–2010) average annual harvest of 11,655 fish (Appendix B1).

In 2011, ADF&G revised the Kenai River late-run Chinook salmon 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. The department 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 DIDSON-based assessment. The 5 indices of abundance the department used for assessing the 2011 Chinook salmon run in the Kenai River were 1) echo length standard deviation based split-beam sonar estimates; 2) net-apportioned split-beam sonar 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).

During the month of July, the Division of Sport Fish closely monitored the 5 abundance indices to gauge whether or not the Kenai River SEG would be achieved. Based on their assessment that the 2011 run was well below average, on July 22, 2011, EO number 2-KS-1-24-11 was issued, limiting sport fishing gear in the Kenai River from its mouth upstream to ADF&G markers at the outlet of Skilak Lake to not more than one unbaited, single-hook, artificial lure, beginning at 12:01 a.m., Monday, July 25, through 11:59 p.m., Sunday, July 31, 2011. As a result of this restriction in the sport fishery, restrictive measures were also implemented in the Upper Subdistrict set gillnet fishery to conserve Kenai River late-run Chinook salmon, which are discussed in detail in the sockeye salmon section that immediately follows this discussion.

From October 4 to 5, 2011, the BOF held its annual work session in Anchorage. At this meeting the Division of Sport Fish presented a memo (RC 7) 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. In 2011, the estimate of passage for late run Chinook salmon was 36,000 fish, and after subtracting for harvest and mortality, the estimate of escapement was 29,800. ADF&G informed the BOF that the indices of abundance were largely in agreement and provide valuable information for inseason monitoring of run strength.

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; 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's commercial fisheries using improved GSI analyses. For a complete review of the GSI data, please 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 2011 sockeye salmon run was estimated to be 2 days late 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). Beginning in 2003, ADF&G began a transition phase in UCI from Bendix sonar to DIDSON. The 2008 season marked the first year that DIDSON was used exclusively (both banks) in the Kenai River (passage estimates were converted to Bendix equivalent units until new escapement goal analyses were completed after converting the historical sonar dataset to DIDSON units).

ADF&G recently assessed sockeye salmon escapement goals for the Kenai and Kasilof rivers (Fair et al. 2010). New goals were recommended because of 1) the change of sonar systems (Bendix sonar being replaced with DIDSON); and 2) new information such as brood year, genetics, age composition, and other data. In 2011, the BOF changed the Kenai River sockeye salmon SEG from a range of 500,000–800,000 fish (Bendix units) to an SEG range of 700,000–1,200,000 fish (DIDSON units). Additionally, the BOF changed the Kasilof River sockeye salmon BEG of 150,000–250,000 (Bendix units) to a BEG range of 160,000–340,000 (DIDSON units).

Beginning in 2009, the DIDSON system was employed in the Yentna River as part of a multiyear study assessing, among other things, differential fish wheel species selectivity. Both Bendix sonar and DIDSON were operational in the Kasilof River in 2009; however, the Bendix sonar estimates of passage were used for management purposes. DIDSON was used exclusively in the Kasilof River in 2011. The transition to DIDSON in the Crescent River is uncertain at this time.

An adult salmon weir was operated by the Division of Sport Fish at Fish Creek (Knik Arm) and provided daily sockeye salmon escapement counts. A counting weir has also been employed at the outlet of Packers Lake (on Kalgin Island) since 1988 (Appendix B10). CIAA operated the weir until 2000, but the project was terminated because they were no longer stocking the lake with sockeye salmon fry. In 2005–2006, and 2009–2011, ADF&G placed a remote video camera system at the outlet of Packers Lake to estimate the adult sockeye salmon escapement into the lake. Unfortunately, in 2006, an electronic malfunction did not allow for a complete census of the escapement. In 2010, the batteries used to power the camera and recorder were not adequately kept charged due to inadequate solar radiation. In 2011, technical difficulties prevented retrieval of data. CIAA operated the weir at Packers Creek in 2007, while the Division of Commercial Fisheries staffed the weir in 2008.

ADF&G and CIAA recently completed a 3-year (2006–2008) comprehensive sockeye salmon mark–recapture study in the Susitna River drainage (Yanusz et al. 2007). These studies verified that sockeye salmon passage estimates in the Yentna River were biased low (Appendix A12);

with the most likely reason for the bias attributed to fish wheel capture selectivity. Therefore, in 2009, the Yentna River SEG was replaced with 3 lake-based SEGs monitored via weir at Chelatna Lake (20,000 to 65,000) and Judd Lake (25,000 to 55,000), in the Yentna River drainage, and Larson Lake (15,000 to 50,000), in the Susitna River drainage (Fair et al. 2009). Please see the stock status section of this report for a description of these changes in more detail.

ADF&G conducted a similar program in the Kenai River, from 2006 to 2008, to estimate the abundance of sockeye salmon migrating past river mile (rm) 19 (Willette et al.[3]). In this study, sockeye salmon were captured at the Division of Commercial Fisheries' sockeye salmon sonar site and marked with passive integrated transponder (PIT) tags. Numerous fixed receivers were placed upstream of the tagging site, as well as at 2 weir sites: 1) Russian River weir operated by Division of Sport Fish, and 2) Hidden Creek weir, operated by CIAA. Sockeye salmon abundance was estimated from tags recaptured in fish wheels operated at rm 28 (in 2006 only), as well as from tag recoveries detected from fish passing through Russian River and Hidden Creek weirs. Please see Willette et al. (*Unpublished*) for further details.

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 22,428 sockeye salmon were examined for age, length, and sex determination from catch and escapement samples in 2011 (Terri Tobias, 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 2011 projected a total run of 6.4 million sockeye salmon (Table 3; Appendix C1). At the time this report was published, harvest information from the 2011 sport fisheries was not available; therefore, sport fishery harvest data were estimated by comparing previous year's harvests from similar sized runs. The 2011 sockeye salmon run estimate of 8.6 million fish was approximately 34% greater than the preseason projection. Of the expected run of 6.4 million sockeye salmon, approximately 1.5 million fish were required for escapement objectives, which left 4.9 million sockeye salmon available for harvest to all users in 2011. Assuming that sport and personal use harvests would be similar in proportion to that observed in 2010, the commercial catch in 2011 was projected to be approximately 4.4 million fish. The actual harvest was approximately 5.3 million fish (Appendix B2) or 20% more than preseason expectations. Drift gillnet fishermen accounted for approximately 61% of the 2011 commercial sockeye salmon harvest, or 3.2 million fish, while set gillnet fishermen caught 39% of the commercial harvest, or 2.1 million fish. The 2011 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 2011 commercial harvest and will be analyzed at a later date. The last reported commercial fishing activity in any area of UCI in 2011 was September 15.

[3] Willette, T. M., T. McKinley, R. D. DeCino, S. Raborn, and D. Evans. *Unpublished*. Inriver abundance and spawner distribution of Kenai River sockeye salmon, Oncorhynchus nerka, 2006–2008. Alaska Department of Fish and Game, Fishery Data Series, Anchorage.

Table 3.–2011 Upper Cook Inlet sockeye salmon forecast and return.

System	Forecast	Actual	Difference
Crescent River	131,000	152,743	17%
Fish Creek	105,000	119,426	14%
Kasilof River	929,000	823,248	-11%
Kenai River	3,941,000	6,199,394	57%
Susitna River	463,000	530,852	15%
Minor Systems	835,000	775,331	-7%
All Systems	6,404,000	8,600,994	34%

In 2011, the harvest from commercial, sport, personal use, subsistence, and educational fisheries was estimated at 6.29 million fish (Appendix A22), which was approximately 78% greater than the 1996–2010 average annual harvest of 3.53 million fish (for the Kenai River, these data include late-run sockeye salmon only). The 2011 sport harvests were estimated based on harvests from similar sized runs. The Statewide Harvest Survey for 2011 that details annual sport harvest of all salmon will not be finalized until later in 2012 (Jennings et al. 2011). The 2011 personal use harvest estimate of more than 630,000 sockeye salmon was approximately 23% greater than the 2010 harvest and more than 126% greater than the average annual harvest of 279,245 fish from 1996 to 2010. 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 2011 can be found in Appendix B11. Based on these estimates, the 2011 UCI sockeye salmon exvessel value of $51.3 million was approximately 193% greater than the previous 10-year (2001–2011) average annual value of $17.5 million (Appendix B7). The 2011 sockeye salmon estimated exvessel value represented 96.7% of the total exvessel value for all UCI salmon.

Big River

The first commercial sockeye salmon fishery to open in UCI in 2011 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 3 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 525 fish; well below the 1,000 fish cap. The 2011 fishery began on Wednesday, June 1, with harvests reported from 11

different days, yielding a total catch of approximately 17,780 sockeye salmon and 524 Chinook salmon (Appendices A3 and A4). Of the total harvest, 83% of the sockeye and 85% of the Chinook salmon were caught in the Kalgin Island westside waters, which is statistical area 246-10 (Figure 3). 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.

Western Subdistrict

The next commercial fishery to open in 2011 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 throughout the season, unless modified by EO. The fishery targets sockeye salmon bound for Crescent Lake.

In 2011, 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. 5 was issued, which opened that portion of the Western Subdistrict south of the latitude of Redoubt Point to continuous fishing beginning at 5:00 a.m. on Sunday, July 3. Fishing remained open in this area 24 hours per day through 7:00 p.m. on Friday, July 29, when EO No. 28 was issued, returning the fishery to its regular schedule of two fishing periods per week.

Slightly more than 70,000 sockeye salmon were harvested by approximately 24 permit holders fishing in the Western Subdistrict set gillnet fishery in 2011 (Appendix A8). The estimated escapement into Crescent Lake was approximately 82,000 fish (Appendix B10). Since 1999, sockeye salmon escapements into Crescent Lake have exceeded the escapement goal range in 11 of 12 years, even with the additional fishing that has been allowed in this area.

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 two 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 being 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 it was their intent that, in most circumstances, ADF&G would adhere to the management plans in the chapter. But 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 two 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 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 basic options 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 to 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 objective number two. 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.

With that brief history as a background, a description of the 2011 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 regular season for drift gillnetting began on Monday, June 20, as provided for in the *Central District Drift Gillnet Fishery Management Plan* (CDDGFMP). The harvest of approximately 3,140 sockeye salmon from 90 boats and 4,164 sockeye salmon from 102 boats on Thursday, June 23, was not atypical for early-season drift catches (Appendix A4).

By Friday, June 24, approximately 57,000 sockeye salmon had been enumerated at the Kasilof River sonar site, which meant the 50,000 fish level required for an early opening to the season had been met. Therefore, EO No. 2 was released, opening the set gillnet fishery in the Kasilof Section on Saturday, June 25, from 7:00 a.m. until 12:00 a.m. Sunday, June 26. This EO also opened drift gillnet fishing in the Kasilof Section (not the Expanded Kasilof Section) during the same time period. Sockeye salmon passage in the Kasilof River through midnight on June 25 had exceeded 66,000 fish. During the week of June 26–July 2, the regular fishing periods on June 27 and June 30 were carried out with set gillnetting confined to the Kasilof Section, and drift gillnetting open districtwide. To reduce the escapement rate of Kasilof River sockeye salmon, two EOs were issued affecting drift and set gillnet fishing. On Wednesday, June 29, EO No. 3 opened setnetting in the Kasilof Section from 8:00 a.m. on June 29 until 7:00 a.m. on June 30; drifting was opened in the regular Kasilof Section for 16 hours on June 29 and from 5:00 a.m. to 7:00 a.m. on June 30. An additional 17-hour period was provided for both drift and set gillnetting in the Kasilof Sections under EO No. 4 on Saturday, July 2. For the week of June 26 to July 2, drift gillnetters harvested 55,000 sockeye salmon, while set gillnetters in the Kasilof Section caught 68,000 fish. Forty hours of additional fishing time per the KRSMP was used, and the 36-hour no-fishing window was also fulfilled (Table 4 and Figure 7). The estimated passage of sockeye salmon past the Kasilof River sonar site had reached 87,000 fish through July 2. In the Kenai River, after 2 days of sockeye salmon enumeration, the estimated sonar passage was 6,500 fish.

Table 4.–Upper Subdistrict set gillnet fishing hours, 2011.

	Kasilof Section				Kenai and 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 26 - Jul 2	48	40	36	36	closed	closed	closed	closed
Jul 3 - 9	48	45	36	36	closed	closed	closed	closed
Jul 10 - 16	51	28[a]	24	24	51	18	24	24
			36	36			36	36
Jul 17 - 23	51	46	24	24	51	46	24	24
			36	36			36	36
Jul 24 - 30	84	46	36	60	84	46	36	60
Jul 31 - Aug 6[b]	84	53	36	36	84	53	36	36
Totals	366	258	264	288	270	163	192	216

[a] 10 hours in Kasilof one-half mile fishery.

[b] Season closed early on August 7.

For the management week of July 3 to July 9, there were two regular districtwide drift gillnet openings (July 4 and July 7), as well as 40 hours of additional drift fishing time allowed in the Kasilof Section. Kasilof Section set gillnetters also fished two regular 12-hour periods, with 45 hours of additional fishing time in the full Kasilof Section. Three EOs were issued during this time period to reduce the escapement of sockeye salmon into the Kasilof River (Appendix A10). The regular set and drift gillnetting periods on Monday, July 4, were extended by 3 hours in the Kasilof Section by EO No. 6. From 6:00 a.m. on Wednesday, July 6, to 7:00 a.m. Thursday, July 7, the Kasilof Section was open for 25 hours of set gillnetting and 20 hours of drift gillnetting (see EO No. 7, Appendix A10). On July 8, a 17 hour period was opened for both set gillnetters and drift gillnetters in the Kasilof Section. For the week, drift gillnetters harvested approximately 125,000 sockeye salmon, while Kasilof Section set gillnetters harvested approximately 66,000 sockeye salmon. Of the 48 hours of additional fishing time provided for in the KRSMP, 45 hours were fished, and the 36 hour no-fishing window was observed (Table 4, Figure 7, Appendices A3 and A5). The passage estimate of sockeye salmon in the Kasilof River was approximately 101,000 fish through July 9. In the Kenai River, the estimated sonar passage of sockeye salmon was approximately 37,000 fish as of July 9 (Appendix A2).

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 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 BOF at this meeting, the *Susitna River Sockeye Salmon Action Plan* (SSSAP) included the following statement: "In light of recent department 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."

For commercial fisheries, conservation of Susitna River sockeye salmon stocks was to be met through implementation of the CDDGFMP and *Northern District Salmon Management Plan* (5AAC 21.358). Both management plans were modified at the 2008 BOF meeting (Shields 2010) and again at the 2011 BOF meeting. As noted in the Regulatory Changes section of this report, 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 6) and the Expanded 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 and the Expanded Corridor; 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 two 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 2011 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 5) and Drift Area 1 (Figure 6); 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.

The management week of July 10–16 produced a variety of harvest records for UCI, followed by a sonar passage estimate record in the Kenai River. All-time catch statistic records were established in the commercial fishery, by both setnets in the Upper Subdistrict and by drifters in the Central District, and by personal use fishermen in the Kenai River. In addition, daily sockeye salmon passage estimate records were set in the Kenai River.

Early season catches by the OTF vessel had indicated very few fish entering the Central District through July 9 (Appendix A1). For example, the cumulative OTF CPUE of 227 through July 9 was the third lowest value since 1992. Beginning on July 10, however, things changed in a hurry. Over the next 9 days, catches by the OTF vessel revealed that a large number of sockeye salmon had entered the Central District. Predicting when these fish would swim to their rivers of origin represented one of the many challenges faced by UCI management staff.

The CDDGFMP, which had just been modified by the BOF at the UCI meeting, outlined specific restrictions to the drift gillnet fishery for the regular periods during July 9–15. The first regular drift gillnet fishing period during this time period, on Monday, July 11, was a mandatory restriction to the Expanded Corridor This was also the first day in 2011 where setnetters in the Kenai and East Forelands Sections were allowed to fish. Management of the Upper Subdistrict set gillnet fishery now shifted primarily from the KRSMP to the KRLSSMP. Catches on July 11 in the setnet fishery were quite small, at only 27,000 fish, while drifting in the Expanded Corridor produced a harvest of nearly 106,000 fish. The KRLSSMP required a mandatory no-fishing window for setnetters on Tuesday, July 12. Because the cumulative sockeye salmon passage in the Kenai River had reached just 51,000 fish through July 12, the 10 hour fishing period provided to setnetters only was restricted to the half-mile fishery in the Kasilof Section. The harvest of approximately 57,000 fish more than doubled the largest single day catch to date for the season.

Daily sockeye salmon passage estimates in both the Kenai and Kasilof rivers did not warrant additional fishing by either set or drift gillnetters on Wednesday, July 13.

The second regular fishing period during the week occurred on Thursday, July 14. Drifters faced a mandatory restriction to Drift Area 1 and the Expanded Corridor. Reports from numerous drifters during the day indicated that this was going to be a very good day of fishing, and it was. The drift gillnet catch of nearly 692,000 sockeye salmon by 402 boats (1,720 fish/boat), on July 14 was the largest single day average catch per boat in UCI history. Conversely, the Upper Subdistrict set gillnet harvest of only 29,000 fish was low for a mid-July fishing period. Again, the KRLSSMP mandated a second no-fishing window, this one 36 hours in duration, which began at the end of the fishing period on Thursday, July 14. By Friday morning, July 15, reports started filtering in from the southern beaches that the waters were alive with jumpers. These reports continued all day, as the apparent large number of fish moved north. By late afternoon, the mouth of the Kenai River was filling with fish, and the personal use dip net fishery there was chaotic. Because the cumulative passage of sockeye salmon in the Kenai River was only 61,000 fish through July 14, an increase in the escapement rate was needed at the time. At 7:00 a.m. on Saturday, July 16, EO No. 12 opened set and drift gillnetting for a 15-hour fishing period, with drifters being held to the Expanded Corridor. Much like the reports of jumpers the previous day, calls came throughout the day, on Saturday, stating that catches in the set gillnet fishery were going to be large. Unfortunately, by early evening it was apparent that the weather was affecting many setnet fishing operations. Strong winds out of the southwest were producing rough seas that made picking nets, filled with fish, very difficult. At the 10:00 p.m. closure, many fishermen were struggling to get their gear out of the water. As they did after the big drift gillnet catch on Thursday, many processors were unable to keep up with the demand for ice and totes. The estimated sockeye salmon harvest for the day in the set gillnet fishery was more than 472,000 fish, the single-day largest catch in UCI history from the east side beaches. Drifters also had very good catches in the Expanded Corridor; producing a daily catch of more than 218,000 fish. Sockeye salmon harvest, by gear type, for the week was estimated at 584,785 for set gillnet and 1,015,708 for drift gillnet. In the personal use dip net fishery at the mouth of the Kenai River, nearly 93,000 sockeye salmon were estimated to have been harvested on Saturday, July 16 (Appendix A18), an all-time single-day harvest record. This daily harvest estimate compares to the average annual harvest of 114,000 fish in this fishery from 1996 to 2000 (Appendix B17). The cumulative sockeye salmon sonar passage estimates through July 16 had reached 92,000 in the Kenai River and 118,000 in the Kasilof River. Four EOs were issued during this management week, resulting in 18 hours of additional fishing in the full Upper Subdistrict set gillnet fishery and 10 hours in the Kasilof half-mile fishery. This extra fishing time was well within the scope of the KRLSSMP, which limited extra set gillnet fishing to no more than 51 hours for the week. Both no-fishing windows were also implemented this week, according to the KRLSSMP (Table 4 and Figure 7).

The July 17–23 week was prosecuted with some unique challenges for UCI commercial fisheries management. Due to the large harvest of fish during the previous 3-day time period (July 14–16), numerous processors found themselves unable to keep up with the demand for ice and totes, which impacted their efficiency in processing all of the fish in a timely manner. Therefore, some processors implemented limits on the number of fish they would purchase from their drift fishermen. It is unknown how long and to what extent this impacted individual fishing operations. But, from an ADF&G standpoint, the only day where commercial fishing was not contemplated in deference to a lack of processor capacity was Sunday, July 17. Many fishermen were still delivering fish mid-day on Sunday, due to the fact they had difficulty getting all of their set gillnet

gear out of the water late Saturday night. Therefore, even if processors had not had problems processing all their fish, commercial fishing on Sunday, July 17, likely would not have occurred.

As just summarized, the management week of July 10–16 produced a couple of commercial fishing harvest records. It soon became apparent that the large number of fish that had been resident in the Central District, and then moved to the east side beaches, was of such magnitude that hundreds of thousands escaped both commercial harvest and the personal use fishery at the mouth of the Kenai River. These fish began being enumerated at the rm 19 sonar site on Sunday; in fact, by the end of the day on Sunday, more than 230,000 fish were estimated to have passed the sonar site, another single day record in UCI history.

This was not a one day phenomena. During the week, nearly 850,000 sockeye salmon were estimated to have passed the sonar counter. In addition, it was estimated that 360,000 sockeye salmon were harvested during this time by the personal use dip net fishery (Appendix A18). This too was an all-time UCI record. Therefore, in a short period of time, commercial fisheries management changed from ensuring that enough sockeye salmon were escaping to meet the minimum inriver escapement objective to structuring management to slow the rate of escapement in order to avoid exceeding the upper end of the inriver goal.

This challenge was further exacerbated by what was being characterized as a poor Chinook salmon run. Prior to the season, staff from the Division of Sport Fisheries had announced that due to difficulties with their sonar program being able to differentiate sockeye salmon from Chinook salmon, they were going to rely on indices of abundance other than daily sonar estimates to determine whether or not the minimum escapement objective of 17,800 fish would be achieved. It was during the July 17–23 week that concerns about a poor Chinook salmon run were elevated. Reducing the rate of Chinook salmon harvest in the Upper Subdistrict set gillnet fishery, while still attempting to slow down the sockeye salmon run coming to the Kenai River, necessitated a departure from traditional fishing patterns, where drift gillnetters do not fish during mandatory set gillnet no-fishing windows. During this week, there were two mandatory no-fishing windows (24 hours and 36 hours) in the set gillnet fishery, commonly referred to as the Tuesday window and Friday window. During both no-fishing windows, drift gillnetting was opened in the Expanded Corridor. This fishing pattern was implemented in order to harvest Kenai and Kasilof River sockeye salmon, while reducing harvest of Kenai River Chinook salmon. On Thursday, July 21, drifters were restricted to Drift Area 1 and the Expanded Corridor, per the CDDGFMP. Two days later, on Saturday, July 23, this same area was provided to drifters in an attempt to increase the harvest rate on a sockeye salmon run that was exceeding preseason expectations. For the week, set gillnetters harvested 746,000 sockeye salmon, while drifters captured more than 1.6 million. The estimated cumulative passage in the Kenai River had reached more than 935,000 fish, with Kasilof River cumulative passage at 185,000.

On Friday, July 22, commercial fisheries staff made an assessment of the sockeye salmon run to date, using data from the test fish project to project what the total run would be at the end of the season. The summary of this assessment was announced to the public via UCI Commercial Fishing announcement no. 23, issued on July 22. It stated that the UCI sockeye salmon run to date was estimated to be 5.4 million fish through July 21, with a final run to UCI expected to exceed 9.9 million fish. With this 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 an increase in the Kenai River inriver (sonar) sockeye salmon escapement goal from a range of 1.0 million–1.2 million fish to 1.1 million–1.35 million fish. The Upper

Subdistrict set gillnet fishery was now allowed a maximum of 84 hours of additional fishing time per week beyond the two 12-hour fishing periods on Mondays and Thursdays. In addition, the Tuesday no-fishing window in the set gillnet fishery was no longer mandatory, but the 36-hour Friday no-fishing window remained in effect. Finally, drift gillnetters would face no mandatory restrictions on their regular Monday and Thursday fishing periods.

With these changes in effect, the management week of July 24–30 began with a 12-hour fishing period on Sunday, July 24, with drifting open in the Expanded Corridor. Both gear types fished the regular period on Monday, July 25; drifters fished districtwide. Although no longer required by the KRLSSMP, the Tuesday no-fishing window for setnetters was implemented on July 26. During this window, drifters were allowed to fish for 14 hours in the Expanded Corridor. These actions were taken in response to two emergency orders issued by the Division of Sport Fish, whereby Chinook salmon retention was eliminated in the personal use dip net fishery at the Kenai River, beginning on Sunday, July 24, and bait was removed from the inriver sport fishery, beginning on Monday, July 25. The indices of abundance that were being relied upon to gauge the Kenai River Chinook salmon run suggested the escapement goal may not be achieved without reducing the harvest on this stock.

The imbalance in the two runs of fish entering the Kenai River (strong sockeye salmon numbers and weak Chinook salmon numbers) produced some conflict between user groups as to how the two runs should be managed. Sport fishing groups met in the ADF&G parking lot in Soldotna during this management week to stage a formal protest over their unhappiness about why more stringent restrictions were not being taken in commercial fisheries management. Commercial set gillnet fishermen on the other hand, felt that some of the restrictions that had been implemented were overly burdensome. During the week, drifters were allowed to fish all 7 days, with Monday's and Thursday's fishing periods opened districtwide, and Wednesday's fishing period opened in Drift Area 1 and the Expanded Corridor. The other 4 days of fishing were all opened in the Expanded Corridor. For set gillnetting, the Tuesday and Friday no-fishing windows were both adhered to, and only 46 hours of the 84 hours of allowable fishing time were utilized (Table 4 and Figure 7). For the week, drifters harvested approximately 352,000 sockeye salmon, while setnetters captured 257,000 fish. Passage estimates in the Kenai and Kasilof Rivers were now at 1.4 million and 224,000 fish, respectively. The upper end of the Kenai River inriver sockeye salmon goal of 1.35 million fish had now been exceeded.

The week of July 31–August 6 was the final full management week of the 2011 season. Commercial fisheries management decisions for the week were again driven by the challenge of reducing sockeye salmon passage into the Kenai River, while conserving Kenai River Chinook salmon. Both set and drift gillnetting were opened for a 14-hour fishing period on Sunday, July 31, with drifters fishing the Expanded Corridor. Both gear groups fished Monday's regular period; drifters fished districtwide with a 3-hour extension in the Expanded Corridor. The KRLSSMP no longer required a Tuesday no-fishing window for setnetters, so both gear types fished a 17-hour period on August 2, with drifters again held to the Expanded Corridor. For the purpose of Chinook salmon conservation, setnetters did not fish on Wednesday, August 3. And, for the first day since July 18, drifters did not fish, as their total catch on Tuesday, August 2, was less than 1,000 fish. Both gear types fished the regular period on Thursday, August 4, with the period being extended until 11:00 p.m. The 36 hour no-fishing window began at that time, with both gear types held out of the water until 11:00 a.m. on Saturday, August 6. Although *The Upper Cook Inlet Salmon Management Plan* could have allowed fishing during the Friday closed

window, because the inriver goal had already been exceeded, ADF&G concluded that Chinook salmon conservation was still necessary. At the end of the closed window period, an emergency order was issued allowing both gear types to fish from 11:00 a.m. on Saturday, August 6, until the beginning of the regular fishing period at 7:00 a.m. on Monday, August 8 (44 hours). Drift gillnetting would be closed during the nighttime hours of 11:00 p.m. until 5:00 a.m. The rationale for this decision was to provide for additional sockeye salmon harvest at a time when the Chinook salmon run was for all practical purposes, complete. However, this decision was contested by local sport groups, and the commercial fishing period was terminated at 11:00 p.m. on Sunday, August 7. After setnet catch data was tallied for Saturday and Sunday, it was determined that both days' harvests were less than 1% of the season total, bringing an end to the season for set gillnetting. During the management week of July 31–August 6, setnetters fished two 12-hour regular periods and 53 additional hours of the 84 hours provided for in the KRLSSMP. Another 23 hours were fished on Sunday, August 7. During this time period (July 31–August 7), they harvested approximately 131,000 sockeye salmon and 1,174 Chinook salmon. During this same time frame, drifters harvested approximately 40,000 sockeye salmon and 9 Chinook salmon.

Per the CDDGFMP, from August 11 to 15, there are no mandatory area restrictions to regular periods, except that if the Upper Subdistrict set gillnet fishery is closed according to 5 AAC 21.310(b)(2)(C)(iii) (the one percent rule), regular fishing periods will be restricted to Drift Areas 3 and 4 (Figure 8). Therefore, drifters fished a districtwide period on Monday, August 8. But the regular periods on Thursday, August 11, and Monday, August 15, were limited to Drift Areas 3 and 4. For the remainder of the season, drifters harvested less than 500 additional sockeye salmon in Drift Areas 3 and 4, and in Chinitna Bay, which was opened by EO on Wednesday, August 31. Aerial census escapement counts had indicated that the upper end of the Chinitna Bay chum salmon escapement goal of 3,400 to 8,400 had been exceeded, warranting fishing in this area.

Sockeye salmon passage was estimated in the Kasilof River through August 15, while in the Kenai River, the final day of escapement enumeration was August 18. Sonar operations at these sites are typically terminated when the daily passage estimates are less than 1% of the season total for 3 consecutive days (after the cessation of commercial fishing). In the Kasilof River, the final passage estimate was 245,721 fish, which was within both the BEG and OEG ranges. The final sockeye salmon estimate of passage in the Kenai River was 1,599,271 fish, exceeding the inriver goal by nearly 250,000 fish.

The last day of sport fishing in the Kenai River, by regulation, was July 31, with inriver sonar operations continuing until August 10. Chinook salmon indices indicated the 2011 run was below average and that the minimum escapement goal of 17,800 fish may not be met. Therefore, actions were taken in both sport and commercial fisheries to reduce the harvest rate on this stock. In October, at the BOF's annual work session, the Division of Sport Fish produced a memo summarizing ADF&G's current knowledge regarding the inriver run strength of late-run Kenai River Chinook salmon in 2010 and 2011. In this memo, dated September 27, 2011, and entered into the meeting as RC7, the 2010 and 2011 late runs of Kenai River Chinook salmon were described as being below average based on the following 5 inseason indices: echo length standard deviation (ELSD-based) split beam sonar estimates, net-apportioned split-beam sonar estimates, CPUE of gillnets drifted at the sonar site, CPUE of sport anglers interviewed in the lower river creel survey, and harvest of Chinook salmon in the eastside setnet fishery (ESSN).

The memo went on to describe that an estimator that combines information from all 5 indices, properly converted to the currency of the TS-based estimates, was developed to evaluate achievement of the current escapement goal. For the 2011 season, the expected TS-based estimates of Chinook salmon passing the sonar site was 36,000 fish (CI: 22,400–58,200). After subtracting estimates of harvest and mortality above the sonar (6,240 in 2011), the corresponding estimate of escapement was 29,800 in 2011 (CI: 16,100–51,900). Therefore, the final escapement estimate was within the SEG of 17,800–35,700 fish.

Kalgin Island Subdistrict

The estimated sockeye salmon harvest in the Kalgin Island Subdistrict in 2011 was approximately 89,000 fish, with roughly 15,000 fish being taken on the west side of the island (Statistical Area 246-10) during the Big River sockeye salmon fishery (Appendix A4). Two additional 12-hour fishing periods were provided in the Kalgin Island Subdistrict in 2011 (EO Nos. 29 and 37). These extra periods occurred on July 30 and August 7, and were in compliance with the *Packers Creek Sockeye Salmon Management Plan* (5 AAC 21.370). Although the remote video system used to estimate sockeye salmon escapement at Packers Lake was not operational for the entire run, above average commercial harvest statistics in the Kalgin Island Subdistrict (fourth highest in the past 45 years) suggested that a strong sockeye salmon run occurred there in 2011.

COHO SALMON

The 2011 commercial coho salmon harvest of approximately 95,000 fish was approximately 49% less than the previous 10-year average annual harvest of 188,000 fish, and nearly 70%, or 211,000 fish less than the 1966–2010 average annual harvest of 306,000 fish (Appendix B3). The 2011 harvest was the second lowest since 1966. The stock status and outlook section of this report has additional discussion on coho salmon stocks.

Drift gillnetters were allowed to fish beyond August 8, but only in Drift Areas 3 and 4, and in Chinitna Bay, beginning on August 30. 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 8 was approximately 2,851 fish (Appendix A5).

The exvessel value of coho salmon from the 2011 UCI commercial fishery was approximately $406,000 or 0.8% of the total exvessel value (Appendix B7). This was the sixth 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 2011 UCI harvest of approximately 34,000 pink salmon was 71% less than the average odd-year harvest since 1966. Pink salmon are typically taken in significant quantities in UCI beginning in late July and the first couple of weeks in August. The average price paid for pink salmon in 2011 was approximately $0.25/lb (Appendix B11), resulting in an exvessel value for this species of $27,000, or 0.1% of the total exvessel value (Appendix B7). The average exvessel value from the previous 10 odd-year runs (1991–2009) of approximately $28,000 was nearly identical to the value in 2011.

CHUM SALMON

Approximately 129,000 chum salmon were harvested by UCI commercial fishermen in 2011, the fourth largest catch in the past 10 years. This harvest was nearly 11% more than the previous 10-year average annual harvest of 116,000 fish, but 71% less than the average annual harvest of 445,000 fish taken from 1966 to 2010 (Appendix B5). Assessing chum salmon stocks based on recent harvest trends is suspect, at best. For example, the drift gillnet fleet is the primary harvester of chum salmon. Drift gillnet fishing time in the Central District has been significantly altered, primarily to conserve Susitna River sockeye salmon. These restrictions have resulted in a marked reduction of chum salmon harvest. The status of chum salmon will be discussed further in the stock status and outlook section of this report.

The 2011 exvessel value for chum salmon was approximately $688,000, or 1.3% of the overall exvessel value of the 2011 fishery (Appendix B7). This was the second highest exvessel value since 1995. The average price paid for chum salmon in 2011 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 2011 represented some of the highest prices observed in many years (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. Finally, 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. More than ever before, the UCI commercial salmon fishing industry emphasizes 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 2011.

The average weight by species from the 2011 commercial harvest was comparable to historical averages, other than for coho salmon and Chinook salmon (Appendices A14 and B12). The 5.7 pound average weight of commercially harvested UCI coho salmon was the smallest since 1970. The 20.2 pound average weight of Chinook salmon from all commercial fisheries in 2011 was 22% less than the 1969–2010 average of 25.9 pounds. Chinook salmon harvested in the Upper Subdistrict set gillnet fishery were sampled for age and size characteristics. Results from these analyses corroborate the weight data recorded on fish tickets. In 2011, approximately 38% of the commercial Chinook salmon harvest in the Upper Subdistrict set gillnet fishery was comprised of fish that had spent 2 years or less in salt water (Figure 9). For the past 10 years (2002–2011),

the average annual composition (percentage of total harvest) of the Upper Subdistrict set gillnet commercial harvest of Chinook salmon that have spent 2 years or less in salt water was 42%, nearly twice the 1987–2001 average of 24% (Appendix A15).

CFEC showed 569 active drift gillnet permits in the Cook Inlet area in 2011, with 72% issued to Alaskan residents (Appendix B13). Of this total, 462 reported fishing in 2011 (Appendix A8). CFEC also showed 736 active set gillnet permits in Cook Inlet, with 83% being issued to Alaskan residents. From this total, 546 reported fishing in UCI in 2011, while 21 set gillnet permit holders made deliveries in Lower Cook Inlet. A total of 21 shore-based processors purchased UCI fishery products in 2011, as well as 13 direct marketing vessels, one floating processor, and 20 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.

Until recently, 2 lakes located on the Kenai Peninsula, Hidden Lake and Tustumena Lake, were stocked with sockeye salmon fry. Production from these enhancement programs benefitted UCI commercial, personal use, educational, and recreational fisheries. In 2011, CIAA released approximately 1,044,000 unfed sockeye salmon fry (0.09g) 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 23 through July 13, 2011, CIAA enumerated approximately 299,000 sockeye salmon smolt emigrating Hidden Lake, of which approximately 47% were estimated to be of hatchery origin (Terri Tobias, 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 since then, CIAA has 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 2011. 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 enumerating smolt emigrating Big Lake.

Due to a ruling issued by the U.S. Ninth Circuit Court of Appeals in 2003 (Shields 2007), stocking activities ceased 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.

In 2011, the estimated number of hatchery-produced adult sockeye salmon that returned to UCI was 112,000 (27,000 Hidden Lake origin; and 85,000 Big Lake origin), which was approximately 1.3% of the total UCI run (Terri Tobias, Commercial Fisheries Technician, ADF&G, Soldotna; personal communication).

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

On the whole, the status of UCI's 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 6.4 million sockeye salmon was forecast to return to UCI in 2011, with an expected harvest by all user groups of approximately 4.9 million fish (Appendix C1). This forecast was about 1.1 million fish above the 20-year average harvest by all user groups of 3.8 million fish. The actual run was approximately 8.6 million fish (Table 5), resulting in a total harvest of approximately 6.3 million fish, with 5.3 million caught by commercial gillnets and an estimated 1.0 million fish taken by sport, personal use, educational, and subsistence fisheries (Appendix A22).

Table 5.–Upper Cook Inlet sockeye salmon run, 2011.

System	Commercial Harvest	Escapement	Other Harvest	Total
Crescent River	70,757	81,952	34	152,743
Fish Creek	47,044	66,178	6,204	119,426
Kasilof River	495,534	244,221	83,493	823,248
Kenai River	3,976,521	1,333,217	889,656	6,199,394
Susitna River	264,884	257,862	8,106	530,852
All Others	422,701	327,004	25,626	775,331
Totals	5,277,441	2,310,434	1,013,119	8,600,994

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 to 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[4]. In 2005, the BOF added a Yentna River sockeye salmon OEG of 75,000 to 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) details 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 species apportionment issues. 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 estimated total sockeye salmon escapement 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

[4] 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 BOF of Fisheries, November 2001 (and February 2002), Anchorage.

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 two 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 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 4 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, and where a historical perspective of sockeye salmon research and management of Susitna River sockeye salmon stocks was presented; 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. To date, the task force report has yet to be published.

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 2011 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 million fish (82% 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 2009–2011. At the 2011 BOF meeting, ADF&G recommended continued classification 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 (please see the Regulatory Changes section of this report for a detailed description of the changes).

The 2011 sockeye salmon run forecast for the Susitna River was 463,000 fish, which was 41% less than the 20-year average run of 780,000. This forecast was derived from historical aggregate weir counts, rather than sonar and age composition allocation models. This was the second 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 2011 total sockeye salmon run, based on "Bendix-like sonar numbers," was estimated to be

approximately 275,000 fish (using the same method to calculate the run as was used for the forecast). There were 2 of 3 lake escapement goals achieved (Judd and Chelatna lakes), with the goal of 15,000–50,000 fish at Larson Lake being missed by approximately 2,600 fish (Table 1).

In summary, the status of Susitna River sockeye salmon stocks is somewhat pessimistic. Recent data show that 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 3 lakes that are known to be the major producers of sockeye salmon in the drainage. The good news is that sockeye salmon production from these 3 lakes appears to be very stable. However, there are numerous lakes within the Susitna River drainage that are not faring so well. 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. So, while restrictions to commercial fishing time, gear, and areas fished per the SSSAP have reduced exploitation on all Susitna River sockeye salmon stocks, 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 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 6). 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 6.–Crescent Lake sockeye salmon average escapement, harvest and run, 1976–2011.

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
2000–2011[a]	90	46	135

[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 2011, this area was opened nonstop from July 3 through July 29 (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 2011 of 34%.

Approximately 71,000 sockeye salmon were harvested by set gillnetters in the immediate area around the Crescent River terminus in 2011, which was the largest harvest observed since 1990. The BEG for Crescent Lake sockeye salmon is set at 30,000–70,000 fish. Since 1999, escapements in 12 of 13 years have exceeded the upper end of the escapement goal range (Appendix A2). At this time, the outlook for Crescent Lake sockeye salmon is positive.

Fish Creek

From 1997 to 2011, 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 2011 of 105,000 fish (Table 3, Appendix C1). The estimated run, however, neared 120,000 fish, resulting in an escapement of more than 66,000 sockeye salmon (Table 7, Appendix A2), and, for the third time since 2001, the personal use dip net fishery was opened. At the 2002 BOF meeting, ADF&G's escapement goal review team recommended the Fish Creek goal be changed from a point goal of 50,000 to an SEG of 20,000 to 70,000 fish.

During the past 15 years, escapements were below the goal 6 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 2009–2011 (6 total years) averaged nearly 144,000 fish annually. The number of smolt emigrating Big Lake from 2003–2008 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 2002–2011, the average annual hatchery proportion of the run to Big Lake was 43%, ranging from 2% in 2002 to 73% in 2006 (Terri Tobias, Commercial Fisheries Technician, ADF&G, Soldotna; personal communication).

Table 7.–Production of sockeye salmon in Big Lake, 1997–2011.

	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	66,678	66,183					

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.

Cautious optimism led ADF&G to recommend removing Big Lake sockeye salmon as a stock of yield concern at the 2005 BOF meetings. Yet, 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.

The total sockeye salmon run to Big Lake for 2011 was estimated at 119,000 fish (Tables 5 and 7). 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).

2012 Sockeye Salmon Outlook

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 (Appendix C2). 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%.

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%).

Pink Salmon

Table 8.–Upper Cook Inlet pink salmon commercial harvests and Deshka River escapements, 1996–2011.

	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]

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

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 the first couple of weeks in August. The 2011 UCI harvest of approximately 34,000 pink salmon was 61% less than the 1997–2009 average odd-year harvest of 88,000 fish. This follows the 2010 harvest of 292,000 pink salmon, which was 57% less than the 1978–2008 (n=16) even-year average annual harvest of 675,000 fish. As noted throughout this report, however, it is difficult to gauge the status of various stocks based solely on commercial harvest data. Both the 2010 and 2011 harvests were below average.

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.

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 2011 UCI commercial chum salmon harvest of approximately 129,000 fish was the seventh largest harvest since 1995 and was 11% greater than the 2001–2010 average annual harvest of 116,000 fish (Appendix B6). However, the 2011 harvest was approximately 71% less than the 1966–2011 average annual harvest of 453,000 fish (Appendix B6). The 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 5 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 Yentna River sockeye salmon; 2) adoption of the *Northern District Salmon Management Plan* (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 a 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 census 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 2011 chum salmon run, however, was above average. This characterization was corroborated by commercial harvest data and the OTF project. The 2011 OTF cumulative chum salmon CPUE of 532 was 18% greater than the 1988-2010 average CPUE of 452. 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 immediate 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 statistics, 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[5] (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 3 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.

[5] 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 BOF 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 *Unpublished*). 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 or exceeded for all 3 years (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[6]. Coho salmon runs to many watersheds in 2011, especially the Little Susitna River, appear to have been poor, as was commercial coho salmon harvest. Therefore, special attention will be given to the Little Susitna River in 2012 to see if the recent downward trend in coho salmon escapement rebounds or not.

Table 9.–Coho salmon escapement and enumeration, 1996–2011.

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

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

[b] Weir washed out; count incomplete.

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

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

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. Interestingly, 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 districtwide Central District drift gillnet fishery was also extended 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.

From 2008 to 2011, the August 11–15 extension of the season could have provided a total of 6 additional fishing periods for Upper Subdistrict setnetters, but during that time only one period was fished, that occurred on August 12, 2010, and produced a harvest of approximately 2,000 coho salmon. The other 5 periods were not fished either due to: a poor sockeye salmon run (2008), the 1% rule (2009), or a poor Chinook salmon run and the 1% rule (2011). In 2011, the Upper Subdistrict set gillnet fishery was closed at 11:00 p.m. on August 7, and the last districtwide drift gillnet opening occurred on Monday, August 8 (Appendix A11). The 1% 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 two consecutive fishing periods. In 2011 the BOF redefined a fishing period as a 24-hour day.

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[7]). 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.

Chinook Salmon

Northern District

The *Northern District King Salmon Management Plan* 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 exploitation 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 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. ADF&G, therefore, recommended that the BOF consider these systems for stock of management concern status. In addition, the department 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 department 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 department recommendations at the 2011 UCI finfish meeting in Anchorage and agreed with department staff to list Chinook salmon stocks in 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 2011 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*. The remainder of the Northern District was opened for four 12-hour periods between May 30 and June 20. The total harvest of Chinook salmon in 2011 was 2,187 fish. The

[7] 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.

final escapement estimate for Chinook salmon in the Deshka River in 2011 totaled a little more than 19,000 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, 1995–2011.

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		

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

In 2008, the final fishing period during the Northern District commercial Chinook salmon fishery was closed, as was the first period during the regular salmon season (Shields 2009) to conserve Deshka River Chinook salmon. In response to a small projected Chinook salmon run to the Deshka River in 2009, the BOF passed an emergency regulation (from its own petition) reducing the open fishing time from 12 hours to 6 hours each for the first 2 commercial fishing periods in 2009 (May 25 and June 1). The third period of the season, June 8, was fished for 12 hours, but low passage rates at the Deshka River weir necessitated a closure of the commercial fishing periods scheduled for June 15 and 22. The final passage estimate in 2009 was approximately 12,000 fish, or about 1,000 fish below the lower end of the BEG.

Early in the 2010 season, the Deshka River Chinook salmon run appeared to be in danger of not achieving the minimum escapement objective, prompting Division of Sport Fish to release EO No. 2-KS-2-14-10, prohibiting bait in the sport fishery beginning on June 12. The justification

for this action was that on average, approximately 12% of the escapement or 3,500 Chinook salmon had passed the weir by June 9. Although Chinook salmon numbers were building and catch rates in the sport fishery had increased, only 544 fish had been counted through the weir through June 8. The Northern District commercial Chinook salmon fishery was also restricted from 12 hours to 6 hours for the June 14 fishing period to provide some reduction in exploitation on Deshka River stocks. A few days later, escapements had improved enough at the Deshka River weir that Division of Sport Fish rescinded the no-bait restriction (EO No. 2-KS-2-22-10) as of June 19. The final escapement of 18,594 in 2010 fell within the BEG range. For the 2011 season, no restrictions were taken in either sport or commercial fisheries specifically for Deshka River Chinook salmon, albeit closures in the commercial fishery in the Northern District to reduce exploitation on other stocks likely benefitted Deshka River Chinook salmon. At this time, there are no immediate concerns for Deshka River Chinook salmon stocks.

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, the department 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 the department'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. In 2011, the estimate of passage for late run Chinook salmon was 36,000 fish, and after subtracting for harvest and mortality, the estimate of escapement was 29,800. 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 2011 UCI herring fishery produced a harvest of 16.2 tons (Appendix B8), with all but 2.5 tons of the harvest coming from the Upper Subdistrict. A total of 15 permit holders reported fishing, which was very close to the average annual number of participants from the previous 10 years (2001–2010). Although open to both set and drift gillnets, all of the harvest is 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 as much as variation in the size and population structure of the stock. In the Upper Subdistrict, 5 age classes

dominated the population in 2011, comprising 99.9% of the 433 samples collected from 4 sample dates. The average by age-class was age-4 (7%), age-5 (17%), age-6 (45%), age-7 (26%), and age-8 (5%). A sample of herring was also collected from Chinitna Bay in 2011, with the age-5 and age-6 component comprising 73% of the sample, which was very similar to the Upper Subdistrict samples.

All of the herring harvested in UCI were used exclusively for personal use or sold as bait. Because Prince William Sound and Kamishak Bay herring fisheries have remained closed for many years, bait herring from UCI has risen in value. Demand by commercial and sport halibut fishermen has resulted in an average price of approximately $1.00/lb or $2,000/ton. Based on this price, the estimated exvessel value of the 2011 commercial herring fishery was approximately $32,000.

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 2011, 9 people obtained commissioner's permits enabling them to participate in the fishery, with 5 CFEC permit holders reporting harvests on fish tickets, totaling approximately 100.8 tons. The harvest cap for this fishery is 100 tons, which necessitated that the fishery be closed by EO (2G-01-11) on Sunday, May 29. 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. The 2011 season marked the first time since 1999 that the quota for the fishery was reached.

Table 11.–Commercial smelt harvest, 1978, 1980, 1998–1999, and 2006–2011.

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

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 of more than $200,000.

Age-composition analyses (determined from otoliths) of samples collected from the 2006–2011 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 2011 harvest ranged from 185 to 210 mm, with an overall average of 199 mm, which was very similar to the average lengths from previous years. The male to female ratio in 2011 was 50.5% to 49.5%, while the 2006–2010 average male to female ratio was 58% to 42%. 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 Point. All clams harvested in this area are directed, by regulation, to be sold for human consumption, except for the small percentage (less than 10% of 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. The Department of Environmental Conservation certified additional beach area for harvesting clams for human consumption beginning in 1993. The additional area is located north of the existing certified beach at Polly Creek, north to Redoubt Creek. This certification was extended further north to Harriet Point in 1994. 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 2011 harvest, taken primarily from the Polly Creek/Crescent River area, was approximately 189,000 pounds (in the shell) (Appendices A23 and B9). A total of 23 diggers initially participated during the season; however, the number of diggers was significantly reduced following an accident involving commercial diggers in early May that resulted in the tragic loss of 5 lives. Harvest was reported from 55 different days spanning the time period from May 14 to September 1. Diggers were paid an average of $.65 per pound for their harvest, resulting in an exvessel value for this fishery of $122,000. The average clam size from the 2011 harvest was 140 mm, or 5.5 inches (Figure 10). The 2011 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. Per 5AAC 01.560 *Fishing Seasons and Daily Fishing Periods*, subsistence fishing is allowed in the Tyonek Subdistrict of the Northern District during two 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 meeting in Anchorage, the BOF specified the amounts necessary for subsistence of king salmon and other salmon in the Tyonek Subdistrict as 700–2,700 king salmon and 150–500 other salmon. Each permit holder is allowed a single 10-fathom gillnet, with a mesh size no greater than 6 inches. The early-season permit, focusing on the annual Chinook run, is the most popular fishery. Few late-season permits are issued.

In 2011, 116 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 2011 Tyonek Subdistrict subsistence fishery was 554 Chinook, 102 sockeye, 19 coho, and 7 chum salmon, from 56 permits that were returned from the 116 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 king 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 2011 Yentna River subsistence fisheries was the second highest ever recorded, and included 598 sockeye, 90 coho, 3 pink, and 21 chum salmon taken by 25 permit holders (Appendix B15).

EDUCATIONAL FISHERIES

Educational fisheries first began in UCI in 1989 with the federal court-ordered subsistence fishery for the Kenaitze Indian Tribe (Sweet et al. 2004). The fishery was labeled as a subsistence fishery due to differences in interpretations of subsistence. The Alaska Superior Court ordered ADF&G to issue educational fishing permits beginning with the 1993 fishing season. The objectives for educational fisheries are specified in 5 AAC 93.235 as "educating persons concerning historic, contemporary, or experimental methods for locating, harvesting,

handling, or processing fishery resources." The present standards for educational fisheries are established by the BOF under 5 AAC 93.200 and include: 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 2011 was 11,166 fish, which was the largest harvest recorded since the educational fisheries began (Appendix B16). The average annual harvest from 1994 through 2010 was approximately 6,167 fish.

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 2011, the Kenaitze Tribe harvested 47 Chinook, 6,873 sockeye, 439 coho, and 5 pink salmon, for a total of 7,364 salmon, which was their third largest harvest ever (Appendix B16). From 1994 through 2010, the average annual harvest of all salmon by the Kenaitze Indian Tribe has been 4,383 fish. The total fish harvest quota for this group is 8,000 fish.

In 1993, the Ninilchik Traditional Council (NTC) applied for and was granted a permit for an educational fishery (Szarzi and Begich 2004). In 1998, a group of NTC members formed a new organization, the Ninilchik Native Descendants (NND), and requested a separate permit with similar goals of passing on traditional knowledge and providing food for needy tribal members. Initially 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 2011, the NTC harvested 64 Chinook, 500 sockeye, 181 coho, 131 pink and 876 chum salmon. The NND reported a harvest of 29 Chinook, 185 sockeye, 84 coho, 37 pink, and 335 chum salmon in 2011 (Appendix B16).

In 2003, another group from Ninilchik, the Ninilchik Emergency Services (NES), applied for and was granted an educational fishery. In 2011, the NES group did not report any harvest from their educational fishery permit.

The Anchor Point VFW applied for and was granted an educational fishery permit in 2007. They reported the following harvest from their 2011 fishing activities: 47 Chinook, 41 sockeye,

21 coho, and 109 pink salmon. In 20ll, the Homer VFW applied for and was granted an educational fishery permit. The Homer VFW group reported a harvest of 39 Chinook, 35 sockeye, and 74 coho salmon (Appendix B16).

The Kasilof Historical Association applied for an educational permit beginning with the 2008 season. For 2011, they reported the following harvest: 3 Chinook, 25 sockeye, and 39 coho salmon (Appendix B16).

Finally, the Southcentral Foundation (SCF) applied for an educational permit beginning in 2010. They are an Alaska Native-owned, nonprofit health care organization serving nearly 60,000 Alaska Native and American Indian people living in Anchorage, the Matanuska-Susitna Valley, and 60 rural villages in the Anchorage Service Unit. This fishery occurs on the west side of Cook Inlet, in the Silver Salmon Creek area. The SCF harvest in 2011 was 34 Chinook, 5 sockeye and 39 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 2011 totaled 8 sockeye, 61 coho salmon, and one pink salmon. The peak harvest from this group of 823 fish occurred in 2003 (Appendix B16).

In 2011, Big Lake Cultural Outreach group harvested 6 sockeye, 4 coho, 3 pink and 3 chum salmon, for a total of 16 fish (Appendix B16).

The Eklutna Village group was also issued an educational fisheries permit beginning in 1994. They reported a harvest in 2011 of 343 sockeye, 282 coho, 32 pink and 57 chum salmon. Tyonek Village did not report any harvest in their educational fishery in 2011. 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 2011, the harvest from this fishery was 6 Chinook, 27 sockeye, 32 coho, and 4 pink salmon, for a total of 69 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), opens only from July 10 through July 31 and only if the upper end of the escapement goal of 70,000 is projected to be exceeded. 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 million fish then 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 of the fishery is not to exceed 500 salmon, although no Chinook salmon may be retained. 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 2011 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 Wednesday, June 15, 2011 and closed at 11:00 p.m. on Friday, June 24, 2011, as stipulated in the personal use management plan. The estimated harvest in the gillnet fishery was 27,020 salmon, with 26,780 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 23,188 fish.

KASILOF RIVER DIP NET

The Kasilof River dip net fishery was open from June 25 through August 7, 2011 (44 days). The estimated harvest for the year was 51,562 salmon, with 49,766 (97%) being sockeye salmon (Appendix A18). This was the fifth largest harvest in the Kasilof River dip net fishery since 2002, but was approximately 3,650 fish less than the 2002–2010 average annual harvest of 55,210 fish. The number of household days fished in 2011 of 6,571 was the third highest number of days fished in the fishery, exceeding the 2002–2010 annual average of 5,334 days fished by more than 1,200 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-1-22-11). The 2011 total harvest estimate was 548,582 fish, of which 537,765 (98%) were sockeye salmon. The 2011 harvest was more than 150,000 fish greater than the 2010 harvest, which had been the highest harvest ever recorded. The average annual harvest from 1996 to 2010 was approximately 211,000 fish, meaning the 2011 harvest was 260% greater than the average annual harvest during this time period. On July 16, 2011, nearly 93,000 sockeye salmon were estimated to have been harvested in the Kenai River dip net fishery in one day (Appendix A18).

FISH CREEK DIP NET FISHERY

For the third year in a row, the Fish Creek personal use dip net fishery was opened. 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. When it became apparent this escapement objective would be met, the Division of Sport Fish issued EO No. 2-RS-2-25-11, opening the Fish Creek dip net fishery at 6:00 a.m. on July 29; it remained open through 11:00 p.m. on July 31. The estimated harvest in the 2011 fishery was 5,236 sockeye, 2 Chinook, 905 coho, 155 pink and 72 chum salmon.

BELUGA RIVER SENIOR CITIZEN DIP NET FISHERY

The estimated harvest from the 2011 Beluga River senior citizen dip net fishery shows that 12 permit holders participated in the fishery, with a total harvest of 159 salmon (137 sockeye, 17 coho, and 5 chum salmon; Appendix A17).

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FIGURES

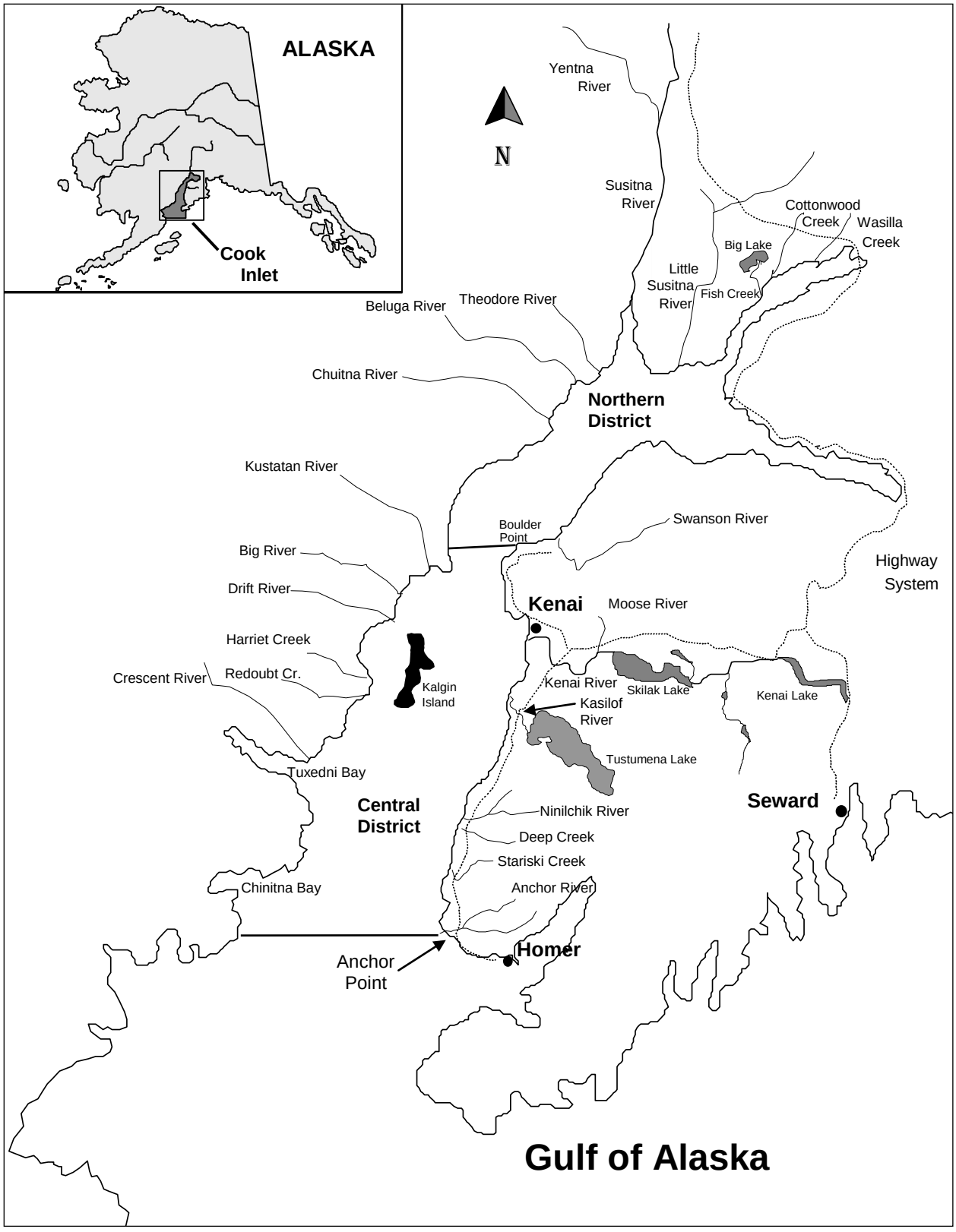

Figure 1.–Major tributaries of the Cook Inlet basin.

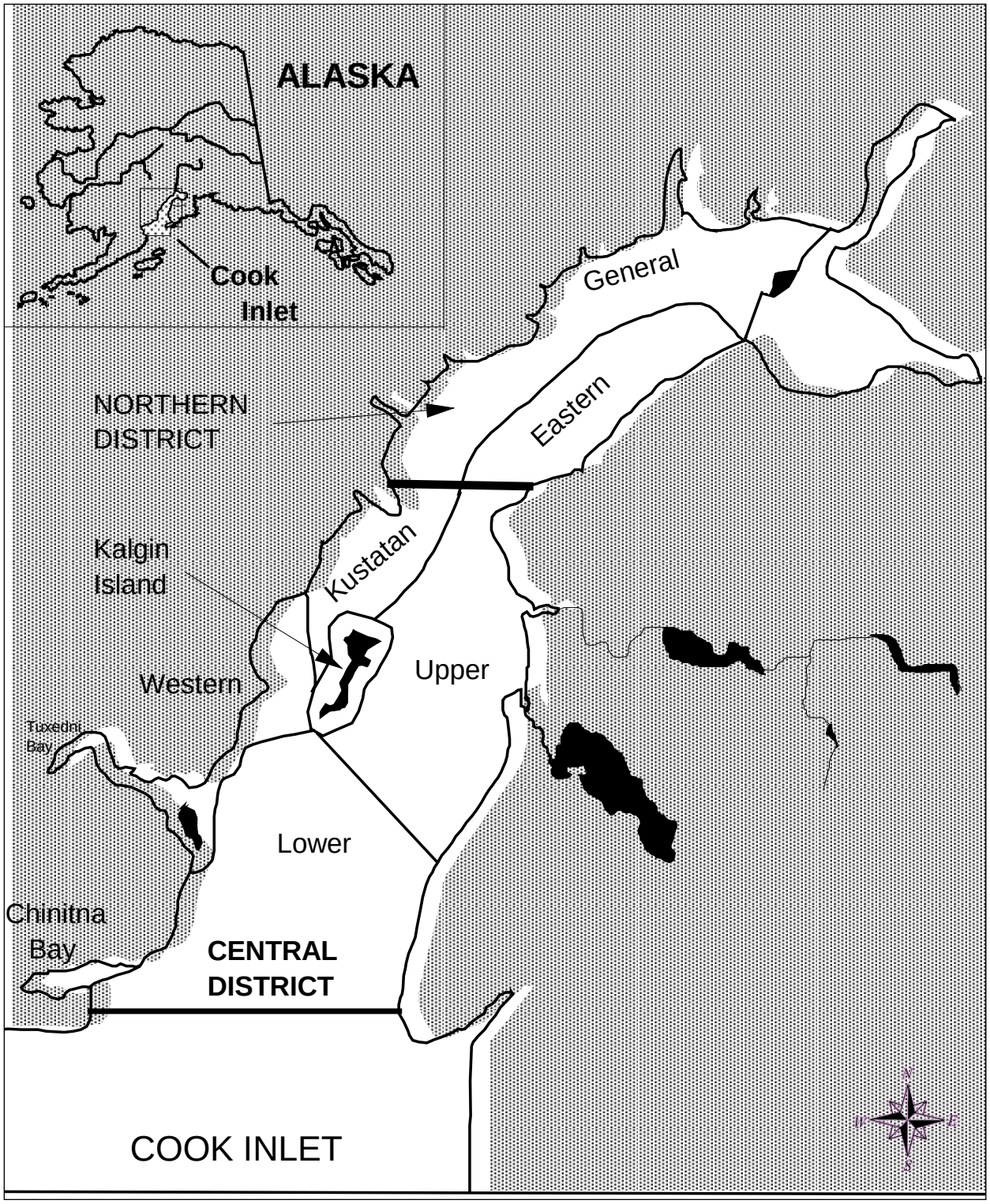

Figure 2.–Upper Cook Inlet commercial fisheries subdistrict fishing boundaries.

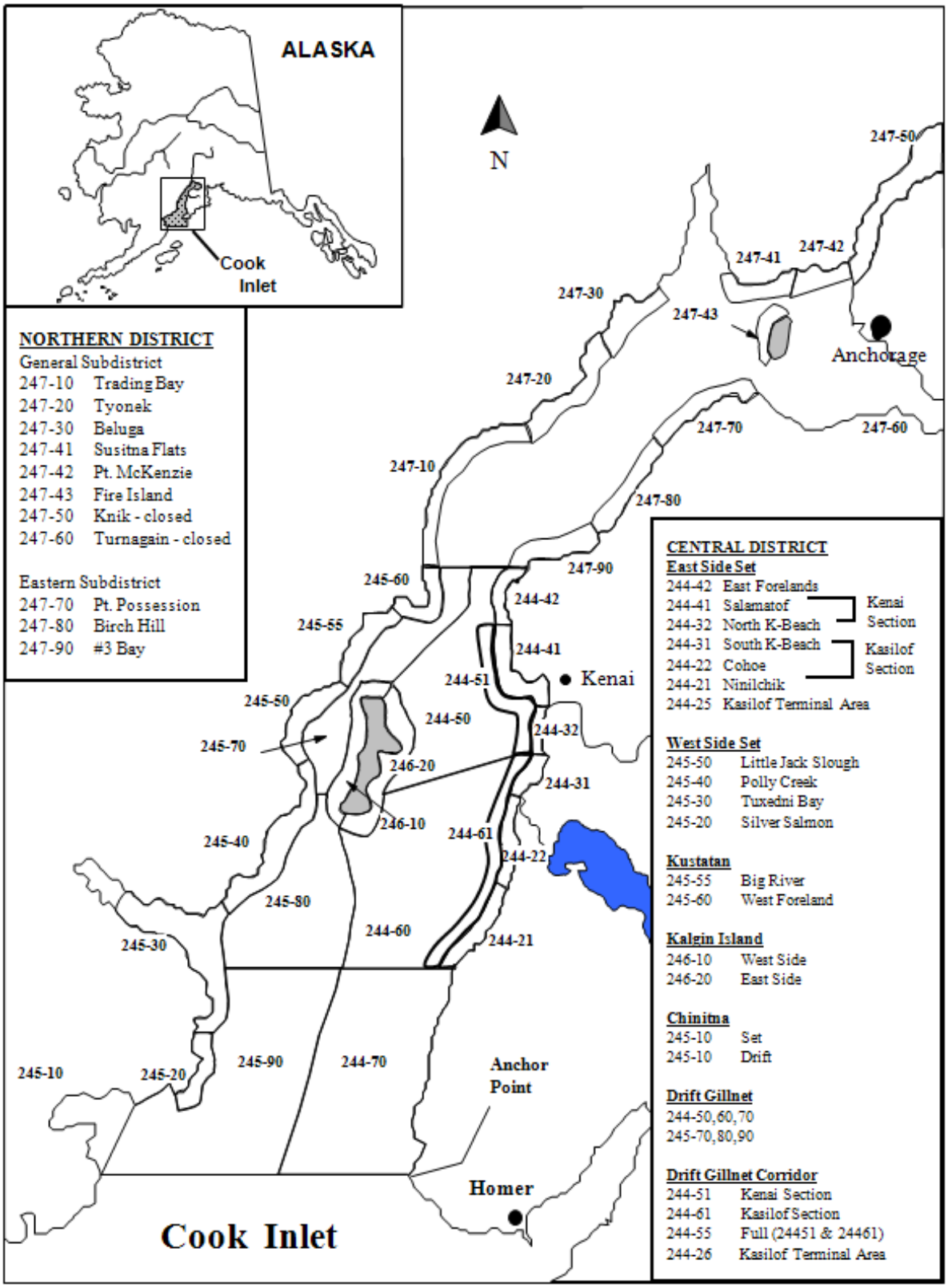

Figure 3.–Upper Cook Inlet commercial fisheries statistical areas.

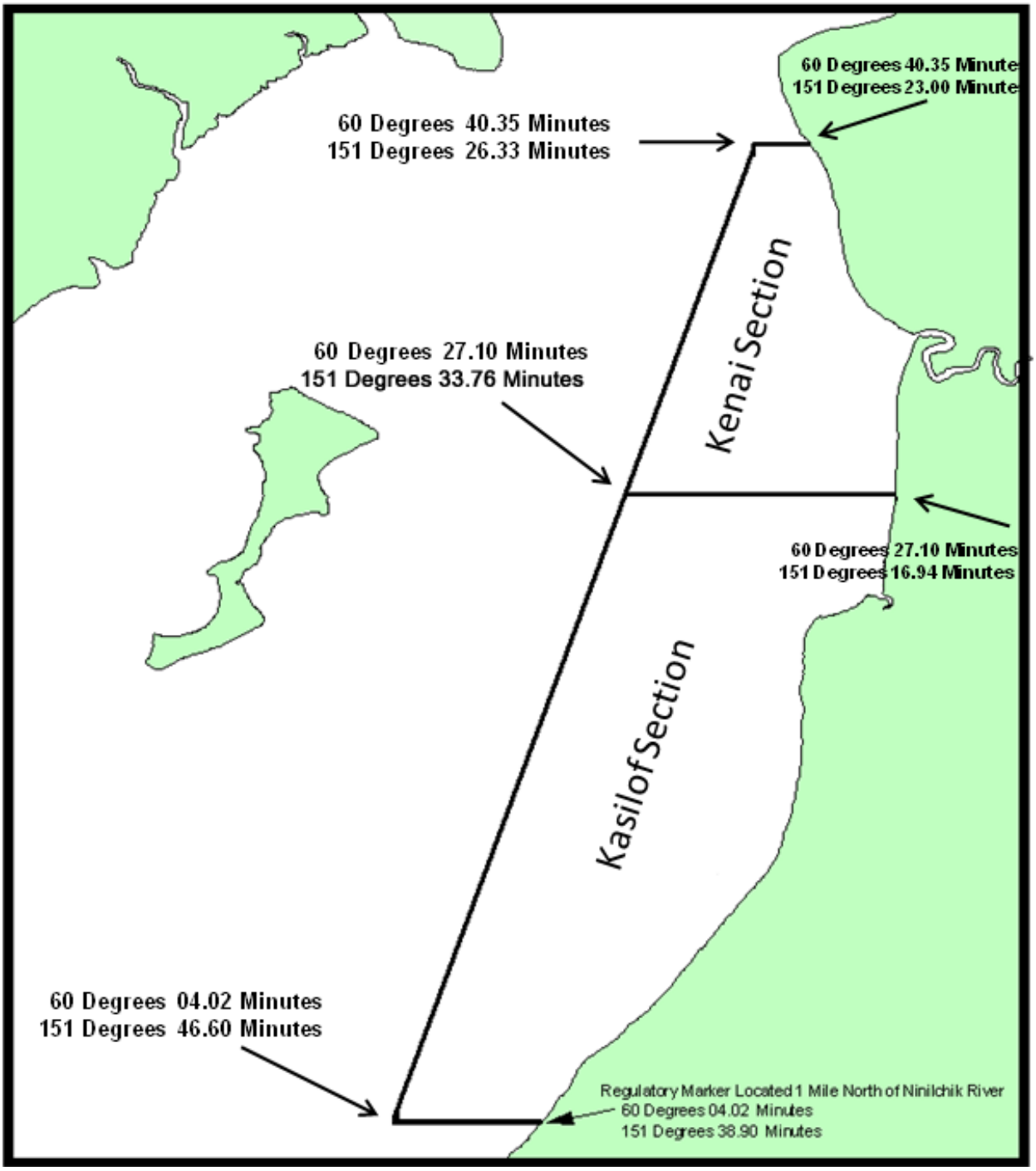

Figure 4.–Map of the Expanded Kenai and Expanded Kasilof Sections with waypoint descriptions.

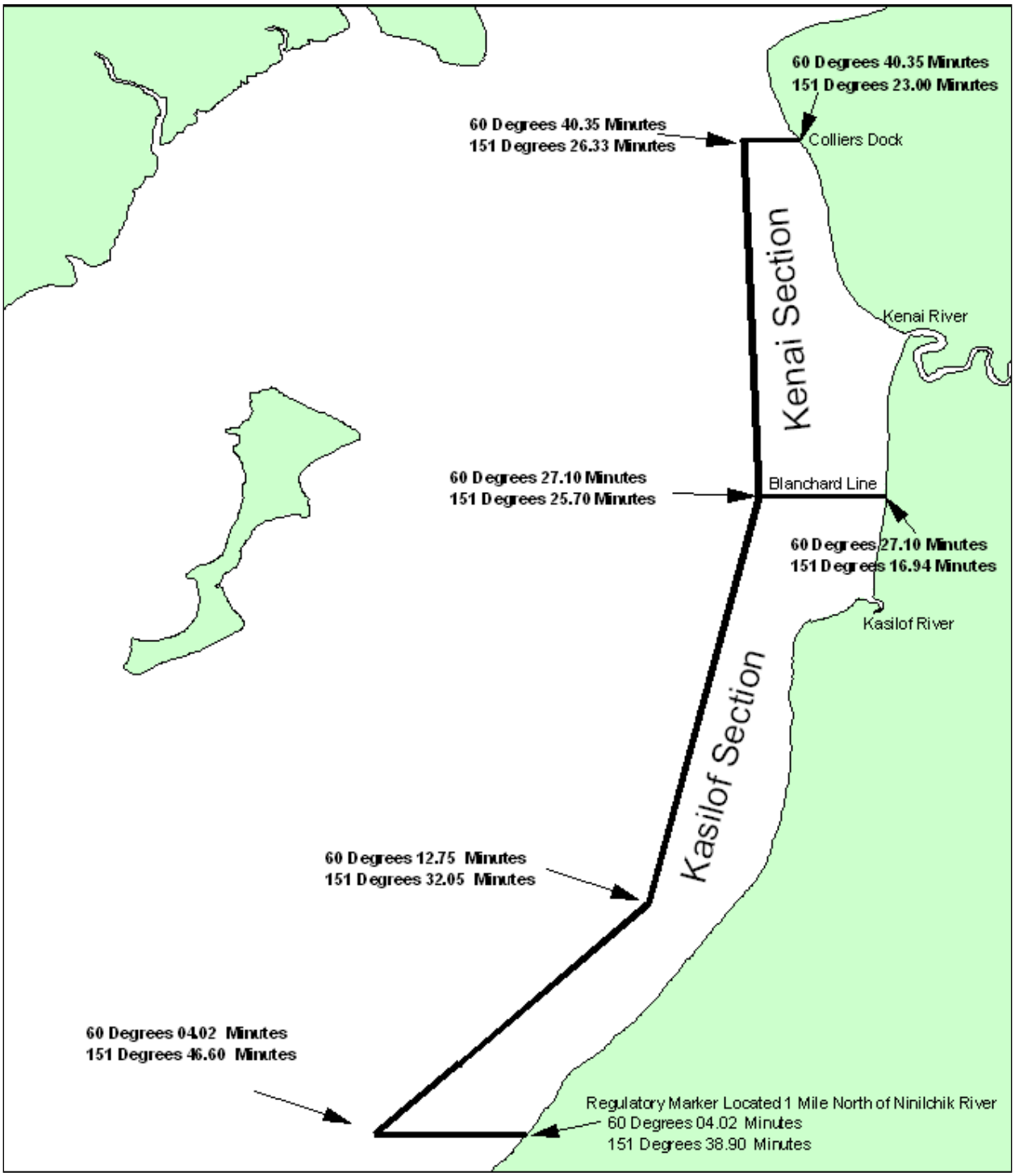

Figure 5.–Map of the Kenai and Kasilof Sections with waypoint descriptions.

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.

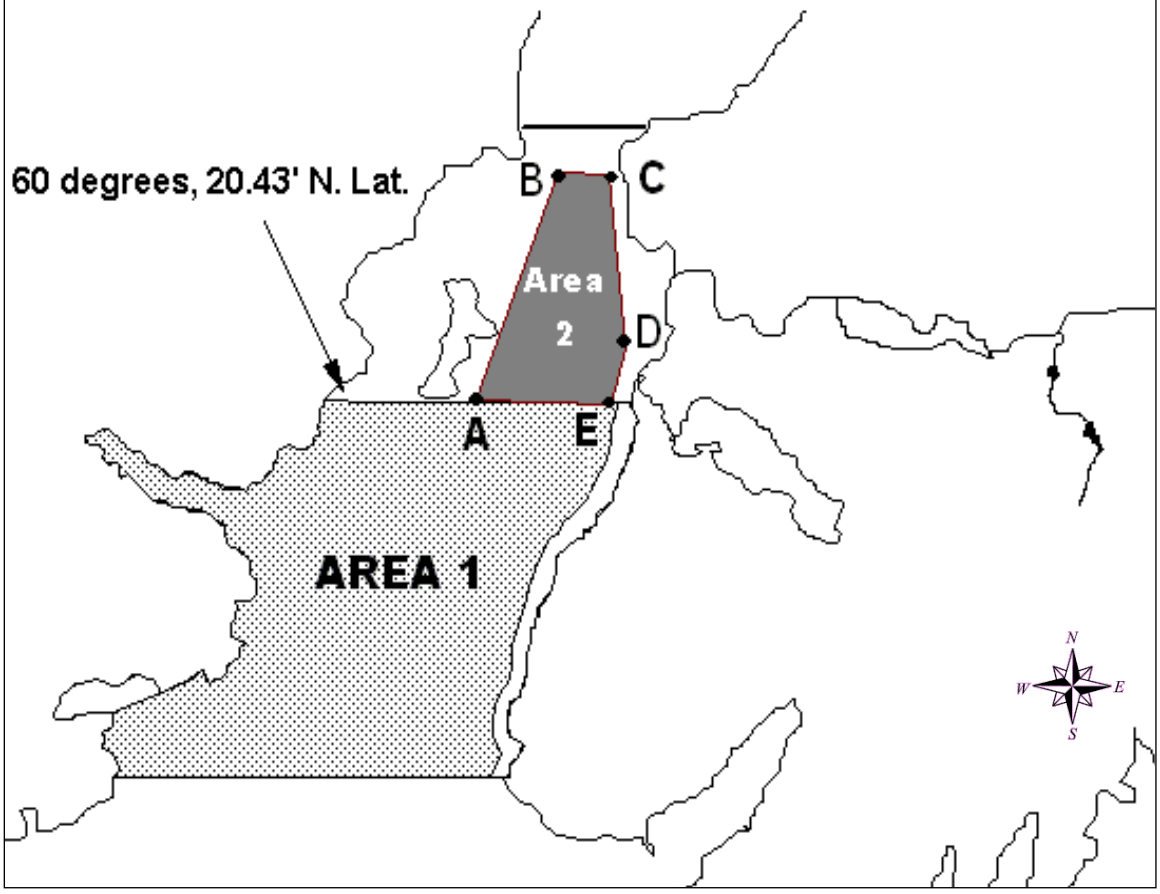

Figure 6.–Drift gillnet boundaries for fishing areas 1 and 2.

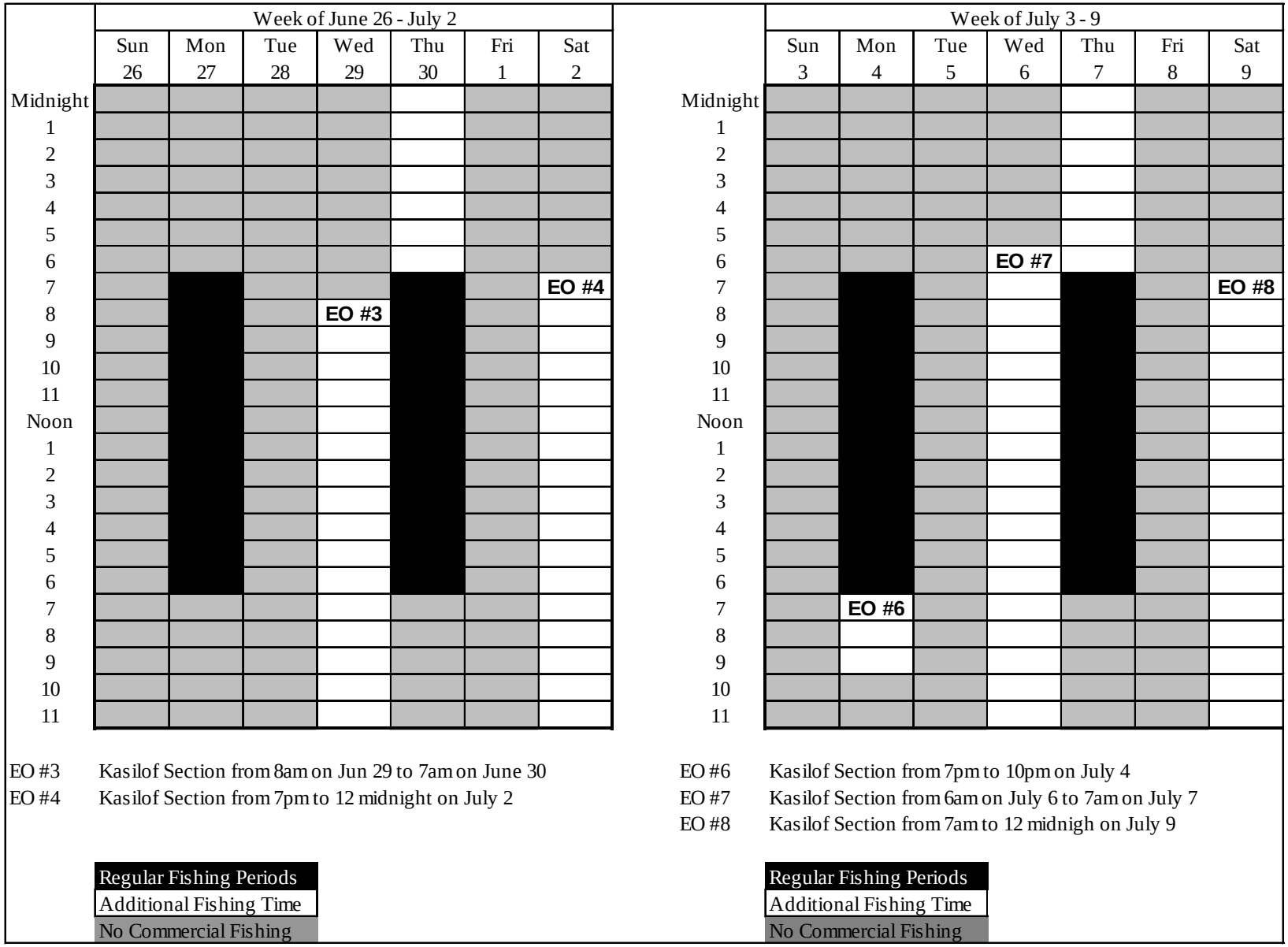

Figure 7.–Hours fished in the Upper Subdistrict set gillnet fishery, 2011.

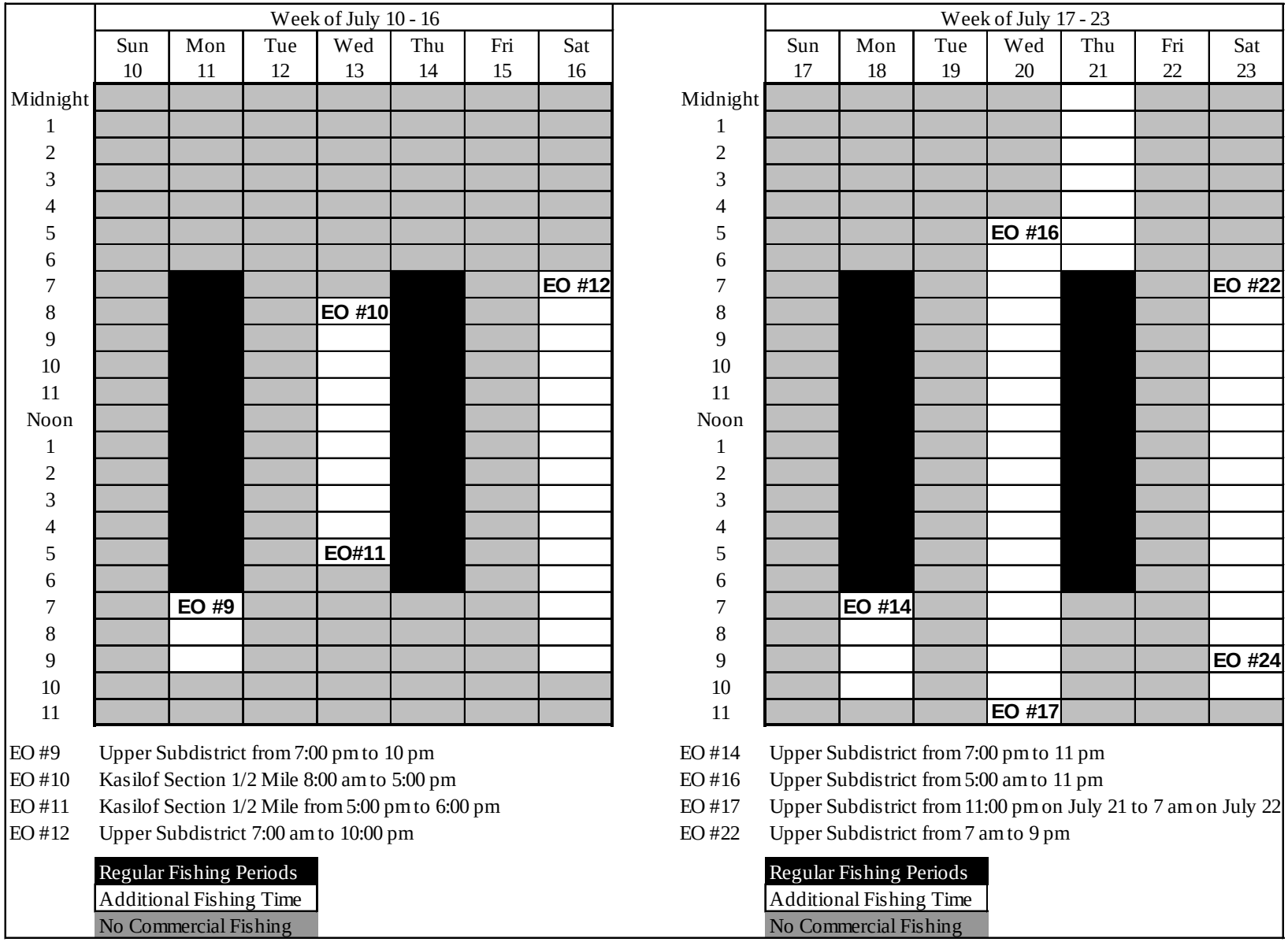

Figure 7.–Page 2 of 4.

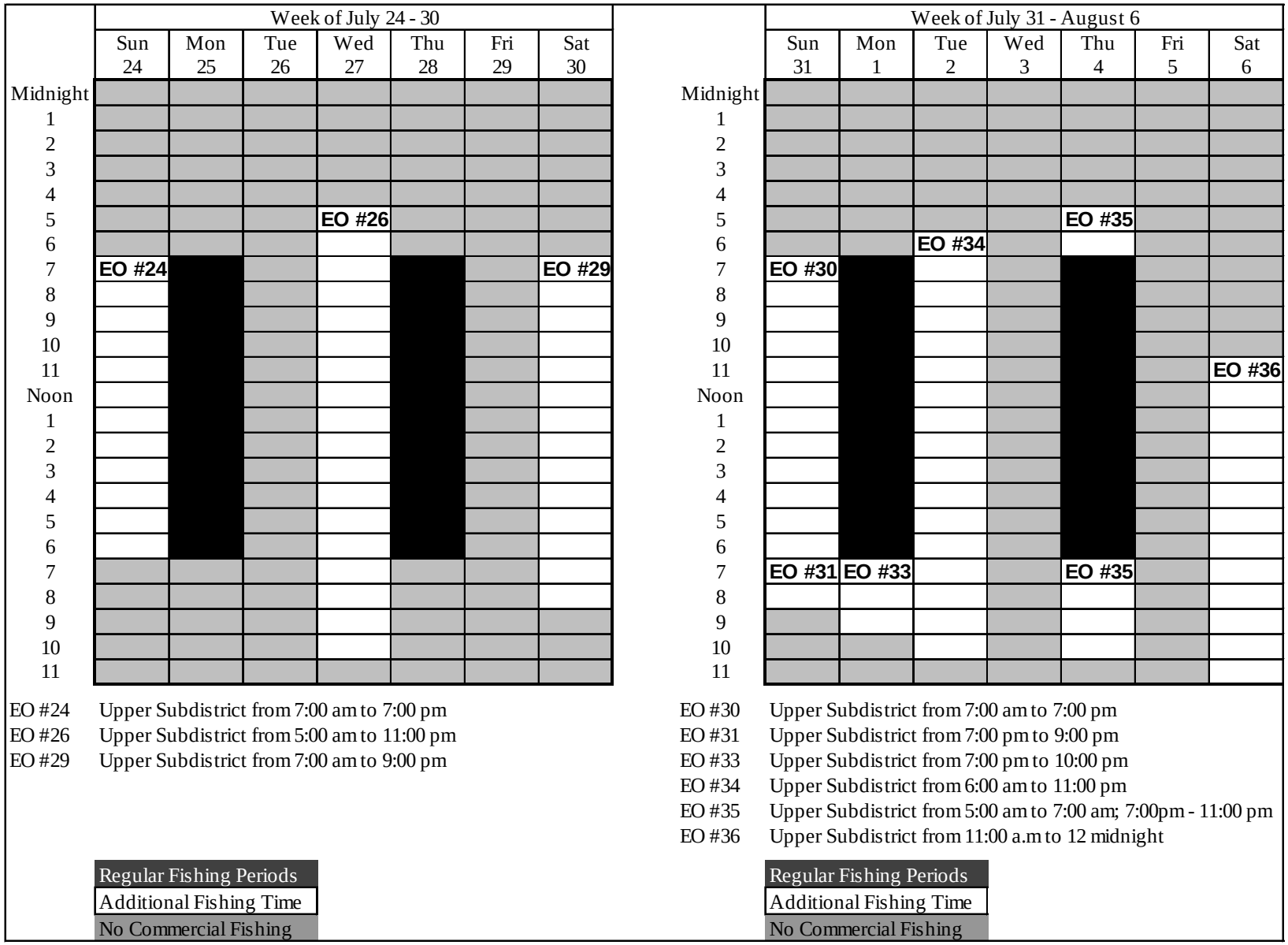

Figure 7.–Page 3 of 4.

	Week of August 7 - 13						
	Sun 7	Mon 8	Tue 9	Wed 10	Thu 11	Fri 12	Sat 13
Midnight	**EO #36/39**						
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
Noon							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							

EO #36/39 Upper Subdistrict from 11 am on Aug 6 to 11:00 pm on Aug 7

Regular Fishing Periods
Additional Fishing Time
No Commercial Fishing

Figure 7.–Page 4 of 4.

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.

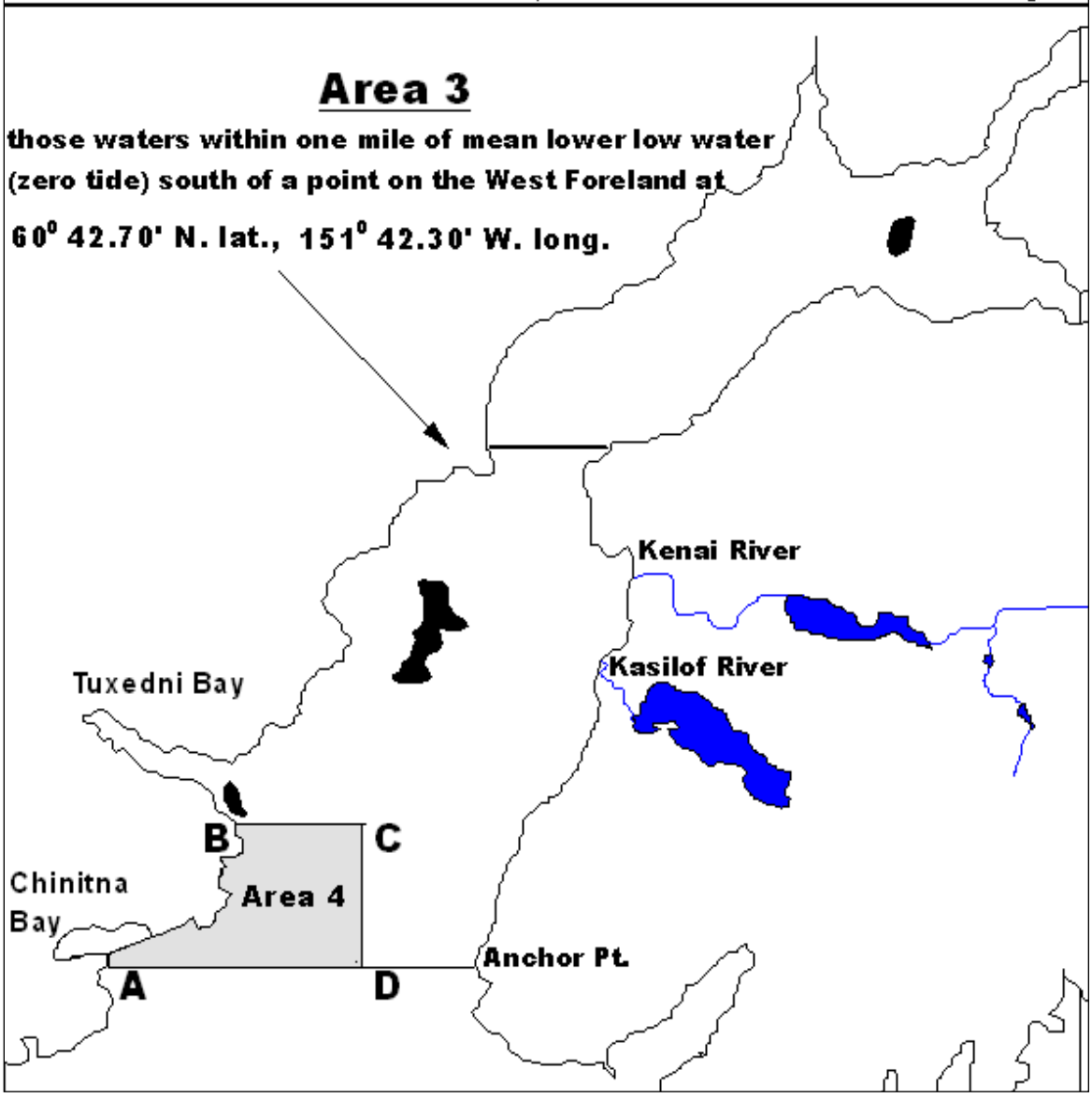

Figure 8.–Map of drift gillnet areas 3 and 4.

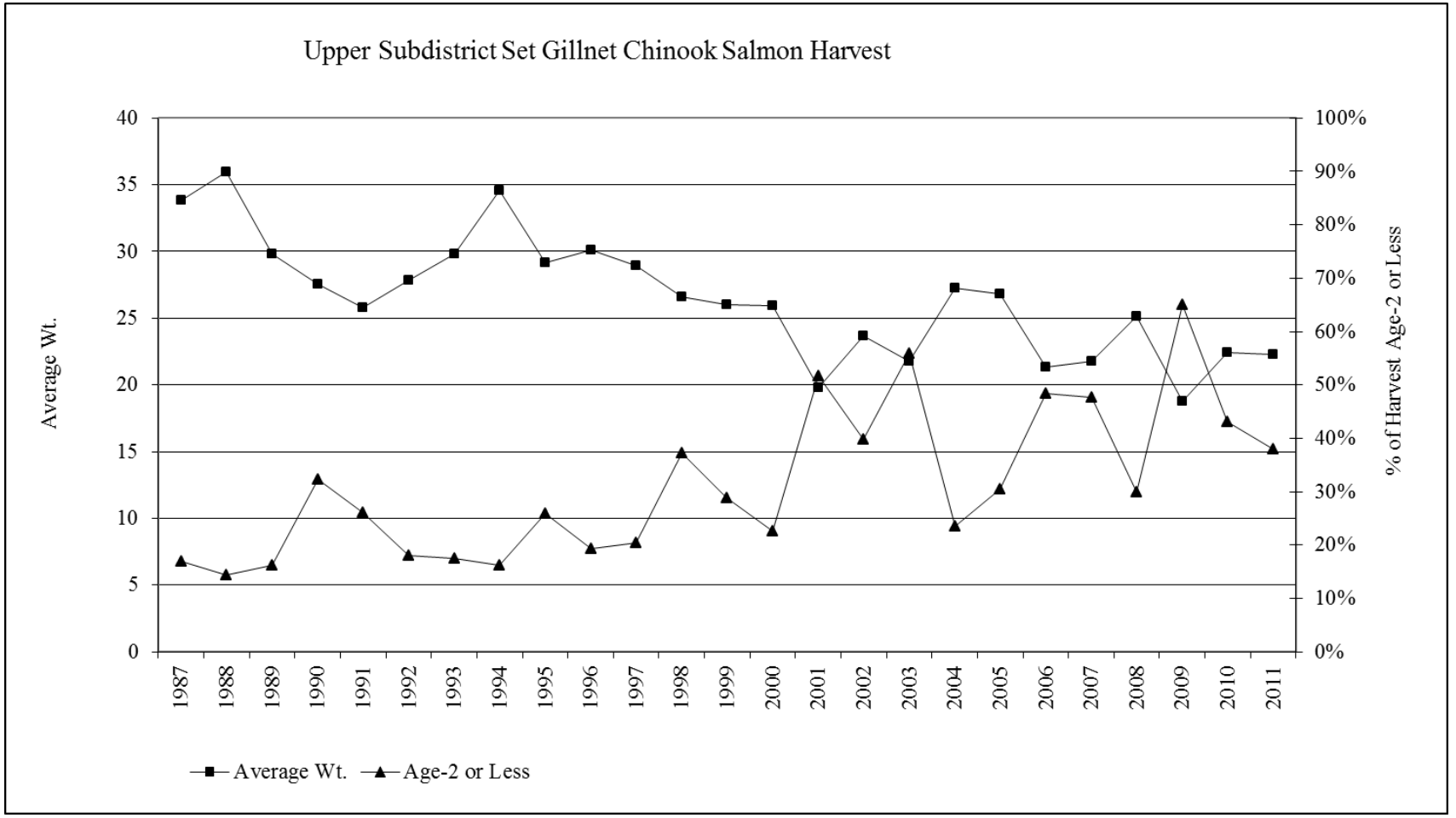

Figure 9.–Chinook salmon average weight (all fish) and percentage of the harvest comprised of ocean-age-2 or less fish in the Upper Subdistrict set gillnet commercial fishery, 1987–2011.

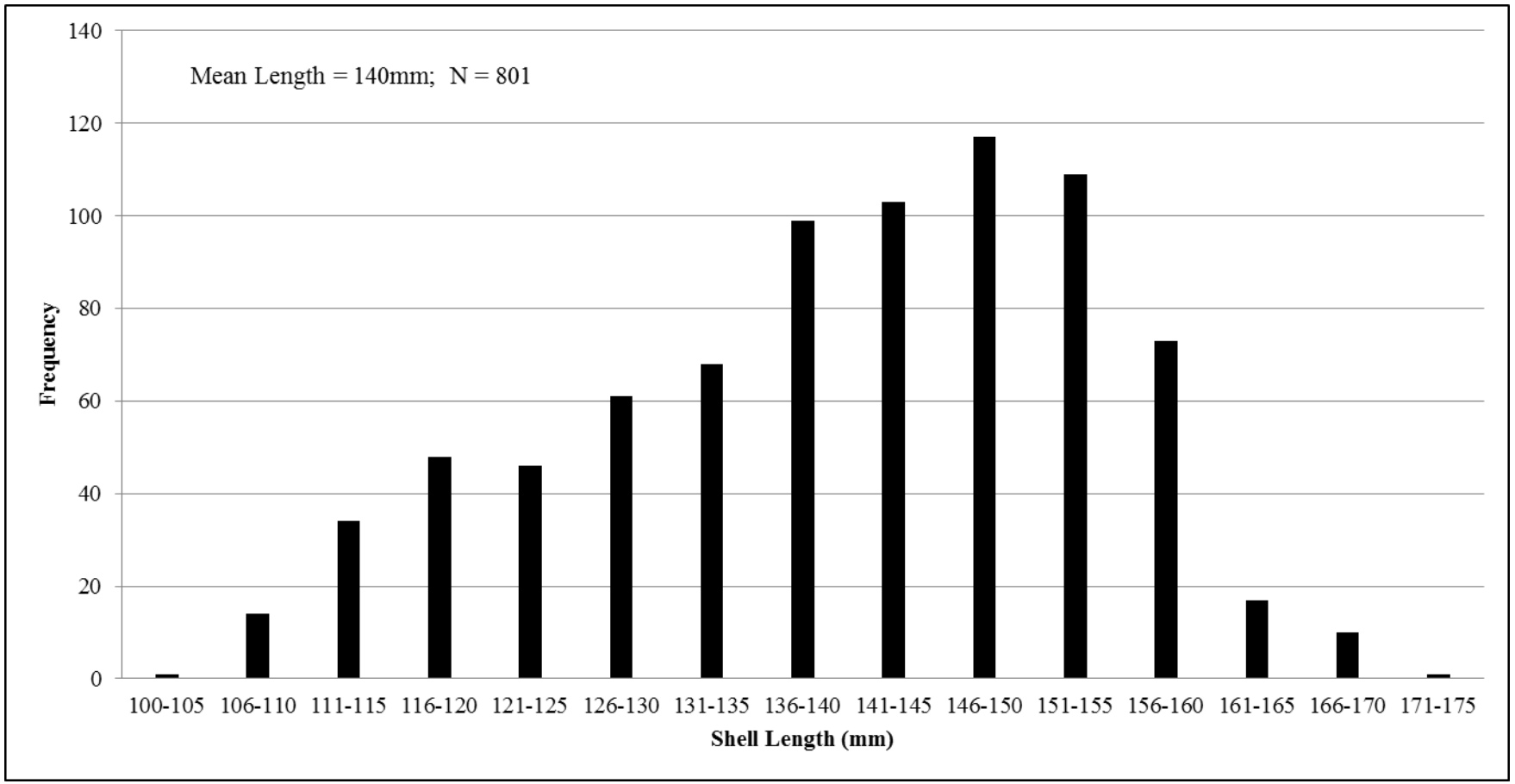

Figure 10.–Length frequency of razor clam shells sampled from the 2011 Polly Creek commercial razor clam fishery.

APPENDIX A: 2011 SEASON DATA

Appendix A1.–Offshore test fish sockeye salmon catch results and environmental data, 2011.

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	221.0	22	22	18	18	568	8.7	10.5	31.3	4	SW	9	S
7/2	6	219.0	76	98	62	79	573	8.7	10.3	30.9	7	SE	2	S
7/3	6	222.5	71	169	57	136	561	8.9	10.6	31.1	6	S	8	SW
7/4	6	221.0	16	185	13	149	563	8.4	10.5	31.0	2	SW	3	SW
7/5	6	222.5	24	209	19	168	582	9.6	12.6	30.3	2	SW	2	SW
7/6	6	218.5	16	225	13	181	565	8.9	10.2	30.9	7	SW	6	SW
7/7	6	214.5	5	230	4	185	585	9.0	12.2	30.9	2	NW	0	na
7/8	6	212.0	8	238	7	192	581	9.0	10.8	30.9	3	SW	4	SW
7/9	6	216.0	43	281	34	227	576	9.2	11.5	31.0	4	NW	1	E
7/10	6	253.0	622	903	257	483	572	9.5	11.7	30.3	1	SW	2	SW
7/11	6	232.0	222	1,125	158	641	574	9.6	10.7	30.6	5	N	3	N
7/12	6	236.5	235	1,360	172	814	572	9.8	10.7	30.1	3	SW	7	S
7/13	6	250.5	459	1,819	312	1,126	567	9.8	13.0	30.5	4	SE	2	SE
7/14	6	243.5	380	2,199	243	1,369	577	9.6	12.3	30.5	0	na	5	SW
7/15	6	266.5	657	2,856	378	1,747	571	9.7	11.3	30.8	6	S	0	SE
7/16	6	259.0	450	3,306	291	2,038	576	9.5	11.5	30.7	5	SW	2	SW
7/17	6	217.5	194	3,500	131	2,169	576	9.2	10.0	30.9	9	S	12	SW
7/18	6	226.0	137	3,637	109	2,277	575	9.4	11.0	30.8	4	SW	7	SW
7/19	6	222.0	47	3,684	36	2,314	576	10.8	13.0	30.3	1	NW	3	SW
7/20	6	225.5	184	3,868	135	2,448	581	9.4	12.8	31.1	1	NW	0	na
7/21	6	226.5	71	3,939	54	2,502	579	10.0	11.3	30.6	1	SE	2	SW
7/22	6	251.0	392	4,331	263	2,766	575	10.1	11.7	30.4	3	S	5	S
7/23	6	239.5	227	4,558	162	2,928	577	10.4	12.2	30.3	2	S	5	SW
7/24	6	226.5	231	4,789	153	3,081	574	10.3	10.8	30.3	6	S	1	SW
7/25	6	228.0	155	4,944	121	3,201	575	11.9	13.0	28.9	3	SW	3	N
7/26	6	234.0	184	5,128	138	3,339	573	11.4	11.3	29.1	6	S	2	N
7/27	6	219.5	38	5,166	29	3,369	574	11.0	12.4	29.4	5	N	6	N
7/28	6	232.5	195	5,361	138	3,507	569	10.9	11.0	29.8	7	SE	5	SE
7/29	6	231.0	209	5,570	143	3,650	570	10.7	12.0	30.0	2	SE	1	SE
7/30	6	230.0	90	5,660	66	3,715	569	10.6	12.3	29.7	2	S	4	SE

Appendix A2.–Upper Cook Inlet sockeye salmon enumeration by watershed and date, 2011.

	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			5,521	5,521										
16 Jun			3,192	8,713										
17 Jun			1927	10,640										
18 Jun			2700	13,340										
19 Jun			5,808	19,148										
20 Jun			5,268	24,416										
21 Jun			5,340	29,756										
22 Jun			5,508	35,264										
23 Jun			11,352	46,616										
24 Jun			11,032	57,648			1,786	1,786						
25 Jun			9,162	66,810			1,855	3,641						
26 Jun			768	67,578			356	3,997						
27 Jun			2,442	70,020			169	4,166						
28 Jun			1,344	71,364			114	4,280						
29 Jun			6,012	77,376			801	5,081						
30 Jun			786	78,162			2,948	8,029						
1 Jul	2,256	2,256	2,994	81,156			1,943	9,972						
2 Jul	4,260	6,516	6,606	87,762			1,361	11,333						
3 Jul	3,084	9,600	1,362	89,124			3,227	14,560						
4 Jul	2,244	11,844	2,628	91,752			3,595	18,155						
5 Jul	4,272	16,116	1,392	93,144			2,531	20,686						
6 Jul	4,647	20,763	3,068	96,212			1,950	22,636						
7 Jul	5,302	26,065	534	96,746			2,202	24,838						
8 Jul	4,737	30,802	1,938	98,684			2,024	26,862						
9 Jul	6,522	37,324	2,268	100,952			1,184	28,046						
10 Jul	6,846	44,170	846	101,798			889	28,935						

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Appendix A2.–Page 2 of 4.

	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	3,510	47,680	1,398	103,196			1,314	30,249						
12 Jul	3,102	50,782	786	103,982			2,624	32,873						
13 Jul	3,822	54,604	1,578	105,560			2,771	35,644						
14 Jul	6,400	61,004	1,146	106,706			4,112	39,756					8	8
15 Jul	2,916	63,920	1,278	107,984			8,723	48,479	35	35			1	9
16 Jul	27,826	91,746	10,302	118,286	52	52	5,906	54,385	366	401			0	9
17 Jul	230,643	322,389	13,542	131,828	88	140	5,034	59,418	23	424			0	9
18 Jul	177,053	499,442	15,042	146,870	578	718	3,427	62,845	329	753			0	9
19 Jul	87,978	587,420	5,506	152,376	384	1,102	3,432	66,277	94	847			40	49
20 Jul	113,178	700,598	11,838	164,214	991	2,093	1,981	68,258	146	993			32	81
21 Jul	90,426	791,024	3,924	168,138	1,059	3,152	1,621	69,879	169	1,162			0	81
22 Jul	37,974	828,998	5,856	173,994	1,135	4,287	962	70,841	1,749	2,911			76	157
23 Jul	106,313	935,311	11,214	185,208	1,713	6,000	1,464	72,304	11,583	14,494			582	739
24 Jul	110,772	1,046,083	8,178	193,386	2,539	8,539	1,321	73,625	8,338	22,832	45	45	1,436	2,175
25 Jul	79,518	1,125,601	7,914	201,300	14,099	22,638	3,678	77,303	8,911	31,743	802	847	1,631	3,806
26 Jul	77,982	1,203,583	7,351	208,651	10,142	32,780	853	78,156	7,407	39,150	2,977	3,824	435	4,241
27 Jul	73,092	1,276,675	5,826	214,477	8,827	41,607	593	78,749	4,336	43,486	3,015	6,839	971	5,212
28 Jul	55,470	1,332,145	3,191	217,668	6,149	47,756	901	79,650	3,931	47,417	2,736	9,575	1,412	6,624
29 Jul	36,540	1,368,685	2,908	220,576	1,431	49,187	950	80,601	2,738	50,155	2,468	12,043	543	7,167
30 Jul	30,384	1,399,069	3,102	223,678	163	49,350	497	81,098	1,897	52,052	2,806	14,849	196	7,363
31 Jul	18,240	1,417,309	2,232	225,910	680	50,030	285	81,383	2,228	54,280	2,716	17,565	403	7,766
1 Aug	21,714	1,439,023	2,214	228,124	32	50,062	568	81,952	2,724	57,004	4,015	21,580	429	8,195
2 Aug	20,707	1,459,730	1,907	230,031	44	50,106			1,204	58,208	4,598	26,178	357	8,552

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	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	10,396	1,470,126	1,730	231,761	3161	53,267			1,800	60,008	1,406	27,584	501	9,053
4 Aug	10,074	1,480,200	1,926	233,687	5234	58,501			720	60,728	456	28,040	284	9,337
5 Aug	11,220	1,491,420	2,173	235,860	3041	61,542			648	61,376	512	28,552	484	9,821
6 Aug	22,086	1,513,506	2,466	238,326	1517	63,059			576	61,952	116	28,668	237	10,058
7 Aug	17,317	1,530,823	960	239,286	1223	64,282			504	62,456	1,059	29,727	377	10,435
8 Aug	6,114	1,536,937	1,215	240,501	875	65,157			432	62,888	1,185	30,912	241	10,676
9 Aug	12,198	1,549,135	1,710	242,211	595	65,752			360	63,248	1,061	31,973	135	10,811
10 Aug	16,524	1,565,659	1,908	244,119	434	66,186			288	63,536	1,075	33,048	87	10,898
11 Aug	11,326	1,576,985	1,602	245,721	89	66,275			762	64,298	803	33,851	63	10,961
12 Aug	12,204	1,589,189			72	66,347			737	65,035	841	34,692	318	11,279
13 Aug	10,029	1,599,217			157	66,504			783	65,818	742	35,434	243	11,522
14 Aug					97	66,601			1,123	66,941	764	36,198	302	11,824
15 Aug					77	66,678			1,040	67,981	665	36,863	93	11,917
16 Aug									728	68,709	529	37,392	108	12,025
17 Aug									553	69,262	552	37,944	100	12,125
18 Aug									421	69,683	398	38,342	44	12,169
19 Aug									237	69,920	522	38,864	3	12,172
20 Aug									160	70,080	378	39,242	2	12,174
21 Aug									119	70,199	98	39,340	0	12,174
22 Aug									102	70,301	110	39,450	24	12,198
23 Aug									52	70,353	81	39,531	69	12,267
24 Aug											75	39,606	32	12,299
25 Aug											50	39,656	21	12,320
26 Aug											48	39,704	0	12,320
27 Aug											32	39,736	21	12,341
28 Aug											32	39,768	19	12,360

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	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
29 Aug											22	39,790	17	12,377
30 Aug											23	39,813	8	12,385
31 Aug											86	39,899	28	12,413
1 Sep											37	39,936	0	12,413
2 Sep											17	39,953		
3 Sep											31	39,984		
4 Sep											13	39,997		
5 Sep														
6 Sep														
7 Sep														
8 Sep														
9 Sep														
10 Sep														
11 Sep														
12 Sep														
13 Sep														

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, 2011.

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
25 Jun	53	53	18	18	32	32	-	-	-	-	-	-	103	103
27 Jun	44	97	23	41	16	48	-	-	-	-	-	-	83	186
29 Jun	43	140	72	113	25	73	-	-	-	-	-	-	140	326
30 Jun	59	199	63	176	57	130	-	-	-	-	-	-	179	505
2 Jul	24	223	44	220	58	188	-	-	-	-	-	-	126	631
4 Jul	33	256	68	288	48	236	-	-	-	-	-	-	149	780
6 Jul	63	319	78	366	61	297	-	-	-	-	-	-	202	982
7 Jul	92	411	91	457	41	338	-	-	-	-	-	-	224	1,206
9 Jul	135	546	110	567	84	422	-	-	-	-	-	-	329	1,535
11 Jul	93	639	80	647	86	508	72	72	235	235	3	3	569	2,104
13 Jul	89	728	129	776	94	602	-	-	-	-	-	-	312	2,416
14 Jul	176	904	166	942	160	762	99	171	243	478	9	12	853	3,269
16 Jul	43	947	72	1,014	99	861	67	238	77	555	9	21	367	3,636
18 Jul	56	1,003	64	1,078	188	1,049	77	315	90	645	11	32	486	4,122

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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
20 Jul	47	1,050	58	1,136	88	1,137	94	409	125	770	3	35	415	4,537
21 Jul	68	1,118	79	1,215	124	1,261	78	487	99	869	3	38	451	4,988
23 Jul	48	1,166	71	1,286	90	1,351	60	547	63	932	3	41	335	5,323
24 Jul	50	1,216	23	1,309	33	1,384	27	574	47	979	4	45	184	5,507
25 Jul	48	1,264	39	1,348	74	1,458	26	600	45	1,024	5	50	237	5,744
27 Jul	18	1,282	29	1,377	45	1,503	41	641	76	1,100	1	51	210	5,954
28 Jul	55	1,337	38	1,415	61	1,564	40	681	64	1,164	1	52	259	6,213
30 Jul	34	1,371	55	1,470	81	1,645	38	719	94	1,258	8	60	310	6,523
31 Jul	53	1,424	32	1,502	67	1,712	24	743	78	1,336	5	65	259	6,782
1 Aug	22	1,446	46	1,548	50	1,762	34	777	65	1,401	2	67	219	7,001
2 Aug	22	1,468	31	1,579	60	1,822	33	810	58	1,459	-	-	204	7,205
4 Aug	8	1,476	18	1,597	92	1,914	30	840	57	1,516	5	72	210	7,415
6 Aug	4	1,480	7	1,604	39	1,953	11	851	51	1,567	8	80	120	7,535
7 Aug	30	1,510	6	1,610	52	2,005	16	867	55	1,622	3	83	162	7,697

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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	-	-	-	-	-	-	-	-	-	-	26	26	-	-	59	59	-	-	85	85
3 Jun	-	-	-	-	-	-	-	-	-	-	3	29	-	-	63	122	-	-	66	151
6 Jun	-	-	-	-	-	-	-	-	-	-	10	39	-	-	108	230	-	-	118	269
8 Jun	-	-	-	-	-	-	-	-	-	-	21	60	-	-	66	296	-	-	87	356
10 Jun	-	-	-	-	-	-	-	-	-	-	12	72	-	-	53	349	-	-	65	421
13 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	372	-	-	23	444
15 Jun	-	-	-	-	-	-	-	-	-	-	2	74	-	-	35	407	-	-	37	481
16 Jun	-	-	-	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	5	486
17 Jun	-	-	-	-	-	-	-	-	-	-	2	76	-	-	17	424	-	-	19	505
20 Jun	-	-	-	-	11	16	-	-	-	-	1	77	-	-	11	435	-	-	23	528
22 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	441	-	-	6	534
23 Jun	-	-	-	-	13	29	-	-	-	-	-	-	-	-	-	-	-	-	13	547
24 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	447	-	-	6	553
27 Jun	-	-	-	-	18	47	-	-	-	-	-	-	-	-	6	453	2	2	26	579
30 Jun	-	-	-	-	13	60	-	-	-	-	-	-	-	-	2	455	-	-	15	594
3 Jul	-	-	-	-	4	64	-	-	-	-	-	-	-	-	-	-	-	-	4	598
4 Jul	-	-	-	-	14	78	-	-	-	-	-	-	-	-	-	-	-	-	14	612

-continued-

Appendix A3.–Page 4 of 7.

Central District - West Side Set Gillnet

	245-10 Chinitna Bay		245-20 Silv. Salmon		245-30 Tuxedni Bay		245-40 Polly Cr.		245-50 L. J. Slough		245-55 Big River		245-60 W. Forelands		246-10 Kalgin - West		246-20 Kalgin - East		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
7 Jul	-	-	-	-	11	89	-	-	-	-	-	-	-	-	-	-	-	-	11	623
9 Jul	-	-	-	-	4	93	-	-	-	-	-	-	-	-	-	-	-	-	4	627
10 Jul	-	-	-	-	4	97	-	-	-	-	-	-	-	-	-	-	-	-	4	631
11 Jul	-	-	-	-	2	99	-	-	-	-	-	-	-	-	2	457	-	-	4	635
12 Jul	-	-	-	-	1	100	-	-	-	-	-	-	-	-	-	-	-	-	1	636
13 Jul	-	-	-	-	2	102	-	-	-	-	-	-	-	-	-	-	-	-	2	638
14 Jul	-	-	-	-	3	105	-	-	-	-	-	-	-	-	1	458	-	-	4	642
16 Jul	-	-	-	-	2	107	-	-	-	-	-	-	-	-	-	-	-	-	2	644
18 Jul	-	-	-	-	1	108	-	-	-	-	-	-	-	-	-	-	1	3	2	646
19 Jul	-	-	-	-	1	109	-	-	-	-	-	-	-	-	-	-	-	-	1	647
20 Jul	-	-	-	-	2	111	-	-	-	-	-	-	-	-	-	-	-	-	2	649
22 Jul	-	-	-	-	4	115	-	-	-	-	-	-	-	-	-	-	-	-	4	653
25 Jul	-	-	-	-	1	116	-	-	-	-	-	-	-	-	-	-	-	-	1	654
29 Jul	-	-	-	-	1	117	-	-	-	-	-	-	-	-	-	-	-	-	1	655
30 Jul	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	459	-	-	1	656
1 Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	461	-	-	2	658
15 Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	462	-	-	1	659

-continued-

Northern District Set Gillnet

	247-10 Trading Bay		247-20 Tyonek		247-30 Beluga		247-41 Su. Flats		247-42 Pt. McKenzie		247-43 Fire Island		247-70 Pt. Possesion		247-80 Birch Hill		247-90 #3 Bay		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
30 May	118	118	85	85	-	-	57	57	73	73	129	129	55	55	29	29	6	6	552	552
6 Jun	305	423	192	277	-	-	51	108	53	126	112	241	64	119	19	48	25	31	821	1,373
13 Jun	132	555	208	485	-	-	31	139	60	186	72	313	66	185	18	66	13	44	600	1,973
20 Jun	27	582	83	568	-	-	18	157	20	206	32	345	22	207	3	69	9	53	214	2,187
27 Jun	-	-	37	605	-	-	2	159	-	-	-	-	5	212	-	-	1	54	45	2,232
30 Jun	-	-	2	607	14	14	-	-	-	-	28	373	-	-	1	70	4	58	49	2,281
4 Jul	-	-	3	610	-	-	-	-	-	-	-	-	-	-	1	71	-	-	4	2,285
7 Jul	1	583	2	612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2,288
11 Jul	-	-	-	-	-	-	2	161	-	-	-	-	-	-	-	-	-	-	2	2,290
14 Jul	-	-	-	-	-	-	-	-	5	211	-	-	-	-	-	-	-	-	5	2,295
28 Jul	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	72	-	-	1	2,296
8 Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	59	1	2,297
15 Aug	-	-	-	-	-	-	2	163	-	-	-	-	-	-	-	-	-	-	2	2,299

-continued-

Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
20 Jun	90	-	-	-	-	-	-	23	23	23	23
23 Jun	102	-	-	-	-	-	-	56	79	56	79
25 Jun	7	1	1	-	-	-	-	-	-	1	80
27 Jun	185	-	-	-	-	-	-	36	115	36	116
29 Jun	16	5	6	-	-	-	-	-	-	5	121
30 Jun	253	-	-	-	-	-	-	50	165	50	171
2 Jul	45	2	8	-	-	-	-	-	-	2	173
4 Jul	342	-	-	-	-	-	-	42	207	42	215
6 Jul	45	9	17	-	-	-	-	-	-	9	224
7 Jul	281	-	-	-	-	-	-	44	251	44	268
9 Jul	82	9	26	-	-	-	-	-	-	9	277
11 Jul	354	-	-	32	32	-	-	-	-	32	309
14 Jul	402	-	-	-	-	-	-	27	278	27	336
16 Jul	384	-	-	77	109	-	-	-	-	77	413
18 Jul	403	-	-	-	-	-	-	34	312	34	447
19 Jul	326	-	-	15	124	-	-	-	-	15	462

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Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
20 Jul	340	-	-	26	150	-	-	-	-	26	488
21 Jul	401	-	-	-	-	-	-	15	327	15	503
22 Jul	303	-	-	12	162	-	-	-	-	12	515
23 Jul	327	-	-	-	-	-	-	12	339	12	527
24 Jul	161	-	-	9	171	-	-	-	-	9	536
25 Jul	381	-	-	-	-	-	-	12	351	12	548
26 Jul	294	-	-	5	176	-	-	-	-	5	553
27 Jul	315	-	-	-	-	-	-	11	362	11	564
28 Jul	253	-	-	-	-	-	-	9	371	9	573
29 Jul	135	-	-	4	180	-	-	-	-	4	577
30 Jul	137	-	-	6	186	-	-	-	-	6	583
31 Jul	80	-	-	1	187	-	-	-	-	1	584
1 Aug	253	-	-	-	-	-	-	3	374	3	587
2 Aug	34	-	-	3	190	-	-	-	-	3	590
4 Aug	141	-	-	-	-	-	-	2	376	2	592
18 Aug	4	-	-	-	-	-	-	1	377	1	593

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

Appendix A4.–Commercial sockeye salmon catch by area and date, Upper Cook Inlet, 2011.

Upper Subdistrict Set Gillnet														
	244-21		244-22		244-31		244-32		244-41		244-42			
	Ninilchik		Cohoe		South K-Beach		North K-Beach		Salamatof		E. Forelands		Total	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
25 Jun	9,304	9,304	3,324	3,324	10,911	10,911	-	-	-	-	-	-	23,539	23,539
27 Jun	12,035	21,339	4,442	7,766	1,772	12,683	-	-	-	-	-	-	18,249	41,788
29 Jun	5,577	26,916	4,770	12,536	5,159	17,842	-	-	-	-	-	-	15,506	57,294
30 Jun	7,647	34,563	2,887	15,423	4,793	22,635	-	-	-	-	-	-	15,327	72,621
2 Jul	6,903	41,466	5,374	20,797	7,558	30,193	-	-	-	-	-	-	19,835	92,456
4 Jul	9,982	51,448	5,116	25,913	5,726	35,919	-	-	-	-	-	-	20,824	113,280
6 Jul	5,373	56,821	5,127	31,040	3,500	39,419	-	-	-	-	-	-	14,000	127,280
7 Jul	6,515	63,336	3,921	34,961	2,116	41,535	-	-	-	-	-	-	12,552	139,832
9 Jul	11,267	74,603	4,691	39,652	2,686	44,221	-	-	-	-	-	-	18,644	158,476
11 Jul	14,427	89,030	4,567	44,219	1,449	45,670	1,588	1,588	3,952	3,952	586	586	26,569	185,045
13 Jul	38,168	127,198	16,684	60,903	2,009	47,679	-	-	-	-	-	-	56,861	241,906
14 Jul	16,970	144,168	7,322	68,225	1,225	48,904	871	2,459	2,466	6,418	353	939	29,207	271,113
16 Jul	103,582	247,750	98,556	166,781	74,036	122,940	49,222	51,681	125,165	131,583	21,587	22,526	472,148	743,261
18 Jul	57,428	305,178	72,937	239,718	29,571	152,511	18,745	70,426	61,977	193,560	11,063	33,589	251,941	995,202

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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
20 Jul	53,013	358,191	39,411	279,129	31,779	184,290	24,554	94,980	62,593	256,153	10,235	43,824	221,585	1,216,787
21 Jul	9,553	367,744	7,525	286,654	4,259	188,549	5,259	100,239	38,045	294,198	7,484	51,308	72,125	1,288,912
23 Jul	35,029	402,773	21,154	307,808	14,405	202,954	26,286	126,525	92,180	386,378	11,484	62,792	200,538	1,489,450
24 Jul	20,114	422,887	14,576	322,384	7,169	210,123	10,368	136,893	28,691	415,069	3,839	66,631	84,757	1,574,207
25 Jul	5,897	428,784	5,221	327,605	6,831	216,954	9,398	146,291	33,867	448,936	6,495	73,126	67,709	1,641,916
27 Jul	3,619	432,403	1,801	329,406	3,633	220,587	5,760	152,051	18,976	467,912	2,484	75,610	36,273	1,678,189
28 Jul	1,144	433,547	1,816	331,222	2,756	223,343	5,650	157,701	16,042	483,954	2,508	78,118	29,916	1,708,105
30 Jul	959	434,506	1,340	332,562	2,102	225,445	3,317	161,018	26,510	510,464	4,298	82,416	38,526	1,746,631
31 Jul	1,230	435,736	1,570	334,132	2,782	228,227	3,435	164,453	21,905	532,369	5,449	87,865	36,371	1,783,002
1 Aug	1,322	437,058	2,003	336,135	1,736	229,963	3,192	167,645	16,906	549,275	3,226	91,091	28,385	1,811,387
2 Aug	728	437,786	931	337,066	1,150	231,113	1,803	169,448	5,917	555,192	881	91,972	11,410	1,822,797
4 Aug	1,641	439,427	965	338,031	1,365	232,478	2,196	171,644	16,738	571,930	6,556	98,528	29,461	1,852,258
6 Aug	1,494	440,921	939	338,970	901	233,379	720	172,364	7,379	579,309	2,134	100,662	13,567	1,865,825
7 Aug	1,593	442,514	745	339,715	1,379	234,758	2,136	174,500	4,051	583,360	1,933	102,595	11,837	1,877,662

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Central District - West Side Set Gillnet

	245-10		245-20		245-30		245-40		245-50		245-55		245-60		246-10		246-20			
	Chinitna Bay		Silv. Salmon		Tuxedni Bay		Polly Cr.		L. J. Slough		Big River		W. Forelands		Kalgin - West		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	-	-	-	-	-	-	-	-	-	-	619	619	-	-	2,247	2,247	-	-	2,866	2,866
3 Jun	-	-	-	-	-	-	-	-	-	-	486	1,105	-	-	4,121	6,368	-	-	4,607	7,473
6 Jun	-	-	-	-	-	-	-	-	-	-	876	1,981	-	-	2,059	8,427	-	-	2,935	10,408
8 Jun	-	-	-	-	-	-	-	-	-	-	500	2,481	-	-	1,232	9,659	-	-	1,732	12,140
10 Jun	-	-	-	-	-	-	-	-	-	-	167	2,648	-	-	1,130	10,789	-	-	1,297	13,437
13 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	707	11,496	-	-	707	14,144
15 Jun	-	-	-	-	-	-	-	-	-	-	187	2,835	-	-	526	12,022	-	-	713	14,857
16 Jun	-	-	-	-	120	120	-	-	-	-	-	-	-	-	-	-	-	-	120	14,977
17 Jun	-	-	-	-	-	-	-	-	-	-	96	2,931	-	-	1,233	13,255	-	-	1,329	16,306
20 Jun	-	-	-	-	1,215	1,335	-	-	-	-	66	2,997	-	-	535	13,790	-	-	1,816	18,122
22 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	569	14,359	-	-	569	18,691
23 Jun	-	-	-	-	1,390	2,725	-	-	48	48	-	-	-	-	-	-	-	-	1,438	20,129
24 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	424	14,783	-	-	424	20,553
27 Jun	-	-	-	-	2,332	5,057	-	-	-	-	-	-	-	-	857	15,640	403	403	3,592	24,145
30 Jun	-	-	-	-	1,657	6,714	-	-	-	-	-	-	-	-	572	16,212	261	664	2,490	26,635
3 Jul	-	-	-	-	2,619	9,333	-	-	-	-	-	-	-	-	-	-	-	-	2,619	29,254
4 Jul	-	-	-	-	3,300	12,633	-	-	34	82	-	-	-	-	1,524	17,736	285	949	5,143	34,397
6 Jul	-	-	-	-	4,870	17,503	-	-	-	-	-	-	-	-	-	-	-	-	4,870	39,267
7 Jul	-	-	-	-	4,216	21,719	-	-	28	110	-	-	-	-	1,612	19,348	435	1,384	6,291	45,558
8 Jul	-	-	-	-	1,777	23,496	-	-	-	-	-	-	-	-	-	-	-	-	1,777	47,335
9 Jul	-	-	-	-	2,597	26,093	-	-	-	-	-	-	-	-	-	-	-	-	2,597	49,932
10 Jul	-	-	-	-	4,669	30,762	-	-	-	-	-	-	-	-	-	-	-	-	4,669	54,601
11 Jul	-	-	-	-	2,490	33,252	58	58	-	-	-	-	-	-	2,788	22,136	126	1,510	5,462	60,063
12 Jul	-	-	-	-	2,727	35,979	-	-	-	-	-	-	-	-	-	-	-	-	2,727	62,790
13 Jul	-	-	-	-	1,435	37,414	-	-	-	-	-	-	-	-	-	-	-	-	1,435	64,225

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Central District - West Side Set Gillnet

	245-10		245-20		245-30		245-40		245-50		245-55		245-60		246-10		246-20			
	Chinitna Bay		Silv. Salmon		Tuxedni Bay		Polly Cr.		L. J. Slough		Big River		W. Forelands		Kalgin - West		Kalgin - East		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
14 Jul	-	-	-	-	3,870	41,284	-	-	68	178	-	-	-	-	462	22,598	97	1,607	4,497	68,722
15 Jul	-	-	-	-	1,750	43,034	-	-	-	-	-	-	-	-	-	-	-	-	1,750	70,472
16 Jul	-	-	-	-	3,827	46,861	-	-	-	-	-	-	-	-	-	-	-	-	3,827	74,299
17 Jul	-	-	-	-	2,036	48,897	-	-	-	-	-	-	-	-	-	-	-	-	2,036	76,335
18 Jul	-	-	-	-	142	49,039	-	-	167	345	-	-	240	240	13,692	36,290	1,220	2,827	15,461	91,796
19 Jul	-	-	-	-	489	49,528	-	-	-	-	-	-	-	-	-	-	-	-	489	92,285
20 Jul	-	-	-	-	5,754	55,282	-	-	-	-	-	-	-	-	-	-	-	-	5,754	98,039
21 Jul	-	-	-	-	268	55,550	-	-	426	771	-	-	214	454	10,814	47,104	2,970	5,797	14,692	112,731
22 Jul	-	-	-	-	4,710	60,260	-	-	-	-	-	-	-	-	-	-	-	-	4,710	117,441
23 Jul	-	-	-	-	2,889	63,149	-	-	-	-	-	-	-	-	-	-	-	-	2,889	120,330
24 Jul	-	-	-	-	646	63,795	-	-	-	-	-	-	-	-	-	-	-	-	646	120,976
25 Jul	-	-	-	-	1,875	65,670	-	-	436	1,207	-	-	177	631	5,719	52,823	2,203	8,000	10,410	131,386
26 Jul	-	-	-	-	316	65,986	-	-	-	-	-	-	-	-	-	-	-	-	316	131,702
27 Jul	-	-	-	-	538	66,524	-	-	-	-	-	-	-	-	-	-	-	-	538	132,240
28 Jul	-	-	-	-	1,160	67,684	-	-	247	1,454	-	-	213	844	5,499	58,322	1,801	9,801	8,920	141,160
29 Jul	-	-	-	-	547	68,231	-	-	-	-	-	-	-	-	-	-	-	-	547	141,707
30 Jul	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,771	65,093	2,401	12,202	9,172	150,879
1 Aug	-	-	-	-	230	68,461	-	-	203	1,657	-	-	-	-	3,800	68,893	1,203	13,405	5,436	156,315
4 Aug	-	-	-	-	9	68,470	-	-	198	1,855	-	-	-	-	2,036	70,929	313	13,718	2,556	158,871
7 Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	447	71,376	129	13,847	576	159,447
8 Aug	-	-	-	-	-	-	-	-	102	1,957	-	-	-	-	370	71,746	110	13,957	582	160,029
11 Aug	-	-	-	-	51	68,521	-	-	135	2,092	-	-	-	-	836	72,582	433	14,390	1,455	161,484
15 Aug	-	-	-	-	4	68,525	-	-	50	2,142	-	-	-	-	1,162	73,744	453	14,843	1,669	163,153
18 Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	322	74,066	-	-	322	163,475
22 Aug	-	-	-	-	20	68,545	-	-	12	2,154	-	-	-	-	32	74,098	-	-	64	163,539

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Appendix A4.–Page 5 of 7.

	247-10 Trading Bay		247-20 Tyonek		247-30 Beluga		247-41 Su. Flats		247-42 Pt. McKenzie		247-43 Fire Island		247-70 Pt. Possession		247-80 Birch Hill		247-90 #3 Bay		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
30-May	69	69	3	3	-	-	13	13	12	12	11	11	362	362	294	294	103	103	867	867
6-Jun	333	402	32	35	-	-	13	26			11	22	219	581	91	385	320	423	1,019	1,886
13-Jun	155	557	9	44	-	-	7	33	2	14	7	29	148	729	60	445	100	523	488	2,374
20-Jun	11	568	14	58	-	-	-	-	2	16	-	-	36	765	41	486	77	600	181	2,555
27-Jun	-	-	71	129	-	-	3	36			-	-	23	788	-	-	46	646	143	2,698
30-Jun	-	-	155	284	328	328	-	-	-	-	4	33	112	900	27	513	104	750	730	3,428
4-Jul	16	584	741	1,025	90	418	7	43	-	-	-	-	71	971	41	554	128	878	1,094	4,522
7-Jul	34	618	1,169	2,194	137	555	33	76	76	92	-	-	221	1,192	43	597	140	1,018	1,853	6,375
11-Jul	-	-	570	2,764	177	732	40	116	157	249	36	69	145	1,337	30	627	22	1,040	1,177	7,552
14-Jul	-	-	440	3,204	227	959	69	185	269	518	66	135	174	1,511	33	660	29	1,069	1,307	8,859
18-Jul	117	735	3,143	6,347	3,141	4,100	614	799	1,065	1,583	1,421	1,556	1,490	3,001	517	1177	436	1,505	11,724	20,583
21-Jul	-	-	1,160	7,507	560	4,660	790	1,589	1,120	2,703	294	1,850	215	3,216	178	1,355	126	1,631	4,443	25,026
25-Jul	67	802	591	8,098	549	5,209	1,141	2,730	608	3,311	174	2,024	305	3,521	249	1,604	253	1,884	3,937	28,963
28-Jul	72	874	449	8,547	358	5,567	232	2,962	583	3,894	54	2,078	142	3,663	229	1,833	123	2,007	2,242	31,205
1-Aug	46	920	268	8,815	58	5,625	185	3,147	268	4,162	7	2,085	151	3,814	214	2,047	144	2,151	1,341	32,546
4-Aug	-	-	116	8,931	7	5,632	-	-	70	4,232	17	2,102	372	4,186	188	2,235	93	2,244	863	33,409
8-Aug	6	926	91	9,022	15	5,647	26	3,173	44	4,276	27	2,129	117	4,303	111	2,346	204	2,448	641	34,050
11-Aug	-	-	68	9,090	20	5,667	21	3,194	58	4,334	24	2,153	82	4,385	55	2,401	95	2,543	423	34,473
15-Aug	-	-	77	9,167	-	-	5	3,199	8	4,342	8	2,161	51	4,436	55	2,456	55	2,598	259	34,732
18-Aug	-	-	30	9,197	-	-	9	3,208	6	4,348	-	-	73	4,509	44	2,500	53	2,651	215	34,947
22-Aug	-	-	-	-	-	-	-	-	4	4,352	3	2,164	82	4,591	26	2,562	43	2,694	158	35,105
25-Aug	-	-	-	-	-	-	-	-	1	4,353	-	-	16	4,607	-	-	7	2,701	24	35,129
29-Aug	-	-	-	-	-	-	-	-	-	-	-	-	7	4,614	-	-	19	2,720	26	35,155
1-Sep	-	-	-	-	-	-	-	-	-	-	-	-	5	4,619	-	-	14	2,734	19	35,174
5-Sep	-	-	-	-	-	-	-	-	-	-	-	-	11	4,630	-	-	-	-	11	35,185
8-Sep	-	-	-	-	-	-	-	-	-	-	-	-	5	4,635	-	-	5	2,739	10	35,195
12-Sep	-	-	-	-	-	-	-	-	-	-	-	-	6	4,641	-	-	-	-	6	35,201
15-Sep	-	-	-	-	-	-	-	-	-	-	-	-	3	4,644	-	-	-	-	3	35,204

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Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
20 Jun	90	-	-	-	-	-	-	3,140	3,140	3,140	3,140
23 Jun	102	-	-	-	-	-	-	4,164	7,304	4,164	7,304
25 Jun	7	144	144	-	-	-	-	-	-	144	7,448
27 Jun	185	-	-	-	-	-	-	15,597	22,901	15,597	23,045
29 Jun	16	922	1,066	-	-	-	-	-	-	922	23,967
30 Jun	253	-	-	-	-	-	-	37,017	59,918	37,017	60,984
2 Jul	45	1,211	2,277	-	-	-	-	29	59,947	1,240	62,224
4 Jul	342	-	-	-	-	-	-	31,833	91,780	31,833	94,057
6 Jul	45	2,884	5,161	-	-	-	-	-	-	2,884	96,941
7 Jul	281	-	-	-	-	-	-	86,442	178,222	86,442	183,383
9 Jul	82	3,647	8,808	-	-	-	-	-	-	3,647	187,030
11 Jul	354	-	-	105,866	105,866	-	-	-	-	105,866	292,896
14 Jul	402	-	-	-	-	-	-	691,622	869,844	691,622	984,518
16 Jul	384	-	-	218,220	324,086	-	-	-	-	218,220	1,202,738
18 Jul	403	-	-	-	-	-	-	529,850	1,399,694	529,850	1,732,588
19 Jul	326	-	-	161,413	485,499	-	-	-	-	161,413	1,894,001
20 Jul	340	-	-	108,267	593,766	-	-	-	-	108,267	2,002,268
21 Jul	401	-	-	-	-	-	-	392,787	1,792,481	392,787	2,395,055
22 Jul	303	-	-	187,380	781,146	-	-	-	-	187,380	2,582,435
23 Jul	327	-	-	-	-	-	-	224,003	2,016,484	224,003	2,806,438

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Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
24 Jul	161	-	-	57,648	838,794	-	-	-	-	57,648	2,864,086
25 Jul	381	-	-	-	-	-	-	129,245	2,145,729	129,245	2,993,331
26 Jul	294	-	-	47,724	886,518	-	-	-	-	47,724	3,041,055
27 Jul	315	-	-	-	-	-	-	46,118	2,191,847	46,118	3,087,173
28 Jul	253	-	-	-	-	-	-	37,271	2,229,118	37,271	3,124,444
29 Jul	135	-	-	11,696	898,214	-	-	-	-	11,696	3,136,140
30 Jul	137	-	-	21,963	920,177	-	-	-	-	21,963	3,158,103
31 Jul	80	-	-	8,605	928,782	-	-	-	-	8,605	3,166,708
1 Aug	253	-	-	-	-	-	-	23,670	2,252,788	23,670	3,190,378
2 Aug	34	-	-	938	929,720	-	-	-	-	938	3,191,316
4 Aug	141	-	-	-	-	-	-	6,847	2,259,635	6,847	3,198,163
6 Aug	21	-	-	388	930,108	-	-	-	-	388	3,198,551
7 Aug	2	-	-	11	930,119	-	-	32	2,259,667	43	3,198,594
8 Aug	44	-	-	-	-	-	-	1,976	2,261,643	1,976	3,200,570
11 Aug	25	-	-	-	-	-	-	288	2,261,931	288	3,200,858
15 Aug	14	-	-	-	-	-	-	142	2,262,073	142	3,201,000
18 Aug	4	-	-	-	-	-	-	26	2,262,099	26	3,201,026
22 Aug	<4	-	-	-	-	-	-	5	2,262,104	5	3,201,031
1 Sep	4	-	-	-	-	-	-	4	2,262,108	4	3,201,035

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

Appendix A5.–Commercial coho salmon catch by area and date, Upper Cook Inlet, 2011.

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
25 Jun	-	-	1	1	-	-	-	-	-	-	-	-	1	1
29 Jun	1	1	-	-	-	-	-	-	-	-	-	-	1	2
30 Jun	-	-	1	2	-	-	-	-	-	-	-	-	1	3
2 Jul	-	-	1	3	1	1	-	-	-	-	-	-	2	5
4 Jul	-	-	1	4	1	2	-	-	-	-	-	-	2	7
6 Jul	-	-	1	5	-	-	-	-	-	-	-	-	1	8
7 Jul	6	7	7	12	3	5	-	-	-	-	-	-	16	24
9 Jul	4	11	2	14	2	7	-	-	-	-	-	-	8	32
11 Jul	3	14	3	17	2	9	3	3	19	19	19	19	49	81
13 Jul	6	20	1	18	17	26	-	-	-	-	-	-	24	105
14 Jul	5	25	5	23	1	27	8	11	59	78	40	59	118	223
16 Jul	7	32	17	40	34	61	38	49	139	217	146	205	381	604
18 Jul	5	37	17	57	19	80	57	106	100	317	129	334	344	948
20 Jul	6	43	22	79	12	92	37	143	130	447	122	456	329	1,277

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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
21 Jul	16	59	31	110	46	138	109	252	224	671	191	647	617	1,894
23 Jul	58	117	108	218	42	180	86	338	439	1,110	628	1,275	1,361	3,255
24 Jul	137	254	207	425	137	317	216	554	1,574	2,684	1,030	2,305	3,301	6,556
25 Jul	39	293	50	475	36	353	30	584	263	2,947	290	2,595	708	7,264
27 Jul	40	333	15	490	8	361	16	600	240	3,187	338	2,933	657	7,921
28 Jul	88	421	59	549	21	382	38	638	171	3,358	161	3,094	538	8,459
30 Jul	63	484	35	584	14	396	42	680	228	3,586	219	3,313	601	9,060
31 Jul	83	567	68	652	42	438	63	743	274	3,860	168	3,481	698	9,758
1 Aug	84	651	79	731	36	474	71	814	360	4,220	344	3,825	974	10,732
2 Aug	56	707	32	763	44	518	32	846	207	4,427	157	3,982	528	11,260
4 Aug	62	769	96	859	66	584	84	930	374	4,801	266	4,248	948	12,208
6 Aug	171	940	243	1,102	124	708	119	1,049	524	5,325	245	4,493	1,426	13,634
7 Aug	290	1,230	214	1,316	263	971	128	1,177	646	5,971	402	4,895	1,943	15,577

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Central District - West Side Set Gillnet

	245-10		245-20		245-30		245-40		245-50		245-55		245-60		246-10		246-20			
	Chinitna Bay		Silv. Salmon		Tuxedni Bay		Polly Cr.		L. J. Slough		Big River		W. Forelands		Kalgin - West		Kalgin - East		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
30 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	3	3
4 Jul	-	-	-	-	1	1	-	-	-	-	-	-	-	-	9	12	-	-	10	13
6 Jul	-	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	2	15
7 Jul	-	-	-	-	4	7	-	-	-	-	-	-	-	-	52	64	4	4	60	75
8 Jul	-	-	-	-	4	11	-	-	-	-	-	-	-	-	-	-	-	-	4	79
9 Jul	-	-	-	-	12	23	-	-	-	-	-	-	-	-	-	-	-	-	12	91
10 Jul	-	-	-	-	13	36	-	-	-	-	-	-	-	-	-	-	-	-	13	104
11 Jul	-	-	-	-	29	65	-	-	-	-	-	-	-	-	151	215	7	11	187	291
12 Jul	-	-	-	-	48	113	-	-	-	-	-	-	-	-	-	-	-	-	48	339
13 Jul	-	-	-	-	22	135	-	-	-	-	-	-	-	-	-	-	-	-	22	361
14 Jul	-	-	-	-	33	168	-	-	1	1	-	-			161	376	42	53	237	598
15 Jul	-	-	-	-	27	195	-	-	-	-	-	-	-	-	-	-	-	-	27	625
16 Jul	-	-	-	-	48	243	-	-	-	-	-	-	-	-	-	-	-	-	48	673
17 Jul	-	-	-	-	41	284	-	-	-	-	-	-	-	-	-	-	-	-	41	714
18 Jul	-	-	-	-	1	285	-	-	1	2	-	-	31	31	949	1,325	60	113	1,042	1,756
19 Jul	-	-	-	-	19	304	-	-	-	-	-	-	-	-	-	-	-	-	19	1,775
20 Jul	-	-	-	-	258	562	-	-	-	-	-	-	-	-	-	-	-	-	258	2,033
21 Jul	-	-	-	-	1	563	-	-	43	45	-	-	59	90	629	1,954	178	291	910	2,943

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Central District - West Side Set Gillnet

	245-10		245-20		245-30		245-40		245-50		245-55		245-60		246-10		246-20			
	Chinitna Bay		Silv. Salmon		Tuxedni Bay		Polly Cr.		L. J. Slough		Big River		W. Forelands		Kalgin - West		Kalgin - East		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
22 Jul	-	-	-	-	271	834	-	-	-	-	-	-	-	-	-	-	-	-	271	3,214
23 Jul	-	-	-	-	212	1,046	-	-	-	-	-	-	-	-	-	-	-	-	212	3,426
24 Jul	-	-	-	-	16	1,062	-	-	-	-	-	-	-	-	-	-	-	-	16	3,442
25 Jul	-	-	-	-	335	1,397	-	-	58	103	-	-	99	189	2,495	4,449	639	930	3,626	7,068
26 Jul	-	-	-	-	87	1,484	-	-	-	-	-	-	-	-	-	-	-	-	87	7,155
27 Jul	-	-	-	-	45	1,529	-	-	-	-	-	-	-	-	-	-	-	-	45	7,200
28 Jul	-	-	-	-	156	1,685	-	-	38	141	-	-	94	283	811	5,260	222	1,152	1,321	8,521
29 Jul	-	-	-	-	51	1,736	-	-	-	-	-	-	-	-	-	-	-	-	51	8,572
30 Jul	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,161	6,421	481	1,633	1,642	10,214
1 Aug	-	-	-	-	64	1,800	-	-	66	207	-	-	-	-	1,046	7,467	297	1,930	1,473	11,687
4 Aug	-	-	-	-	36	1,836	-	-	42	249	-	-	-	-	885	8,352	121	2,051	1,084	12,771
7 Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320	8,672	63	2,114	383	13,154
8 Aug	-	-	-	-	-	-	-	-	108	357	-	-	-	-	554	9,226	60	2,174	722	13,876
11 Aug	-	-	-	-	32	1,868	-	-	246	603	-	-	-	-	750	9,976	145	2,319	1,173	15,049
15 Aug	-	-	-	-	7	1,875	-	-	209	812	-	-	-	-	750	10,726	271	2,590	1,237	16,286
18 Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	11,026	-	-	300	16,586
22 Aug	-	-	-	-	72	1,947	-	-	70	882	-	-	-	-	32	11,058	-	-	174	16,760

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Northern District Set Gillnet

	247-10 Trading Bay		247-20 Tyonek		247-30 Beluga		247-41 Su. Flats		247-42 Pt. McKenzie		247-43 Fire Island		247-70 Pt. Possession		247-80 Birch Hill		247-90 #3 Bay		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
30 Jun	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
4 Jul	-	-	11	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	13
7 Jul	1	1	56	69	6	6	3	3	1	1	-	-	-	-	-	-	-	-	67	80
11 Jul	-	-	79	148	24	30	-	-	1	2	5	5	6	6	-	-	-	-	115	195
14 Jul	-	-	337	485	232	262	14	17	164	166	45	50	11	17	-	-	-	-	803	998
18 Jul	16	17	379	864	427	689	70	87	106	272	140	190	76	93	34	34	20	20	1,251	2,249
21 Jul	-	-	561	1,425	299	988	116	203	182	454	100	290	49	142	14	48	4	24	1,325	3,574
25 Jul	19	36	372	1,797	900	1,888	413	616	153	607	244	534	262	404	160	208	19	43	2,542	6,116
28 Jul	103	139	187	1,984	796	2,684	369	985	583	1,190	273	807	79	483	60	268	6	49	2,456	8,572
1 Aug	172	311	841	2,825	103	2,787	255	1,240	242	1,432	23	830	99	582	41	309	9	58	1,785	10,357
4 Aug	-	-	582	3,407	77	2,864	-	-	180	1,612	66	896	131	713	53	362	14	72	1,103	11,460
8 Aug	62	373	495	3,902	295	3,159	289	1,529	341	1,953	188	1,084	983	1,696	152	514	112	184	2,917	14,377
11 Aug	-	-	362	4,264	291	3,450	303	1,832	617	2,570	207	1,291	361	2,057	195	709	145	329	2,481	16,858
15 Aug	92	465	426	4,690	-	-	77	1,909	84	2,654	60	1,351	103	2,160	217	926	119	448	1,178	18,036
18 Aug	95	560	173	4,863	-	-	78	1,987	80	2,734	-	-	299	2,459	414	1,340	364	812	1,503	19,539
22 Aug	-	-	146	5,009	-	-	-	-	34	2,768	32	1,383	410	2,869	587	1,927	464	1,276	1,673	21,212
25 Aug	-	-	41	5,050	-	-	-	-	9	2,777	-	-	122	2,991	-	-	145	1,421	317	21,529
29 Aug	-	-	-	-	-	-	-	-	-	-	-	-	45	3,036	-	-	293	1,714	338	21,867
1 Sep	-	-	-	-	-	-	-	-	-	-	-	-	14	3,050	-	-	21	1,735	35	21,902
5 Sep	-	-	-	-	-	-	-	-	-	-	-	-	46	3,096	-	-	-	-	46	21,948
8 Sep	-	-	-	-	-	-	3	1,990	-	-	-	-	53	3,149	-	-	50	1,785	106	22,054
12 Sep	-	-	-	-	-	-	-	-	-	-	-	-	12	3,161	-	-	-	-	12	22,066
15 Sep	-	-	-	-	-	-	-	-	-	-	-	-	15	3,176	-	-	-	-	15	22,081

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Appendix A5.–Page 6 of 7.

Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
20 Jun	90	-	-	-	-	-	-	3	3	3	3
23 Jun	102	-	-	-	-	-	-	8	11	8	11
27 Jun	185	-	-	-	-	-	-	41	52	41	52
30 Jun	253	-	-	-	-	-	-	98	150	98	150
2 Jul	45	2	2	-	-	-	-	-	-	2	152
4 Jul	342	-	-	-	-	-	-	149	299	149	301
6 Jul	45	1	3	-	-	-	-	-	-	1	302
7 Jul	281	-	-	-	-	-	-	829	1,128	829	1,131
9 Jul	82	5	8	-	-	-	-	-	-	5	1,136
11 Jul	354	-	-	103	103	-	-	-	-	103	1,239
14 Jul	402	-	-	-	-	-	-	2,982	4,110	2,982	4,221
16 Jul	384	-	-	607	710	-	-	-	-	607	4,828
18 Jul	403	-	-	-	-	-	-	1,770	5,880	1,770	6,598
19 Jul	326	-	-	374	1,084	-	-	-	-	374	6,972
20 Jul	340	-	-	368	1,452	-	-	-	-	368	7,340
21 Jul	401	-	-	-	-	-	-	2,519	8,399	2,519	9,859
22 Jul	303	-	-	932	2,384	-	-	-	-	932	10,791
23 Jul	327	-	-	-	-	-	-	3,828	12,227	3,828	14,619
24 Jul	161	-	-	1,250	3,634	-	-	-	-	1,250	15,869

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Central District Drift Gillnet

		244-61 Kasilof Section		244-55 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	381	-	-	-	-	-	-	3,187	15,414	3,187	19,056
26 Jul	294	-	-	1,185	4,819	-	-	-	-	1,185	20,241
27 Jul	315	-	-	-	-	-	-	3,370	18,784	3,370	23,611
28 Jul	253	-	-	-	-	-	-	3,088	21,872	3,088	26,699
29 Jul	135	-	-	525	5,344	-	-	-	-	525	27,224
30 Jul	137	-	-	799	6,143	-	-	-	-	799	28,023
31 Jul	80	-	-	854	6,997	-	-	-	-	854	28,877
1 Aug	253	-	-	-	-	-	-	4,570	26,442	4,570	33,447
2 Aug	34	-	-	91	7,088	-	-	-	-	91	33,538
4 Aug	141	-	-	10	7,098	-	-	3,187	29,629	3,197	36,735
6 Aug	21	-	-	68	7,166	-	-	-	-	68	36,803
7 Aug	2	-	-	4	7,170	-	-	28	29,657	32	36,835
8 Aug	44	-	-	-	-	-	-	1,172	30,829	1,172	38,007
11 Aug	25	-	-	-	-	-	-	825	31,654	825	38,832
15 Aug	14	-	-	-	-	-	-	935	32,589	935	39,767
18 Aug	4	-	-	-	-	-	-	171	32,760	171	39,938
22 Aug	2	-	-	-	-	-	-	254	33,014	254	40,192
29 Aug	1	-	-	-	-	-	-	148	33,162	148	40,340
1 Sep	5	-	-	-	-	479	479	39	33,201	518	40,858

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

Appendix A6.–Commercial pink salmon catch by area and date, Upper Cook Inlet, 2011.

Upper Subdistrict Set Gillnet														
	244-21		244-22		244-31		244-32		244-41		244-42			
	Ninilchik		Cohoe		South K-Beach		North K-Beach		Salamatof		E. Forelands		Total	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
25 Jun	36	36	10	10	8	8	-	-	-	-	-	-	54	54
27 Jun	42	78	13	23	3	11	-	-	-	-	-	-	58	112
29 Jun	25	103	20	43	3	14	-	-	-	-	-	-	48	160
30 Jun	80	183	52	95	9	23	-	-	-	-	-	-	141	301
2 Jul	70	253	28	123	11	34	-	-	-	-	-	-	109	410
4 Jul	76	329	31	154	12	46	-	-	-	-	-	-	119	529
6 Jul	57	386	29	183	16	62	-	-	-	-	-	-	102	631
7 Jul	103	489	49	232	24	86	-	-	-	-	-	-	176	807
9 Jul	122	611	97	329	32	118	-	-	-	-	-	-	251	1,058
11 Jul	171	782	160	489	41	159	13	13	20	20	46	46	451	1,509
13 Jul	165	947	187	676	55	214	-	-	-	-	-	-	407	1,916
14 Jul	287	1,234	376	1,052	63	277	29	42	79	99	43	89	877	2,793
16 Jul	117	1,351	107	1,159	113	390	44	86	45	144	40	129	466	3,259
18 Jul	166	1,517	116	1,275	141	531	67	153	43	187	82	211	628	3,887

-continued-

Appendix A6.–Page 2 of 7.

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
20 Jul	265	1,782	335	1,610	180	711	49	202	76	263	101	312	1,006	4,893
21 Jul	363	2,145	395	2,005	198	909	65	267	140	403	162	474	1,323	6,216
23 Jul	350	2,495	574	2,579	120	1,029	56	323	163	566	424	898	1,687	7,903
24 Jul	367	2,862	448	3,027	125	1,154	48	371	143	709	274	1,172	1,405	9,308
25 Jul	234	3,096	201	3,228	64	1,218	30	401	78	787	279	1,451	886	10,194
27 Jul	480	3,576	522	3,750	116	1,334	23	424	98	885	298	1,749	1,537	11,731
28 Jul	264	3,840	224	3,974	68	1,402	20	444	69	954	119	1,868	764	12,495
30 Jul	274	4,114	235	4,209	113	1,515	53	497	106	1,060	239	2,107	1,020	13,515
31 Jul	131	4,245	99	4,308	102	1,617	44	541	105	1,165	79	2,186	560	14,075
1 Aug	85	4,330	80	4,388	51	1,668	21	562	60	1,225	130	2,316	427	14,502
2 Aug	71	4,401	33	4,421	32	1,700	24	586	40	1,265	71	2,387	271	14,773
4 Aug	49	4,450	29	4,450	35	1,735	43	629	63	1,328	147	2,534	366	15,139
6 Aug	23	4,473	8	4,458	29	1,764	17	646	38	1,366	59	2,593	174	15,313
7 Aug	54	4,527	21	4,479	14	1,778	6	652	51	1,417	81	2,674	227	15,540

-continued-

Central District - West Side Set Gillnet

	245-10		245-20		245-30		245-40		245-50		245-55		245-60		246-10		246-20			
	Chinitna Bay		Silv. Salmon		Tuxedni Bay		Polly Cr.		L. J. Slough		Big River		W. Forelands		Kalgin - West		Kalgin - East		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
23 Jun	-	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	3	3
24 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	3	6
27 Jun	-	-	-	-	9	12	-	-	-	-	-	-	-	-	14	17	-	-	23	29
30 Jun	-	-	-	-	15	27	-	-	-	-	-	-	-	-	8	25	-	-	23	52
3 Jul	-	-	-	-	8	35	-	-	-	-	-	-	-	-	-	-	-	-	8	60
4 Jul	-	-	-	-	26	61	-	-	-	-	-	-	-	-	15	40	-	-	41	101
6 Jul	-	-	-	-	14	75	-	-	-	-	-	-	-	-	-	-	-	-	14	115
7 Jul	-	-	-	-	17	92	-	-	-	-	-	-	-	-	12	52	7	7	36	151
8 Jul	-	-	-	-	11	103	-	-	-	-	-	-	-	-	-	-	-	-	11	162
9 Jul	-	-	-	-	18	121	-	-	-	-	-	-	-	-	-	-	-	-	18	180
10 Jul	-	-	-	-	41	162	-	-	-	-	-	-	-	-	-	-	-	-	41	221
11 Jul	-	-	-	-	42	204	-	-	-	-	-	-	-	-	50	102	-	-	92	313
12 Jul	-	-	-	-	33	237	-	-	-	-	-	-	-	-	-	-	-	-	33	346
13 Jul	-	-	-	-	9	246	-	-	-	-	-	-	-	-	-	-	-	-	9	355
14 Jul	-	-	-	-	33	279	-	-	-	-	-	-	-	-	76	178	6	13	115	470
15 Jul	-	-	-	-	31	310	-	-	-	-	-	-	-	-	-	-	-	-	31	501
16 Jul	-	-	-	-	41	351	-	-	-	-	-	-	-	-	-	-	-	-	41	542
17 Jul	-	-	-	-	17	368	-	-	-	-	-	-	-	-	-	-	-	-	17	559
18 Jul	-	-	-	-	2	370	-	-	27	27	-	-	-	-	53	231	-	-	82	641

-continued-

Central District - West Side Set Gillnet

	245-10		245-20		245-30		245-40		245-50		245-55		245-60		246-10		246-20			
	Chinitna Bay		Silv. Salmon		Tuxedni Bay		Polly Cr.		L. J. Slough		Big River		W. Forelands		Kalgin - West		Kalgin - East		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
20 Jul	-	-	-	-	74	444	-	-	-	-	-	-	-	-	-	-	-	-	74	715
21 Jul	-	-	-	-	12	456	-	-	-	-	-	-	-	-	61	292	19	32	92	807
22 Jul	-	-	-	-	103	559	-	-	-	-	-	-	-	-	-	-	-	-	103	910
23 Jul	-	-	-	-	121	680	-	-	-	-	-	-	-	-	-	-	-	-	121	1,031
24 Jul	-	-	-	-	51	731	-	-	-	-	-	-	-	-	-	-	-	-	51	1,082
25 Jul	-	-	-	-	101	832	-	-	146	173	-	-	1	1	131	423	13	45	392	1,474
26 Jul	-	-	-	-	39	871	-	-	-	-	-	-	-	-	-	-	-	-	39	1,513
27 Jul	-	-	-	-	13	884	-	-	-	-	-	-	-	-	-	-	-	-	13	1,526
28 Jul	-	-	-	-	52	936	-	-	64	237	-	-	4	5	157	580	18	63	295	1,821
29 Jul	-	-	-	-	5	941	-	-	-	-	-	-	-	-	-	-	-	-	5	1,826
30 Jul	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106	686	8	71	114	1,940
1 Aug	-	-	-	-	3	944	-	-	45	282	-	-	-	-	169	855	10	81	227	2,167
4 Aug	-	-	-	-	-	-	-	-	8	290	-	-	-	-	55	910	-	-	63	2,230
7 Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	917	-	-	7	2,237
8 Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	1,007	-	-	90	2,327
11 Aug	-	-	-	-	6	950	-	-	1	291	-	-	-	-	14	1,021	46	127	67	2,394
15 Aug	-	-	-	-	-	-	-	-	1	292	-	-	-	-	27	1,048	1	128	29	2,423
22 Aug	-	-	-	-	-	-	-	-	1	293	-	-	-	-	-	-	-	-	1	2,424

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Appendix A6.–Page 5 of 7.

Northern District Set Gillnet

	247-10 Trading Bay		247-20 Tyonek		247-30 Beluga		247-41 Su. Flats		247-42 Pt. McKenzie		247-43 Fire Island		247-70 Pt. Possession		247-80 Birch Hill		247-90 #3 Bay		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
20 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1
27 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	2
30 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	1	3
4 Jul	-	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	4	7	9	12
7 Jul	1	1	-	-	-	-	-	-	1	1	-	-	5	5	-	-	4	11	11	23
11 Jul	-	-	-	-	-	-	-	-	2	3	-	-	5	10	-	-	4	15	11	34
14 Jul	-	-	8	13	-	-	2	2	1	4	3	3	15	25	-	-	-	-	29	63
18 Jul	6	7	9	22	5	5	5	7	-	-	-	-	21	46	13	13	17	32	63	126
21 Jul	-	-	1	23	5	10	12	19	-	-	-	-	32	78	12	25	9	41	71	197
25 Jul	7	14	-	-	-	-	12	31	-	-	-	-	112	190	69	94	20	61	220	417
28 Jul	4	18	-	-	-	-	20	51	26	30	-	-	20	210	23	1147	4	65	97	514
1 Aug	20	38	3	26	-	-	6	57	3	33	-	-	12	222	59	176	13	78	116	630
4 Aug	-	-	14	40	-	-	-	-	-	-	-	-	25	247	12	188	8	86	59	689
8 Aug	-	-	2	42	-	-	1	58	-	-	-	-	8	255	3	191	1	87	15	704
11 Aug	-	-	-	-	-	-	2	60	-	-	-	-	7	262	2	193	5	92	16	720
15 Aug	5	43	-	-	-	-	-	-	-	-	-	-	2	264	2	195	-	-	9	729
18 Aug	-	-	-	-	-	-	2	62	-	-	-	-	-	-	-	-	-	-	2	731
25 Aug	-	-	-	-	-	-	-	-	-	-	-	-	2	266	-	-	-	-	2	733

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Appendix A6.–Page 6 of 7.

Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
20 Jun	90	-	-	-	-	-	-	16	16	16	16
23 Jun	102	-	-	-	-	-	-	35	51	35	51
27 Jun	185	-	-	-	-	-	-	243	294	243	294
29 Jun	16	4	4	-	-	-	-	-	-	4	298
30 Jun	253	-	-	-	-	-	-	242	536	242	540
2 Jul	45	3	7	-	-	-	-	-	-	3	543
4 Jul	342	-	-	-	-	-	-	305	841	305	848
6 Jul	45	11	18	-	-	-	-	-	-	11	859
7 Jul	281	-	-	-	-	-	-	285	1,126	285	1,144
9 Jul	82	16	34	-	-	-	-	-	-	16	1,160
11 Jul	354	-	-	116	116	-	-	-	-	116	1,276
14 Jul	402	-	-	-	-	-	-	584	1,710	584	1,860
16 Jul	384	-	-	527	643	-	-	-	-	527	2,387
18 Jul	403	-	-	-	-	-	-	533	2,243	533	2,920
19 Jul	326	-	-	255	898	-	-	-	-	255	3,175
20 Jul	340	-	-	385	1,283	-	-	-	-	385	3,560
21 Jul	401	-	-	-	-	-	-	966	3,209	966	4,526
22 Jul	303	-	-	655	1,938	-	-	-	-	655	5,181
23 Jul	327	-	-	-	-	-	-	1,177	4,386	1,177	6,358

-continued-

Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
24 Jul	161	-	-	509	2,447	-	-	-	-	509	6,867
25 Jul	381	-	-	-	-	-	-	1,154	5,540	1,154	8,021
26 Jul	294	-	-	716	3,163	-	-	-	-	716	8,737
27 Jul	315	-	-	-	-	-	-	1,869	7,409	1,869	10,606
28 Jul	253	-	-	-	-	-	-	1,320	8,729	1,320	11,926
29 Jul	135	-	-	428	3,591	-	-	-	-	428	12,354
30 Jul	137	-	-	760	4,351	-	-	-	-	760	13,114
31 Jul	80	-	-	490	4,841	-	-	-	-	490	13,604
1 Aug	253	-	-			-	-	996	9,725	996	14,600
2 Aug	34	-	-	65	4,906	-	-	-	-	65	14,665
4 Aug	141	-	-			-	-	487	10,212	487	15,152
6 Aug	21	-	-	24	4,930	-	-	-	-	24	15,176
7 Aug	2	-	-	2	4,932	-	-	2	10,214	4	15,180
8 Aug	44	-	-	-	-	-	-	116	10,330	116	15,296
11 Aug	25	-	-	-	-	-	-	14	10,344	14	15,310
15 Aug	14	-	-	-	-	-	-	15	10,359	15	15,325
18 Aug	4	-	-	-	-	-	-	4	10,363	4	15,329
22 Aug	2	-	-	-	-	-	-	3	10,366	3	15,332
1 Sep	5	-	-	-	-	1	1	-	-	1	15,333

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

Appendix A7.–Commercial chum salmon catch by area and date, Upper Cook Inlet, 2011.

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
25 Jun	1	1	-	-	-	-	-	-	-	-	-	-	1	1
30 Jun	1	2	-	-	1	1	-	-	-	-	-	-	2	3
2 Jul	-	-	-	-	1	2	-	-	-	-	-	-	1	4
6 Jul	2	4	-	-	1	3	-	-	-	-	-	-	3	7
7 Jul	1	5	2	2	1	4	-	-	-	-	-	-	4	11
9 Jul	2	7	1	3	-	-	-	-	-	-	-	-	3	14
11 Jul	-	-	1	4	-	-	1	1	-	-	-	-	2	16
13 Jul	2	9	1	5	-	-	-	-	-	-	-	-	3	19
14 Jul	1	10	2	7	2	6	-	-	17	17	2	2	24	43
16 Jul	-	-	1	8	5	11	7	8	10	27	8	10	31	74
18 Jul	1	11	2	10	5	16	2	10	8	35	12	22	30	104
20 Jul	1	12	3	13	3	19	1	11	22	57	3	25	33	137
21 Jul	5	17	6	19	-	-	11	22	32	89	27	52	81	218

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Upper Subdistrict Set Gillnet

	244-21 Ninilchik		244-22 Cohoe		244-31 South K-Beach		244-32 North K-Beach		244-41 Salamatof		244-42 E. Forelands		Total	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
23 Jul	16	33	17	36	-	-	2	24	30	119	60	112	125	343
24 Jul	69	102	16	52	2	21	-	-	79	198	202	314	368	711
25 Jul	13	115	6	58	-	-	4	28	29	227	47	361	99	810
27 Jul	16	131	5	63	1	22	1	29	17	244	23	384	63	873
28 Jul	7	138	8	71	-	-	1	30	6	250	12	396	34	907
30 Jul	9	147	5	76	-	-	-	-	17	267	31	427	62	969
31 Jul	16	163	2	78	4	26	-	-	22	289	19	446	63	1,032
1 Aug	12	175	8	86	10	36	3	33	29	318	44	490	106	1,138
2 Aug	4	179	1	87	1	37	-	-	45	363	88	578	139	1,277
4 Aug	11	190	20	107	4	41	-	-	43	406	101	679	179	1,456
6 Aug	1	191	-	-	-	-	-	-	21	427	23	702	45	1,501
7 Aug	7	198	17	124	1	42	4	37	25	452	57	759	111	1,612

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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
23 Jun	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1
27 Jun	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	1	2
30 Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	3
3 Jul	-	-	-	-	3	5	-	-	-	-	-	-	-	-	-	-	-	-	3	6
4 Jul	-	-	-	-	6	11	-	-	-	-	-	-	-	-	5	6	4	4	15	21
6 Jul	-	-	-	-	6	17	-	-	-	-	-	-	-	-	-	-	-	-	6	27
7 Jul	-	-	-	-	15	32	-	-	-	-	-	-	-	-	14	20	-	-	29	56
8 Jul	-	-	-	-	10	42	-	-	-	-	-	-	-	-	-	-	-	-	10	66
9 Jul	-	-	-	-	19	61	-	-	-	-	-	-	-	-	-	-	-	-	19	85
10 Jul	-	-	-	-	29	90	-	-	-	-	-	-	-	-	-	-	-	-	29	114
11 Jul	-	-	-	-	38	128	-	-	-	-	-	-	-	-	46	66	2	6	86	200
12 Jul	-	-	-	-	25	153	-	-	-	-	-	-	-	-	-	-	-	-	25	225
13 Jul	-	-	-	-	22	175	-	-	-	-	-	-	-	-	-	-	-	-	22	247
14 Jul	-	-	-	-	27	202	-	-	1	1	-	-	-	-	90	156	-	-	118	365
15 Jul	-	-	-	-	13	215	-	-	-	-	-	-	-	-	-	-	-	-	13	378
16 Jul	-	-	-	-	56	271	-	-	-	-	-	-	-	-	-	-	-	-	56	434
17 Jul	-	-	-	-	38	309	-	-	-	-	-	-	-	-	-	-	-	-	38	472
18 Jul	-	-	-	-	5	314	-	-	1	2	-	-	1	1	704	860	-	-	711	1,183
19 Jul	-	-	-	-	2	316	-	-	-	-	-	-	-	-	-	-	-	-	2	1,185

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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
20 Jul	-	-	-	-	208	524	-	-	-	-	-	-	-	-	-	-	-	-	208	1,393
21 Jul	-	-	-	-	71	595	-	-	9	11	-	-	5	6	356	1,216	144	150	585	1,978
22 Jul	-	-	-	-	353	948	-	-	-	-	-	-	-	-	-	-	-	-	353	2,331
23 Jul	-	-	-	-	622	1,570	-	-	-	-	-	-	-	-	-	-	-	-	622	2,953
24 Jul	-	-	-	-	127	1,697	-	-	-	-	-	-	-	-	-	-	-	-	127	3,080
25 Jul	-	-	-	-	922	2,619	-	-	13	24	-	-	-	-	448	1,664	204	354	1,587	4,667
26 Jul	-	-	-	-	292	2,911	-	-	-	-	-	-	-	-	-	-	-	-	292	4,959
27 Jul	-	-	-	-	139	3,050	-	-	-	-	-	-	-	-	-	-	-	-	139	5,098
28 Jul	-	-	-	-	361	3,411	-	-	13	37	-	-	-	-	521	2,185	63	417	958	6,056
29 Jul	-	-	-	-	213	3,624	-	-	-	-	-	-	-	-	-	-	-	-	213	6,269
30 Jul	-	-	-	-	-	-	-	-	-	-	-	-	-	-	820	3,005	53	470	873	7,142
1 Aug	-	-	-	-	56	3,680	-	-	8	45	-	-	-	-	329	3,334	16	486	409	7,551
4 Aug	-	-	-	-	28	3,708	-	-	5	50	-	-	-	-	503	3,837	23	509	559	8,110
7 Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106	3,943	36	545	142	8,252
8 Aug	-	-	-	-	-	-	-	-	15	65	-	-	-	-	217	4,160	16	561	248	8,500
11 Aug	-	-	-	-	285	3,993	-	-	23	88	-	-	-	-	259	4,419	52	613	619	9,119
15 Aug	-	-	-	-	47	4,040	-	-	7	95	-	-	-	-	434	4,853	83	696	571	9,690
18 Aug	-	-	-	-			-	-	-	-	-	-	-	-	151	5,004	-	-	151	9,841
22 Aug	-	-	-	-	150	4,190	-	-	-	-	-	-	-	-	4	5,008	-	-	154	9,995

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Northern District Set Gillnet

	247-10 Trading Bay		247-20 Tyonek		247-30 Beluga		247-41 Su. Flats		247-42 Pt. McKenzie		247-43 Fire Island		247-70 Pt. Possession		247-80 Birch Hill		247-90 #3 Bay		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
4 Jul	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
7 Jul	-	-	8	9	4	4	3	3	-	-	-	-	-	-	-	-	-	-	15	16
11 Jul	-	-	19	28	28	32	6	9	3	3	-	-	2	2	-	-	-	-	58	74
14 Jul	-	-	41	69	185	217	8	17	105	108	60	60	1	3	-	-	-	-	400	474
18 Jul	-	-	56	125	167	384	33	50	65	173	45	105	13	16	-	-	-	-	379	853
21 Jul	-	-	128	253	213	597	86	136	109	282	87	192	25	41	3	3	-	-	651	1,504
25 Jul	-	-	29	282	238	835	193	329	55	337	157	349	222	263	54	57	-	-	948	2,452
28 Jul	-	-	16	298	564	1,399	257	586	266	603	298	647	65	328	19	76	-	-	1,485	3,937
1 Aug	-	-	57	355	28	1,427	299	885	172	775	-	-	18	346	2	78	1	1	577	4,514
4 Aug	-	-	64	419	-	-	-	-	170	945	52	699	14	360	3	81	1	2	304	4,818
8 Aug	-	-	176	595	279	1,706	268	1,153	168	1,113	-	-	46	406	3	84	5	7	945	5,763
11 Aug	-	-	-	-	-	-	68	1,221	153	1,266	56	755	29	435	-	-	3	10	309	6,072
15 Aug	-	-	3	598	-	-	164	1,385	63	1,329	20	775	27	462	1	85	-	-	278	6,350
18 Aug	-	-	-	-	-	-	47	1,432	14	1,343	-	-	7	469	-	-	1	11	69	6,419
22 Aug	-	-	-	-	-	-	-	-	8	1,351	7	782	16	485	2	87	-	-	33	6,452
25 Aug	-	-	-	-	-	-	-	-	2	1,353	-	-	49	534	-	-	-	-	51	6,503
29 Aug	-	-	-	-	-	-	-	-	-	-	-	-	3	537	-	-	1	12	4	6,507
1 Sep	-	-	-	-	-	-	-	-	-	-	-	-	1	538	-	-	-	-	1	6,508
8 Sep	-	-	-	-	-	-	4	1,436	-	-	-	-	-	-	-	-	-	-	4	6,512
15 Sep	-	-	-	-	-	-	-	-	-	-	-	-	1	539	-	-	-	-	1	6,513

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Appendix A7.–Page 6 of 7.

Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		245-10 Chinitna Bay		244-60 Districtwide		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
20 Jun	90	-	-	-	-	-	-	102	102	102	102
23 Jun	102	-	-	-	-	-	-	78	180	78	180
27 Jun	185	-	-	-	-	-	-	613	793	613	793
29 Jun	16	3	3	-	-	-	-	-	-	3	796
30 Jun	253	-	-	-	-	-	-	656	1,449	656	1,452
2 Jul	45	5	8	-	-	-	-	-	-	5	1,457
4 Jul	342	-	-	-	-	-	-	925	2,374	925	2,382
6 Jul	45	5	13	-	-	-	-	-	-	5	2,387
7 Jul	281	-	-	-	-	-	-	2,301	4,675	2,301	4,688
9 Jul	82	20	33	-	-	-	-	-	-	20	4,708
11 Jul	354	-	-	264	264	-	-	-	-	264	4,972
14 Jul	402	-	-	-	-	-	-	5,130	9,805	5,130	10,102
16 Jul	384	-	-	2,360	2,624	-	-			2,360	12,462
18 Jul	403	-	-	-	-	-	-	5,131	14,936	5,131	17,593
19 Jul	326	-	-	2,321	4,945	-	-	-	-	2,321	19,914
20 Jul	340	-	-	2,377	7,322	-	-	-	-	2,377	22,291
21 Jul	401	-	-	-	-	-	-	4,437	19,373	4,437	26,728
22 Jul	303	-	-	1,524	8,846	-	-	-	-	1,524	28,252
23 Jul	327	-	-	-	-	-	-	9,776	29,149	9,776	38,028
24 Jul	161	-	-	2,158	11,004	-	-	-	-	2,158	40,186

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Central District Drift Gillnet

		244-61 Kasilof Section		244-55 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	381	-	-	-	-	-	-	11,096	40,245	11,096	51,282
26 Jul	294	-	-	3,071	14,075	-	-	-	-	3,071	54,353
27 Jul	315	-	-	-	-	-	-	7,230	47,475	7,230	61,583
28 Jul	253	-	-	-	-	-	-	10,200	57,675	10,200	71,783
29 Jul	135	-	-	2,340	16,415	-	-	-	-	2,340	74,123
30 Jul	137	-	-	4,386	20,801	-	-	-	-	4,386	78,509
31 Jul	80	-	-	3,959	24,760	-	-	-	-	3,959	82,468
1 Aug	253	-	-	-	-	-	-	17,516	75,191	17,516	99,984
2 Aug	34	-	-	798	25,558	-	-	-	-	798	100,782
4 Aug	141	-	-	38	25,596	-	-	8,065	83,256	8,103	108,885
6 Aug	21	-	-	291	25,887	-	-	-	-	291	109,176
7 Aug	2	-	-	15	25,902	-	-	24	83,280	39	109,215
8 Aug	44	-	-	-	-	-	-	1,364	84,644	1,364	110,579
11 Aug	25	-	-	-	-	-	-	353	84,997	353	110,932
15 Aug	14	-	-	-	-	-	-	69	85,066	69	111,001
18 Aug	4	-	-	-	-	-	-	28	85,094	28	111,029
22 Aug	2	-	-	-	-	-	-	9	85,103	9	111,038
29 Aug	1	-	-	-	-	-	-	23	85,126	23	111,061
1 Sep	5	-	-	-	-	2	2	19	85,145	21	111,082

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, 2011.

Gear	District	Subdistrict	Stat Area	Permits[a]	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	462	593	3,201,035	40,858	15,333	111,082	3,368,901
Setnet	Central	Upper	24421	91	1,510	442,514	1,230	4,527	198	449,979
			24422	87	1,610	339,715	1,316	4,479	124	347,244
			24431	71	2,005	234,758	971	1,778	42	239,554
			24432	49	867	174,500	1,177	652	37	177,233
			24441	56	1,622	583,360	5,971	1,417	452	592,822
			24442	33	83	102,815	4,912	2,687	759	111,256
			All	385	7,697	1,877,662	15,577	15,540	1,612	1,918,088
		Kalgin Is.	24610	27	462	74,098	11,058	1,048	5,008	91,674
			24620	<4	3	14,843	2,590	128	696	18,260
			All	28	465	88,941	13,648	1,176	5,704	109,934
		Chinitna	24510							
		Western	24520	0						0
			24530	21	117	68,545	1,947	950	4,190	75,749
			24540	<4		58				58
			24550	3		2,154	882	293	95	3,424
			All	24	117	70,757	2,829	1,243	4,285	79,231
		Kustatan	24555	10	77	2,997	0	0	0	3,074
			24560	<4	0	844	283	5	6	1,138
			All	11	77	3,841	283	5	6	4,212
		All	All	442	8,356	2,041,201	32,337	17,964	11,607	2,111,465
	Northern	General	24710	13	583	926	560	43		1,441
			24720	18	612	9197	5,050	42	598	22,346
			24730	14	14	5,667	3,450	10	1706	9,860
			24741	6	163	3,208	1,990	62	1436	4,558
			24742	12	211	4,353	2,777	33	1353	8,902
			24743	6	373	2,164	1,383	3	782	2,923
			All	61	1,956	25,515	15,210	193	5,875	48,749
		Eastern	24770	13	212	4,644	3,176	266	539	18,014
			24780	7	72	2306	1,910	182	87	8,863
			24790	7	59	2,739	1,785	92	12	12,639
			All	26	343	9,689	6,871	540	638	18,081
		All	All	86	2,299	35,204	22,081	733	6,513	66,830
	All	All	All	525	10,655	2,076,405	54,418	18,697	18,120	2,178,295
Seine	All	All	All	0	0	0	0	0	0	0
All	All	All	All	987	11,248	5,277,440	95,276	34,030	129,202	5,547,196

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

Appendix A9.–Commercial salmon catch per permit by statistical area, Upper Cook Inlet, 2011.

Gear	District	Subdistrict	Stat Area	Permits[a]	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	462	1	6,929	88	33	240	7,292
Set	Central	Upper	24421	91	17	4,863	14	50	2	4,945
			24422	87	19	3,905	15	51	1	3,991
			24431	71	28	3,306	14	25	1	3,374
			24432	49	18	3,561	24	13	1	3,617
			24441	56	29	10,417	107	25	8	10,586
			24442	33	3	3,116	149	81	23	3,371
			All	385	20	4,877	40	40	4	4,982
		Kalgin Is.	24610	27	17	2,744	410	39	185	3,395
			24620	<4	na	na	na	na	na	na
			All	28	17	3,176	487	42	204	3,926
		Chinitna	24510	0	na	na	na	na	na	na
		Western	24520	0	na	na	na	na	na	na
			24530	21	6	3,264	93	45	200	3,607
			24540	<4	na	na	na	na	na	na
			24550	3	na	na	na	na	na	na
			All	24	5	2,948	118	52	179	3,301
		Kustatan	24555	10	8	300	0	0	0	307
			24560	<4	na	na	na	na	na	na
			All	11	7	349	26	0	1	383
		All	All	442	19	4,618	73	41	26	4,777
	Northern	General	24710	13	45	71	43	3	0	111
			24720	18	34	511	281	2	33	1,241
			24730	14	1	405	246	1	122	704
			24741	6	27	535	332	10	239	760
			24742	12	18	363	231	3	113	742
			24743	6	62	361	231	1	130	487
			All	61	32	418	249	3	96	799
		Eastern	24770	13	16	357	244	20	41	1,386
			24780	7	10	329	273	26	12	1,266
			24790	7	8	391	255	13	2	1,806
			All	26	13	373	264	21	25	695
		All	All	86	27	409	257	9	76	777
	All	All	All	525	20	3,955	104	36	35	4,149
Seine	All	All	All	-	-	-	-	-	-	-
All	All	All	All	987	11	5,347	97	34	131	5,620

[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 2011 Upper Cook Inlet fishing season.

Emergency Order No.	Effective Date	Action	Reason
1	30 May	Closed that portion of the General Subdistrict of the Northern District from a point at the wood chip dock located approximately 3 miles south of Tyonek at 61° 02.56' N. lat., 151° 14.36' W. long., to the Susitna River to commercial king salmon fishing for the 2011 directed king salmon fishery. For the 2011 season, the fishing periods closed by this emergency occur on the following Mondays: May 30, June 6, 13, and 20.	The AK BOF 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.
2	25 Jun	Opened set and drift gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 a.m. until 12:00 midnight on Saturday, June 25, 2011.	The Kasilof Section set gillnet fishery opened because 50,000 sockeye salmon had been enumerated in the Kasilof River (see 5 AAC 21.310 Fishing Seasons). Both set and drift gillnet fisheries were opened in order to reduce the escapement rate of Kasilof River sockeye salmon.
3	29 Jun	Opened set gillnetting in the Kasilof Section of the Upper Subdistrict from 8:00 a.m. on Wednesday, June 29, 2011, until 7:00 a.m. on Thursday, June 30, 2011. Drift gillnetting was opened in the Kasilof Section from 8:00 a.m. until 12:00 midnight on Wednesday, June 29, 2011, and from 5:00 a.m. until 7:00 a.m. on Thursday, June 30, 2011.a.m.	To reduce the escapement rate of Kasilof River sockeye salmon.
4	2 Jul	Opened set and drift gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 a.m. until 12:00 midnight on Saturday, July 2, 2011.	To reduce the escapement rate of Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
5	3 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 5:00 a.m. on Sunday, July 3, 2011, until further notice.	To reduce the escapement rate of Crescent River sockeye salmon.
6	4 Jul	Extended set gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 p.m. until 10:00 p.m. on Monday, July 4, 2011. Drift gillnetting was opened in the Kasilof Section of the Upper Subdistrict from 7:00 p.m. until 10:00 p.m. on Monday, July 4, 2011.	To reduce the escapement rate of Kasilof River sockeye salmon.
7	6 Jul	Opened set gillnetting in the Kasilof Section of the Upper Subdistrict from 6:00 a.m. on Wednesday, July 6, 2011 until 7:00 a.m. on Thursday, July 7, 2011. Drift gillnetting was opened in the Kasilof Section of the Upper Subdistrict from 6:00 a.m. until 12:00 midnight on Wednesday, July 6, 2011, and from 5:00 a.m. until 7:00 a.m. on Thursday, July 7, 2011.	To reduce the escapement rate of Kasilof River sockeye salmon.
8	9 Jul	Opened set and drift gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 a.m. until 12:00 midnight on Saturday, July 9, 2011.	To reduce the escapement rate of Kasilof River sockeye salmon.
9	11 Jul	Extended set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 7:00 p.m. until 10:00 p.m. on Monday, July 11, 2011. Drift gillnetting was extended in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict from 7:00 p.m. until 10:00 p.m. on Monday, July 11, 2011.	To reduce the escapement rate of Kasilof River sockeye salmon and to facilitate an orderly closure in the Kenai & East Forelands Sections.
10	13 Jul	Opened set gillnetting in that portion of the Kasilof Section of the Upper Subdistrict within ½ mile of the mean high tide mark on the Kenai Peninsula shoreline from 8:00 a.m. until 5:00 p.m. on Wednesday, July 13, 2011.	To reduce the escapement rate of Kasilof River sockeye salmon.
11	13 Jul	Extended set gillnetting in that portion of the Kasilof Section of the Upper Subdistrict within ½ mile of the mean high tide mark on the Kenai Peninsula shoreline from 5:00 p.m. until 6:00 p.m. on Wednesday, July 13, 2011.	To reduce the escapement rate of Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
12	16 Jul	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict from 7:00 a.m. until 10:00 p.m. on Saturday, July 16, 2011. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict from 7:00 a.m. until 10:00 p.m. on Saturday, July 16, 2011.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
13	18 Jun	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 18, 2011, from 7:00 a.m. until 7:00 p.m.	To comply with the Central District Drift Gillnet Fishery Management Plan
14	18 Jul	Extended set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Monday, July 18, 2011, from 7:00 p.m. until 11:00 p.m. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections on Monday, July 18, 2011, from 7:00 p.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
15	19 Jul	Opened drift gillnets in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Tuesday, July 19, 2011 from 12:00 noon until 10:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
16	20 Jul	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Wednesday, July 20, 2011, from 5:00 a.m. until 11:00 p.m. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Wednesday, July 20, 2011 from 5:00 a.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
17	20 Jul	Extended set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict from 11:00 p.m. on Wednesday, July 20, 2011, until 7:00 a.m. on Thursday, July 21, 2011. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Thursday, July 21, 2011, from 5:00 a.m. until 7:00 a.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 Thursday, July 21, 2011, from 7:00 a.m. until 7:00 p.m.	To comply with the Central District Drift Gillnet Fishery Management Plan

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Emergency Order No.	Effective Date	Action	Reason
19	21 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 Thursday, July 21, 2011.	To comply with the Northern Dist. Salmon Management Plan and the Susitna River Sockeye Salmon Action Plan
20	21 Jul	Opened commercial fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Thursday, July 21, 2011, from 7:00 p.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
21	22 Jul	Opened commercial fishing with drift gillnets in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Friday, July 22, 2011, from 5:00 a.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
22	23 Jul	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Saturday, July 23, 2011, from 7:00 a.m. until 9:00 p.m. Drift gillnetting was opened in Drift Gillnet Area 1 and in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Saturday, July 23, 2011, from 7:00 a.m. until 9:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
23	23 Jul	Extended commercial fishing with set gillnets in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Saturday, July 23, 2011, from 9:00 p.m. until 11:00 p.m. Drift gillnetting was extended in Drift Gillnet Area 1 and in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Saturday, July 23, 2011, from 9:00 p.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
24	24 Jul	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Sunday, July 24, 2011, from 7:00 a.m. until 7:00 p.m. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Sunday, July 24, 2011, from 7:00 a.m. until 7:00 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
25	26 Jul	Opened drift gillnetting in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Tuesday, July 26, 2011, from 8:00 a.m. until 8:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
26	27 Jul	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Wednesday, July 27, 2011, from 5:00 a.m. until 11:00 p.m. Drift gillnetting was opened in Drift Gillnet Area 1 and in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Wednesday, July 27, 2011, from 5:00 a.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
27	29 Jul	Opened drift gillnetting in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Friday, July 29, 2011, from 9:00 a.m. until 9:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
28	29 Jul	Rescinded Emergency Order 2S-05-11 and closed set gillnetting in that portion of the Western Subdistrict south of the latitude of Redoubt Point at 7:00 p.m. on Friday, July 29, 2011. 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 Monday, August 1, 2011.	To reduce the exploitation rate of coho salmon in the Western Subdistrict.
29	30 Jul	Opened set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 7:00 a.m. until 9:00 p.m. on Saturday, July 30, 2011. Set gillnetting will also opened in the Kalgin Island Subdistrict from 7:00 a.m. until 7:00 p.m. on Saturday, July 30, 2011. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict from 7:00 a.m. until 9:00 p.m. on Saturday, July 30, 2011.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon and Packers Lake sockeye salmon.
30	31 Jul	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Sunday, July 31, 2011, from 7:00 a.m. until 7:00 p.m. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Sunday, July 31, 2011, from 7:00 a.m. until 7:00 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
31	31 Jul	Extended commercial fishing with set gillnets in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Sunday, July 31, 2011, from 7:00 p.m. until 9:00 p.m. Drift gillnetting was extended in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Sunday, July 31, 2011, from 7:00 p.m. until 9:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
32	1 Aug	Modified Emergency Order No. 19, issued on July 20, 2011, 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 Thursday, July 21, 2011. Beginning at 7:00 a.m. on Monday, August 1, 2011, 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 Susitna River Sockeye Salmon Action Plan.
33	1 Aug	Extended set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Monday, August 1, 2011, from 7:00 p.m. until 10:00 p.m. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Monday, August 1, 2011, from 7:00 p.m. until 10:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
34	2 Aug	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Tuesday, August 2, 2011, from 6:00 a.m. until 11:00 p.m. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Tuesday, August 2, 2011, from 6:00 a.m. until 11:00 p.m.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
35	4 Aug	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict on Thursday, August 4, 2011, from 5:00 a.m. until 7:00 a.m. and from 7:00 p.m. until 11:00 p.m. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict on Thursday, August 4, 2011, from 5:00 a.m. until 7:00 a.m. and from 7:00 p.m. until 11:00 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
36	6 Aug	Opened set gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict from 11:00 a.m. on Saturday, August 6, 2011, until 7:00 a.m. on Monday, August 8, 2011. Drift gillnetting was opened in the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict from 11:00 a.m. until 11:00 p.m. on Saturday, August 6, 2011; and from 5:00 a.m. until 11:00 p.m. on Sunday, August 7, 2011; and from 5:00 a.m. until 7:00 a.m. on Monday, August 8, 2011.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
37	7 Aug	Opened set gillnetting in the Kalgin Island Subdistrict of the Central District on Sunday, August 7, 2011, from 7:00 a.m. until 7:00 p.m.	To reduce the escapement rate of Packers Lake sockeye salmon
38	8 Aug	Rescinded Emergency Order Number 32 and returned the legal complement of gear to 4 set gillnets per permit, measuring no more than 35 fathoms in length or 105 fathoms in the aggregate, in the Northern District of Upper Cook Inlet for the remainder of the 2011 fishing season, except on Fire Island, where more than 4 set gillnets may be operated, but the aggregate length of the nets may not exceed 105 fathoms, effective at 7:00 a.m. on Monday August 8, 2011.	To comply with the Susitna River Sockeye Salmon Action Plan.
39	7 Aug	Modified Emergency Order Number 36 and closed commercial fishing with set gillnets in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict for the remainder of the 2011 season, effective at 11:00 p.m. on Sunday, August 7, 2011.	To reduce the exploitation on late-run Kenai River Chinook salmon.
40	11 Aug	Closed drift gillnetting in all areas of the Central District, except in Drift Gillnet Area 3 and Drift Gillnet Area 4 on Thursday, August 11, 2011, and on Monday, August 15, 2011, from 7:00 a.m. to 7:00 p.m. each day. From August 16 until closed by emergency order, drift gillnetting was opened in Drift Gillnet Areas 3 and 4 for fishing during regular fishing periods. The Chinitna Bay Subdistrict remained closed to drifting, unless opened by subsequent emergency order.	The Central District Drift Gillnet Fishery Management Plan states that from Aug 11-15, if the Upper Subdistrict set gillnet fishery is closed under 5 AAC 21.310(b)(2)(C)(iii), regular fishing periods will be restricted to Drift Gillnet Areas 3 and 4.

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Emergency Order No.	Effective Date	Action	Reason
41	31 Aug	Opened drift gillnetting in the Chinitna Bay Subdistrict of the Central District on Mondays, Wednesdays, and Thursdays from 7:00 a.m. until 7:00 p.m., beginning on Wednesday, August 31, 2011, for the remainder of the season.	To provide an opportunity to harvest surplus chum salmon, as escapement goals for Clearwater Creek and Chinitna River had been met.

Appendix A11.–Commercial salmon fishing periods, Upper Cook Inlet, 2011.

Date	Day	Time	Set Gillnet	Drift Gillnet
30 May	Mon	0700-1900	Northern District	
1 Jun	Wed	0700-1900	Kustatan - Big River - Kalgin Island	
3 Jun	Fri	0700-1900	Kustatan - Big River - Kalgin Island	
6 Jun	Mon	0700-1900	N. District - Kustatan - Big River - Kalgin Island	
8 Jun	Wed	0700-1900	Kustatan - Big River - Kalgin Island	
10 Jun	Fri	0700-1900	Kustatan - Big River - Kalgin Island	
13 Jun	Mon	0700-1300	N. District - Kustatan - Big River - Kalgin Island	
15 Jun	Wed	0700-1900	Kustatan - Big River - Kalgin Island	
16 Jun	Thu	0700-1900	Western Subdistrict	
17 Jun	Fri	0700-1900	Kustatan - Big River - Kalgin Island	
20 Jun	Mon	0700-1900	N. Dist - Kustatan - Big Riv - Kalgin Isl - W. Subdist.	All
22 Jun	Wed	0700-1900	Kustatan - Big River - Kalgin Island	
23 Jun	Thu	0700-1900	Western Subdistrict	All
25 Jun	Sat	0700-2400	Kasilof Section	Kasilof Section
27 Jun	Mon	0700-1900	All except Kenai & E. Forelands Sections	All
29 Jun	Wed	0800-2400	Kasilof Section	Kasilof Section
30 Jun	Thu	0000-0700	Kasilof Section	
		0500-0700		Kasilof Section
		0700-1900	All except Kenai & E. Forelands Sections	All
2 Jul	Sat	0700-2400	Kasilof Section	Kasilof Section
3 Jul	Sun	0000-2400	Western Subdistrict south of Redoubt Pt.	
4 Jul	Mon	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All except Kenai & E. Forelands Sections	All
		1900-2200	Kasilof Section	Kasilof Section
5 Jul	Tue	0000-2400	Western Subdistrict south of Redoubt Pt.	
6 Jul	Wed	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0600-2400	Kasilof Section	Kasilof Section
7 Jul	Thu	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0000-0700	Kasilof Section	
		0500-0700		Kasilof Section
		0700-1900	Kasilof Section	All
8 Jul	Fri	0000-2400	Western Subdistrict south of Redoubt Pt.	
9 Jul	Sat	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-2400	Kasilof Section	Kasilof Section
10 Jul	Sun	0000-2400	Western Subdistrict south of Redoubt Pt.	
11 Jul	Mon	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All	Expanded Kenai/Kasilof Sections
		1900-2200	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
12 Jul	Tue	0000-2400	Western Subdistrict south of Redoubt Pt.	
13 Jul	Wed	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0800-1800	Kasilof Section within 1/2 mile of shore	
14 Jul	Thu	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All	Drift Area 1 & Expanded Corridor
		0700-1900	All	Expanded Kenai/Kasilof Sections

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Date	Day	Time	Set Gill Net	Drift Gill Net
15 Jul	Fri	0000-2400	Western Subdistrict south of Redoubt Pt.	
16 Jul	Sat	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-2200	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
17 Jul	Sun	0000-2400	Western Subdistrict south of Redoubt Pt.	
18 Jul	Mon	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All	All
		1900-2300	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
19 Jul	Tue	0000-2400	Western Subdistrict south of Redoubt Pt.	
		1200-2200		Expanded Kenai/Kasilof Sections
20 Jul	Wed	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0500-2300	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
		0500-2400	Kenai, Kasilof, & East Forelands Sections	
21 Jul	Thu	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0000-0700	Kenai, Kasilof, & East Forelands Sections	
		0500-0700		Expanded Kenai/Kasilof Sections
		0700-1900	All	Drift Area 1 & Expanded Corridor
		1900-2300		Expanded Kenai/Kasilof Sections
22 Jul	Fri	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0500-2300		Expanded Kenai/Kasilof Sections
23 Jul	Sat	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-2300	Kenai, Kasilof, & East Forelands Sections	Drift Area 1 & Expanded Corridor
24 Jul	Sun	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
25 Jul	Mon	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All	All
26 Jul	Tue	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0800-2000		Expanded Kenai/Kasilof Sections
27 Jul	Wed	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0500-2300	Kenai, Kasilof, & East Forelands Sections	Drift Area 1 & Expanded Corridor
28 Jul	Thu	0000-2400	Western Subdistrict south of Redoubt Pt.	
			All	All
29 Jul	Fri	0000-1900	Western Subdistrict south of Redoubt Pt.	
		0900-2100		Expanded Kenai/Kasilof Sections
30 Jul	Sat	0700-2100	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
		0700-1900	Kalgin Island Subdistrict	
31 Jul	Sun	0700-2100	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
1 Aug	Mon	0700-1900	All	All
		1900-2200	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
2 Aug	Tue	0600-2300	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
4 Aug	Thu	0500-0700	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
		0700-1900	All	All
		1900-2300	Kenai, Kasilof, & East Forelands Sections	Expanded Kenai/Kasilof Sections
6 Aug	Sat	1100-2300		Expanded Kenai/Kasilof Sections
		1100-2400	Kenai, Kasilof, & East Forelands Sections	

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Date	Day	Time	Set Gill Net	Drift Gill Net
7 Aug	Sun	0000-2300	Kenai, Kasilof, & East Forelands Sections	
		0500-2300		Expanded Kenai/Kasilof Sections
		0700-1900	Kalgin Island Subdistrict	
8 Aug	Mon	0500-0700		Expanded Kenai/Kasilof Sections
		0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	All
11 Aug	Thu	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3 & 4
15 Aug	Mon	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3 & 4
18 Aug	Thu	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3 & 4
22 Aug	Mon	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3 & 4
25 Aug	Thu	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3 & 4
29 Aug	Mon	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3 & 4
31 Aug	Wed	0700-1900		Chinitna Bay
1 Sep	Thu	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3, 4 & Chinitna
5 Sep	Mon	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3, 4 & Chinitna
7 Sep	Wed	0700-1900		Chinitna Bay
8 Sep	Thu	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3, 4 & Chinitna
12 Sep	Mon	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3, 4 & Chinitna
14 Sep	Wed	0700-1900		Chinitna Bay
15 Sep	Thu	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3, 4 & Chinitna

Appendix A12.–Susitna River sockeye salmon studies, 2006–2011.

Yentna River Passage	2006	2007	2008	2009	2010	2011
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

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

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

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

Appendix A13.–Age composition (in percent) of sockeye salmon escapements, Upper Cook Inlet, 2011.

	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			0.1	8.0	1.1	38.9	5.4	0.4	45.6	0.1			0.3	100.0
Kasilof River			1.4	13.7	2.7	31.5	25.2		25.6					100.0
Yentna River	0.4	18.1	0.9	11.3	4.3	55.9	3.9	0.2	5.1					100.0
Crescent River		0.2		7.6		51.4	6.9		33.9					100.0
Fish Creek		15.0	1.1	57.7	0.2	20.3	3.5		2.2					100.0
Hidden Creek			0.4	83.8		8.1	7.3		0.4					100.0

Appendix A14.–Upper Cook Inlet salmon average weights (in pounds) by area, 2011.

Fishery	Chinook	Sockeye	Coho	Pink	Chum
Upper Cook Inlet Total	20.2	6.5	5.7	3.2	6.7
A. Northern District Total	14.9	5.9	5.1	3.3	5.7
1. Northern District West	15.2	5.9	5.1	3.0	5.7
a. Trading Bay 247-10	15.3	6.1	5.9	4.4	
b. Tyonek 247-20	14.6	6.3	5.0	2.3	5.7
c. Beluga 247-30	13.4	6.6	5.0	2.6	5.8
d. Susitna Flat 247-41	17.3	5.1	5.7	2.2	5.9
e. Pt. Mackenzie 247-42	14.5	5.1	5.0	3.9	5.4
f. Fire Island 247-43	15.3	5.5	5.2	3.0	5.7
2. Northern District East	13.7	6.0	5.2	3.4	5.7
a. Pt. Possession 247-70	14.6	6.0	4.4	3.1	5.8
b. Birch Hill 247-80	10.5	5.4	5.8	4.0	5.0
c. Number 3 Bay 247-90	14.2	6.3	5.9	3.0	4.3
B. Central District Total	21.5	6.5	5.9	3.2	6.7
1. East Side Set Total	22.3	6.4	5.8	3.1	5.4
a. Salamatof/EastForelands	22.8	6.8	5.8	3.2	5.5
1. Salamatof 244-41	23.1	6.9	5.9	3.4	5.8
2. East Forelands 244-42	15.3	6.4	5.6	3.1	5.3
b. Kalifonsky Beach	23.6	6.1	5.6	3.1	4.9
1. South K. Beach 244-31	23.8	5.6	5.5	3.0	4.5
2. North K. Beach 244-32	23.1	6.7	5.7	3.5	5.3
d. Cohoe/Ninilchik	20.9	6.3	5.8	3.0	5.3
1. Cohoe 244-22	19.4	6.4	5.7	3.0	5.4
2. Ninilchik 244-21	22.6	6.2	6.0	3.0	5.3

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Fishery	Chinook	Sockeye	Coho	Pink	Chum
2. West Side Set Total	23.8	6.2	5.4	3.2	6.3
a. Little Jack Slough 245-50		5.3	5.4	3.1	6.8
b. Polly Creek 245-40		6.6			
c. Tuxedni Bay 245-30	23.8	6.3	5.5	3.3	6.3
3. Kustatan Total	22.9	5.6	5.1	3.2	6.3
a. Big River 245-55	22.9	5.4			
b. West Foreland 245-60		6.1	5.1	3.2	6.3
4. Kalgin Island Total	19.8	6.1	5.4	3.1	6.2
a. West Side 246-10	19.8	6.2	5.2	2.9	6.2
b. East Side 246-20	22.3	6.0	6.0	4.0	5.9
5. Chinitna Bay Total			6.7	4.0	5.0
a. Set 245-10					
b. Drift 245-10			6.7	4.0	5.0
5. Central District Set Total	22.2	6.4	5.6	3.1	6.1
6. Central District Drift Total	11.4	6.6	6.1	3.4	6.8
a. Districtwide 244-60	10.3	6.5	6.1	3.4	6.8
b. Kasilof Section 244-61	14.54	6.47	6.25	3.15	6.73
c. Kenai & Kasilof Section	13.28	6.58	6.11	3.35	6.71
d. Chinitna Bay 245-10					

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, 1987–2011.

	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
Mean		0.05	6.06	0.03	24.64	0.13	0.05	26.62	0.27	39.11	0.31	2.41	0.33	0.00	0.00	100

Appendix A16.–Major buyers and processors of Upper Cook Inlet fishery products, 2011.

Buyer/Processor	Code	Plant Site	Contact	Address
Alaska Salmon Purchasers	F4665	Kenai	Mark Powell	HC01 Box 240 Kenai, AK 99611-0240
Alaska Wild Kenai Salmon	F8204	Anchorage	Richard McClure	831 Briny Circle Anchorage, AK 99501
The Auction Block	F8162	Homer	Jessica Yeoman	P.O. Box 2228 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	1400 E. 1st 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 West Old International Airport Rd. Anchorage, AK 99502
Icicle Seafoods	F0135	Seward	Melody Jordan	P.O. Box 79003 Seattle Wa. 98119
Inlet Fisheries Inc.	F4682	Kenai	Patrick Klier	P.O. Box 530 Kenai Ak. 99611
Inlet Fish Producers	F2806	Kenai	Ellie Tikka	200 Columbia St Kenai, AK 99611
Pacific Star Seafoods	F1834	Kenai	Dan Foley	520 Bridge Access Rd. Kenai, AK 99611
Peninsula Processing	F6618	Soldotna	Carrie Collins	720 K. Beach Rd. Soldotna, AK 99669
Salamatof Seafoods	F0037	Kenai	Wylie Reed	P.O. Box 1450 Kenai Ak. 99615
Snug Harbor Seafoods	F3894	Kenai	Paul Dale	P.O. Box 701 Kenai, AK 99611
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, 2011.

	Harvest					
Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
Kasilof Gillnet	167	26,780	47	23	3	27,020
Kasilof Dip Net	24	49,766	977	652	144	51,563
Kenai Dip Net	1,243	537,765	4,745	3,914	915	548,582
Fish Creek Dip Net	2	5,236	905	155	72	6,370
Beluga Dip Net	0	137	17	0	5	159
No Site Reported	17	10,695	80	135	72	10,999
Total	1,453	630,379	6,771	4,879	1,211	644,693

Note: Preliminary estimates.

Appendix A18.–Personal use sockeye salmon harvest by day, 2011.

	Kasilof Gillnet		Kasilof Dip Net		Kenai Dip Net		Fish Creek Dip Net	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
15 Jun	3,202	3,202						
16 Jun	2,284	5,486						
17 Jun	3,072	8,558						
18 Jun	2,398	10,956						
19 Jun	2,652	13,608						
20 Jun	3,049	16,657						
21 Jun	2,207	18,864						
22 Jun	3,339	22,203						
23 Jun	2,603	24,806						
24 Jun	1,974	26,780						
25 Jun			1,068	1,068				
26 Jun			429	1,497				
27 Jun			419	1,915				
28 Jun			366	2,281				
29 Jun			554	2,835				
30 Jun			143	2,978				
1 Jul			1,048	4,026				
2 Jul			1,164	5,191				
3 Jul			697	5,887				
4 Jul			738	6,625				
5 Jul			491	7,116				
6 Jul			263	7,379				
7 Jul			143	7,522				
8 Jul			605	8,127				
9 Jul			482	8,609				

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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	9,109	2,086	2,086		
11 Jul			446	9,554	2,465	4,551		
12 Jul			357	9,911	1,802	6,353		
13 Jul			428	10,339	3,050	9,403		
14 Jul			693	11,031	3,512	12,915		
15 Jul			4,091	15,122	10,981	23,896		
16 Jul			7,689	22,811	92,794	116,690		
17 Jul			3,973	26,785	56,429	173,119		
18 Jul			2,600	29,385	41,720	214,839		
19 Jul			3,645	33,030	60,311	275,150		
20 Jul			2,345	35,375	41,402	316,552		
21 Jul			934	36,309	18,693	335,246		
22 Jul			3,645	39,954	48,287	383,533		
23 Jul			2,475	42,430	53,292	436,825		
24 Jul			1,508	43,938	21,762	458,587		
25 Jul			1,007	44,945	16,842	475,429		
26 Jul			1,078	46,023	16,822	492,250		
27 Jul			439	46,462	11,035	503,285		
28 Jul			504	46,966	9,329	512,614		
29 Jul			751	47,717	11,130	523,744	2,573	2,573
30 Jul			622	48,339	9,384	533,128	1,461	4,034
31 Jul			250	48,589	4,637	537,765	1,202	5,236
1 Aug			241	48,830				
2 Aug			112	48,942				
3 Aug			140	49,082				
4 Aug			124	49,206				
5 Aug			225	49,431				
6 Aug			278	49,709				
7 Aug			57	49,766				

Note: Dip net harvest reports that did not list the day of harvest were proportionalized from the known harvest by day.

Appendix A19.–Age, weight, sex, and size distribution of Pacific herring sampled by gillnet in Upper Cook Inlet, 2011.

Sample date = May 12, 2011

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	-	2	-	-	6	7	102	15.0	6	209	5.9	6
	5	5	-	7	-	-	12	14	120	14.7	12	215	6.0	12
	6	12	-	24	-	-	36	43	128	20.9	36	220	9.7	36
	7	8	-	18	1	-	27	32	147	27.4	27	227	8.1	27
	8	1	-	2	-	-	3	4	184	57.3	3	240	12.4	3
	9	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Total		30	0	53	1	0	84	100	133	28.4	84	221	11	84
Sex Composition		36%	0%	63%	1%	0%								

Sample date = May 19, 2011

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	3	-	1	-	-	4	5	88	17.6	4	195	10.0	4
	5	7	-	9	-	-	16	19	120	19.3	16	209	10.7	16
	6	14	-	43	-	-	57	66	127	19.0	57	214	8.5	57
	7	2	-	6	-	-	8	9	157	16.0	8	229	8.9	8
	8	-	-	1	-	-	1	1	181	-	1	242	-	1
	9	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Total		26	0	60	0	0	86	100	127	23.0	86	214	11.4	86
Sex Composition		30%	0%	70%	0%	0%								

-continued-

Sample date = May 26, 2011

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	1	-	1	-	-	2	3	118	14.4	2	219	10.6	2
	5	1	-	-	4	-	5	6	108	8.8	5	218	10.6	5
	6	12	-	2	24	-	38	49	126	24.9	38	226	10.6	38
	7	5	-	4	14	-	23	30	132	20.0	23	226	10.6	23
	8	4	-	-	4	-	8	10	144	28.6	8	238	9.4	8
	9		-	-	1	-	1	1	183	-	1	247	-	1
Sample Total		23	0	7	47	0	77	100	129	24.5	77	227	11.3	77
Sex Composition		30%	0%	9%	61%	0%								

Sample date = May 27 to June 3, 2011

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	8	-	9	-	-	17	9	123	14.5	17	212	9.0	17
	5	14	-	28	-	-	42	23	147	19.4	42	227	9.4	42
	6	25	-	37	-	-	62	33	161	21.1	62	238	39.2	62
	7	22	-	31	-	-	53	28	185	28.7	53	242	10.7	53
	8	8	-	3	-	-	11	6	195	24.2	11	243	6.3	11
	9	1	-	-	-	-	1	1	168	-	1	237	-	1
Sample Total		78	0	108	0	0	186	100	163	30.4	186	235	25.6	186
Sex Composition		42%	0%	58%	0%	0%								

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Appendix A20.–Age, sex, and size distribution of eulachon (smelt) from Upper Cook Inlet commercial dip net fishery, 2006–2011.

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		

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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		

Appendix A21.–Seldovia District tide tables, May through August, 2011.

May

		High Tides						Low Tides			
		A.M.		P.M.				A.M.		P.M.	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Sun	01:57A	17.7	02:38P	16.7	1	Fri	08:20A	**-0.2**	08:23P	2.8
2	Mon	02:27A	18.4	03:14P	17.3	2	Sat	08:53A	**-1.1**	08:56P	2.7
3	Tue	02:58A	18.8	03:49P	17.5	3	Sun	09:26A	**-1.7**	09:30P	2.8
4	Wed	03:29A	19	04:26P	17.4	4	Mon	09:59A	**-1.9**	10:05P	3.1
5	Thu	04:02A	18.8	05:04P	17	5	Tue	10:34A	**-1.8**	10:41P	3.5
6	Fri	04:37A	18.4	05:44P	16.3	6	Wed	11:11A	**-1.5**	11:20P	4.1
7	Sat	05:14A	17.6	06:28P	15.6	7	Thu	11:51A	**-0.8**		
8	Sun	05:57A	16.7	07:17P	14.9	8	Fri	12:03A	4.7	12:36P	0
9	Mon	06:49A	15.6	08:14P	14.6	9	Sat	12:54A	5.2	01:29P	0.8
10	Tue	07:55A	14.6	09:16P	14.8	10	Sun	01:58A	5.4	02:31P	1.6
11	Wed	09:15A	14	10:18P	15.5	11	Mon	03:14A	5	03:40P	2.1
12	Thu	10:37A	14.3	11:16P	16.7	12	Tue	04:32A	3.6	04:48P	2.2
13	Fri	11:53A	15.2			13	Wed	05:40A	1.6	05:50P	1.9
14	Sat	12:09A	18.1	12:57P	16.5	14	Thu	06:38A	**-0.6**	06:46P	1.4
15	Sun	12:58A	19.5	01:54P	17.8	15	Fri	07:29A	**-2.7**	07:37P	1
16	Mon	01:45A	20.6	02:45P	18.7	16	Sat	08:18A	**-4.2**	08:26P	0.7
17	Tue	02:30A	21.3	03:33P	19.2	17	Sun	09:04A	**-5.1**	09:13P	0.7
18	Wed	03:15A	21.4	04:20P	19.2	18	Mon	09:49A	**-5.3**	09:59P	1
19	Thu	04:00A	20.9	05:07P	18.7	19	Tue	10:34A	**-4.7**	10:45P	1.6
20	Fri	04:45A	19.9	05:54P	17.9	20	Wed	11:18A	**-3.6**	11:33P	2.5
21	Sat	05:31A	18.5	06:42P	16.9	21	Thu	12:04P	**-2.1**		
22	Sun	06:19A	16.8	07:33P	15.9	22	Fri	12:23A	3.5	12:51P	**-0.3**
23	Mon	07:12A	15.1	08:26P	15.1	23	Sat	01:18A	4.4	01:41P	1.4
24	Tue	08:12A	13.6	09:22P	14.6	24	Sun	02:20A	5	02:36P	2.9
25	Wed	09:21A	12.6	10:17P	14.5	25	Mon	03:31A	5.2	03:37P	4.1
26	Thu	10:38A	12.3	11:08P	14.8	26	Tue	04:43A	4.6	04:39P	4.8
27	Fri	11:49A	12.7	11:53P	15.4	27	Wed	05:44A	3.7	05:35P	5.1
28	Sat	12:48P	13.5			28	Thu	06:33A	2.4	06:25P	5
29	Sun	12:34A	16.1	01:36P	14.5	29	Fri	07:15A	1.2	07:09P	4.8
30	Mon	01:13A	16.9	02:17P	15.4	30	Sat	07:52A	0	07:49P	4.4
31	Tue	01:50A	17.6	02:57P	16.2	31	Sun	08:29A	**-1**	08:29P	4

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June

		High Tides						Low Tides			
		A.M.		P.M.				A.M.		P.M.	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Wed	02:27A	18.3	03:35P	16.8	1	Wed	09:04A	**-1.8**	09:07P	3.7
2	Thu	03:05A	18.7	04:13P	17.1	2	Thu	09:41A	**-2.4**	09:46P	3.4
3	Fri	03:43A	18.8	04:52P	17.2	3	Fri	10:18A	**-2.7**	10:27P	3.4
4	Sat	04:23A	18.7	05:32P	17.1	4	Sat	10:57A	**-2.6**	11:09P	3.4
5	Sun	05:05A	18.2	06:14P	16.9	5	Sun	11:37A	**-2.2**	11:55P	3.5
6	Mon	05:51A	17.4	06:58P	16.7	6	Mon			12:21P	**-1.4**
7	Tue	06:43A	16.3	07:46P	16.5	7	Tue	12:46A	3.6	01:09P	**-0.4**
8	Wed	07:45A	15.2	08:38P	16.6	8	Wed	01:44A	3.5	02:02P	0.8
9	Thu	08:56A	14.3	09:35P	16.8	9	Thu	02:51A	3.1	03:03P	2.0
10	Fri	10:15A	13.9	10:33P	17.3	10	Fri	04:04A	2.2	04:09P	2.9
11	Sat	11:34A	14.3	11:32P	18.0	11	Sat	05:14A	0.8	05:17P	3.2
12	Sun			12:45P	15.3	12	Sun	06:18A	**-0.8**	06:20P	3.2
13	Mon	12:29A	18.8	01:46P	16.4	13	Mon	07:14A	**-2.4**	07:17P	2.8
14	Tue	01:23A	19.6	02:38P	17.4	14	Tue	08:05A	**-3.6**	08:10P	2.3
15	Wed	02:13A	20.1	03:26P	18.2	15	Wed	08:52A	**-4.3**	08:59P	1.9
16	Thu	03:01A	20.3	04:11P	18.5	16	Thu	09:37A	**-4.5**	09:46P	1.7
17	Fri	03:46A	20.1	04:54P	18.5	17	Fri	10:20A	**-4.1**	10:31P	1.8
18	Sat	04:31A	19.4	05:35P	18.2	18	Sat	11:01A	**-3.3**	11:16P	2.2
19	Sun	05:14A	18.4	06:16P	17.6	19	Sun	11:41A	**-2.1**		
20	Mon	05:57A	17.1	06:56P	16.9	20	Mon	12:01A	2.8	12:20P	**-0.6**
21	Tue	06:43A	15.6	07:36P	16.1	21	Tue	12:48A	3.4	01:00P	1.1
22	Wed	07:32A	14.1	08:18P	15.5	22	Wed	01:38A	4.1	01:41P	2.7
23	Thu	08:29A	12.9	09:03P	15.0	23	Thu	02:34A	4.5	02:28P	4.3
24	Fri	09:37A	12.0	09:53P	14.8	24	Fri	03:38A	4.5	03:23P	5.5
25	Sat	10:55A	11.9	10:46P	14.9	25	Sat	04:46A	4.1	04:27P	6.3
26	Sun	12:10P	12.4	11:41P	15.3	26	Sun	05:49A	3.2	05:32P	6.5
27	Mon			01:11P	13.3	27	Mon	06:42A	2.1	06:30P	6.2
28	Tue	12:32A	16.1	01:59P	14.4	28	Tue	07:26A	0.8	07:20P	5.6
29	Wed	01:19A	17.0	02:40P	15.6	29	Wed	08:07A	**-0.5**	08:06P	4.8
30	Thu	02:04A	18.0	03:19P	16.6	30	Thu	08:45A	**-1.7**	08:48P	3.9

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July

		High Tides						Low Tides			
		A.M.		P.M.				A.M.		P.M.	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Fri	02:47A	18.8	03:56P	17.5	1	Fri	09:23A	**-2.7**	09:30P	3.0
2	Sat	03:29A	19.4	04:33P	18.1	2	Sat	10:01A	**-3.3**	10:12P	2.4
3	Sun	04:12A	19.6	05:11P	18.6	3	Sun	10:40A	**-3.5**	10:55P	1.8
4	Mon	04:56A	19.3	05:49P	18.8	4	Mon	11:19A	**-3.1**	11:40P	1.5
5	Tue	05:42A	18.6	06:30P	18.7	5	Tue			12:01P	**-2.2**
6	Wed	06:33A	17.4	07:13P	18.5	6	Wed	12:29A	1.4	12:45P	**-0.8**
7	Thu	07:31A	15.9	08:01P	18.1	7	Thu	01:23A	1.5	01:34P	0.9
8	Fri	08:38A	14.6	08:56P	17.6	8	Fri	02:25A	1.6	02:31P	2.6
9	Sat	09:56A	13.7	09:58P	17.4	9	Sat	03:36A	1.5	03:37P	4.0
10	Sun	11:22A	13.7	11:05P	17.4	10	Sun	04:52A	0.9	04:51P	4.8
11	Mon			12:40P	14.5	11	Mon	06:04A	**-0.1**	06:03P	4.7
12	Tue	12:11A	17.8	01:43P	15.7	12	Tue	07:06A	**-1.3**	07:07P	4.1
13	Wed	01:12A	18.5	02:33P	16.9	13	Wed	07:58A	**-2.3**	08:01P	3.2
14	Thu	02:05A	19.2	03:17P	17.9	14	Thu	08:43A	**-3.0**	08:49P	2.4
15	Fri	02:52A	19.6	03:56P	18.5	15	Fri	09:24A	**-3.3**	09:33P	1.8
16	Sat	03:35A	19.7	04:32P	18.8	16	Sat	10:02A	**-3.2**	10:14P	1.5
17	Sun	04:15A	19.4	05:07P	18.8	17	Sun	10:38A	**-2.6**	10:54P	1.5
18	Mon	04:54A	18.8	05:40P	18.5	18	Mon	11:12A	**-1.6**	11:33P	1.9
19	Tue	05:33A	17.7	06:12P	17.9	19	Tue	11:45A	**-0.3**		
20	Wed	06:12A	16.5	06:44P	17.2	20	Wed	12:12A	2.4	12:19P	1.3
21	Thu	06:54A	15.0	07:18P	16.4	21	Thu	12:53A	3.1	12:53P	3.0
22	Fri	07:43A	13.6	07:57P	15.6	22	Fri	01:38A	3.8	01:31P	4.6
23	Sat	08:43A	12.3	08:43P	14.9	23	Sat	02:32A	4.4	02:18P	6.1
24	Sun	10:01A	11.6	09:43P	14.5	24	Sun	03:40A	4.7	03:22P	7.3
25	Mon	11:32A	11.8	10:52P	14.7	25	Mon	04:59A	4.2	04:43P	7.7
26	Tue	12:47P	12.8	11:59P	15.5	26	Tue	06:08A	3.2	05:58P	7.3
27	Wed			01:38P	14.2	27	Wed	07:01A	1.7	06:57P	6.2
28	Thu	12:56A	16.7	02:19P	15.7	28	Thu	07:45A	0.1	07:46P	4.8
29	Fri	01:46A	18.1	02:55P	17.2	29	Fri	08:24A	**-1.5**	08:30P	3.3
30	Sat	02:31A	19.4	03:30P	18.5	30	Sat	09:02A	**-2.7**	09:12P	1.9
31	Sun	03:15A	20.4	04:05P	19.7	31	Sun	09:39A	**-3.5**	09:54P	0.6

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August

		High Tides						Low Tides			
		A.M.		P.M.				A.M.		P.M.	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Mon	03:59A	20.8	04:41P	20.4	1	Mon	10:17A	**-3.6**	10:36P	**-0.3**
2	Tue	04:43A	20.7	05:18P	20.7	2	Tue	10:57A	**-3.1**	11:21P	**-0.7**
3	Wed	05:30A	19.8	05:57P	20.6	3	Wed	11:37A	**-1.9**		
4	Thu	06:19A	18.4	06:39P	20.0	4	Thu	12:08A	**-0.6**	12:20P	**-0.3**
5	Fri	07:15A	16.7	07:27P	19.0	5	Fri	12:59A	**-0.1**	01:08P	1.7
6	Sat	08:21A	14.9	08:22P	17.8	6	Sat	01:59A	0.8	02:04P	3.7
7	Sun	09:42A	13.7	09:30P	16.8	7	Sun	03:11A	1.5	03:14P	5.4
8	Mon	11:16A	13.6	10:49P	16.5	8	Mon	04:35A	1.6	04:38P	6.1
9	Tue			12:38P	14.6	9	Tue	05:56A	1.0	05:59P	5.6
10	Wed	12:06A	16.9	01:37P	15.9	10	Wed	07:00A	0.0	07:04P	4.6
11	Thu	01:10A	17.7	02:22P	17.1	11	Thu	07:50A	**-0.9**	07:55P	3.3
12	Fri	02:01A	18.6	02:59P	18.2	12	Fri	08:30A	**-1.6**	08:38P	2.2
13	Sat	02:43A	19.3	03:32P	19.0	13	Sat	09:06A	**-1.9**	09:17P	1.3
14	Sun	03:21A	19.6	04:02P	19.4	14	Sun	09:38A	**-1.8**	09:53P	0.8
15	Mon	03:57A	19.6	04:30P	19.5	15	Mon	10:09A	**-1.3**	10:27P	0.7
16	Tue	04:32A	19.2	04:58P	19.4	16	Tue	10:40A	**-0.5**	11:01P	0.9
17	Wed	05:07A	18.4	05:26P	18.9	17	Wed	11:10A	0.7	11:36P	1.4
18	Thu	05:43A	17.3	05:55P	18.1	18	Thu	11:40A	2.1		
19	Fri	06:21A	15.9	06:25P	17.2	19	Fri	12:11A	2.1	12:12P	3.6
20	Sat	07:04A	14.4	06:59P	16.2	20	Sat	12:49A	3.1	12:46P	5.2
21	Sun	07:58A	12.9	07:43P	15.1	21	Sun	01:35A	4.1	01:28P	6.7
22	Mon	09:15A	11.9	08:46P	14.4	22	Mon	02:38A	4.8	02:30P	8.0
23	Tue	10:55A	11.8	10:10P	14.2	23	Tue	04:04A	5.0	04:03P	8.5
24	Wed	12:18P	12.9	11:32P	15.1	24	Wed	05:31A	4.0	05:32P	7.8
25	Thu			01:09P	14.6	25	Thu	06:31A	2.4	06:36P	6.2
26	Fri	12:36A	16.6	01:47P	16.4	26	Fri	07:17A	0.7	07:26P	4.2
27	Sat	01:28A	18.4	02:22P	18.2	27	Sat	07:57A	**-0.9**	08:09P	2.1
28	Sun	02:15A	20.0	02:57P	19.9	28	Sun	08:35A	**-2.2**	08:51P	0.1
29	Mon	03:00A	21.2	03:32P	21.3	29	Mon	09:13A	**-2.9**	09:33P	**-1.5**
30	Tue	03:44A	21.8	04:08P	22.1	30	Tue	09:52A	**-2.9**	10:15P	**-2.5**
31	Wed	04:29A	21.6	04:45P	22.4	31	Wed	10:32A	**-2.3**	10:59P	**-2.8**

Appendix A22.–Total sockeye salmon harvest from all sources in Upper Cook Inlet, 1996–2011.

	Commercial				Sport[a,b,c]			Personal Use					Subsistence and 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	275,000	30,000	283,600	21,924	70,774	389,552	32,052	514,302	865	5,652	3,660,856
2011	3,201,035	2,076,405	5,660	5,283,100	341,000	27,500	368,500	26,780	49,766	537,765	16,068	630,379	700	11,166	6,293,845

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

[b] Sport harvest is estimated from the annual Statewide Harvest Survey.

[c] Sport harvest in 2011 is unknown until the Statewide Harvest Survey is finalized; these figures are estimates based on size of 2010 sockeye salmon run.

[d] Area of harvest not identified on permits, other than Fish Creek dip net, which was open from 1996-2001 and 2009-2010 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, 2011.

Date	Lbs	No. Diggers	Date	Lbs	No. Diggers
5/14/2011	6385	23	6/28/2011	4375	9
5/15/2011	5842	23	6/29/2011	3285	9
5/16/2011	4750	23	6/30/2011	4347	9
5/17/2011	4954	17	7/1/2011	2217	9
5/19/2011	1050	6	7/2/2011	2224	9
5/20/2011	1101	5	7/3/2011	3234	9
5/21/2011	2163	7	7/4/2011	2178	9
5/22/2011	1050	5	7/5/2011	2186	9
5/23/2011	1685	6	7/6/2011	1907	9
5/29/2011	1050	6	7/7/2011	2216	9
5/30/2011	3112	8	7/10/2011	4341	9
5/31/2011	2964	9	7/11/2011	3046	9
6/1/2011	1020	6	7/12/2011	2255	7
6/2/2011	3180	8	7/13/2011	3232	9
6/3/2011	2955	9	7/14/2011	3276	9
6/4/2011	2130	8	7/15/2011	3180	9
6/5/2011	3260	9	7/16/2011	3181	9
6/6/2011	2100	8	7/17/2011	3150	9
6/7/2011	3089	9	7/18/2011	2062	9
6/8/2011	2728	9	7/19/2011	2116	9
6/11/2011	2040	8	7/20/2011	2720	9
6/12/2011	3228	9	7/26/2011	3195	9
6/13/2011	4163	9	7/27/2011	3129	8
6/14/2011	2100	8	7/28/2011	4272	9
6/15/2011	4161	9	7/29/2011	3090	7
6/16/2011	3261	9	7/30/2011	3776	9
6/17/2011	3206	8	7/31/2011	3140	9
6/18/2011	4214	9	8/1/2011	2053	9
6/19/2011	3307	9	8/2/2011	2070	9
6/20/2011	3191	9	8/3/2011	2093	9
6/21/2011	3271	9	8/29/2011	540	<4
6/22/2011	3485	9	9/1/2011	605	<4
6/27/2011	4286	9			
Total for Year = 189,172 lbs					

APPENDIX B: HISTORICAL DATA

Appendix B1.–Upper Cook Inlet commercial Chinook salmon harvest by gear type and area, 1966–2011.

	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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	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			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	7.0	22,101	78.5	739	2.6	3,373	12.0	28,171
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	539	5.4	7,059	71.3	553	5.6	1,750	17.7	9,901
2011	593	5.3	7,697	68.4	659	5.9	2,299	20.4	11,248
1966-10 Avg [a]	1,019	6.4	10,012	66.2	1,307	9.1	3,218	18.3	15,556
2001-10 Avg	1,108	6.8	11,655	69.5	948	6.2	2,612	17.4	16,323

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, 1966–2011.

	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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	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	2,428,385	35	146,377	2	129,713	2	6,843,833
1989			4,543,492	91	186,828	4	280,801	6	5,011,121
1990	2,305,331	64	1,117,581	31	84,949	2	96,398	3	3,604,259
1991	1,118,119	51	844,156	39	99,855	5	116,201	5	2,178,331
1992	6,069,495	67	2,838,076	31	131,304	1	69,478	1	9,108,353
1993	2,558,732	54	1,941,783	41	108,181	2	146,633	3	4,755,329
1994	1,901,452	53	1,458,162	41	85,830	2	120,142	3	3,565,586
1995	1,773,873	60	961,216	33	107,640	4	109,098	4	2,951,827
1996	2,205,067	57	1,483,008	38	96,719	2	104,128	3	3,888,922
1997	2,197,736	53	1,832,824	44	48,723	1	97,455	2	4,176,738
1998	599,202	49	512,225	42	47,165	4	60,650	5	1,219,242
1999	1,413,995	53	1,092,946	41	114,454	4	59,115	2	2,680,510
2000	656,427	50	529,747	40	92,477	7	43,831	3	1,322,482
2001	846,257	46	870,019	48	59,709	3	50,848	3	1,826,833
2002	1,367,251	49	1,303,158	47	69,609	3	33,100	1	2,773,118
2003	1,593,638	46	1,746,841	50	87,193	3	48,487	1	3,476,159
2004	2,528,910	51	2,235,810	45	134,356	3	27,144	1	4,926,220
2005	2,520,300	48	2,533,841	48	157,612	3	26,415	1	5,238,168
2006	784,771	36	1,301,275	59	94,054	4	12,630	1	2,192,730
2007	1,823,481	55	1,353,407	41	122,424	4	17,467	1	3,316,779
2008	983,303	41	1,303,236	55	67,366	3	26,230	1	2,380,135
2009	968,075	47	905,853	44	131,214	6	40,652	2	2,045,794
2010	1,587,682	56	1,085,789	38	114,719	4	40,177	1	2,828,367
2011	3,201,035	61	1,877,442	36	163,539	3	35,424	1	5,277,440
1966-10 Avg [a]	1,593,878	55	1,063,628	35	103,185	5	90,274	5	2,850,966
2001-10 Avg	1,500,367	48	1,463,923	48	103,826	4	32,315	1	3,100,430

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, 1966–2011.

	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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	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	110,277	53.2	32,683	15.8	26,281	12.7	38,015	18.3	207,256
2011	40,858	42.9	15,560	16.3	16,760	17.6	22,098	23.2	95,276
1966-10 Avg [a]	150,962	47.0	37,650	13.3	51,656	17.4	66,017	22.3	306,285
2001-10 Avg	105,100	54.1	21,099	10.8	26,697	14.7	35,563	20.4	188,459

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, 1966–2011.

	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	164,006	56.0	121,817	41.6	3,106	1.1	3,743	1.3	292,672
2011	15,333	45.1	15,527	45.6	2,424	7.1	746	2.2	34,030
1966-10 Avg [a]	214,674	43.8	179,458	37.3	13,515	4.3	74,345	14.6	481,992
2001-10 Avg	124,033	56.7	87,789	38.2	4,998	2.9	3,396	2.2	220,216

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, 1966–2011.

	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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Appendix B5.–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	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	216,985	94.9	3,035	1.3	4,947	2.2	3,703	1.6	228,670
2011	111,082	86.0	1,612	1.2	9,995	7.7	6,513	5.0	129,202
1966-10 Avg [a]	402,552	88	2,615	1	22,700	5	25,360	6	453,227
2001-10 Avg	108,423	93	1,136	1	4,263	4	2,396	2	116,218

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, 1966–2011.

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	757,319	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	4,926,220	311,056	357,939	146,164	5,768,301
2005	28,171	5,238,168	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	9,901	2,828,367	207,256	292,672	228,670	3,566,866
2011	11,248	5,277,440	95,276	34,030	129,202	5,547,196
1966-2010 Avg	15,805	2,898,969	307,030	472,780	445,868	4,140,452
2001-2010 Avg	16,323	3,100,430	188,459	220,216	116,218	3,641,646

Note: Catch statistics prior to 2011 reflect minor adjustments to harvest database.

Appendix B7.–Approximate exvessel value of Upper Cook Inlet commercial salmon harvest by species, 1960–2011.

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%	$ 19,404,381	93.8%	$ 416,193	2.0%	$ 65,861	0.3%	$ 129,794	0.6%	$ 20,678,778
2005	$ 692,161	2.2%	$ 30,156,133	95.2%	$ 708,793	2.2%	$ 12,783	0.0%	$ 101,123	0.3%	$ 31,670,993
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	$ 349,137	1.0%	$ 32,112,549	93.1%	$ 943,481	2.7%	$ 235,963	0.7%	$ 836,884	2.4%	$ 34,478,013
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

Appendix B8.–Commercial herring harvest by fishery, Upper Cook Inlet, 1973–2011.

	Harvest (Tons)				
Year	Upper Subdistrict	Chinitna Bay	Tuxedni Bay	Kalgin Isl	Total
1973	13.8	-	-	not open	13.8
1974	36.7	-	-	not open	36.7
1975	6.2	-	-	not open	6.2
1976	5.8	-	-	not open	5.8
1977	17.3	-	-	not open	17.3
1978	8.3	55.3	-	not open	63.6
1979	67.3	96.2	24.8	not open	188.3
1980	37.4	20	86.5	not open	143.9
1981	86.2	50.5	84.9	not open	221.6
1982	60.2	91.8	50.2	not open	202.2
1983	165.3	49.2	238.2	not open	452.7
1984	117.5	90.6	159	not open	367.1
1985	136.3	46.1	215.9	not open	398.4
1986	142.6	111.1	191.9	not open	445.6
1987	126.5	65.1	152.5	not open	344.1
1988	50.7	23.4	14.1	not open	88.1
1989	55.2	122.3	34.3	not open	211.8
1990	55.4	55.9	16.1	not open	127.5
1991	13.4	15.7	1.6	not open	30.7
1992	24.7	10.4	-	not open	35.2
1993	-	-	-	not open	-
1994	-	-	-	not open	-
1995	-	-	-	not open	-
1996	-	-	-	not open	-
1997	-	-	-	not open	-
1998	19.5	-	-	not open	19.4
1999	10.4	-	-	not open	10.4
2000	14.7	-	-	not open	16.3
2001	9.9	-	-	not open	10.4
2002	16.2	1.9	0	not open	18.1
2003	3.7	0	0	not open	3.7
2004	6.7	0.1	0	not open	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

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

Appendix B9.–Commercial harvest of razor clams in Upper Cook Inlet, 1919–2011.

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

Appendix B10.–Enumeration goals and counts of sockeye salmon in selected streams of Upper Cook Inlet, 1979–2011.

	Kenai River		Kasilof River		Fish Creek	
Year	Enumeration Goal	Enumeration Estimate [a,b]	Enumeration Goal	Enumeration Estimate [a,b]	Enumeration Goal	Enumeration Estimate[c,b]
1979	350,000-500,000	412,978	75,000-150,000	152,179	0	68,739
1980	350,000-500,000	667,458	75,000-150,000	184,260	0	62,828
1981	350,000-500,000	575,848	75,000-150,000	256,625	0	50,479
1982	350,000-500,000	809,173	75,000-150,000	180,239	50,000	28,164
1983	350,000-500,000	866,455	75,000-150,000	215,731	50,000	118,797
1984	350,000-500,000	481,473	75,000-150,000	238,413	50,000	192,352
1985	350,000-500,000	680,897	75,000-150,000	512,827	50,000	68,577
1986	350,000-500,000	645,906	75,000-150,000	283,054	50,000	29,800
1987	400,000-700,000	2,245,615	150,000-250,000	256,707	50,000	91,215
1988	400,000-700,000	1,356,958	150,000-250,000	204,336[d]	50,000	71,603
1989	400,000-700,000	2,295,576	150,000-250,000	164,952	50,000	67,224
1990	400,000-700,000	950,358	150,000-250,000	147,663	50,000	50,000
1991	400,000-700,000	954,843	150,000-250,000	233,646	50,000	50,500
1992	400,000-700,000	1,429,864	150,000-250,000	188,819	50,000	71,385
1993	400,000-700,000	1,134,922	150,000-250,000	151,801	50,000	117,619
1994	400,000-700,000	1,412,047	150,000-250,000	218,826	50,000	95,107
1995	450,000-700,000	884,922	150,000-250,000	202,428	50,000	115,000
1996	550,000-800,000	1,129,274	150,000-250,000	264,511	50,000	63,160
1997	550,000-825,000	1,512,733	150,000-250,000	263,780	50,000	54,656
1998	550,000-850,000	1,084,996	150,000-250,000	259,045	50,000	22,853
1999	750,000-950,000	1,137,001	150,000-250,000	312,481	50,000	26,667
2000	600,000-850,000	900,700	150,000-250,000	263,631	50,000	19,533
2001	600,000-850,000	906,333	150,000-250,000	318,735	50,000	43,469
2002	750,000-950,000	1,339,682	150,000-250,000	235,731	20,000 - 70,000	90,483
2003	750,000-950,000	1,656,026	150,000-250,000	353,526	20,000 - 70,000	92,298
2004	850,000-1,100,000	1,945,383	150,000-250,000	523,653	20,000 - 70,000	22,157
2005	850,000-1,100,000	1,908,821	150,000-250,000	360,065	20,000 - 70,000	14,215
2006	750,000-950,000	2,064,728	150,000-250,000	389,645	20,000 - 70,000	32,566
2007	750,000-950,000	1,229,945	150,000-250,000	365,184	20,000 - 70,000	27,948
2008	650,000-850,000	917,139	150,000-250,000	327,018	20,000 - 70,000	19,339
2009	650,000-850,000	1,090,055	150,000-250,000	326,285	20,000 - 70,000	83,477
2010	750,000-950,000	1,334,769	150,000-250,000	295,265	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

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	Yentna River		Crescent River		Packers Creek	
Year	Enumeration Goal[e]	Enumeration Estimate [f,b]	Enumeration Goal	Enumeration Estimate [f,b]	Enumeration Goal	Enumeration Estimate[e,b]
1979	100,000		50,000	86,654	0	N/C
1980	100,000		50,000	90,863	0	16,477
1981	100,000	139,401	50,000	41,213	0	13,024
1982	100,000	113,847	50,000	58,957	0	15,687
1983	100,000	104,414	50,000	92,122	0	18,403
1984	100,000	149,375	50,000	118,345	0	30,684
1985	100,000	107,124	50,000	128,628	0	36,850
1986	100,000-150,000	92,076	50,000	20,385[g]	0	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	no count
2002	90,000-160,000	78,591	25,000-50,000	62,833	15,000-30,000	no count
2003	90,000-160,000	180,813	25,000-50,000	122,457	15,000-30,000	no count
2004	90,000-160,000	71,281	25,000-50,000	103,201	15,000-30,000	no count
2005	75,000-180,000	36,921	30,000-70,000	125,623	no goal	2,2000[h]
2006	90,000-160,000	92,896	30,000-70,000	92,533	no goal	no count
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	Nd[i]	ND[h]	30,000-70,000	no count	15,000-30,000	1,6473[h]
2010	Nd[i]	ND[h]	30,000-70,000	86,333	15,000-30,000	no count
2011	Nd[i]	ND[h]	30,000-70,000	81,952	15,000-30,000	no count

[a] Derived from DIDSON or DIDSON equivalent units.

[b] Enumeration estimates prior to 2010 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] Derived from Bendix sonar.

[g] Counts through 16 July only.

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

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

Appendix B11.–Average price paid for commercially-harvested salmon, Upper Cook Inlet, 1970–2011.

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

Note: Price is expressed as dollars per pound. Data source: 1969–1983: Commercial Fisheries Entry Commission; 1984–2010: random fish ticket averages, which do not include bonuses or postseason adjustments.

Appendix B12.–Average weight (pounds) of commercially-harvested salmon, Upper Cook Inlet, 1970–2011.

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	24.6	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
1970-2010 Avg	25.9	6.3	6.5	3.6	7.4
2011	20.2	6.5	5.7	3.2	6.7

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, 1970–2011.

	Drift Gillnet			Set Gillnet			
Year	Resident	Non-Resident	Subtotal	Resident	Non-Resident	Subtotal	Total
1970	537	220	757	707	65	772	1,529
1971	519	191	710	693	38	731	1,441
1972	419	152	571	672	35	707	1,278
1973	516	146	662	632	43	675	1,337
1974	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

Source: 1970–1974 ADF&G unpublished reports; 1975–2010 Commercial Fisheries Entry Commission. http://www.cfec.state.ak.us/pstatus/14052009.htm.

Appendix B14.–Forecast and projected commercial harvests of salmon by species, Upper Cook Inlet, 1985–2011.

	Sockeye			Coho			Pink			Chum			Chinook		
Year	Forecast[a]	Actual[b,d]	Error	Projected	Actual[c,d]	Error	Projected	Actual[c,d]	Error	Projected	Actual[c,d]	Error	Projected	Actual[c,d]	Error
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	39,449	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	207,256	16%	305,000	292,672	-4%	70,000	228,670	227%	17,000	9,901	-42%
2011	4,600,000	5,277,440	15%	178,000	95,276	-46%	106,000	34,030	-68%	101,000	129,202	28%	14,000	11,248	-20%
Avg.	3,253,846	4,332,202	30%	301,500	322,753	11%	281,058	282,250	23%	339,231	260,357	-11%	18,407	18,571	8%

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

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

[c] Actual harvests prior to 2010 reflect minor adjustments to the harvest database.

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

Appendix B15.–Upper Cook Inlet subsistence fisheries salmon harvest, 1980–2011 (harvest estimated from returned permits only, not expanded for non-returned permits).

	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

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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

Appendix B16.–Upper Cook Inlet educational fisheries salmon harvest, 1994–2011.

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

-continued-

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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

-continued-

Appendix B16.–Page 5 of 5.

Year	Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
2011	Kenaitze	47	6873	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

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, 1996–2011.

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[a]	10	1,846	16	26,780	244	167	4	47	10	23	1	3	0	27,020	244
Min.	5	582		9,506		46		0		2		0		9,561	
Mean	9	1,332		19,787		214		83		21		7		20,111	
Max.	13	1,855		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[a]	44	6,571	35	49,766	351	24	3	977	39	652	40	144	14	51,562	355
Min.	27	1,091		9,737		16		90		19		17		9,900	
Mean	38	4,375		43,371		67		778		651		98		44,963	
Max.	44	7,650		73,035		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[a]	22	32,818	60	537,765	1,105	1,243	10	4,745	107	3,914	86	915	47	548,583	1,115
Min.	18	10,503		98,262		254		559		619		58		101,771	
Mean	22	17,843		225,130		816		2,045		3,529		344		231,864	
Max.	27	32,818		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[a]	-	836	11	10,695	136	17	1	80	5	135	17	72	7	10,962	137
Min.	-	270		3,310		0		39		28		4		3,429	
Mean	-	812		8,393		65		163		199		38		8,855	
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	1,452	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	3576	84	1721	28	290	9	29,303	184
2011[a]	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	1,464		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[a]	43			137		0		17		0		5		159	
Min.	43			31		0		1		0		0		53	
Mean	43			89		0		33		2		3		115	
Max.	43			140		0		78		7		5		225	

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Upper Cook Inlet Personal Use Fisheries Total

	Days Fished		Sockeye		Chinook		Coho		Pink		Chum		Total	
Year	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE
1996	16,606	85	145,545	644	452	12	4,811	56	2,973	50	350	12	154,131	655
1997	14,923	114	148,940	592	464	13	777	26	844	27	88	6	151,113	604
1998	17,360	84	176,581	1,032	549	14	2,685	102	1,933	70	220	34	181,968	1,043
1999	19,752	101	208,589	1,309	1,108	31	1,413	119	2,078	66	168	15	213,356	1,320
2000	17,930	88	149,267	961	1,102	28	3,638	114	2,482	86	290	35	156,779	976
2001	20,625	86	218,688	1,176	1,138	24	2,637	112	1,821	46	276	39	224,560	1,197
2002	21,224	74	259,623	1,092	1,070	17	3,271	91	8,470	149	757	38	273,191	1,136
2003	21,668	63	298,831	1,061	1,711	34	2,250	85	2,082	101	371	24	305,245	1,079
2004	25,360	43	350,091	678	1,098	9	3,754	75	2,715	32	502	14	358,158	689
2005	27,253	21	369,776	311	1,132	3	3,415	29	2,520	17	428	3	377,271	314
2006	20,543	20	216,047	236	1,405	4	3,759	27	12,434	41	746	10	234,391	242
2007	28,677	29	356,717	386	1,924	5	2,727	26	2,352	24	614	17	364,334	388
2008	28,491	34	318,513	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
Min.	14,923		145,545		452		777		844		88		151,113	
Mean	25,188		301,216		1,166		3,609		4,556		522		311,070	
Max.	43,450		630,379		1,924		8,405		12,434		1,169		644,635	

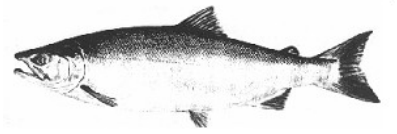
[a] Fishery not open from 2001 to 2008 and 2011 data are preliminary estimates

APPENDIX C: SALMON OUTLOOK AND FORECAST

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

Cora Campbell, Commissioner

Jeff Regnart, Director



Contact:
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Date Issued: 2/4/2010

UPPER COOK INLET
2011 OUTLOOK FOR COMMERCIAL SALMON FISHING
SALMON FISHING

SOCKEYE SALMON

A run of 6.4 million sockeye salmon is forecasted to return to UCI in 2011, with a harvest by all user groups of 4.9 million. The forecasted harvest in 2011 is about 1.1 million fish above the 20-year average harvest by all user groups of 3.8 million. The run forecast for the Kenai River is 3.9 million, which is 9% greater than the 20-year average run of 3.6 million. Age 1.3 sockeye salmon typically comprise about 64% of the run to the Kenai River. A sibling model based upon the return of age 1.2 sockeye salmon in 2010 (663,000; 20-year average: 373,000) predicted a return of 3.0 million age 1.3 sockeye salmon. A fry model based upon the abundance of age-0 fry rearing in Skilak and Kenai lakes in the fall of 2007 (9.1 million; 20-year average: 17.8 million) predicted a return of 1.4 million age 1.3 sockeye salmon. The sibling model was used for this forecast, because the 10-year mean absolute percentage error (MAPE) was lower for the sibling model (25%) than the fry model (62%). Age 2.3 sockeye salmon typically comprise about 17% of the run to the Kenai River. A sibling model based upon the return of age 2.2 sockeye salmon in 2010 (171,000; 20-year average: 248,000) predicted a return of 275,000 age 2.3 sockeye salmon in 2011. A fry model based upon the abundance of age-1 fry rearing in Skilak and Kenai lakes in the fall of 2007 (8.9 million; 20-year average: 1.6 million) predicted a return of 1.6 million age 2.3 sockeye salmon. The sibling model was used for this forecast because the 10-year MAPE was lower for the sibling model (28%) than the fry model (115%). The forecasted age 2.3 return is

-continued-

56% less than the 20-year average return for this age class. The predominant age classes in the 2011 run should be age 1.3 (75%), age 1.2 (9%), and age 2.3 (7%). The 10-year MAPE for the set of models used for the 2011 Kenai sockeye salmon run forecast was 29%.

The sockeye salmon run forecast for the Kasilof River is 929,000, which is 3% greater than the 20-year average run of 902,000. 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 325,000 which is 3% greater than the 20-year average return (315,000) for this age class. A smolt model based upon the abundance of age-1 sockeye salmon smolts in 2008 was used to forecast the return of age 1.3 sockeye salmon in 2011. The abundance of age-1 smolts in 2008 was 4.3 million, which is equal to the 20-year average abundance for this age class. A sibling model predicted a return of 316,000 age 1.3 sockeye salmon. The smolt model was used for this forecast because the 10-year MAPE was lower for the smolt model (23%) than the sibling model (27%). Age 1.2 sockeye salmon typically comprise about 30% of the run. The forecast for age 1.2 sockeye salmon is 242,000, which is 12% less than the 20-year average return (274,000) for this age class. A smolt model based upon the abundance of age-1 smolts (2.1 million) in 2009 was used to forecast the return of age 1.2 sockeye salmon in 2011. A sibling model forecasted a return of 309,000 age 1.2 sockeye salmon. The smolt model was used for this forecast because the 10-year MAPE was lower for the smolt model (39%) than the sibling model (50%). Age 2.2 sockeye salmon typically comprise about 24% of the run. The forecast for age 2.2 sockeye salmon is 286,000, which is 34% greater than the 20-year average return (213,000) for this age class. A smolt model based upon the abundance and mean weight of age-2 smolts in 2009 was used to forecast the return of age 2.2 sockeye salmon in 2011. The abundance of age-2 smolts in 2009 was 1.5 million, which is 9% less than the 20-year average abundance (1.7 million) for this age class. The mean weight of age-2 smolts in 2009 was 6.8 g, which is 22% greater than the 20-yr average smolt weight (5.5 g). The predominant age classes in the 2011 run should be age 1.2 (26%), age 1.3 (35%), and age 2.2 (31%). The 10-year MAPE for the set of models used for the 2011 Kasilof sockeye salmon run forecast was 27%.

The sockeye salmon run forecast for the Susitna River is 463,000, which is 61% of the 20-year average run of 780,000. 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. Since this is only the second year a weir-based method has been used, no MAPE can be estimated. However, the 2010 forecast was 112% greater than the estimated actual run. 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 105,000, which is 10% 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. A fry model based upon the estimated abundance of age-0 fry entering Big Lake in 2008 (7.1 million; 15-year average: 13.7 million) predicted a return of 45,000 age 1.2 sockeye salmon. A sibling model based upon the abundance of age 1.2 sockeye salmon returning in 2010 predicted a return of 37,000 age 1.3 sockeye salmon in 2011. The age 1.2 forecast is 26% less than

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the 20-year average return (61,000) for this age class, while the age 1.3 forecast is 23% greater than the 20-year average return (30,000). The predominant age classes in the 2011 run should be age 1.2 (43%), age 1.3 (35%), and age 2.2 (12%).

The sockeye salmon run forecast for Crescent River is 131,000, which is 26% greater than the 20-year average run of 104,000. Age 1.3 and 2.3 sockeye salmon typically comprise 75% of the run to Crescent River. Sibling models based upon returns of age 1.2 and 2.2 sockeye salmon in 2010 were used to forecast returns of age 1.3 (75,000) and 2.3 (31,000) sockeye salmon in 2011. The predominant age classes in the 2011 run should be age 1.3 (58%) and age 2.3 (24%).

Forecast runs to individual freshwater systems are as follows:

System	Run	Goals [a]
Crescent River	131,000	30,000–70,000
Fish Creek	105,000	20,000–70,000
Kasilof River [b, c]	929,000	160,000–390,000
Kenai River [b]	3,941,000	1,000,000–1,200,000
Susitna River	463,000	
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	835,000	N/A
Total	6,404,000	

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

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 2011 harvest:

Pink Salmon	106,000
Chum Salmon	101,000
Coho Salmon	178,000
Chinook Salmon	14,000

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REGULATORY CHANGES AND FISHING STRATEGY

There were several regulatory changes made by the Alaska BOF of Fisheries during the March meeting that will be implemented during the 2011 fishing season. The following summary is for informational purposes only and is not a comprehensive review. Regulation booklets are currently being printed and may not be available prior to the beginning of some fisheries. Once published, booklets will be available to allow fishermen to become familiar with the new regulations prior to fishing. Fishermen should consult the new regulations to see how their specific fishery may have changed. Regulation language will be available from department offices prior to booklets being published.

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 2011. This area will open for the regular season beginning 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 meeting, the BOF 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 the department estimates that 50,000 sockeye salmon are in the Kasilof River prior to that date, at which time the commissioner may open the fishery, by Emergency Order (EO); however, the fishery may not open earlier than June 20.
- From June 25 through July 7 the department 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.

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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:
- 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, the department may limit regular and additional periods in the Kasilof Section to within ½ 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 ½ mile of shore in the Kasilof Section.
- If the Kenai assessment is **between 2.3 and 4.6 million Kenai sockeye salmon**, the Department 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, the department may limit regular and extra periods in the Kasilof Section to within ½ mile of shore.
- If the Kenai assessment changes to a run of **more than 4.6 million Kenai sockeye salmon**, the department 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, the department may limit regular and extra periods in the Kasilof Section to within ½ 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 after August 10. The season closes if during two consecutive fishing periods (defined as a calendar day) the harvest is less than 1%.

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,
    - Drift gillnet fishing is restricted for the first regular fishing period to the Expanded Kenai and Expanded Kasilof Sections (Figure 2) described below.
    - Drift gillnet fishing is restricted for the second regular fishing period to the Expanded Kenai and Expanded Kasilof Sections (Figure 2) and Drift Area One (Figure 3) described below.

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- 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 the Expanded Kenai and Expanded Kasilof Sections of the Upper Subdistrict and in Drift Area One;
  - 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 during even years was authorized for both drift and set nets; mesh size restrictions apply.

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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 there 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 ½ 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 BOF 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 Department offices in Soldotna, Homer, or Anchorage or by mail. Forms are available at area offices or on the department's homepage at http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareauci.salmon. 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 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 30. There will be up to four fishing periods in 2011, the remaining periods are scheduled for June 6, 13, and 20. Weekly fishing periods are Mondays only from 7:00 a.m. to 7:00 p.m. In that 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 2011.
- *Northern District Regular Season Salmon Fishery*: June 27,
- *Western Subdistrict Set Net Fishery:* June 16

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- *All remaining set gillnet fisheries, except the Upper Subdistrict:* June 27.
- *Upper Subdistrict Set Net Fishery:* June 27 for the Kasilof Section (that portion south of the Blanchard Line), unless opened earlier by EO (if 50,000 sockeye are in the river before the June 28 opener), but will not open before June 20. The Kenai and East Forelands Sections (that portion north of the Blanchard Line) will open July 11. All sections of the Upper Subdistrict will close for the season on or before August 15.
- *Drift Gillnet Fishery*: June 20.

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).

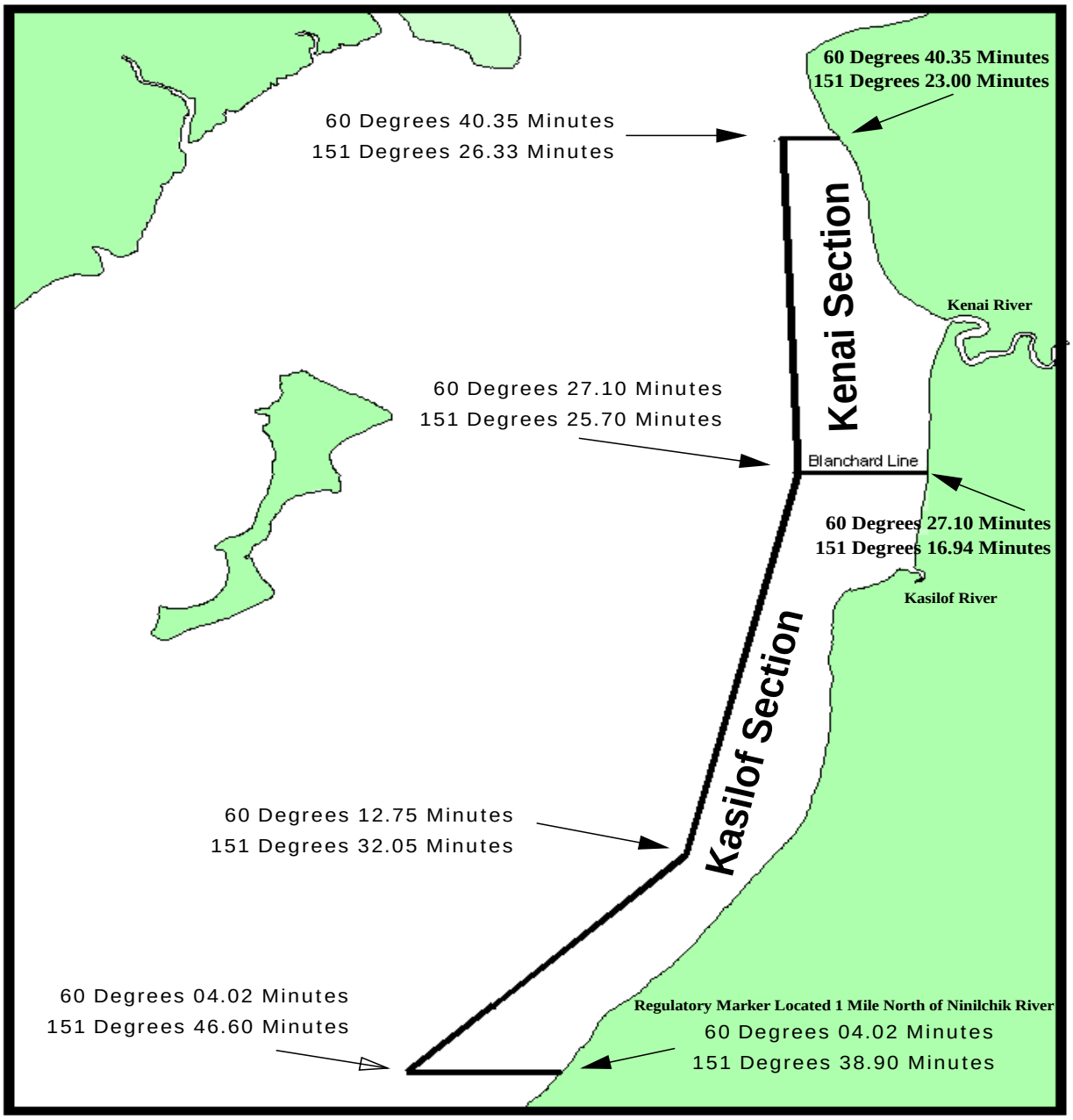

Figure 1. Map of the Kenai and Kasilof Sections with waypoint descriptions.

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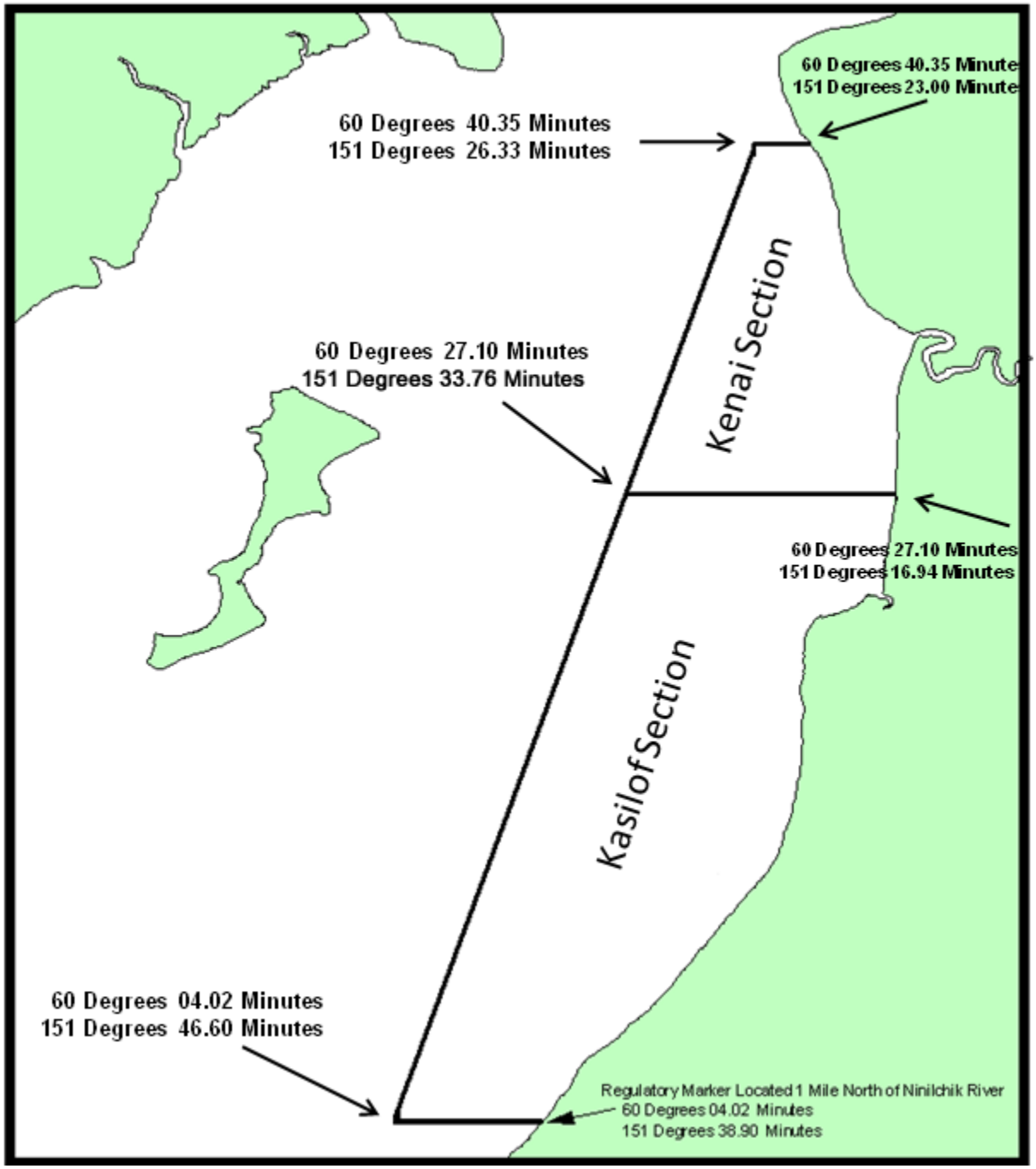

Figure 2. Map of the expanded Kenai and expanded Kasilof Section with waypoint descriptions.

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Drift Gillnet Area 1 & Area 2 Descriptions

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

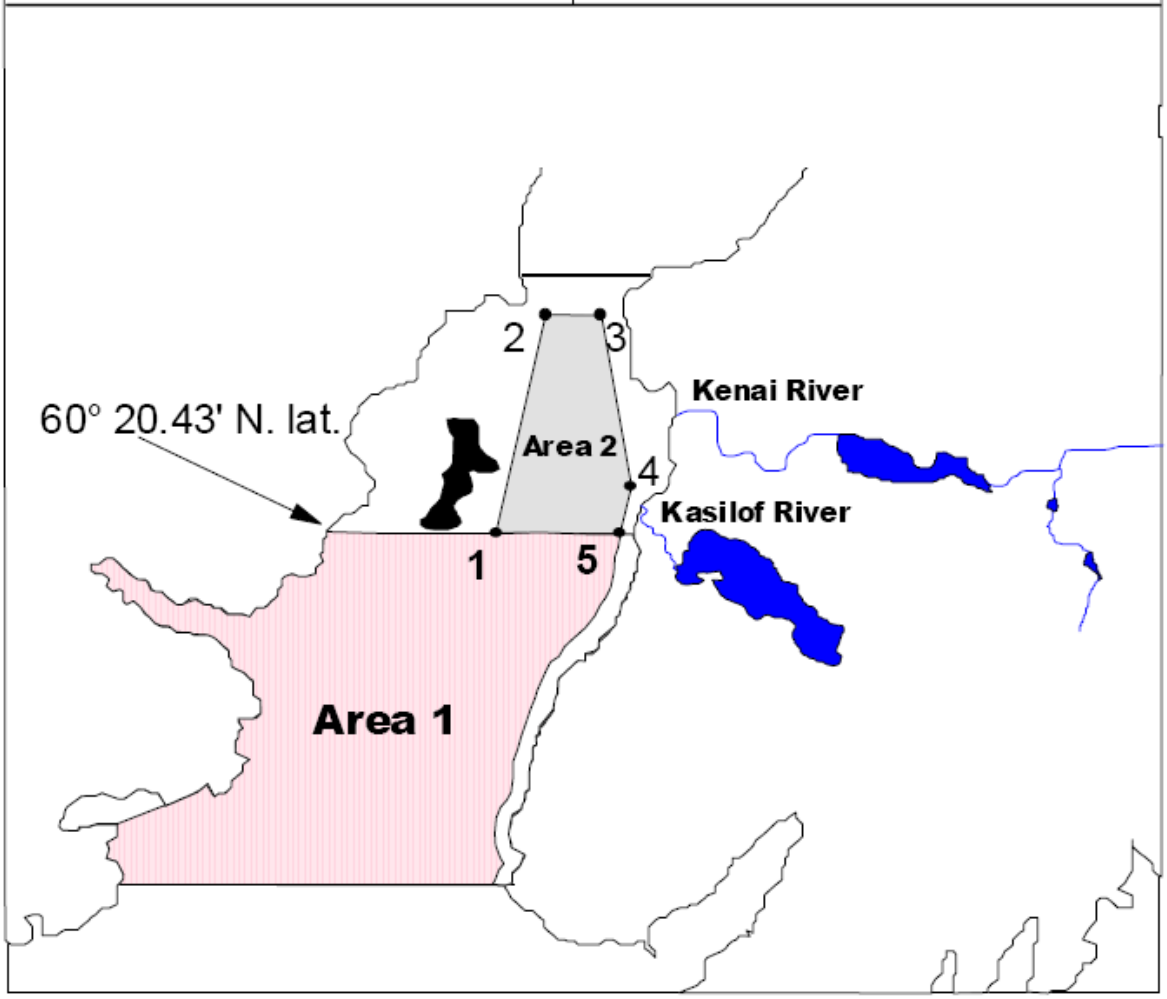

Figure 3. Map of drift gillnet fishing areas one and two.

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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.

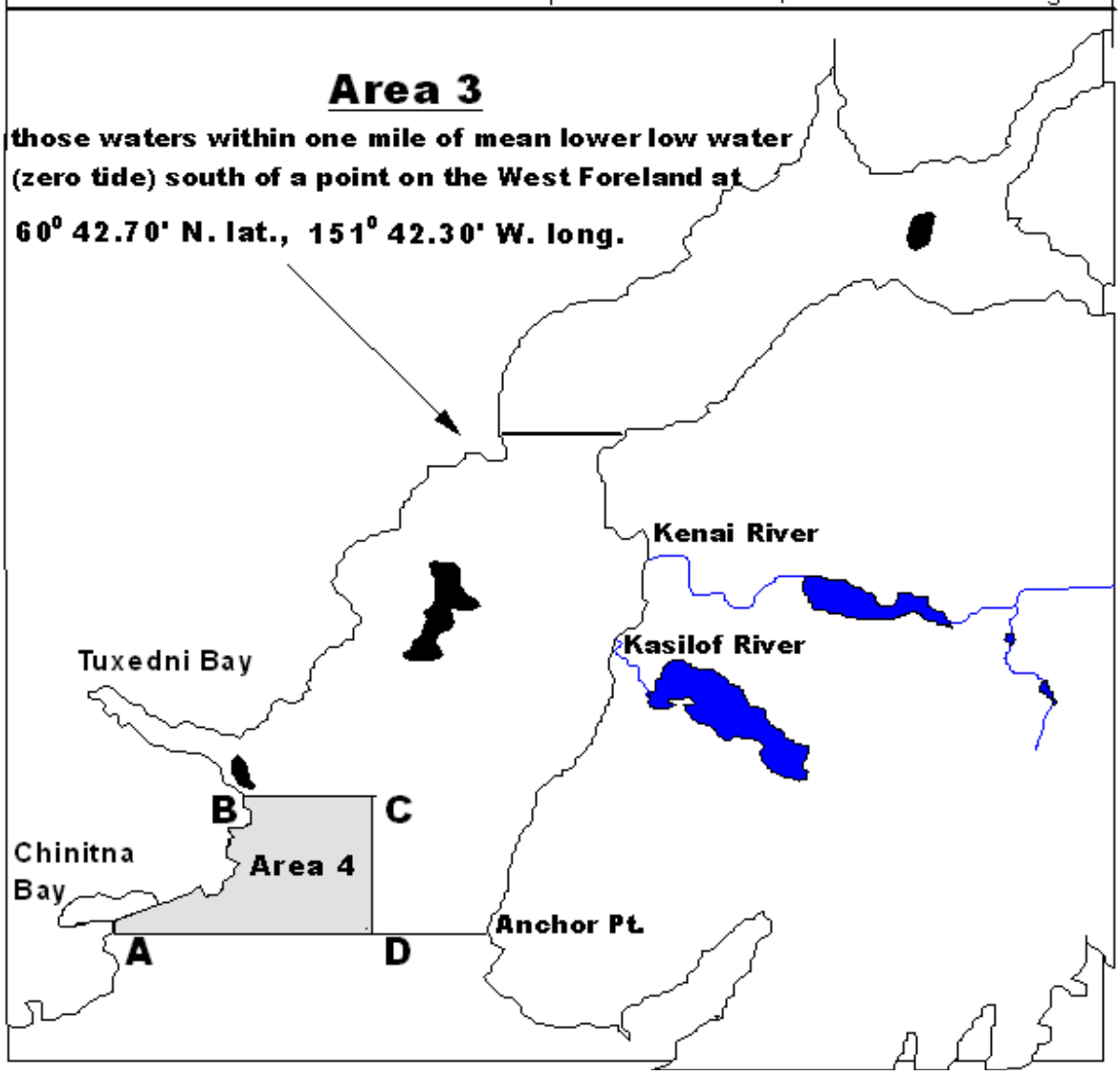
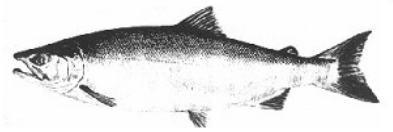


Figure 4. Map of the drift gillnet areas open beginning August 16.

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
Jeff Fox & 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

2012 UPPER COOK INLET SOCKEYE SALMON FORECAST

The preliminary forecast of the 2012 Upper Cook Inlet sockeye salmon run is as follows:

	Forecast Estimate (millions)	Forecast Range (millions)
TOTAL PRODUCTION:		
Total Run	6.2	4.0–10.0
Escapement	1.8	
Harvest	4.4	

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 2012: (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 2012 were forecasted using sibling models. For example, the sibling-model prediction of the return of age-1.3 sockeye salmon was based on the abundance of age-1.2 sockeye salmon in 2011. A spawner-recruit model prediction of the age-1.2 sockeye salmon return was based upon escapement in 2008. The

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return of age-2.3 sockeye 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). Smolt models were used to forecast the returns of age 1.2, 1.3, and 2.3 sockeye salmon to the Kasilof River. The return of age-2.2 sockeye salmon to the Kasilof River was forecasted using a sibling model based upon the abundance of age-2.1 sockeye salmon in 2011.

The total escapement of sockeye salmon to the Susitna River was forecasted using the recent 5-year average aggregate escapement into Judd, Shell, Chelatna, and Larson lakes expanded to the entire Susitna River watershed using mark–recapture abundance estimates from 2006–2010. The total run of Susitna River sockeye salmon to UCI was forecasted using the escapement and the mean harvest rate estimated from genetic stock composition of the commercial harvest in 2007–2010.

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 2012 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 times the upper and lower values of the percent error of the actual runs from published forecast runs from 2002 through 2011.

Forecast Discussion

In 2011, the harvest of sockeye salmon by all user groups in UCI was 6.1 million, while the preseason forecast was 4.4–4.8 million. The higher than expected harvest in 2011 was largely due to an above forecast run of age-2.3 sockeye salmon to the Kenai River (actual run 2.9 million; sibling model forecast was 275,000). In 2011, the total run was 5.9 million to the Kenai River, 860,000 to the Kasilof River, 564,000 to the Susitna River, 126,000 to the Crescent River, and 203,000 to Fish Creek. The 2011 run forecast was 3.9 million to the Kenai River, 929,000 to the Kasilof River, 463,000 to the Susitna River, 131,000 to the Crescent River, and 105,000 to Fish Creek.

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 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. A sibling model based upon the return of age-1.2 sockeye salmon in 2011 (290,000; 20-year average is 358,000) predicted a return of 2.0 million age-1.3 sockeye salmon.

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A fry model based upon the abundance of age-0 fry rearing in Skilak and Kenai lakes in the fall of 2008 (20.1 million; 20-year average is 17.9 million) predicted a return of 2.2 million age-1.3 sockeye salmon. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling model (27%) than the fry model (53%). Age-2.3 sockeye salmon typically comprise about 19% of the run to the Kenai River. A sibling model based upon the return of age-2.2 sockeye salmon in 2011 (241,000; 20-year average is 246,000) predicted a return of 466,000 age-2.3 sockeye salmon in 2012. A fry-smolt model based upon the abundance of age-2 smolt emigrating from the Kenai River in spring 2009 (5.3 million: 95% confidence interval 2.6-8.0 million) predicted a return of 1.4 million age-2.3 sockeye salmon. The fry-smolt model was used for this forecast, due to the high age-2 smolt abundance in 2009 and the failure of the sibling model to accurately predict large returns of age-2.3 sockeye salmon like that seen in 2011. However, there is considerable uncertainty in the age-2.3 sockeye salmon forecast, due to the large difference between the sibling and smolt model forecasts and uncertainty in the 2009 smolt abundance estimate. The forecasted age-2.3 return is 194% greater than the 20-year average return for this age class (736,500). 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 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. A smolt model based upon the abundance of age-1 sockeye salmon smolts in 2009 was used to forecast the return of age-1.3 sockeye salmon in 2012. The abundance of age-1 smolts in 2009 was 2.1 million, which is 51% less than the 20-year average abundance (4.3 million) for this age class. A sibling model predicted a return of 187,000 age-1.3 sockeye salmon. The smolt model was used for this forecast because the 10-year MAPE was lower for the smolt model (21%) than the sibling model (26%). 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. A smolt model based upon the abundance of age-1 smolts (1.8 million) in 2010 was used to forecast the return of age-1.2 sockeye salmon in 2012. A sibling model forecasted a return of 114,000 age-1.2 sockeye salmon. The smolt model was used for this forecast because the 10-year MAPE was lower for the smolt model (47%) than the sibling model (63%). 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. A sibling model based upon the abundance of age-2.1 sockeye salmon in 2011 was used to forecast the return of age-2.2 sockeye salmon in 2012. The sibling model was used for this forecast, because the 10-year MAPE was lower for the sibling model (34%) than the smolt model (38%). The smolt-model forecast for age 2.2 sockeye salmon was 186,000. 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%.

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

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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. A fry model based upon the estimated abundance of age-0 fry entering Big Lake in 2009 (2.8 million; 15-year average: 10.3 million) predicted a return of 37,000 age-1.2 sockeye salmon. A sibling model based upon the abundance of age-1.2 sockeye salmon returning in 2011 predicted a return of 28,000 age-1.3 sockeye salmon in 2012. 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. Sibling models based upon returns of age-1.2 and -2.2 sockeye salmon in 2011 were used to forecast returns of age-1.3 (37,000) and -2.3 (21,000) sockeye salmon in 2012. The predominant age classes in the 2012 run should be age 1.3 (46%) and age 2.3 (26%).

Run forecasts to individual freshwater systems are as follows:

System	Run	Goals
Crescent River	81,000	30,000–70,000
Fish Creek	84,000	20,000–70,000
Kasilof River	754,000	160,000–340,000
Kenai River	4,026,000	1,000,000-1,200,000
Susitna River	443,000	
Larson Lake	NA	15,000–50,000
Chelatna Lake	NA	20,000–65,000
Judd Lake	NA	20,000–55,000
Unmonitored Systems	808,000	NA
Total	6,196,000	

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OTHER SALMON SPECIES

The preliminary forecast of the 2012 commercial harvest of other salmon species is as follows:

	Commercial Harvest Forecasts
Natural Production:	
Pink Salmon	334,000
Chum Salmon	113,000
Coho Salmon	159,000
Chinook Salmon	12,000

Forecast Methods

The recent 5-year average commercial harvest was used to forecast the harvest of chum, coho, and Chinook salmon in 2012. The forecast for pink salmon was based upon the average harvest during the past 5 even-numbered years.

Forecast Discussion

The recent 5-year average commercial harvest was used in the forecast, because 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

Contact:
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Suite B
Soldotna, AK 99669
Date Issued: March 24, 2011

2011 UPPER COOK INLET COMMERCIAL SMELT (HOOLIGAN) AND HERRING FISHING SEASONS

A commercial fishery for smelt (hooligan) was reopened by the Alaska BOF of Fisheries (BOF), beginning with the 2005 season. This fishery occurs in Cook Inlet, 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 free 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 to occur 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, or 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 2011, commercial fishing for herring will open at 12:01 a.m. on Wednesday, April 20 and close no later than 6:00 p.m. on Friday, June 3, 2011. In the Upper Subdistrict, the guideline harvest range is 0-40 tons and fishing for herring is not allowed any closer than 600 feet of the mean high tide mark on the Kenai Peninsula. In the Chinitna Bay Subdistrict, the department is to manage for a guideline harvest of 0-40 tons; in the Western Subdistrict, the guideline harvest range is 0-50 tons, and in the Kalgin Island Subdistrict, the guideline harvest range is 0-20 tons.

In the Central District, herring may be taken only by gillnet, as defined in 5 AAC 27.431, except that in the Chinitna Bay and Kalgin Island Subdistricts, herring may only be taken by set gillnets (5 AAC 27.430 (b)). Prior to fishing, all participants are required to register at the department's Soldotna office. Fishermen are also required to report fishing time and the amount of smelt and herring harvested, whether sold or retained

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.