Fishery Management Report No. 10-54

Upper Cook Inlet Commercial Fisheries Annual Management Report, 2010

by

Pat Shields

December 2010

Alaska Department of Fish and Game **Division of 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)

Measures (fisheries)

fork length	FL
mideye to fork	MEF
mideye to tail fork	METF
standard length	SL
total length	TL

Mathematics, statistics

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

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ABSTRACT

The 2010 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 pallasi*), and eulachon or smelt (*Thaleichthys pacificus*) are subject to commercial harvest in UCI. The 2010 UCI commercial harvest of 3.6 million salmon was approximately 14% less than the 1966–2009 average annual harvest of 4.2 million fish, while the commercial sockeye salmon harvest estimate of 2.8 million fish was only 2.5% below the 1966–2009 average annual harvest of 2.9 million fish. The 2010 estimated exvessel value of $33.0 million represented a 105% increase from the average annual exvessel value of $16.1 million from the previous 10 years, and approximately 34% more than the 1966–2009 average annual exvessel value of $24.8 million. For the 2010 season, 3 of 7 monitored sockeye salmon systems fell within established escapement goal ranges, with 3 escapement estimates exceeding the upper goal range, and 1 failing to achieve the minimum target. The timing of the 2010 sockeye salmon run was estimated to be 1 day early 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, salmon, sockeye, *Oncorhynchus nerka*, Chinook, *O. tshawytscha*, chum, *O. keta*, coho *O. kisutch*, pink *O. gorbuscha*, Pacific herring, *Clupea pallasi*, 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 (59^0 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 pallasi*), 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*) since 1966, 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 (2000–2009), 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 age class 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 (board) 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 board, 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 board prior to the 2002 fishing season, extending the closing date for the fishery an additional 11 days; that is, until 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 board 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 board 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 board adopted the current

Forage Fish Management Plan, they chose to close the entire commercial smelt fishery. At the 2005 board 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 1-mile section of the Polly Creek beach. Numerous attempts to develop feasible dredging operations were largely unsuccessful due to excessive shell breakage or the limited availability of clams in the area open to this gear. Mechanical means of harvesting is no longer permitted in any area of Cook Inlet.

2010 COMMERCIAL SALMON FISHERY

The 2010 UCI commercial harvest of 3.6 million salmon (Appendix B6) was approximately 14% less than the 1966–2009 average annual harvest of 4.2 million fish, with 18 years during this time span experiencing greater harvests and 26 years with harvests less than that realized in 2010. This year's sockeye salmon harvest estimate of 2.8 million fish was only 2.5% below the 1966–2009 average annual harvest of 2.9 million fish, with 26 years experiencing lower harvests and 18 years with harvests greater than the 2010 harvest. Sockeye salmon harvested in test and cost recovery fisheries are not included in commercial harvest statistics. For a breakdown of all sources of sockeye salmon harvest, please see Appendix A21). The estimated exvessel value of the 2010 UCI commercial fishery of $33.2 million was approximately 105% more than the average annual exvessel value of $16.1 million from the previous 10 years (2000–2009), and approximately 34% more than the 1966–2009 average annual exvessel value of $24.8 million

(Appendix B7). The average price paid per pound for UCI salmon has remained fairly stable in recent years, but has been preceded by a period of lower than average prices, especially for sockeye salmon, during the early 2000s (Appendix B11). However, there was a significant increase of approximately $0.60/lb paid for sockeye salmon in 2010, which represents the second highest price ever recorded in UCI. That said, determining an average annual price per pound 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 $1.75/lb was paid for sockeye salmon in 2010. Prices paid for coho, pink, and chum salmon were also up in 2010; Chinook salmon prices have remained stable for the past 5 years.

In 2010, 3 of 7 sockeye salmon systems monitored in UCI (Westerman and Willette 2010) met their established goal ranges (Table 1, Appendix A2, and Appendix B10). This marked the second 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 1 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 the batteries used to power the recording unit were not kept adequately charged due to a lack of solar radiation and therefore, only a partial count was obtained.

Table 1.–Upper Cook Inlet sockeye salmon goals and escapement objectives, 2010.

		Goal Range		
System	Goal Type	Lower	Upper	2010 Escapement
Crescent River	BEG	30,000	70,000	86,333
Fish Creek	SEG	20,000	70,000	126,829
Kasilof River	OEG	150,000	300,000	267,013
Kenai River	Inriver	750,000	950,000	970,662
Larson Lake	SEG	15,000	50,000	20,324
Chelatna Lake	SEG	20,000	65,000	37,784
Judd Lake	SEG	25,000	55,000	18,361
Packers Creek	SEG	15,000	30,000	na

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

UCI commercial catch statistics refined to gear type, area, and date are available back to 1966. All commercially-harvested salmon, whether sold or kept for home use, are legally required to be

recorded on fish tickets (5 AAC 39.130), which are then entered into the statewide fish ticket database. The 2010 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 2010 can be found in Appendix A10, and a summary of fishing periods by gear type and area is summarized in Appendix A11.

REGULATORY CHANGES

There were no regulatory changes governing UCI commercial fishing in 2010. For a detailed description of regulatory changes made at the 2008 board meeting, see Shields (2009).

CHINOOK SALMON

The 2010 UCI harvest of 9,901 Chinook salmon was approximately 41% less than the previous 10-year (2000–2009) average annual harvest of 16,687 fish, and 38% less than the average annual harvest of 15,867 fish from the 1966–2009 time period (Appendices A3, B1 and B6). The exvessel value for UCI Chinook salmon in 2010 was estimated at $359,000, which represented approximately 1.1% 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 board in 1986 and most recently modified in 2008. 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 with the changes made to the management plan in 2008, now remains open for all Mondays through June 24. However, the most productive waters for harvesting Chinook salmon, which occur from 1 mile south of the Theodore River to the mouth of the Susitna River, are open to fishing for the second regular Monday period only. 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 board meeting, fishing periods were expanded to 12 hours per day, or from 7:00 a.m. to 7:00 p.m.

Prior to the start of the 2010 Northern District directed Chinook salmon commercial fishery, the Division of Sport Fish issued EO No. 2-KS-2-09-10, closing sport fishing for Chinook salmon in the Theodore, Lewis, and Chuitna rivers beginning at 6:00 a.m. on Saturday, May 15; the closures were in effect for the remainder of the Chinook salmon sport fishing season. The closures prohibited all sport fishing for Chinook salmon, including catch-and-release fishing, and were made in response to a failure to meet the escapement goal in these three rivers from 2007–2009. In compliance with the *Northern District King Salmon Management Plan*, if the Theodore, Lewis, and Chuitna rivers are closed to sport fishing, the commercial fishery shall close for the remainder of the directed Chinook salmon fishery in that portion of the Northern District from an ADF&G regulatory marker located 1 mile south of the Chuitna River to the Susitna River. Therefore, the Division of Commercial Fisheries issued EO No. 1, which closed

this area to commercial fishing for the 2010 season. The fishing periods closed by this announcement were those on May 31, June 7, June 14, and June 21, 2010.

On Wednesday, June 9, the Division of Sport Fish released EO No. 2-KS-2-14-10, prohibiting the use of bait in the Deshka River sport fishery, effective at 6:00 a.m. on Saturday, June 12. This action was taken in response to lagging Chinook salmon escapement at the Deshka River weir, which had reached approximately 544 fish by midnight on June 8. Although the management plan did not dictate any commercial fishing restrictions based on bait prohibition in the Deshka River, commercial fishing EO No. 2 was released, restricting the commercial fishing period on Monday, June 14, from 12 hours to 6 hours in duration. This action was taken in order to provide some reduction in Deshka River Chinook salmon exploitation in the commercial fishery. The Deshka River minimum escapement objective (goal = 13,000–28,000 fish) was achieved on June 19, with a final escapement estimate in the Deshka River of approximately 18,600 fish.

Approximately 51 commercial permit holders participated in the 2010 Northern District Chinook salmon fishery, with an estimated harvest of 1,674 fish (Table 2 and Appendix A3). This was the fifth 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 for that year (Northern District, Upper Subdistrict, or Greater Cook Inlet). 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 1 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 average harvest of 2,300 Chinook salmon remains significantly below the 12,500 cap placed on this fishery.

Table 2.–Upper Cook Inlet Northern District early season Chinook salmon fishery harvest, 1986–2010.

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				

The estimated Chinook salmon harvest for all of 2010 in the Northern District was 1,750 fish (Appendices A3 and B1).

Upper Subdistrict

In 2010, approximately 71% of UCI's Chinook salmon commercial harvest occurred in the Upper Subdistrict set gillnet fishery (Appendix A1). The estimated catch of 7,100 fish was 30% less than the average annual harvest of 10,081 fish from 1966 to 2009, and 38% below the previous 10-year (2000–2009) average annual harvest of 11,318 fish (Appendix B1). The preliminary inseason Kenai River late-run Chinook salmon passage, estimated by target strength-based sonar, was 48,343 fish. The preliminary inseason estimated late-run sport harvest of approximately 5,375 fish, of which about 4,900 were harvested above the sonar, provided a target strength-based sonar spawning escapement of 43,358 Chinook salmon (Begich and Pawluk 2010). The final estimate of the 2010 Kenai River late-run Chinook salmon spawning escapement will not be known until results of the statewide harvest survey are finalized, which does not occur until late in 2011. The BEG for this stock has changed over the years (the current BEG is 17,800-35,700 fish), but since 1989, the escapement goal has been achieved 18 times, been exceeded 2 times, and has been under the current lower end of the range once.

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), where updates were made to 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 2010). 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 catch per unit of effort (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 2010 sockeye salmon run was estimated to be 1 day early relative to the July 15 midpoint measured at the OTF Anchor Point transect line. Daily catch data from the test fish vessel can be found in Appendix A1.

Hydroacoustic technology is used to quantify sockeye salmon escapement into glacial rivers and was first employed in UCI in the Kenai and Kasilof rivers in 1968, then expanded to the Susitna River in 1978 and Crescent River in 1979 (Westerman and Willette 2010). Beginning in 2003,

ADF&G began a transition phase from Bendix sonar to Dual-frequency Identification Sonar (DIDSON[1]) in UCI. 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).

On July 2, 2010, department staff from the Division of Commercial Fisheries held a public meeting to present new methods to be used during the 2010 season to estimate late-run sockeye salmon escapement in the Kenai River. At this meeting, the public was notified that daily passage estimates generated from DIDSON would be converted to Bendix equivalent units so the SEG, which was set in Bendix units, could be monitored and achieved. The inriver goal, however, which includes an allocation added to the SEG, posed a different issue. The department felt that the DIDSON-to-Bendix conversion must accurately reflect the original intention of the board. For Kenai River runs of less than 2 million fish, the minimum inriver goal was 650,000 fish, which was comprised of 500,000 spawners (Bendix units) and 150,000 fish for inriver users. In DIDSON units, the 650,000 fish Bendix goal would be equivalent to 850,000 fish. This was determined as follows: side-by-side comparisons had revealed that the DIDSON saw approximately 1.4 times as many fish as the Bendix sonar did. Therefore, in order to ensure that 500,000 spawners in Bendix units had escaped, a minimum of 700,000 DIDSON fish must be enumerated. The inriver allocation of 150,000 fish would be added to this figure, for a total of 850,000 fish. The inriver allocation of 150,000 fish was to be enumerated by the most accurate method possible, which the department had determined was the DIDSON. The inriver allocation was in "real fish." If all 650,000 fish in Bendix units had been used in the conversion process, approximately 910,000 fish in DIDSON units would have been required (650,000 x 1.4). In essence, this would have added 210,000 fish for inriver users (910,000–700,000), when the board had directed the department to add only 150,000 fish.

Unfortunately, another issue still had to be resolved and explained. Of the daily estimates of passage, some of the counts needed to be converted, while others, which represented the inriver allocation, did not need to go through the conversion process. It was determined that 17.6% of the daily DIDSON counts would not be converted, while 82.4% would be subject to the DIDSON to Bendix conversion. These proportions were arrived at by dividing 150,000 fish into the total DIDSON goal of 850,000 fish, which was 17.6%. The daily reported total estimate of passage would be the sum of the converted and unconverted counts. Once 850,000 DIDSON units were achieved, all remaining DIDSON counts would be converted to Bendix equivalents.

The department recently assessed sockeye salmon escapement goals for the Kenai and Kasilof rivers (Fair et al. 2010). New goals are being 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. Department staff have recommended to the directors of the divisions of Commercial Fisheries and Sport Fish that the Kenai River sockeye salmon SEG range of 500,000–800,000 fish (Bendix units) should change to an SEG range of 700,000–1,200,000 fish (DIDSON units). For Kasilof River sockeye salmon, the department recommended the BEG of 150,000–250,000 (Bendix units) should change to a BEG range of 160,000–340,000 (DIDSON units).

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

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 2010. 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 because they no longer were stocking the lake with sockeye salmon fry, the project was terminated. In 2005–2006, and 2009–2010, 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, and in 2010 the batteries used to power the camera and recorder were not adequately kept charged due to inadequate solar radiation. CIAA again operated the weir at Packers Creek in 2007, while in 2008, the Division of Commercial Fisheries staffed the weir.

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. As a result, the Yentna River sustainable escapement goal (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 at Larson Lake (15,000 to 50,000), located in the Susitna River drainage. For more details about these changes, see Fair et al. (2009), and the stock status section of this report.

At the same time that mark–recapture studies were initiated in the Susitna River drainage, ADF&G conducted a similar program in the Kenai River from 2006 to 2008, estimating the abundance of sockeye salmon migrating past river mile (rm) 19 (Willette et al. *In prep*). 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, 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. (*In prep*) 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 22,404 sockeye salmon were examined for age, length, and sex determination from catch and escapement samples in 2010 (Terri Tobias, Division of Commercial Fisheries Technician, ADF&G, Soldotna, Alaska; personal communication). The age composition of adult sockeye salmon returning to monitored systems is provided in Appendix A13.

The UCI preseason forecast for 2010 projected a total run of 3.6 million sockeye salmon (Table 3; Appendix C1). At the time this report was published, harvest information from the 2010 sport fisheries was not available; therefore, sport fishery harvest data were estimated by comparing previous year's harvests from similar sized runs. The 2010 sockeye salmon run estimate of 5.3 million fish was approximately 47% greater than the preseason projection. Of the expected run of 3.6 million sockeye salmon, approximately 1.3 million fish were required for escapement objectives, which left 2.3 million sockeye salmon available for harvest to all users in 2010. Assuming that sport and personal use harvests would be similar in proportion to that observed in 2009, the commercial catch in 2010 was projected to be approximately 1.8 million fish. The actual harvest was approximately 2.8 million fish (Appendices A4 and B2), or 56% more than preseason expectations. Drift gillnet fishermen accounted for approximately 56% of the 2010 commercial sockeye salmon harvest, or 1.59 million fish, while set gillnet fishermen caught 44% of the commercial harvest, or 1.24 million fish. The 2010 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 2010 commercial harvest and will be analyzed at a later date. The last reported commercial fishing activity in any area of UCI in 2010 was September 13.

Table 3.–Upper Cook Inlet 2010 sockeye salmon forecast and return.

System	Forecast	Actual	Difference
Crescent River	148,000	132,000	-11%
Fish Creek	142,000	228,000	61%
Kasilof River	901,000	832,000	-8%
Kenai River	1,672,000	3,330,000	99%
Susitna River	542,000	253,000	-53%
Minor Systems	170,000	485,000	185%
All Systems	3,575,000	5,260,000	47%

Appendix A21 summarizes sockeye salmon harvests from all sources in UCI since 1996 (for the Kenai River, these data include late-run sockeye salmon only). In 2010, the estimated harvest from commercial, sport, personal use, subsistence, and educational fisheries was estimated at 3.66 million fish, which was very close to the 1996–2009 average annual harvest of 3.52 million fish. The 2010 sport harvests were estimated based on harvests from similar sized runs. The Statewide Harvest Survey for 2010 that details annual sport harvest of all salmon will not be finalized until later in 2011 (Jennings et al. *In prep*). For more details on the specifics of personal use harvests, including demographics, see Reimer and Sigurdsson (2004), Dunker and Lafferty (2007), and Dunker (2010).

Estimating the average price paid per pound for commercially-harvested UCI salmon has become more difficult than in previous years because an increasing number of fishermen market their own catch. Fishermen who sell to individual niche markets can often command a higher price than if they sell directly to area processors. Early in the fishing season, prices for sockeye salmon were much higher than in July. The price paid per pound seemed to stabilize somewhere in the $1.65 to $1.75/lb range by about mid July. The estimated average price paid per pound for UCI salmon in 2010 can be found in Appendix B11.

Based on these estimates, the 2010 UCI sockeye salmon exvessel value of $30.5 million was approximately 103% greater than the previous 10-year (2000–2009) average annual value of $15.0 million (Appendix B7). The 2010 sockeye salmon estimated exvessel value represented 92% of the total exvessel value for all UCI salmon.

Big River

The first commercial sockeye salmon fishery to open in UCI in 2010 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 board 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 529 fish, well below the 1,000 fish cap. The 2010 fishery began on Wednesday, June 2, with harvests reported from 10 different days, yielding a total catch of approximately 16,500 sockeye salmon and 368 Chinook salmon (Appendices A3 and A4). Of the total harvest, 87% of the sockeye and 86% of the Chinook salmon were caught in the Kalgin Island westside waters, which is statistical area 246-10 (Figure 3). There were 25 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 2010 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 2009, the Crescent River sonar program was not conducted, primarily due to concerns for employee safety because Redoubt Volcano had erupted numerous times that spring. With those concerns alleviated, sockeye salmon escapement was again monitored via Bendix sonar in the Crescent River in 2010. 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 on Monday, June 28. Fishing remained open in this area 24 hours per day through 7:00 p.m. on Thursday, July 29, when EO No. 26 was issued, returning the fishery to its regular schedule of two fishing periods per week.

Slightly more than 45,000 sockeye salmon were harvested by 26 permit holders fishing in the Western Subdistrict set gillnet fishery in 2010. The estimated escapement into Crescent Lake was more than 86,000 fish (Appendix B10). Since 1999, sockeye salmon escapements into Crescent Lake have exceeded the escapement goal range in 10 of 11 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 board modified the *Upper Cook Inlet Salmon Management Plan* (5 AAC 21.363 (e)) at the 2008 meeting. The board stated it was their intent that in most circumstances ADF&G would adhere to the management plans in the chapter, but that no provision within a specific management plan was intended to limit the commissioner's use of EO authority under AS 16.06.060 to achieve established escapement goals in the management plans as the primary management objective.

The Kasilof Section set gillnet fishery is open from June 25 through August 15; however, if 50,000 sockeye salmon are in the Kasilof River before June 25, the season may begin as early as June 20. According to the KRSMP, from the beginning of the fishing season through July 7, the fishery shall remain closed for at least one continuous 36-hour period per week, with the closure to begin between 7:00 p.m. on Thursday and 7:00 a.m. on Friday. In addition, no more than 48-hours of additional fishing beyond the 2 regular weekly periods may be allowed. The KRSMP also states that achieving the lower end of the Kenai River sockeye salmon escapement goal shall take priority over not exceeding the upper end of the Kasilof River optimal escapement goal (OEG) of 150,000 to 300,000 salmon. In essence, the board added 50,000 fish to the Kasilof River BEG (150,000 to 250,000 fish) for those years where achieving the lower end of the Kenai River goal (650,000) 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 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 million fish. For runs of this strength, if the department projects the Kasilof River OEG of 300,000 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 and 4 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 during the same management week.

The third management tier is for Kenai River sockeye salmon runs exceeding 4 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 500,000 to 1,000,000 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. For runs less than 2 million fish, the inriver goal range was changed in 2005 from 600,000–850,000 fish to 650,000–850,000 fish; at run strengths between 2 and 4 million fish, the goal is 750,000–950,000; and for Kenai River runs greater than 4 million, the inriver goal is 850,000–1,100,000 sockeye salmon.

With that brief history as a background, a description of the 2010 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 21, as provided for in the *Central District Drift Gillnet Fishery Management Plan* (CDDGFMP). The harvest of approximately 3,100 sockeye salmon from 68 boats (Appendix A4) and 5,500 sockeye salmon from 88 boats on Thursday, June 24, was not atypical for early-season drift catches.

Table 4.–Upper Subdistrict set gillnet fishing hours, 2010.

	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 Used
Jun 27–Jul 3	48	48	36	36	closed	closed	closed	closed
Jul 4–10	48	46[a]	36	36	closed	closed	closed	closed
Jul 11–17	24 + 24[b]	24[c]	none[d]	n/a	24	7	none[d]	na
Jul 18–24	51[e]	35[f]	24	24	51[e]	27	24	24
			36	36			36	36
Jul 25–31	51	51	24	24	51	51	24	24
			36	36			36	36
Aug 1–7	51	51	24	24	51	51	24	24
			36	36			36	36
Aug 8–14	51	51	24	24	51	51	24	24
			36	36			36	36

[a] 17 hours in Kasilof one-half mile fishery.

[b] Additional 24 hours allowed in the Kasilof one-half mile fishery only.

[c] 17 hours in Kasilof one-half mile fishery.

[d] No mandatory windows on Kenai runs of <2 million fish.

[e] Kenai River sockeye salmon run exceeded 2 million fish late in the week, increasing extra hours to 51.

[f] 8 hours in the Kasilof one-half mile fishery.

By midnight on Saturday, June 26, approximately 45,000 sockeye salmon had been enumerated at the Kasilof River sonar site, with hourly passage rates strongly suggesting that the 50,000 fish level would easily be achieved during the course of the day on June 27 (Figure 5). Therefore, EO No. 3 was released, opening the set gillnet fishery in the Kasilof Section on Sunday, June 27, from 11:00 a.m. until 11:00 p.m. Drifting in the Kasilof Section was also open during the same time. Sockeye salmon passage in the Kasilof River through midnight on June 27 has exceeded 53,000 fish. During the week of June 27–July 3, there were a total of 5 EOs affecting set and drift gillnet fishing in the Upper Subdistrict and Central District. The regular fishing periods on June 28 and July 1 were extended to incorporate slack tide; a 17-hour fishing period was open on June 30, with a 14-hour fishing period being allowed on July 2. Drift gillnetting was confined to the Kasilof Section (corridor), except for the two regular fishing periods on Monday and Thursday from 7:00 a.m. to 7:00 p.m. For the week, drifters harvested 61,000 sockeye salmon, while set gillnetters in the Kasilof Section caught 111,000 fish. All 48 hours of additional fishing time per the KRSMP was used, and the 36-hour no-fishing window was also fulfilled (Table 4). The estimated passage of sockeye salmon past the Kasilof River sonar site had reached 73,000 fish through July 3. In the Kenai River, after 3 days of sockeye salmon enumeration, the estimated sonar passage was 12,000 fish.

For the management week of July 4 to July 10, there were 2 regular districtwide drift gillnet openings (July 5 and July 8), as well as 29 hours of additional drift fishing time allowed in the Kasilof Section. Kasilof Section setnetters also fished two regular 12-hour periods, with 29 hours of additional fishing time in the full Kasilof Section and a 17-hour period in the Kasilof Section one-half mile fishery (see EOs 9, 10, and 11), which took place on Saturday, July 10. The Kenai and East Forelands sections had their first fishing period of the year on Thursday, July 8, a regular 12-hour period. Management of the Upper Subdistrict set gillnet fisheries shifted from the KRSMP to the KRLSSMP during the week, which can sometimes cause confusion as to how many hours of additional fishing time is allowed and how many hours of no-fishing windows must be implemented. Previous consultation with the Department of Law supported the approach that the best way to proceed was to follow the plan that was active for the most days in the management week. In this case, the KRSMP was in effect for the first 4 days of the week, with the KRLSSMP coming on line the last 3 days of the week. The Kasilof River plan allowed for 48 hours of additional fishing time, while the Kenai River plan limited extra fishing to no more than 24 hours for the week. Thus, the 29 hours of extra fishing in the full Kasilof Section on July 6–7, followed by 17 hours in the Kasilof Section half-mile fishery on Saturday, July 10, were within the scope of both management plans. The 36-hour no-fishing window in the set gillnet fishery, per the KRSMP, was met (the KRLSSMP plan did not require a no-fishing window). Sockeye salmon harvest by gear type for the week was estimated at 83,000 for set gillnet and 359,000 for drift gillnet. The CPUE of 810 sockeye salmon per boat from 301 deliveries on July 8 was the highest CPUE ever observed during the July 1–8 time frame in the UCI drift fishery. The high CPUE in 2010 was partly attributable to fewer boats participating in the fishery. For example, from 2000–2010, the average number of drift deliveries for inletwide periods from July 1–8 was approximately 310, while prior to the year 2000, the average number of drift deliveries for inletwide periods from July 1–8 was more than 500. Nevertheless, this year's July 8 drift harvest was well above average. The cumulative sockeye salmon sonar passage estimates through July 10 were 64,000 in the Kenai River and 94,000 in the Kasilof River.

There were 4 EOs (Nos. 12–15) issued during the management week of July 11–17, with the objective being to slow the escapement rate of sockeye salmon into the Kasilof River. These fishing time adjustments were in addition to the 2 regularly-scheduled 12-hour fishing periods on Monday, July 12 and Thursday, July 15. In the drift fishery, the CDDGFMP required both regular fishing periods during the week to be restricted to the Kenai and Kasilof sections (Figure 1) and Drift Area 1 (Figure 2). The two regular fishing periods for both set and drift gillnet were extended: July 12 for 3 hours and on July 14 for 4 hours, in order to allow for orderly removal of fishing gear (drift gillnetting was restricted to the Kenai and Kasilof sections during the extensions) and to allow for harvest to continue until slack tide. A 9-hour fishing period was opened in the Kasilof Section one-half mile set gillnet fishery on Wednesday, July 14, while an 8-hour period was allowed in the same area on Saturday, July 17. Drift gillnetting was not open for either of these periods. The rationale for fishing the one half-mile fishery only was that Kasilof River sockeye salmon escapement was ahead of where it needed to be in order to finish the season in the OEG range, while additional fishing on Kenai River stocks was not warranted at the time. For the week, the set gillnet fishery harvested approximately 305,000 sockeye salmon, while drifters caught 580,000 fish. Like the previous week, the drift gillnet CPUEs were very strong, with the July 12 average sockeye salmon catch per boat of 1,339 fish representing the highest CPUE ever measured in the UCI drift fishery. It must be noted again though, that only 297 boats reported harvest on July 12, which is only slightly more than one-half the number of boats that typically fished regular periods in the 1980s and 1990s. Therefore, even though the total harvest by drifters was not atypical, the decreased participation resulted in much higher than average CPUEs. The total drift harvest through July 17 stood at approximately 1,010,000 fish, which equated to 64% of the total UCI sockeye salmon harvest of 1,570,000 through that date. Estimated cumulative passage of sockeye salmon in the Kenai River through July 17 was 261,000 fish; in the Kasilof River, passage estimates for the season had reached 157,000 fish. This meant the minimum escapement objective had already been achieved in the Kasilof River. Based upon escapement data from the previous 10 years, the Kasilof River sockeye salmon escapement was 58% complete. Therefore, exploitation rates for the rest of the season would need to remain at the current level or higher in order to keep the final escapement within the OEG range.

The 2010 sockeye salmon preseason forecast had estimated a total run to the Kenai River of less than 2 million fish (Appendix C1). For runs of this size, the KRLSSMP allowed no more than 24 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 the department determined that the Kenai River late-run sockeye salmon run strength was projected to be less than 2 million fish and the 300,000 optimal escapement goal for the Kasilof River sockeye salmon may be exceeded.

At the 2008 board meeting, Susitna River sockeye salmon were found to be a stock of yield concern. According to the *5 AAC 39.222 Policy for Management of Sustainable Salmon Fisheries* for the State of Alaska, 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, an action plan, developed by ADF&G, identified conservative management measures in both the sport and commercial fisheries targeting Susitna River sockeye salmon stocks. Adopted by board 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 board that Susitna River sockeye salmon stocks will be conservatively managed while the department 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 modifications to the Northern District set gillnet fishery. The CDDGFMP states that from July 9 to 15, ADF&G must restrict the drift gillnet fishing fleet for 2 regular fishing periods to Area 1 (Figure 4) of the Central District, and to the Kenai and Kasilof sections of the Upper Subdistrict (Figure 3), often referred to as "the corridor." From July 16 to 31, there are 2 regular period area restrictions to the drift gillnet fleet that are dependent upon the size of the Kenai River sockeye salmon run. For Kenai River sockeye salmon runs less than 2 million, ADF&G must restrict the drift fleet to Area 1 (and the Kenai and Kasilof sections); for runs of 2 million to 4 million, the drift fleet is restricted to areas 1 and 2 (and the Kenai and Kasilof sections); and for runs greater than 4 million, there are no mandatory restrictions. These restrictions apply to any 2 regular periods during this timeframe. 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. These drift and set gillnet commercial fishing restrictions were intended to meet the conservation burden for Susitna River sockeye salmon stocks as a result of the stock of yield concern status.

The management week of July 18–24 began with an 8-hour fishing period for set gillnetting only in the Kasilof Section one-half mile fishery. All areas and gear types fished the regular period on July 19, with a 2-hour extension provided to Upper Subdistrict set gillnetters, while drifting was opened for 2 hours in the Kenai and Kasilof sections. The July 19 regular drift gillnet period was restricted to Drift Area 1, which fulfilled one of the two July 16–31 restrictions called for in the CDDGFMP and the SSSAP. On Wednesday, July 21, an 11-hour fishing period was provided in the entire Upper Subdistrict set gillnet fishery, with drifters fishing in the Kenai and Kasilof sections. From July 18–20, more than 207,000 sockeye salmon were enumerated at the Kenai River sonar site, bringing the total passage for the season to more than 467,000. It was now apparent that the minimum inriver goal objective of 650,000 would be achieved; in fact, with the run less than 50% complete, additional exploitation on this stock would likely be needed in order to keep the final escapement within the SEG range for runs less than 2 million fish. Thus, for the regular period on Thursday, July 22, drift gillnetters were allowed to fish districtwide. Set gillnetting in the Upper Subdistrict was opened for a 14-hour fishing period beginning at 10:00 a.m. on Saturday, July 24, with drifting again being limited during this fishing period to the Kenai and Kasilof sections. During this management week, the first formal inseason assessment of the 2010 sockeye salmon run was made. Because the KRLSSMP focuses specifically on the abundance of Kenai River sockeye salmon, the inseason assessment of the run provides direction to staff concerning which "tier" to follow in the KRLSSMP. On July 23, all of the catch and escapement data through July 22 were entered into the OTF curve-fitting model. These data projected a total UCI sockeye salmon run to range between 4.2 and 11.8 million fish. The first best fit of the data suggested the run would be approximately 4.7 million fish, with the Kenai River component coming in at more than 2.8 million fish. The estimated Kenai River run through July 22 had already exceeded 2 million fish.

With the increased Kenai River run size, two important changes to commercial fisheries management occurred. First, the inriver goal range objective increased to 750,000–950,000 fish and there were changes to the number of hours the set gillnet fishery could be fished each week, as well as the number of hours the fishery must be closed. For Kenai River sockeye salmon runs between 2 and 4 million fish, the maximum number of additional hours that could be fished each week beyond the two regular periods was increased to 51. In addition, there were now two no-fishing windows in the set gillnet fishery, one 24 hours long and one 36 hours long. Both closed fishing windows were observed during the July 18–24 management week. Only 35 hours of additional time were allowed in the Upper Subdistrict set gillnet fishery, with 8 of the 35 hours fished in the Kasilof Section one-half mile fishery (Figure 5). For the week, setnetters harvested approximately 312,000 sockeye salmon, for a season total of 811,000 fish, while drifters caught 349,000 sockeye salmon, for a total of 1.4 million, or 59% of the UCI total harvest to date. Sockeye salmon escapement in the Kenai River had reached 607,000 fish by July 24, while the Kasilof River cumulative passage was 215,000 fish.

The week of July 25–31 was prosecuted with two regular 12-hour fishing periods and 5 EOs (Nos. 22–24 and 27–28) providing 51 additional hours of fishing time for set gillnetters in the Upper Subdistrict and 45 additional hours of fishing time for drifters in the Kenai and Kasilof sections. Both no-fishing windows were met for the week. On Thursday, July 29, drift gillnetting was restricted to drift areas 1 and 2, which fulfilled the second of two restrictions called for in the CDDGFMP and SSSAP during the July 16–31 time period. When Kenai River sockeye salmon runs fall in the 2–4 million fish range, the drift gillnet restrictions from July 16–31 are to be in drift areas 1 and 2. For the week, setnetters caught approximately 162,000 sockeye salmon, for a season total of 973,000 fish, while drifters harvested approximately 185,000 fish, for a season total of 1.5 million, or approximately 58% of the UCI total harvest to date. Sockeye salmon cumulative passage in the Kenai River had reached 743,000 fish through July 31, while the estimated passage in the Kasilof River was now 237,000 fish. Commercial fisheries staff made their second formal inseason assessment of the 2010 sockeye salmon run following the July 26 fishing period, with the total run estimate now ranging between 4.5 and 5.6 million fish. The first best fit estimator suggested the total run would be 4.5 million fish, with the Kenai River run estimated to end up at more than 2.6 million fish. The Kenai River run to date had now exceeded 2.4 million fish.

Commercial fisheries management decisions for the week of August 1–7 followed the same strategy as the week before, albeit different days of the week were fished. In essence, all 51 hours of additional fishing time allowed for in the management plans beyond the two 12-hour regular periods were fished in the Upper Subdistrict set gillnet fishery, while drifters fished an additional 39 hours in the Kenai and Kasilof sections. Both no-fishing windows in the set gillnet fishery were implemented. During the week, setnetters harvested 89,000 sockeye salmon, for a season total of 1.02 million fish, with drift gillnetters harvesting 40,000 fish, for a season total of 1.58 million. Cumulative sonar estimates of passage had reached 864,000 fish in the Kenai River and 256,000 in the Kasilof River.

August 8–14 represented the final management week of the 2010 season for Upper Subdistrict set gillnet fisheries and inletwide drift fishing. According to 5 AAC 21.310 (*Fishing Seasons*), from August 11 through August 15, the set gillnet fishery is open for regular periods only. Because August 15 fell on a Sunday, August 12 represented the last day that fishing could take place in the Upper Subdistrict set gillnet fishery or Central District inletwide drift fishery. In

light of the fact that sockeye salmon escapements were near the upper end of the inriver escapement goal rang in the Kenai River and the OEG in the Kasilof River, it was prudent to fish all of the hours provided for in the management plans in an attempt to keep final escapements within the escapement goal ranges for each river. Thus, all 51 hours were again fished in the set gillnet fishery, with 39 additional hours being provided to drifters in the Kenai and Kasilof sections. Setnetters harvested 23,000 sockeye salmon during the final week, for a season total of 1.09 million fish. Drift gillnetters harvested approximately 3,600 fish, for a season total of 1.59 million fish.

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 19. 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 267,000 fish, which was within the OEG range, but which exceeded the BEG. The final sockeye salmon estimate of passage in the Kenai River was 971,000 fish, exceeding the inriver goal.

For the remainder of the season (after August 12), drift gillnetters harvested approximately 258 sockeye, 7,540 coho, 97 pink, and 1,250 chum salmon in drift areas 3 and 4 and in Chinitna Bay. EO No. 36 opened Chinitna Bay to drift gillnetting for Monday, Wednesday, and Friday 12-hour fishing periods beginning on Wednesday, August 25. 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. The last reported drift gillnet harvest anywhere in UCI took place on September 9.

Additional fishing time earlier in the season was provided to set gillnetters in the Kasilof Section within one-half mile of shore to target Kasilof River sockeye salmon stocks while minimizing the harvest of Kenai River sockeye salmon stocks. For the second year in a row (2009 and 2010), the Kasilof River Special Harvest Area (KRSHA) was not opened to commercial fishing, which met the intent language of the KRSMP.

Kalgin Island Subdistrict

The estimated sockeye salmon harvest in the Kalgin Island Subdistrict in 2010 was approximately 67,000 fish, with roughly 14,000 fish being taken on the west side of the island (Statistical Area 246-10) during the Big River sockeye salmon fishery. Two additional 12-hour fishing periods were provided in the Kalgin Island Subdistrict in 2010 (EO Nos. 28 and 32). These extra periods occurred on July 31 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 (seventh highest in the past 45 years) suggested that a strong sockeye salmon run occurred there in 2010 and the escapement goal was likely met.

COHO SALMON

The 2010 commercial coho salmon harvest of approximately 207,000 fish was 12% more than the previous 10-year average annual harvest of 185,000 fish, but nearly 33%, or 101,000 fish less than the 1966–2009 average annual harvest of 309,000 fish (Appendix B3). In the past 10 years, there were 6 years with lower harvests and 4 years with higher harvests than what occurred in

2010. The stock status and outlook section of this report has additional discussion on coho salmon stocks.

Drift gillnetters were allowed to fish beyond August 12, but only in drift areas 3 and 4 and in Chinitna Bay, beginning on August 27. Fishing periods in areas 3 and 4 were 12 hours in duration and occurred on Monday and Thursday within 1 mile of mean lower-low water (zero tide), while Chinitna Bay 12-hour openings occurred on Monday, Wednesday, and Friday. The estimated coho salmon harvest by drift gillnetters after August 12 was approximately 7,500 fish (Appendix A5).

The exvessel value of coho salmon from the 2010 UCI commercial fishery was approximately $1.1 million or 3.3% of the total exvessel value (Appendix B7). This was the highest coho salmon exvessel value since 1995. The average price paid for coho salmon was estimated at $0.80/lb (Appendix B11), which was the highest price since 1988.

PINK SALMON

The 2010 UCI harvest of approximately 293,000 pink salmon was the fourth lowest even-year harvest since 1992 (10 years of even-year harvests). Oddly, the even-year harvest in 2010 was only 78,000 fish more than the 2009 odd-year harvest of 214,000 fish (Appendix B4). That said, the 2009 run was probably one of the strongest odd-year pink salmon returns on record. 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 2010 was approximately $0.25/lb (Appendix B11), resulting in an exvessel value for this species of $311,000, or 0.9% of the total exvessel value (Appendix B7). Due to the above average price, the 2010 pink salmon exvessel value was the highest since 1992.

CHUM SALMON

Approximately 229,000 chum salmon were harvested by UCI commercial fishermen in 2010, the second largest catch in the past 15 years. This harvest was nearly 116% more than the previous 10-year average annual harvest of 106,000 fish, but 50% less than the average annual harvest of 458,000 fish taken from 1966–2009 (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 2010 exvessel value for chum salmon was approximately $850,000, or 2.6% of the overall exvessel value of the 2010 fishery (Appendix B7). This was the highest exvessel value since 1995. The average price paid for chum salmon in 2010 was estimated to be $0.55/lb (Appendix B11), the highest price since 1990.

PRICE, AVERAGE WEIGHT, AND PARTICIPATION

The estimated average price per pound paid to UCI commercial fishermen for their catch in 2010 represented some of the highest prices observed in many years (Appendix B11). For sockeye salmon, the estimate of $1.75/lb was the second highest price ever estimated. 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. 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 2010.

The average weight by species from the 2010 commercial harvest was comparable to historical averages, other than for Chinook salmon (Appendix B12). The 20.7 pound average weight of Chinook salmon from all commercial fisheries in 2010 was 20% less than the 1969–2009 average of 25.8 pounds. Chinook salmon harvested in the Upper Subdistrict set gillnet fishery are sampled for age and size characteristics. Results from these analyses corroborate the weight data recorded on fish tickets. In 2010, approximately 43% 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 7). For the past 10 years (2001–2010), 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 44%, nearly twice the 1987–2000 average of 22% (Appendix A15).

The Commercial Fisheries Entry Commission (CFEC) showed 571 active drift gillnet permits in the Cook Inlet area in 2010, with 71% issued to Alaskan residents (Appendix B13). Of this total, 378 reported fishing in 2010 (Appendix A8). CFEC also showed 738 active set gillnet permits in Cook Inlet, with 83% being issued to Alaskan residents. From this total, 467 reported fishing in UCI in 2010, while 21 set gillnet permit holders made deliveries in Lower Cook Inlet. A total of 21 shore-based processors purchased UCI fishery products in 2010, as well as 13 direct marketing vessels, 1 floating processor, and 21 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.cf.adfg.state.ak.us/geninfo/permits/intent/catchsel.pdf (accessed 12/2010) or after February 2011 http://www.adfg.alaska.gov. A list of the major fishery processors that purchased salmon in UCI in 2010 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. 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 Fisheries Rehabilitation and Enhancement Division, but was subsequently leased to CIAA in 1990, as the state operating budget 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 benefit UCI common property commercial, personal use, educational, and recreational fisheries. In 2010, CIAA released approximately 880,000 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 20 through July 8, 2010, CIAA enumerated approximately 284,000 sockeye salmon smolt emigrating Hidden Lake, of which 54% 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 2010. 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.

As a result of 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 2010, the estimated number of hatchery-produced adult sockeye salmon that returned to UCI was 204,000 (74,000 Hidden Lake origin; and 130,000 Big Lake origin), which was approximately 3.9% of the total UCI run (Terri Tobias, Commercial Fisheries Technician, ADF&G, Soldotna, Alaska; 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, with only one stock, Susitna sockeye salmon, meriting detailed review. The department has also recommended the board consider 6 Chinook salmon stocks in the Northern District for stocks of concern status.

Sockeye Salmon

A run of 3.6 million sockeye salmon was forecast to return to UCI in 2010, with an expected harvest by all user groups of approximately 2.3 million fish (Appendix C1). This forecast was about 1.7 million fish below the 20-year average harvest by all user groups of 4.0 million fish. The actual run was approximately 5.3 million fish (Table 5), resulting in a total harvest of approximately 3.6 million fish, with 2.8 million caught by commercial gillnets and an estimated 819,000 fish taken by sport, personal use, educational fisheries and subsistence fisheries (Appendix A21).

Table 5.–Upper Cook Inlet sockeye salmon run, 2010.

System	Commercial Harvest	Escapement	Non-Commercial Harvest	Total
Crescent River	45,000	86,000	0	132,000
Fish Creek	76,000	126,000	25,000	228,000
Kasilof River	467,000	266,000	100,000	832,000
Kenai River	1,911,000	755,000	665,000	3,330,000
Susitna River	96,000	149,000	8,000	253,000
All Others	233,000	231,000	22,000	485,000
Totals	2,828,000	1,613,000	819,000	5,260,000

Susitna River

In an attempt to understand the complicated circumstances regarding Susitna River sockeye salmon, a thorough review of the recent history regarding research and management of this stock is warranted.

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 in turn 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 return to the Susitna River were considered unreliable[2]. In 2005, the board 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

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

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 have been 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 is 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 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 board 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; 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. In addition, public testimony was 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 conflict 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 sockeye salmon were undercounted in the Yentna River, the ADF&G commissioner 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.

The formation of sockeye salmon individual lake 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 or sometimes 3 weeks from the time that the drift gillnet fishery could occur before any savings from a closure or restriction could be measured. Therefore, the SSSAP was developed with conservation of northern-bound sockeye salmon stocks in mind, based upon management plans governing both the Central District drift gillnet fishery and Northern District set gillnet fishery. For Kenai River sockeye salmon runs of less than 4 million fish (82% of all Kenai River runs since 1978), there are 4 regular period restrictions to the drift gillnet fleet in July per the CDDGFMP and SSSAP. Furthermore, the Northern District set gillnet fishery is 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.

The escapement goal review report (Fair et al. 2009) 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 will be continued in the 2011 field season.

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 and 2010. The 2010 sockeye salmon run forecast for the Susitna River was 542,000 fish, which was 41% less than the 20-year average run of 913,000. This forecast was derived from historical aggregate weir counts rather than sonar and age composition allocation models. This was the first 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 2010 total sockeye salmon run, based on "Bendix-like sonar numbers", was estimated to be 282,000 fish (using the same method to calculate the run as was used for the forecast). Two of the three lake escapement goals were achieved (Larson and Chelatna Lakes), with the goal of 25,000–55,000 fish at Judd Lake being missed by approximately 6,600 fish (Table 1).

In light of all the changes that had taken place regarding Susitna River sockeye salmon stocks, a petition was submitted by Andrew N. Couch to the board at its statewide meeting in March 2010 requesting an emergency regulation be adopted to restrict one drift gillnet fishing period between July 9 and July 15, 2010, from Drift Area 1 to the Kenai and Kasilof sections. The board declined the petition.

In summary, the status of Susitna River sockeye salmon stocks is somewhat unclear. 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. Attempts are also being made to identify and decrease the impacts of beaver dams and northern pike predation on sockeye salmon production. Restrictions to commercial fishing gear and areas fished, per the SSSAP, have also reduced the exploitation on Susitna River sockeye salmon stocks. For the 2011 board meeting, ADF&G has recommended that Susitna River sockeye salmon remain a stock of yield concern. The impetus behind this recommendation is 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.

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, 1976–2010.

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
2000–2010	90[a]	44	134

[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 goal range for this system. In 2010, this area was opened nonstop from June 28 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. As a result of the reduced fishing effort, the average annual exploitation rate on Crescent River sockeye salmon stocks from 2000 to 2010 was only 33%, even with all the extra fishing time allowed.

Approximately 43,000 sockeye salmon were harvested by set gillnetters in the immediate area around the Crescent River terminus in 2010, which was the sixth highest harvest observed since 1990. The escapement goal for Crescent Lake sockeye salmon is a BEG of 30,000–70,000 fish. Since 1999, escapements in 11 of 12 years have exceeded the upper end of the escapement goal range (Appendix A2).

Fish Creek

From 1997 to 2010, sockeye salmon runs to Fish Creek, which drains Big Lake and flows into Knik Arm, have been highly variable; therefore, there has been a mixed result in achievement of the established escapement goal for this system. ADF&G forecasted a total sockeye salmon run to Fish Creek in 2010 of 142,000 fish (Table 3, Appendix C1). The estimated run, however, exceeded 200,000 fish, resulting in an escapement of more than 126,000 sockeye salmon (Table 7, Appendix A2), and, for the second time since 2001, the personal use dip net fishery was opened. At the 2002 board 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.

Table 7.–Production of sockeye salmon in Big Lake, 1997–2010.

Year	Total Run	Weir	Spawners	Spring Fry Release	Fall Fry Release	Smolt Release	Smolt Emigration Age-1	Smolt Emigration Age-2
1997	131,814	54,656	48,513	4,018,000				
1998	45,622	22,859	18,789	5,000,000				
1999	45,714	26,749	25,199		197,000			
2000	37,635	19,533	16,704	846,000				
2001	70,013	43,486	39,093	0				
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	0	433,000	592,919	38,785
2009	121,965	83,477	83,477	0	0	0	nd	nd
2010	227,690	126,333	126,333	0	0	0		

During the past 14 years, escapements fell below the goal 6 years, were within the goal range 4 years, and exceeded the goal in 4 years. The average annual total sockeye salmon run to Big Lake from 1980 to 1997 was 212,000 fish, but from 1998 to 2001 and 2004 to 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 2009–2010 (5 total years) averaged nearly 153,000 fish annually. The number of smolt emigrating Big Lake from 2003–2010 has ranged from 117,000 to 632,000 fish (http://www.ciaanet.org/). 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 2002–2010, the average annual hatchery proportion of the run to Big Lake was 40%, ranging from 2% in 2002 to 73% in 2006 (Terri Tobias, Division of Commercial Fisheries Technician, ADF&G, Soldotna, Alaska; personal communication).

A technical review assessing Big Lake sockeye salmon production was completed prior to the 2002 board meeting (Litchfield and Willette 2002). 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 board 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 board 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 2010 was estimated at 209,000 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).

2011 Sockeye Salmon Outlook

A run of 6.4 million sockeye salmon is forecasted to return to UCI in 2011, with a harvest by commercial, sport, subsistence, personal use and educational fishermen of 4.4–4.8 million fish (Appendix C2). The harvest forecast for 2011 is 0.6–1.0 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 fish, 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 percent 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 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 in 2011 is 929,000 fish, which is 3% greater than the 20-year average run of 902,000. The forecast for the Susitna River is 463,000, which is 61% less than the 20-year average run of 780,000 (see Appendix C2 for an explanation of how Susitna River sockeye salmon run forecasts have changed to better reflect actual numbers of fish). The sockeye salmon run forecast for Fish Creek is 105,000, which is 10% less than the 20-year average run of 116,000. Finally, the sockeye salmon run forecast for Crescent River is 131,000, which is 26% greater than the 20-year average run of 104,000.

Pink Salmon

Pink salmon runs in UCI are even-year dominant, with odd-year average annual harvests typically less than one-seventh of even-year harvests (Appendix B4). Pink salmon are generally taken in significant quantities in UCI beginning in late July and the first couple of weeks in August. The 2010 UCI harvest of approximately 290,000 pink salmon was 15% less than the 1996–2008 average even-year harvest of 330,000 fish. This follows the 2009 harvest of 214,000 pink salmon, which was the largest odd-year harvest since 1977, and was 171% greater than the 1979–2007 (n=15) odd-year average annual harvest of 79,000 fish. As noted throughout this report, however, it is difficult to gauge the status of various stocks based solely on commercial harvest data. The 2009 harvest was significantly above average, while the 2010 harvest was slightly less than recent year's harvests.

Prior to 2009, pink salmon were encountered at a weir on the Deshka River and enumerated (Table 8). This project no longer enumerates pink salmon and there are no escapement goals in UCI for this species. Thus, the only data collected on pink salmon stocks are commercial fisheries harvests, recreational fishing success, and some information at projects that are designed to enumerate other species. In general, pink salmon stocks in UCI have maintained their even-year dominance, albeit the 2007 and 2009 harvests might be an early indication that odd-year runs are beginning to increase. Although pink salmon enumeration data are limited, ADF&G did conduct a marine tagging project designed to estimate the total population size, escapement, and exploitation rates for coho, pink, and chum salmon returning to UCI in 2002 (Willette et al. 2003). This study estimated the exploitation rate on pink salmon by the UCI commercial fishery to range between 1 and 12%, with a point estimate of 2%, indicating this stock is in no apparent danger from overfishing.

Table 8.–Upper Cook Inlet pink salmon commercial harvests and Deshka River escapements, 1996–2010.

	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		no data
2010	289,000			no data

Chum Salmon

Chum salmon returns 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 2010 UCI commercial chum salmon harvest of approximately 230,000 fish was the second largest harvest since 1995 and was 116% greater than the 2000–2009 average annual harvest of 106,000 fish (Appendix B6). However, the 2010 harvest was approximately 49% less than the 1966–2009 average annual harvest of 450,000 fish (Appendix B6). 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 via 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 at best be used to make very 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 2010 chum salmon run, however, was above average. This characterization was corroborated by commercial harvest data and the OTF project. The 2010 OTF cumulative chum salmon CPUE of 737 was the second largest CPUE in the OTF project history (Shields and Willette *In prep*). 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

Table 9.–Coho salmon escapement and enumeration, 1996–2010.

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

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

[b] Weir washed out; count incomplete.

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 board 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[3] (Table 9). Therefore, at the 2005 board 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 board 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 to 17,700 fish (Fair et al. 2007) and was met or exceeded each year from 2000–2008, but has not been achieved the past 2 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; Alaska, 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.

While there are several regulatory management plans pertinent to the Susitna River that direct ADF&G to manage for coho salmon, there are no escapement goals or comprehensive sustained yield objectives for Susitna River drainage coho salmon. Sustained yield is thought to be provided for by basic bag limits and seasons in the sport fishery and inseason management of the commercial fishery[4]. In summary, Northern Cook Inlet coho salmon stocks are considered to be in good condition.

Kenai River

From 1999 to 2004, the total return of Kenai River adult coho salmon was estimated annually by: 1) the population-specific harvest in marine commercial fisheries, 2) the inriver sport and personal use harvest, and 3) the 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 board 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

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[3] Yanusz, R., J. Carlon, D. Bosch, and R. Clark. *Unpublished* (2002). Stock status of coho salmon in Upper Cook Inlet, a report to the Alaska Board of Fisheries. Located at: Alaska Department of Fish and Game, Division of Sport Fish, 333 Raspberry Road, Anchorage.

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

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 board 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 board 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 board 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 board 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% of the run annually. Estimates were also provided to the board 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. In 2008, the fishing season extension would have provided 2 additional days of fishing (August 11 and 15), but both of these fishing periods were closed as a result of the poor sockeye salmon run. In 2009, the extension of the season beyond August 10 would have provided one additional day of fishing (August 13), but this period was also closed due to the 1% sockeye salmon rule (Shields 2010). The 1% rule requires the Upper Subdistrict set gillnet fishery to be closed anytime after July 31 if the department 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 2010, the extension of the fishing season provided only one additional fishing period (August 12). The total coho salmon harvest on August 12, 2010 in the Upper Subdistrict set gillnet fishery was approximately 2,000 fish (Appendix A5).

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 *In prep*). The last year this project was active was 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. Restrictions to fishing in that area from a department regulatory marker located one mile south of the Theodore

River to the Susitna River were implemented in 1997 in response to low escapements in the Theodore and Chuitna rivers. This area is now open for a single 12-hour period each year. The Northern District has approximately 345 streams and rivers with Chinook salmon and the estimated total annual return is estimated at between 100,000 and 200,000 fish (www.sf.adfg.state.ak.us/Static/Region2/pdfpubs/MatSuKingSalmon.pdf; [accessed 12/2010] or after February 2011 http://www.adfg.alaska.gov.) The average harvest in the Northern District commercial fishery for the last 10 years is 2,300 fish, or about 10% of the total Northern District Chinook salmon harvest, which equates to an annual exploitation rate of between 1.1 and 2.2%. 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.

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. 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 (Table 10). As a result of strong runs during this time, there were numerous liberalizations to the inriver sport fishery via inseason EOs. In addition, in 2005, the board 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 returns, 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, 1995–2010.

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

Note: BEG = 13,000-28,000

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). In response to a small projected Chinook salmon run to the Deshka River in 2009, the board 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 (EO No. 2, Appendix A10) 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 SEG range.

In a department memo to the board dated October 1, 2010, a summary of results from the stock of concern evaluation for UCI salmon was presented. The department'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. The department, therefore, recommended that the board 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. Also in this memo, the department recommended that Willow and Goose Creek Chinook salmon be considered as stocks of yield concern in response to the SEGs not being met in the past 4 years. The board will review these department recommendations at the 2011 UCI finfish meeting in Anchorage.

Kenai River

Since 1986, Kenai River late-run Chinook salmon estimates of inriver passage have been completed via traditional target strength-sonar by the Division of Sport Fish. 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. The late-run Chinook salmon returns have been relatively stable and escapement objectives have been consistently achieved or exceeded.

COMMERCIAL HERRING FISHERY

The 2010 UCI herring fishery produced a harvest of 16.6 tons (Appendix B8), with all but 0.2 tons of the harvest coming from the Upper Subdistrict. A total of 13 permit holders reported fishing, which was very close to the average annual number of participants from the previous 10 years (2000–2009). Although open to both set and drift gillnets, all of the harvest is taken by set gillnets. Appendix A18 summarizes the age, weight, size, and sex distribution from samples collected during the 2010 fishery. It must be noted that these samples were 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, comprising 99.6% of the 446 samples collected from 4 sample dates. The average by age-class was age-4 (6%), age-5 (40%), age-6 (34%), age-7 (14%), and age-8

(5%). A sample of herring was also collected from Chinitna Bay in 2010, 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 2010 commercial herring fishery was approximately $33,000.

COMMERCIAL SMELT FISHERY

Commercial smelt harvests in UCI have ranged from 300 pounds to 63.7 tons (Table 11). For more details about the history of smelt fishing in UCI, see Shields (2005). In 2010, 3 permit holders from the 9 people who obtained commissioner's permits, reported harvest in the commercial dip net smelt fishery (5 AAC 21.505 *Cook Inlet Smelt Fishery Management Plan*), harvesting approximately 63.1 tons. The harvest cap for this fishery is 100 tons, which easily could have been caught based on reports from those fishermen who took part in the fishery, as significant quantities of smelt were observed migrating up the Susitna River. Fishermen were able to dip net the fish in a relatively short period of time. Harvest was limited by market demand and the logistics of getting the product to a location where the smelt could be off-loaded and processed.

Table 11.–Commercial smelt harvest, 1978, 1980, 1998–1999, and 2006–2010.

Year	Lb	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

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 Peninsula 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 for human consumption. The final value of the smelt fishery is, therefore, unknown, but it easily exceeds $1.00/lb, for an exvessel value of more than $126,000.

Age-composition analyses (determined from otoliths) of samples collected from the 2006–2009 harvest showed that age-4 smelt dominated the population (Appendix A19). Samples were obtained from the 2010 harvest, but had not yet been processed when this report was published. Approximately 73% of the 2009 harvest were age-4 smelt, which was similar to that observed in

2008 (73%), 2007 (81%), and 2006 (80%). The average fork length from the 2009 harvest ranged from 191 to 203 mm, with an overall average of 198 mm, which was slightly larger than the 2006–2008 average size of 192 mm. The male to female ratio in 2009 was 55% to 45%, while the 2006–2008 average male to female ratio was 65% to 35%. 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 2010 harvest, taken primarily from the Polly Creek/Crescent River area, was approximately 380,000 pounds (in the shell) (Appendices A22 and B9). A total of 22 diggers participated during the season, reporting harvest from 56 different days spanning the time period from May 13 to July 27. Diggers were paid an average of $.62 per pound for their harvest, resulting in an exvessel value for this fishery of $235,000. The average clam size from the 2010 harvest was 143 mm, or 5.6 inches (Figure 8).

The 2010 summer tide schedule can be found in Appendix A20.

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 board 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 board adopted permanent regulations for this fishery (see Stanek et al. 2007 for a history). Originally open only to those individuals living in the community of Tyonek, court decisions mean all Alaska residents are eligible to participate. In 2009, 89 permits were issued for the Tyonek Subdistrict subsistence fishery, including 62 permits issued to Tyonek residents (70%) and 27 permits issued to other Alaska residents (30%), mostly residents of Anchorage. Fishing is allowed only 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, or until 4,200 Chinook salmon have been harvested. The late-season permit allows for fishing from 6:00 a.m. to 6:00 p.m. each Saturday after June 15, although the opening is delayed until July 1 if 4,200 Chinook salmon were taken before June 16. 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. 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. Annual Chinook salmon harvests have ranged from a low of 636 in 2009 to as many as 2,665 in 1983 (Appendix B15). The preliminary harvest for the 2010 Tyonek Subdistrict subsistence fishery was 890 Chinook, 190 sockeye, 155 coho, and 4 chum salmon, from 74 permits that were returned.

UPPER YENTNA RIVER SUBSISTENCE SALMON FISHERY

A subsistence salmon fishery is allowed in the Yentna River drainage outside the Anchorage-Matsu-Kenai Nonsubsistence Area, which is described in 5 AAC 99.015(a)(3). The 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 2010 Yentna River subsistence fisheries was the highest ever recorded, and included 675 sockeye, 52 coho, 41 pink, and 18 chum salmon taken by 18 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 board 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 2010 was 8,709 fish, which was the second largest harvest recorded since the educational fisheries began (Appendix B16). The average annual harvest from 1994 through 2009 was approximately 6,016 fish.

CENTRAL DISTRICT EDUCATIONAL FISHERIES

In the Central District of UCI there currently are 7 groups permitted to conduct educational fisheries, including the Kenaitze Tribal Group, Ninilchik Traditional Council, Ninilchik Native Descendents, Ninilchik Emergency Services, Anchor Point 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. A summary of the harvest from all the educational fisheries in UCI can be found in Appendix B16. In 2010, the Kenaitze Tribe harvested 60 Chinook, 5,382 sockeye, 839 coho, and 170 pink salmon, for a total of 6,451 salmon, which was their third largest harvest ever. From 1994 through 2009, the average annual harvest of all salmon by the Kenaitze Indian Tribe has been 4,254 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 Descendents (NND), and requested a separate permit with similar goals of passing on traditional knowledge and providing food for needy tribal members. Initially 1 permit was issued for both groups, but this was not acceptable to the NTC and both groups were allowed to fish concurrently. There have been a number of changes to the annual harvest limits allowed under these permits, but the total salmon quota more than tripled in 2007 from 850 to 2,800 fish for both the NTC and NND groups. In 2010, the NTC harvested 83 Chinook, 643 sockeye, 500 coho, and 263 pink salmon. The NND reported no fish from 2010.

In 2003, another group from Ninilchik, the Ninilchik Emergency Services (NES), applied for and was granted an educational fishery. In 2010, 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 2010 fishing activities: 46 sockeye, 47 coho, 25 pink, and 1 chum salmon.

The Kasilof Historical Association applied for an educational permit beginning with the 2008 season. For 2010, they reported the following harvest: 1 Chinook, 9 sockeye, and 37 coho salmon.

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 2010 was 3 sockeye and 27 coho salmon.

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 2010 totaled 72 sockeye, 94 coho salmon, 21 pink, and 61 chum salmon, for a total of 248 fish. The peak harvest from this group of 823 fish occurred in 2003.

In 2010, Big Lake Cultural Outreach group harvested 94 sockeye, 100 coho, 6 pink, and 16 chum salmon, for a total of 216 fish.

The Eklutna Village group was also issued an educational fisheries permit beginning in 1994. They did not report any harvest for 2010.

Tyonek Village reported an educational fishery harvest of 1 sockeye salmon in 2010.

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 2010, the harvest from this fishery was 14 Chinook, 45 sockeye, 30 coho, and 19 pink salmon, for a total of 108 fish.

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 board meeting in January of 1996. In 1995, personal use fishing was allowed with set gillnets in most areas of Cook Inlet normally open to commercial set gillnet fishing. Most of this area was closed in 1996, but to compensate for the lost opportunity, dip net fisheries were expanded to allow for approximately the same level of harvest that had occurred with gillnets in 1995. Personal use fishing using gillnets is now only open near the Kasilof River in the waters of UCI normally closed to commercial set gillnet fishing. This area encompasses approximately 1 mile on either side of the Kasilof River terminus, extending out from shore for 1 mile. In addition, personal use fishing with dip nets is allowed at the terminus of the Kenai and Kasilof rivers, and in some years, at Fish Creek. The personal use management plan

was again amended at the 2002 board 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 board, 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 board-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, this fishery may be extended by EO to 24 hours per day.

In 2008, the board authorized a new UCI personal use fishery. Referred to as the *Beluga River Senior Citizen Personal Use Dip Net Fishery* (5 AAC 77.540(g)), salmon may be taken by dip net only by persons 60 years of age or older (no proxy fishing is allowed). The fishery is open 24 hours per day from the Beluga River Bridge downstream to an ADF&G regulatory marker located approximately 1 mile below the bridge. The annual limit 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 are 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 2010 personal use harvest data can be found in Appendix A17, 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 Tuesday, June 15, 2010 and closed at 11:00 p.m. on Thursday, June 24, 2010, as stipulated in the personal use management plan. The estimated harvest in 2010 in the gillnet fishery was 22,107 salmon, with

21,924 being sockeye salmon. This was the sixth largest harvest recorded in this fishery. The average annual sockeye salmon harvest since the board modified the management plan in 2002 has been 22,762 fish.

KASILOF RIVER DIP NET

The Kasilof River dip net fishery was open from June 25 through August 7, 2010 (44 days). The estimated harvest for the year was 73,826 salmon, with 70,774 (96%) being sockeye salmon. This was the second largest harvest ever observed in the Kasilof River dip net fishery, exceeding the average annual sockeye salmon harvest from 2002 to 2009 of 51,079 fish by 44%. The number of household days fished in 2010 of 7,588 was less than 2009, and represented a 50% increase over the 2002 to 2009 average of 5,052 household days fished.

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 24, 2010, and then was open 24 hours per day from 11:00 p.m. on July 24 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 million fish. As described earlier in this report, data from the OTF program, combined with inseason harvest figures, indicated the 2010 late-run Kenai River sockeye salmon return would likely be greater than 2 million fish, so the inriver minimum inriver goal was increased to 750,000–950,000 fish and the Kenai River dip net fishery was liberalized to allow fishing for 24 hours per day beginning at 11:00 p.m. on Saturday, July 24 (SF EO No. 2-RS-1-40-10). The 2010 harvest estimate was 397,451 fish, of which 389,552 (98%) were sockeye salmon. The 2010 total salmon harvest was the highest estimated for the Kenai River dip net fishery. The 2010 sockeye salmon harvest exceeded the 2002–2009 average harvest of 244,367 fish by more than 59%.

FISH CREEK DIP NET FISHERY

For the second year in a row, the Fish Creek personal use dip net fishery was opened. When it became apparent that the Fish Creek sockeye salmon escapement goal would be exceeded, the Division of Sport Fish, in compliance with the *Upper Cook Inlet Personal Use Salmon Fishery Management Plan*, released EO No. 2-RS-2-38-10. This announcement opened Fish Creek to personal use dip netting for all salmon, other than Chinook salmon, starting at 6:00 a.m. on July 24, and remaining open through 11:00 p.m. on July 31. The estimated harvest in the Fish Creek personal use dip net fishery was 23,705 sockeye, 12 Chinook, 3,576 coho, 1,721 pink, and 290 chum salmon (Appendix B17).

BELUGA RIVER SENIOR CITIZEN DIP NET FISHERY

The estimated harvest from the 2010 Beluga River senior citizen dip net fishery shows that 9 permit holders participated in the fishery, with a total harvest of 53 salmon (47 sockeye, 1 coho, and 5 chum salmon).

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FIGURES

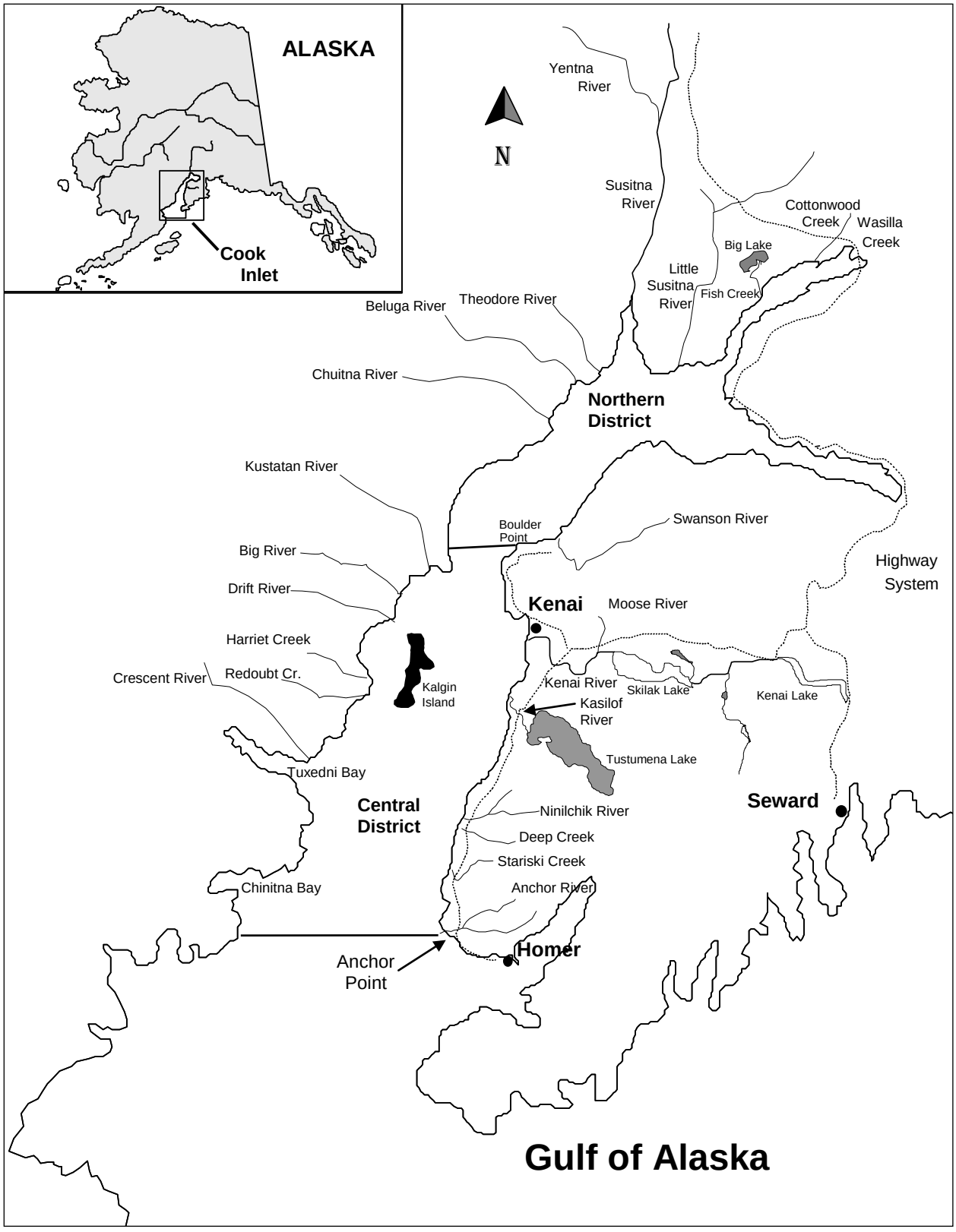

Figure 1.–Major tributaries of the Cook Inlet basin.

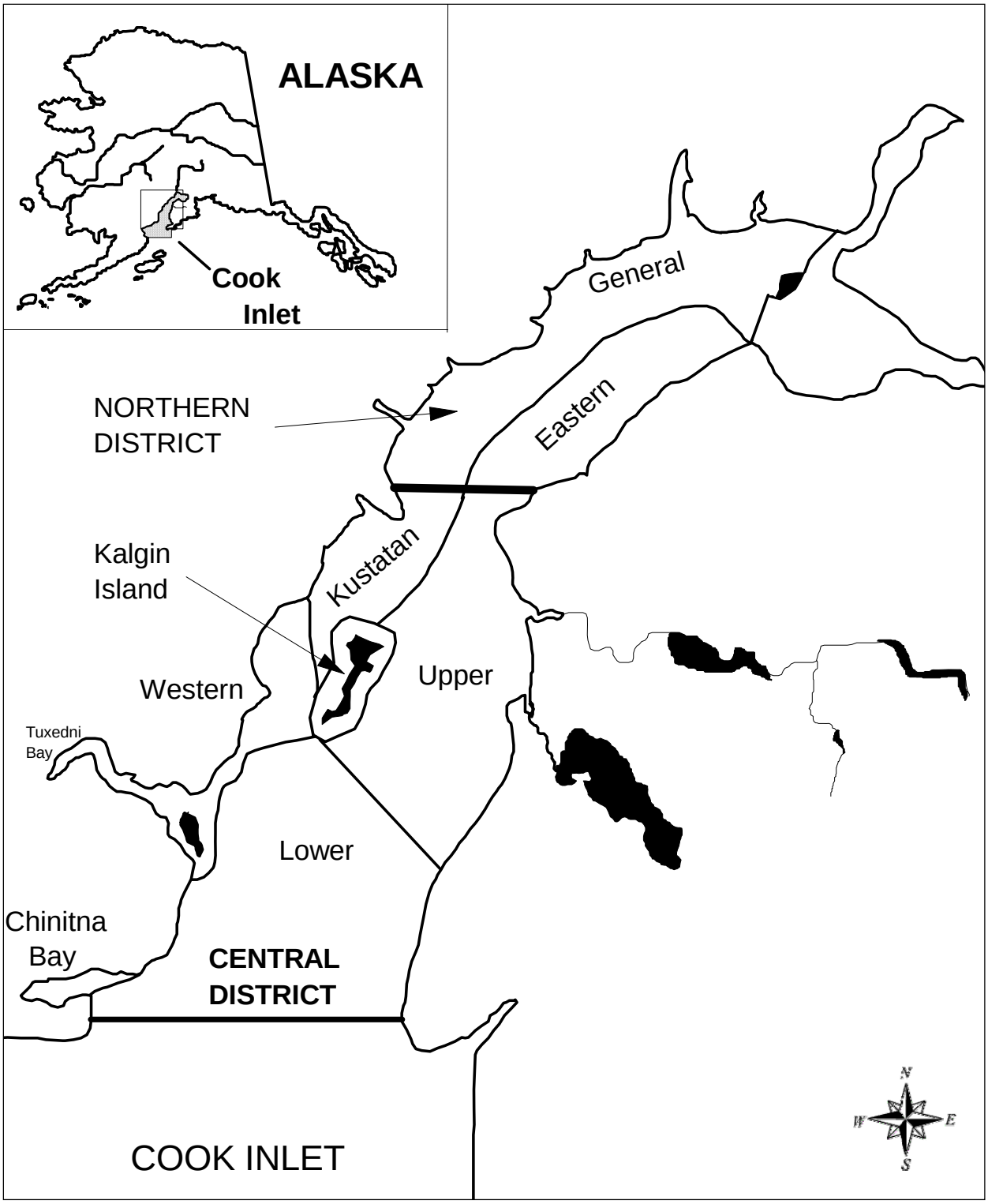

Figure 2.–Upper Cook Inlet commercial fisheries subdistrict fishing boundaries.

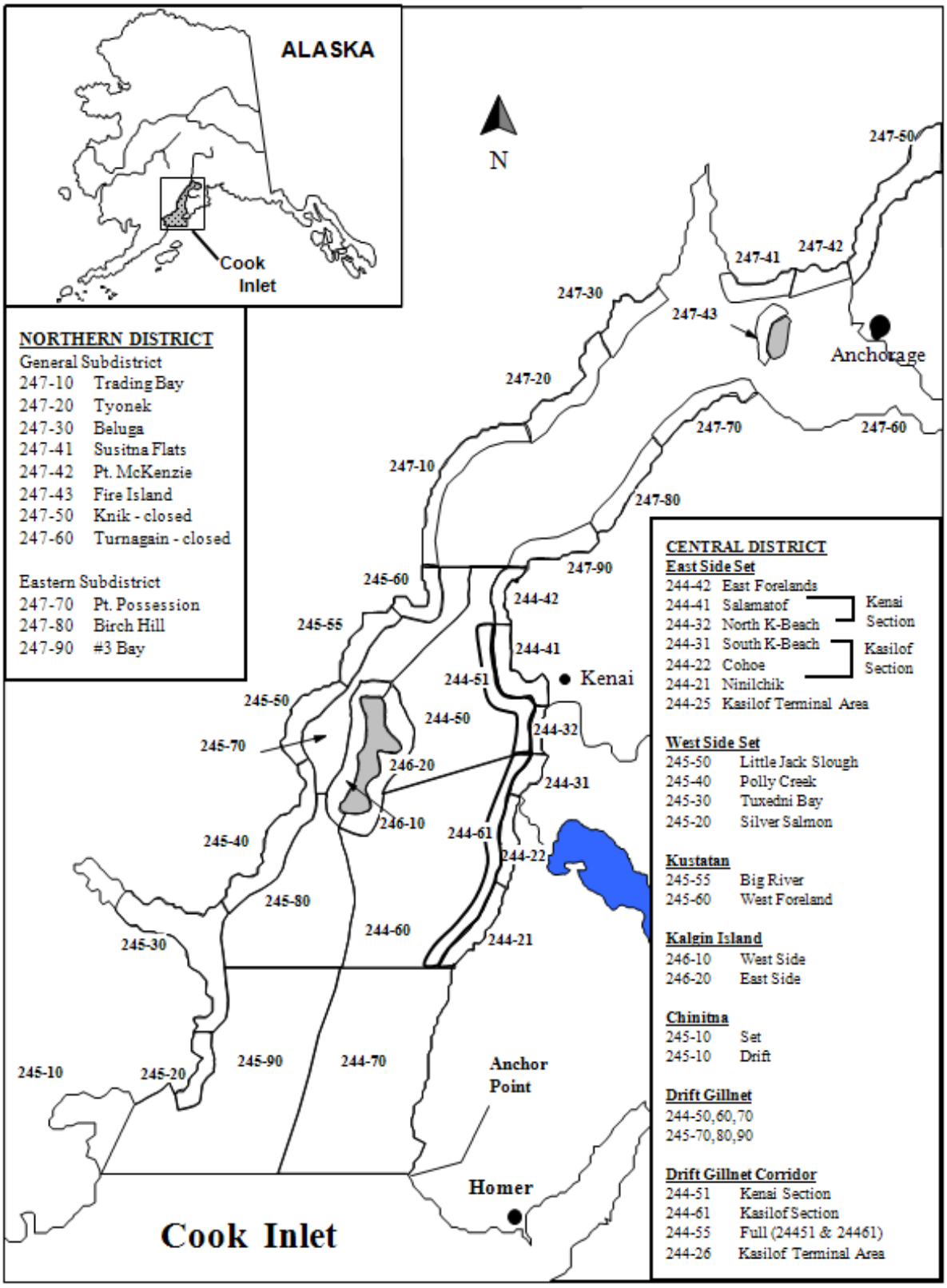

Figure 3.–Upper Cook Inlet commercial fisheries statistical areas.

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.

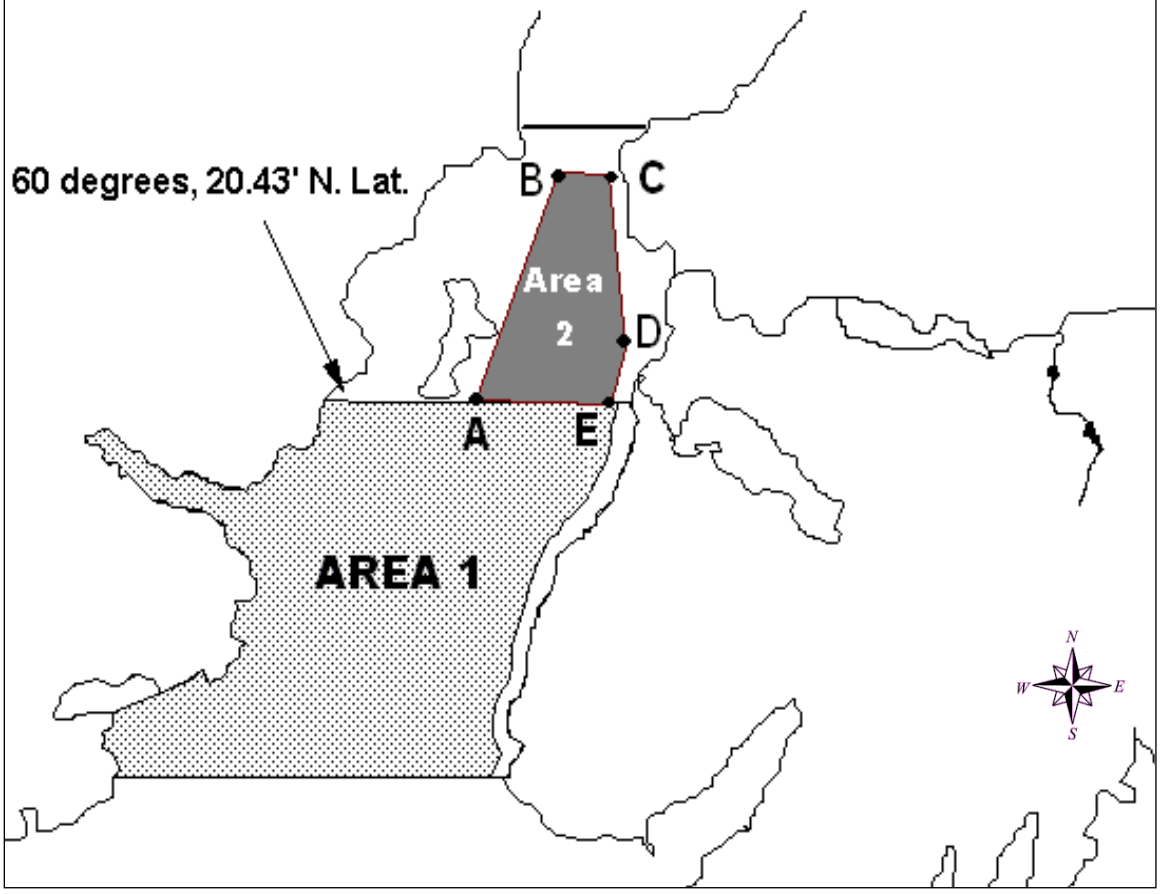

Figure 4.–Drift gillnet boundaries for fishing areas 1 and 2.

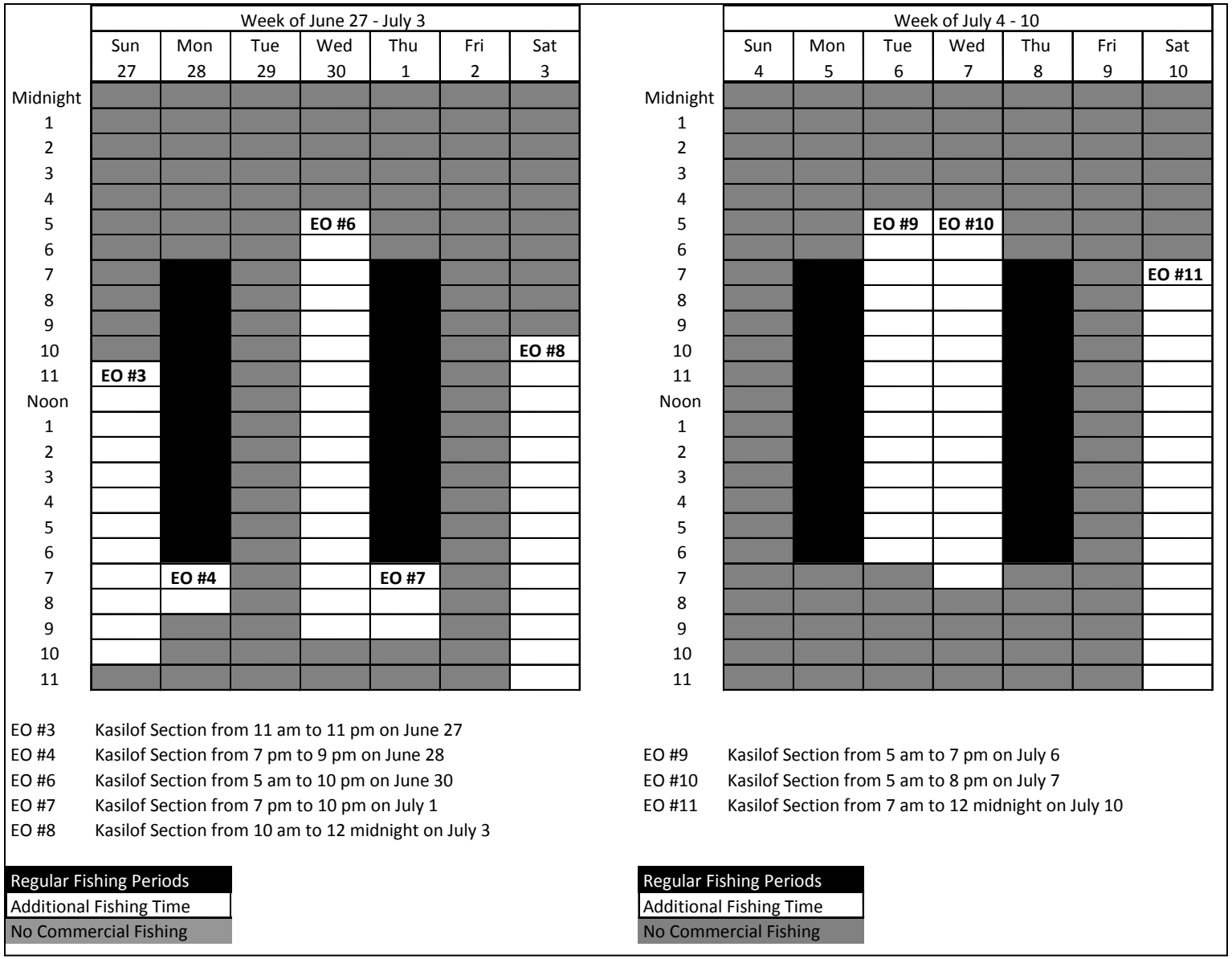

Figure 5.–Hours fished in the Upper Subdistrict set gillnet fishery, 2010.

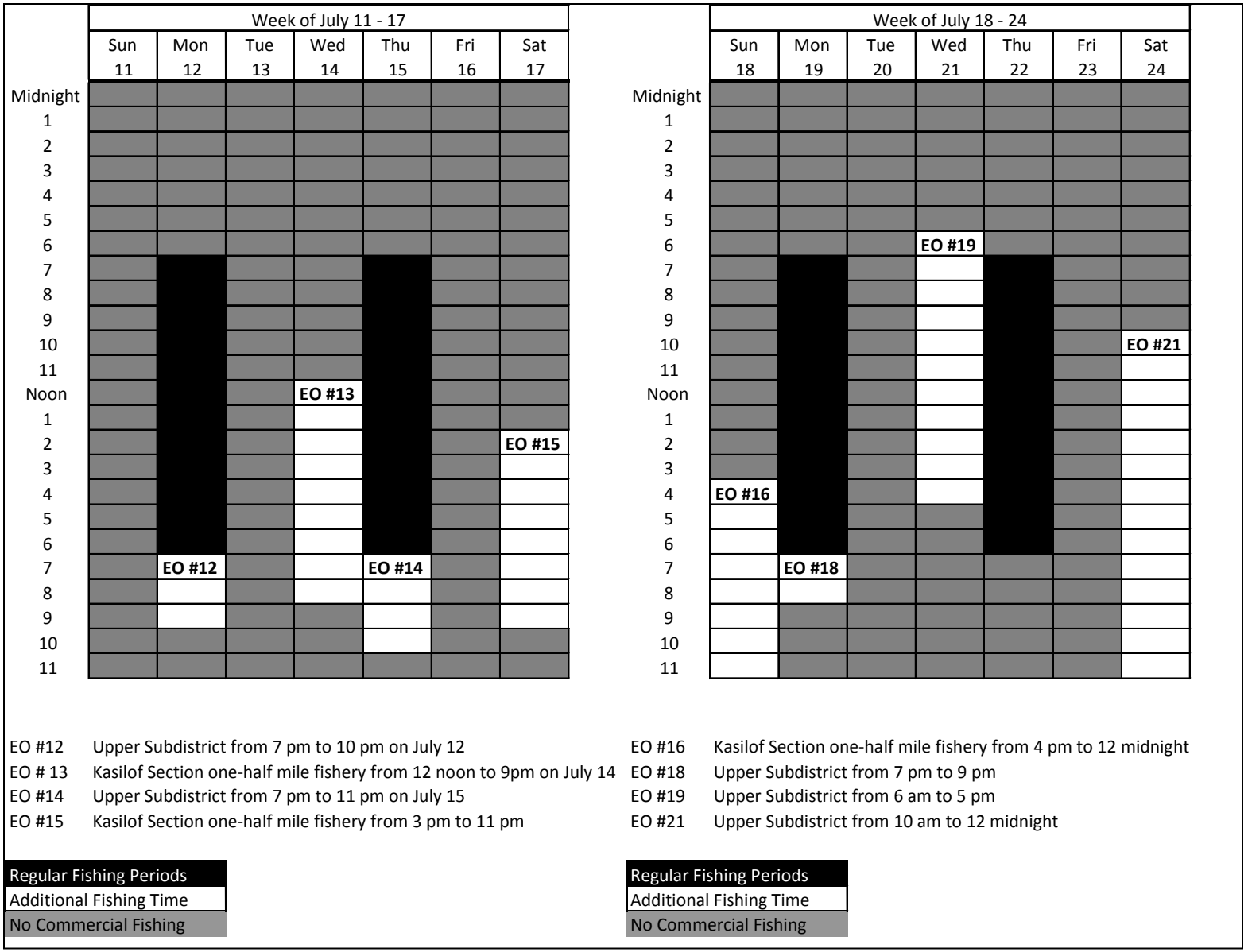

Figure 5.–Page 2 of 4.

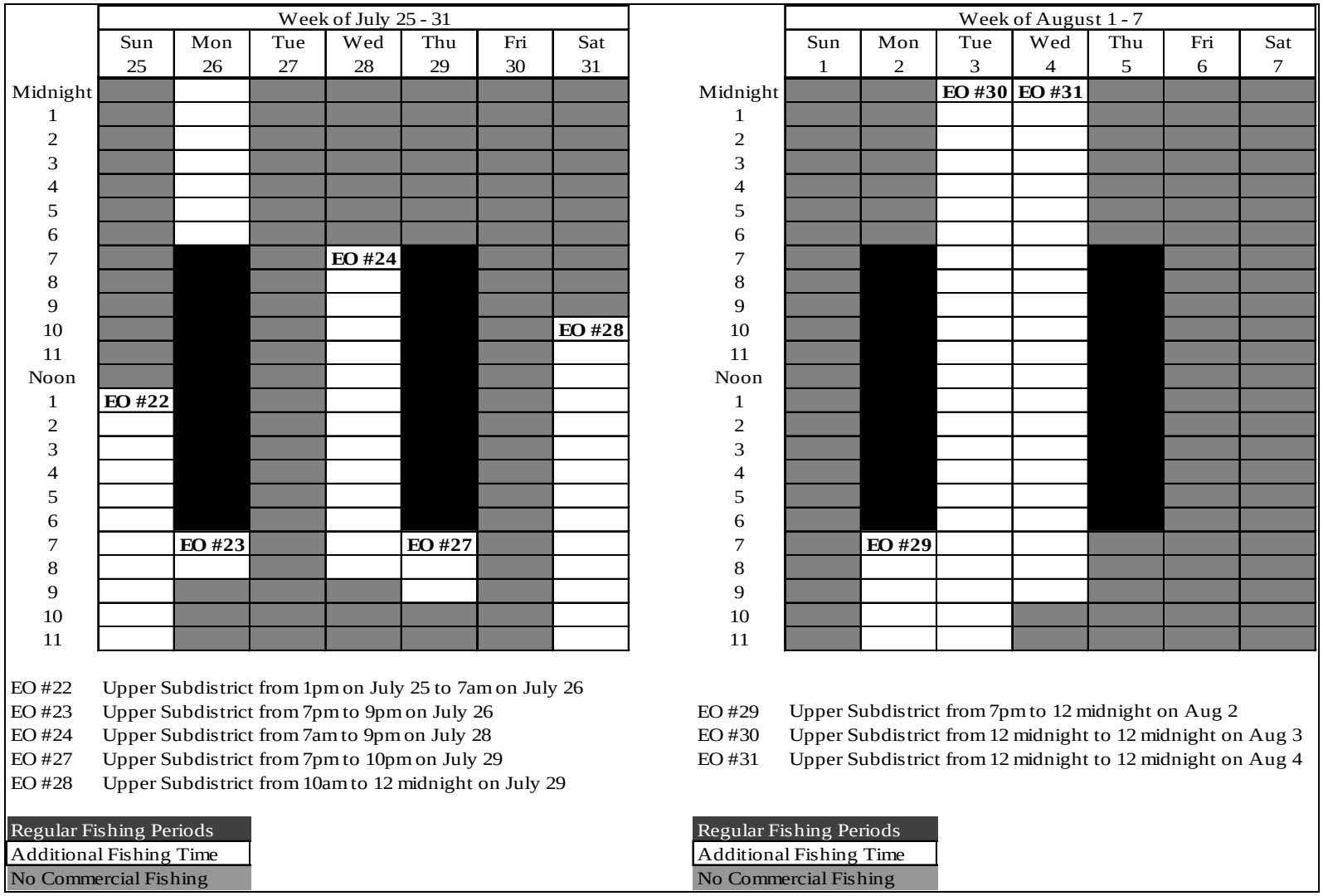

Figure 5.–Page 3 of 4.

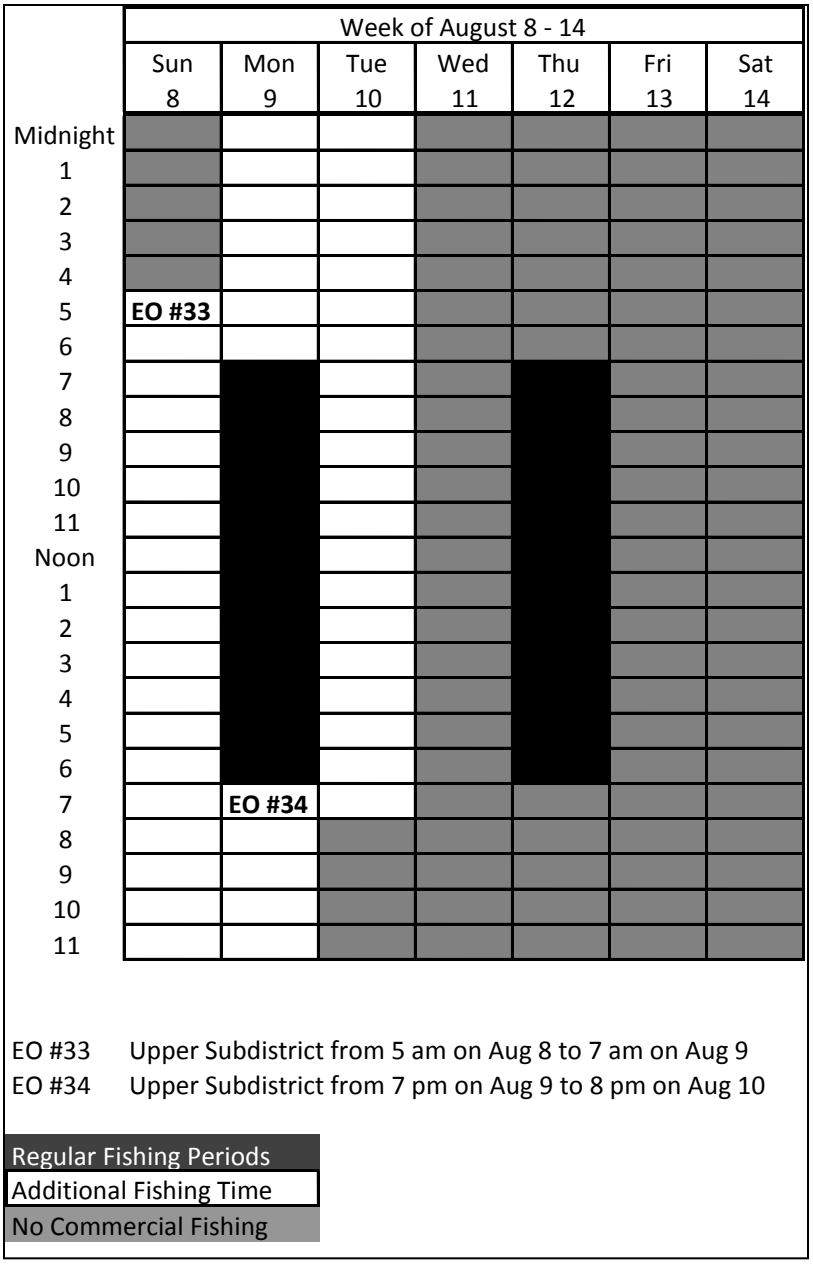

Figure 5.–Page 4 of 4.

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.

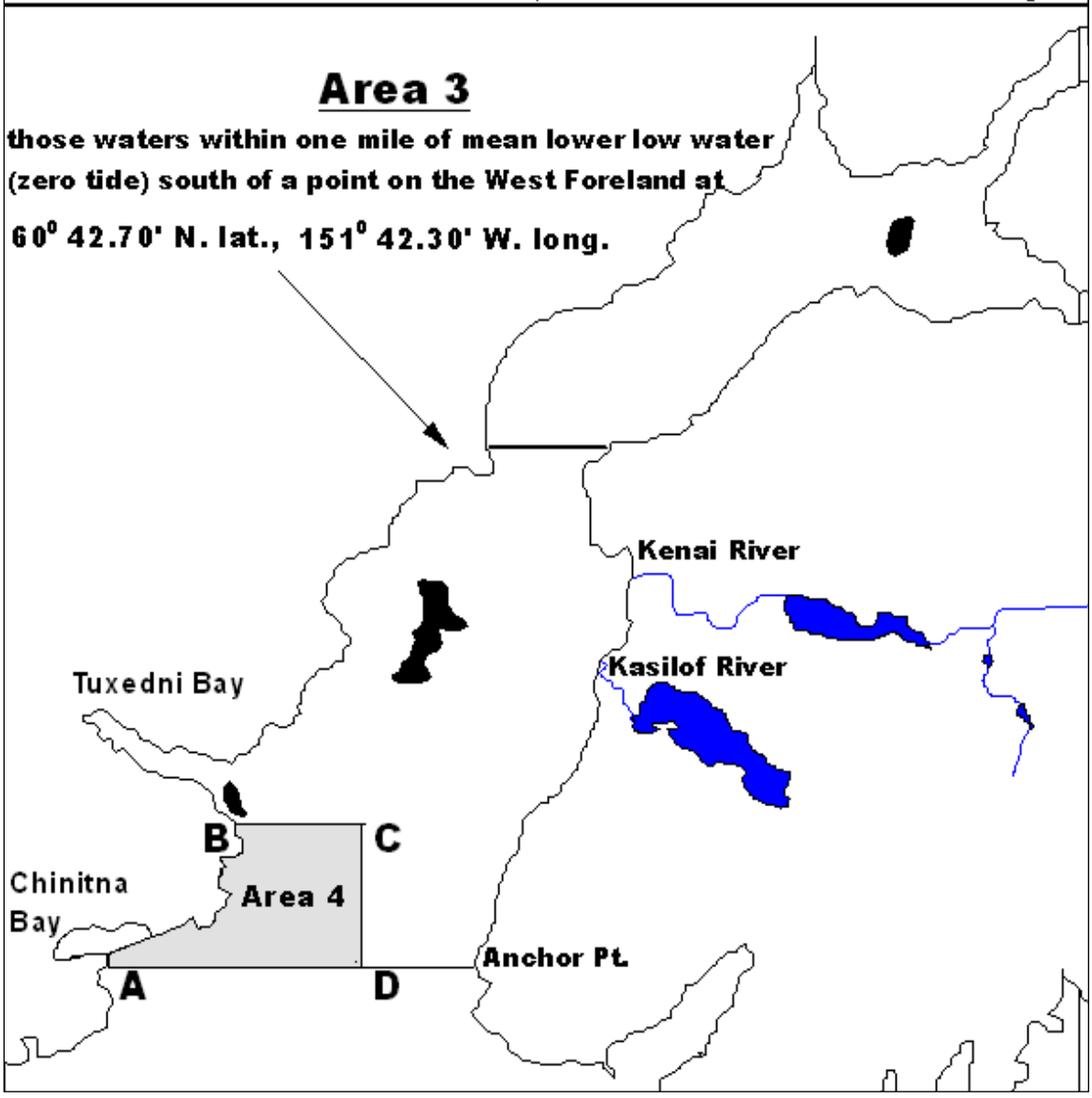

Figure 6.–Map of drift gillnet areas 3 and 4.

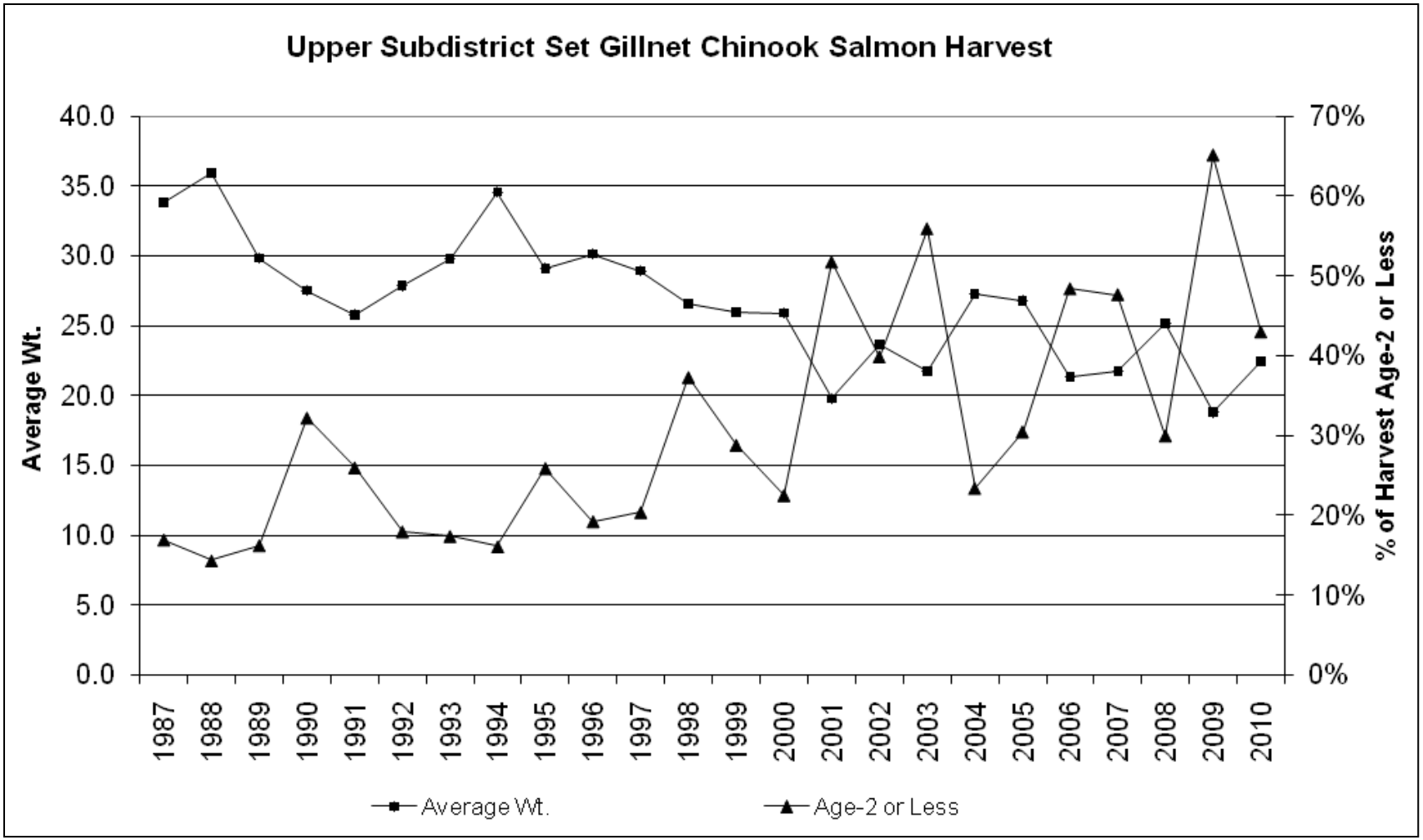

Figure 7.–Chinook salmon average weight (all fish) and percentage of the harvest comprised of ocean-age-2 or less fish in the Upper Subdistrict set gillnet commercial fishery, 1987–2010.

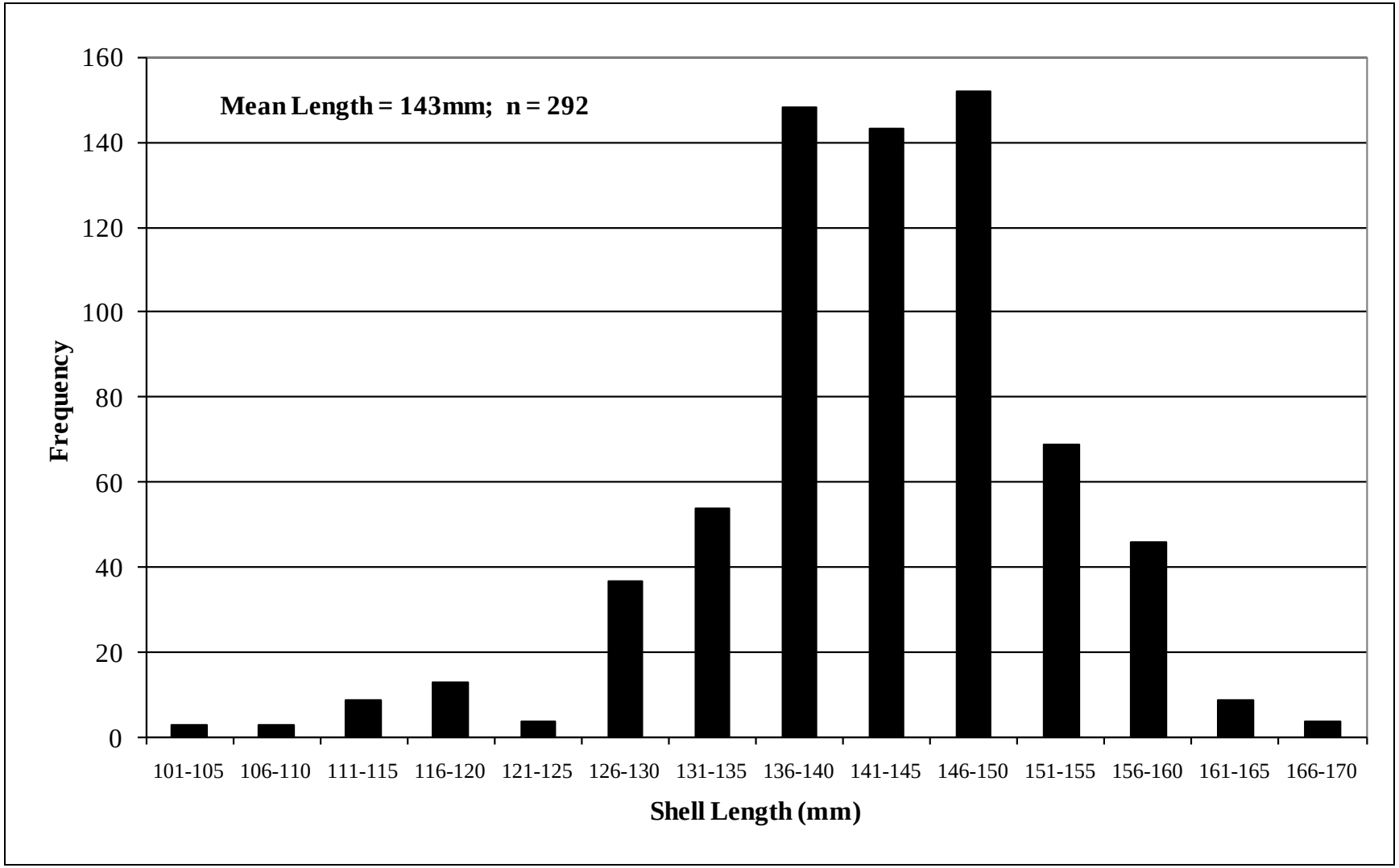

Figure 8.–Length frequency of razor clam shells sampled from the 2010 Polly Creek commercial razor clam fishery.

APPENDIX A: 2010 SEASON DATA

Appendix A1.–Offshore test fish sockeye salmon catch results and environmental data, 2010.

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	228.0	90	90	66	66	556	9.2	11.9	30.4	2	E	0	na
7/2	6	238.5	154	244	95	161	541	9.2	11.9	30.2	1	N	0	na
7/3	6	223.5	86	330	67	228	553	9.5	11.4	30.0	6	N	4	SW
7/4	6	255.5	206	536	132	360	543	9.4	10.8	30.2	5	SW	10	S
7/5	6	248.0	219	755	150	509	554	9.3	11.1	30.1	13.0	N	3	N
7/6	6	242.5	166	921	110	619	553	9.9	10.7	30.2	0	na	2	NW
7/7	6	227.0	20	941	15	634	535	9.5	11.3	30.0	8	NW	14	N
7/8	6	217.0	11	952	9	644	553	9.3	11.7	30.4	2	NE	8	NE
7/9	6	235.5	116	1,068	84	728	569	9.4	11.0	30.5	3	NW	5	NW
7/10	5[a]	196.5	39	1,107	28	756	558	9.4	11.0	30.3	12	N	10	SE
7/11	6	244.5	306	1,413	206	962	564	9.7	12.0	30.4	12	S	4	S
7/12	6	225.5	60	1,473	46	1,008	553	10.0	12.4	29.8	2	N	9	SW
7/13	6	228.5	44	1,517	34	1,043	559	9.6	11.7	30.5	4	N	6	NW
7/14	6	226.0	65	1,582	51	1,093	555	9.5	11.1	30.6	5	SE	6	S
7/15	0[a]	0.0	117	1,699	74	1,167	na	na	na	na	na	na	na	na
7/16	3[a]	149.0	188	1,887	113	1,280	564	10.1	10.9	30.0	11	S	12	SE
7/17	2[a]	89.5	132	2,019	91	1,371	572	9.9	10.2	30.8	18	SW	14	S
7/18	5[a]	191.0	66	2,085	51	1,421	563	10.1	13.2	30.1	1	SW	2	SW
7/19	6	235.0	103	2,188	76	1,497	564	10.1	11.6	30.3	8	W	16	SW
7/20	6	227.5	82	2,270	57	1,554	554	10.7	11.9	29.4	8	SW	5	SW
7/21	0[a]	0.0	59	2,329	40	1,594	na	na	na	na	na	na	na	na
7/22	6	232.0	33	2,362	23	1,617	556	10.8	13.5	29.9	0	na	7	SW
7/23	3[a]	113.5	126	2,488	72	1,690	560	10.8	12.6	29.3	6	SE	19	W
7/24	6	246.5	121	2,609	74	1,764	559	10.4	10.8	30.1	9.0	NW	7	S
7/25	6	220.5	21	2,630	16	1,780	551	10.5	11.4	29.5	4	NE	10	E
7/26	6	235.5	148	2,778	104	1,885	561	10.5	11.2	30.2	6	W	3	NW
7/27	6	271.5	228	3,006	130	2,015	564	10.7	11.1	29.5	5	S	3	SW
7/28	6	220.0	14	3,020	11	2,027	554	10.8	12.0	29.3	3	S	9	SW
7/29	6	222.5	38	3,058	28	2,055	553	10.3	12.6	30.2	3	SW	2	NW

[a] All stations not fished due to inclement weather; the data for missed stations were interpolated.

Appendix A2.–Upper Cook Inlet sockeye salmon enumeration by watershed and date, 2010.

	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		0	2,523	2,523										
16-Jun			1,124	3,647										
17-Jun			646	4,293										
18-Jun			570	4,863										
19-Jun			672	5,535										
20-Jun			698	6,233										
21-Jun			2,116	8,349										
22-Jun			4,493	12,842										
23-Jun			9,993	22,835										
24-Jun			9,481	32,316			3,107	3,107						
25-Jun			5,757	38,073			1,144	4,251						
26-Jun			7,165	45,238			4,092	8,343						
27-Jun			8,073	53,311			2,690	11,033						
28-Jun			1,991	55,302			4,011	15,044						
29-Jun			3,017	58,319			2,692	17,736						
30-Jun			6,758	65,077			2,571	20,307						
1-Jul	4,290	4,290	2,286	67,363			2,393	22,700						
2-Jul	4,557	8,847	2,134	69,497			2,314	25,014						
3-Jul	3,241	12,088	3,863	73,360			1,801	26,815						
4-Jul	6,092	18,180	3,289	76,649			2,678	29,493						
5-Jul	10,209	28,389	6,044	82,693			2,254	31,747						
6-Jul	11,232	39,621	1,097	83,790			2,952	34,699						
7-Jul	5,013	44,634	2,475	86,265			2,491	37,190						
8-Jul	8,097	52,731	2,671	88,936			1,077	38,267						
9-Jul	5,978	58,709	1,541	90,477			3,032	41,299						
10-Jul	5,544	64,253	3,230	93,707			2,600	43,899						

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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
11-Jul	8,548	72,801	2,457	96,164			3,954	47,853						
12-Jul	14,434	87,235	7,298	103,462			2,892	50,745						
13-Jul	24,412	111,647	4,078	107,540	323	323	2,315	53,060						
14-Jul	16,904	128,551	6,729	114,269	367	690	2,477	55,537						
15-Jul	22,652	151,203	7,485	121,754	1,795	2,485	1,731	57,268					3	3
16-Jul	47,016	198,219	12,513	134,267	660	3,145	2,615	59,883					11	14
17-Jul	62,316	260,535	22,498	156,765	1,896	5,041	2,149	62,032					0	14
18-Jul	68,553	329,088	16,532	173,297	6,453	11,494	2,588	64,620					10	24
19-Jul	82,804	411,892	7,727	181,024	7,002	18,496	1,976	66,596					0	24
20-Jul	55,883	467,775	8,371	189,395	11,194	29,690	2,652	69,248					21	45
21-Jul	48,840	516,615	7,247	196,642	20,128	49,818	1,616	70,864	221	221			9	54
22-Jul	38,757	555,372	6,177	202,819	18,187	68,005	1,619	72,483	1,447	1,668			25	79
23-Jul	35,123	590,495	5,453	208,272	19,495	87,500	1,937	74,420	1,946	3,614			1,073	1,152
24-Jul	16,973	607,468	7,142	215,414	3,565	91,065	2,066	76,486	2,309	5,923	164	164	318	1,470
25-Jul	41,089	648,557	2,513	217,927	155	91,220	1,280	77,766	1,396	7,319	10	174	1,368	2,838
26-Jul	19,031	667,588	1,427	219,354	262	91,482	1,542	79,308	1,333	8,652	0	174	1,610	4,448
27-Jul	16,316	683,904	3,409	222,763	1,052	92,534	909	80,217	1,815	10,467	50	224	1,218	5,666
28-Jul	19,323	703,227	5,741	228,504	1,780	94,314	605	80,822	1,655	12,122	614	838	723	6,389
29-Jul	14,228	717,455	2,849	231,353	3,852	98,166	658	81,480	1,456	13,578	560	1,398	1,776	8,165
30-Jul	13,699	731,154	2,363	233,716	2,693	100,859	857	82,337	1,487	15,065	1,571	2,969	1,233	9,398
31-Jul	11,525	742,679	3,615	237,331	1,871	102,730	641	82,978	2,042	17,107	784	3,753	1,348	10,746
1-Aug	14,314	756,993	2,684	240,015	8,858	111,588	774	83,752	3,193	20,300	1,325	5,078	909	11,655
2-Aug	22,139	779,132	5,603	245,618	6,547	118,135	929	84,681	3,602	23,902	2,347	7,425	992	12,647

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Appendix A2.–Page 3 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
3-Aug	36,317	815,449	1,784	247,402	2,701	120,836	557	85,238	2,207	26,109	1,408	8,833	742	13,389
4-Aug	14,140	829,589	1,271	248,673	927	121,763	424	85,662	1,768	27,877	1,221	10,054	492	13,881
5-Aug	10,749	840,338	2,472	251,145	1,440	123,203	671	86,333	1,007	28,884	482	10,536	522	14,403
6-Aug	11,560	851,898	3,167	254,312	475	123,678			1,316	30,200	943	11,479	153	14,556
7-Aug	12,468	864,366	1,829	256,141	481	124,159			1,162	31,362	866	12,345	37	14,593
8-Aug	12,310	876,676	2,179	258,320	115	124,274			853	32,215	806	13,151	707	15,300
9-Aug	12,061	888,737	1,297	259,617	617	124,891			1,272	33,487	523	13,674	647	15,947
10-Aug	10,571	899,308	705	260,322	462	125,353			849	34,336	446	14,120	509	16,456
11-Aug	6,641	905,949	1,013	261,335	402	125,755			328	34,664	657	14,777	530	16,986
12-Aug	6,151	912,100	1,280	262,615	136	125,891			50	34,714	485	15,262	287	17,273
13-Aug	8,860	920,960	1,437	264,052	85	125,976			530	35,244	320	15,582	455	17,728
14-Aug	9,588	930,548	1,468	265,520	461	126,437			611	35,855	505	16,087	481	18,209
15-Aug	13,282	943,830	1,493	267,013	23	126,460			481	36,336	404	16,491	246	18,455
16-Aug	12,816	956,646			59	126,519			262	36,598	480	16,971	208	18,663
17-Aug	5,842	962,488			72	126,591			4	36,602	191	17,162	262	18,925
18-Aug	4,951	967,439			40	126,631			174	36,776	347	17,509	99	19,024
19-Aug	3,223	970,662			34	126,665			220	36,996	81	17,590	9	19,033
20-Aug					77	126,742			346	37,342	13	17,603	164	19,197
21-Aug					26	126,768			137	37,479	64	17,667	104	19,301
22-Aug					15	126,783			74	37,553	9	17,676	151	19,452
23-Aug					12	126,795			132	37,685	45	17,721	153	19,605
24-Aug					0	126,795			87	37,772	148	17,869	135	19,740
25-Aug					2	126,797			12	37,784	117	17,986	68	19,808
26-Aug					12	126,809					0	17,986	177	19,985
27-Aug					1	126,810					17	18,003	31	20,016
28-Aug					16	126,826					82	18,085	43	20,059

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Appendix A2.–Page 4 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
29-Aug					3	126,829					88	18,173	96	20,155
30-Aug					0	126,829					47	18,220	85	20,240
31-Aug					0	126,829					29	18,249	36	20,276
1-Sep					0	126,829					27	18,276	39	20,315
2-Sep					0	126,829					36	18,312	9	20,324
3-Sep					0	126,829					34	18,346		
4-Sep					0	126,829					15	18,361		
5-Sep					0	126,829								
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, 2010.

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
27 Jun	23	23	49	49	20	20							92	92
28 Jun	11	34	21	70	23	43							55	147
30 Jun	18	52	40	110	38	81							96	243
01 Jul	21	73	43	153	20	101							84	327
03 Jul	42	115	43	196	33	134							118	445
05 Jul	30	145	62	258	58	192							150	595
06 Jul	64	209	48	306	24	216							136	731
07 Jul	42	251	72	378	44	260							158	889
08 Jul	67	318	59	437	69	329	66	66	132	132	8	8	401	1,290
10 Jul	40	358	113	550	56	385				132			209	1,499
12 Jul	52	410	112	662	108	493	106	106	151	283	11	11	540	2,039
14 Jul	32	442	84	746	53	546				283			169	2,208
15 Jul	49	491	37	783	87	633	85	85	70	353	11	11	339	2,547
17 Jul	11	502	69	852	34	667				353			114	2,661
18 Jul	16	518	58	910	40	707				353			114	2,775
19 Jul	27	545	61	971	92	799	49	49	129	482	3	3	361	3,136
21 Jul	60	605	71	1,042	53	852	80	129	97	579	1	4	362	3,498

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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
22 Jul	23	628	55	1,097	153	1,005	92	221	104	683	1	5	428	3,926
24 Jul	26	654	51	1,148	66	1,071	87	308	101	784	4	9	335	4,261
25 Jul	13	667	31	1,179	37	1,108	24	332	80	864		9	185	4,446
26 Jul	57	724	68	1,247	90	1,198	89	421	166	1,030	1	10	471	4,917
28 Jul	24	748	46	1,293	51	1,249	64	485	150	1,180	6	16	341	5,258
29 Jul	52	800	44	1,337	55	1,304	77	562	146	1,326	6	22	380	5,638
31 Jul	22	822	45	1,382	44	1,348	44	606	99	1,425	2	24	256	5,894
02 Aug	48	870	39	1,421	51	1,399	51	657	75	1,500	4	28	268	6,162
03 Aug	40	910	25	1,446	37	1,436	34	691	83	1,583	7	35	226	6,388
04 Aug	35	945	8	1,454	37	1,473	32	723	72	1,655	2	37	186	6,574
05 Aug	11	956	11	1,465	28	1,501	23	746	40	1,695	1	38	114	6,688
08 Aug	13	969	7	1,472	36	1,537	8	754	84	1,779	1	39	149	6,837
09 Aug	3	972	7	1,479	41	1,578	24	778	62	1,841		39	137	6,974
10 Aug	2	974	2	1,481	23	1,601	4	782	33	1,874		39	64	7,038
12 Aug	2	976		1,481	11	1,612	2	784	6	1,880		39	21	7,059

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Appendix A3.–Page 3 of 7.

Central District - West Side Set Gillnet

	245-10 Chinitna Bay		245-20 Silv. Salmon		245-30 Tuxedni Bay		245-40 Polly Cr.		245-50 L. J. Slough		245-55 Big River		245-60 W. Forelands		246-10 Kalgin - West		246-20 Kalgin - East		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
2 Jun									8	8					83	83			91	91
4 Jun											11	11			62	145			73	164
7 Jun											17	28			37	182			54	218
9 Jun															45	227			45	263
11 Jun											6	34			13	240			19	282
14 Jun															16	256			16	298
16 Jun											5	39			33	289			38	336
17 Jun					6	6													6	342
18 Jun											13	52			21	310			34	376
21 Jun					23	29									6	316			29	405
24 Jun					6	35													6	411
28 Jun					10	45									2	318			12	423
29 Jun					1	46													1	424
30 Jun					2	48													2	426
1 Jul					19	67									3	321			22	448
2 Jul					5	72													5	453
3 Jul					8	80													8	461
5 Jul					25	105													25	486
6 Jul					3	108													3	489
8 Jul					9	117									1	322			10	499
9 Jul					3	120													3	502
10 Jul					8	128													8	510
12 Jul					1	129									3	325			4	514

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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
13 Jul					2	131													2	516
14 Jul					4	135													4	520
15 Jul					4	139									1	326			5	525
19 Jul					3	142									2	328			5	530
21 Jul					1	143													1	531
22 Jul					3	146											1	1	4	535
23 Jul					3	149													3	538
24 Jul					4	153													4	542
26 Jul					2	155									3	331			5	547
29 Jul					1	156									2	333			3	550
2 Aug					1	157													1	551
5 Aug																	1	2	1	552
9 Aug					1	158													1	553

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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
31 May	141	141	102	102			43	43	48	48	42	42	32	32	5	5	20	20	433	433
7 Jun	180	321	302	404			71	114	63	111	71	113	74	106	22	27	19	39	802	1,235
14 Jun			61	465			8	122	54	165	25	138	19	125	8	35	5	44	180	1,415
21 Jun	17	338	147	612			2	124	23	188	39	177	20	145	7	42	4	48	259	1,674
28 Jun	1	339	21	633			3	127			1	178	5	150					31	1,705
Jul 1	2	341	22	655					3	191			3	153					30	1,735
Jul 5							1	128											1	1,736
Jul 8															1	43			1	1,737
Jul 12	4	345									1	179							5	1,742
Jul 15													1	154	1	44			2	1,744
Jul 19											1	180					1	49	2	1,746
Jul 29															1	45			1	1,747
Aug 2									1	192					1	46			2	1,749
Aug 23													1	155					1	1,750

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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
21 Jun	68							10	10	10	10
24 Jun	88							14	24	14	24
28 Jun	160							29	53	29	53
30 Jun	36	4	4							4	57
1 Jul	220							31	84	31	88
3 Jul	54	7	11							7	95
5 Jul	269							97	181	97	192
6 Jul	42	18	29							18	210
7 Jul	36	14	43							14	224
8 Jul	301							15	196	15	239
12 Jul	249							33	229	33	272
15 Jul	297							46	275	46	318
19 Jul	333							32	307	32	350

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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
21 Jul	229			67	67					67	417
22 Jul	329							10	317	10	427
24 Jul	146			23	90					23	450
25 Jul	61			5	95					5	455
26 Jul	307							5	322	5	460
28 Jul	148			26	121					26	486
29 Jul	292							14	336	14	500
31 Jul	76			11	132					11	511
2 Aug	200							13	349	13	524
3 Aug	14			1	133					1	525
4 Aug	23			3	136					3	528
5 Aug	177							2	351	2	530
8 Aug	10			2	138					2	532
9 Aug	108							4	355	4	536
10 Aug	4			2	140					2	538
23 Aug	25							1	356	1	539

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

Appendix A4.–Commercial sockeye salmon catch by area and date, Upper Cook Inlet, 2010.

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
27 Jun	9,765	9,765	9,229	9,229	5,516	5,516							24,510	24,510
28 Jun	7,425	17,190	4,275	13,504	3,112	8,628							14,812	39,322
30 Jun	10,942	28,132	9,552	23,056	8,533	17,161							29,027	68,349
1 Jul	7,819	35,951	3,569	26,625	4,354	21,515							15,742	84,091
3 Jul	10,945	46,896	9,338	35,963	6,446	27,961							26,729	110,820
5 Jul	12,658	59,554	4,449	40,412	5,885	33,846							22,992	133,812
6 Jul	5,570	65,124	3,532	43,944	2,317	36,163							11,419	145,231
7 Jul	5,608	70,732	3,202	47,146	4,470	40,633							13,280	158,511
8 Jul	7,188	77,920	1,620	48,766	2,119	42,752	2,224	2,224	10,485	10,485	1,109	1,109	24,745	183,256
10 Jul	3,085	81,005	3,552	52,318	4,110	46,862							10,747	194,003
12 Jul	10,465	91,470	17,130	69,448	16,027	62,889	17,958	20,182	38,551	49,036	4,317	5,426	104,448	298,451
14 Jul	3,620	95,090	8,164	77,612	4,758	67,647							16,542	314,993
15 Jul	5,717	100,807	15,247	92,859	21,102	88,749	15,834	36,016	65,638	114,674	18,379	23,805	141,917	456,910
17 Jul	15,179	115,986	18,954	111,813	7,590	96,339							41,723	498,633
18 Jul	10,306	126,292	11,073	122,886	8,909	105,248							30,288	528,921
19 Jul	3,819	130,111	11,253	134,139	6,271	111,519	14,851	50,867	78,946	193,620	8,081	31,886	123,221	652,142
21 Jul	2,887	132,998	3,369	137,508	3,867	115,386	5,589	56,456	25,829	219,449	4,618	36,504	46,159	698,301

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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
22 Jul	2,063	135,061	2,768	140,276	6,431	121,817	6,942	63,398	29,104	248,553	3,998	40,502	51,306	749,607
24 Jul	7,349	142,410	8,314	148,590	6,337	128,154	8,714	72,112	25,823	274,376	4,981	45,483	61,518	811,125
25 Jul	2,285	144,695	2,954	151,544	2,791	130,945	3,646	75,758	7,524	281,900	1,229	46,712	20,429	831,554
26 Jul	3,709	148,404	8,595	160,139	5,842	136,787	6,170	81,928	7,996	289,896	1,177	47,889	33,489	865,043
28 Jul	4,119	152,523	6,936	167,075	5,541	142,328	5,280	87,208	28,019	317,915	3,732	51,621	53,627	918,670
29 Jul	4,555	157,078	4,809	171,884	3,449	145,777	5,712	92,920	12,988	330,903	2,301	53,922	33,814	952,484
31 Jul	2,752	159,830	2,180	174,064	1,933	147,710	2,417	95,337	9,710	340,613	1,871	55,793	20,863	973,347
2 Aug	4,511	164,341	3,203	177,267	2,128	149,838	4,501	99,838	27,712	368,325	3,560	59,353	45,615	1,018,962
3 Aug	2,966	167,307	1,806	179,073	1,449	151,287	2,254	102,092	5,147	373,472	1,487	60,840	15,109	1,034,071
4 Aug	4,360	171,667	1,987	181,060	2,448	153,735	4,392	106,484	4,436	377,908	1,355	62,195	18,978	1,053,049
5 Aug	1,051	172,718	513	181,573	756	154,491	1,249	107,733	4,516	382,424	1,195	63,390	9,280	1,062,329
8 Aug	1,330	174,048	1,041	182,614	1,131	155,622	1,032	108,765	4,341	386,765	744	64,134	9,619	1,071,948
9 Aug	933	174,981	717	183,331	1,248	156,870	1,099	109,864	1,895	388,660	1,071	65,205	6,963	1,078,911
10 Aug	275	175,256	497	183,828	653	157,523	464	110,328	1,471	390,131	153	65,358	3,513	1,082,424
12 Aug	629	175,885	77	183,905	277	157,800	208	110,536	1,690	391,821	484	65,842	3,365	1,085,789

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Central District - West Side Set Gillnet

	245-10 Chinitna Bay		245-20 Silv. Salmon		245-30 Tuxedni Bay		245-40 Polly Cr.		245-50 L. J. Slough		245-55 Big River		245-60 W. Forelands		246-10 Kalgin - West		246-20 Kalgin - East		Total	
Date	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
2 Jun									140	140					2,047	2,047			2,187	2,187
4 Jun											738	738			1,615	3,662			2,353	4,540
7 Jun											251	989			2,839	6,501			3,090	7,630
9 Jun												989			1,035	7,536			1,035	8,665
11 Jun											174	1,163			1,233	8,769			1,407	10,072
14 Jun											77	1,240			851	9,620			928	11,000
16 Jun											425	1,665			983	10,603			1,408	12,408
17 Jun					448	448						1,665							448	12,856
18 Jun											455	2,120			1,053	11,656			1,508	14,364
21 Jun					1,299	1,747									2,400	14,056			3,699	18,063
23 Jun															270	14,326			270	18,333
24 Jun					810	2,557													810	19,143
28 Jun					1,728	4,285									636	14,962	254	254	2,618	21,761
29 Jun					637	4,922													637	22,398
30 Jun					1,535	6,457													1,535	23,933
1 Jul					1,888	8,345									1,731	16,693	292	546	3,911	27,844
2 Jul					1,099	9,444													1,099	28,943
3 Jul					3,566	13,010													3,566	32,509
4 Jul					1,719	14,729													1,719	34,228
5 Jul					3,223	17,952									2,096	18,789	250	796	5,569	39,797
6 Jul					977	18,929													977	40,774
7 Jul					1,119	20,048													1,119	41,893
8 Jul					1,621	21,669									1,965	20,754	96	892	3,682	45,575
9 Jul					1,494	23,163													1,494	47,069

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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
10 Jul					1,690	24,853				0				0					1,690	48,759
11 Jul					428	25,281				0				0					428	49,187
12 Jul					731	26,012			77	77				0	1,228	21,982	322	1,214	2,358	51,545
13 Jul					2,109	28,121								0					2,109	53,654
14 Jul					1,059	29,180								0					1,059	54,713
15 Jul					2,379	31,559								0	4,368	26,350	362	1,576	7,109	61,822
17 Jul					1,335	32,894								0					1,335	63,157
19 Jul					1,315	34,209			283	360			76	76	3,483	29,833	1,394	2,970	6,551	69,708
21 Jul					126	34,335													126	69,834
22 Jul					4,108	38,443	329	329	468	828			300	376	5,110	34,943	2,426	5,396	12,741	82,575
23 Jul					752	39,195													752	83,327
24 Jul					1,775	40,970													1,775	85,102
25 Jul					318	41,288													318	85,420
26 Jul					180	41,468			145	973			57	433	5,138	40,081	518	5,914	6,038	91,458
27 Jul					256	41,724													256	91,714
28 Jul					136	41,860													136	91,850
29 Jul					338	42,198			212	1,185					5,203	45,284	1,952	7,866	7,705	99,555
31 Jul						42,198									2,392	47,676	641	8,507	3,033	102,588
2 Aug					172	42,370			282	1,467					1,579	49,255	704	9,211	2,737	105,325
5 Aug					125	42,495			237	1,704					1,319	50,574	1,054	10,265	2,735	108,060
7 Aug						42,495									1,299	51,873	487	10,752	1,786	109,846
9 Aug					237	42,732			111	1,815					1,604	53,477	993	11,745	2,945	112,791
12 Aug					1	42,733			84	1,899					702	54,179	290	12,035	1,077	113,868
16 Aug					8	42,741			35	1,934					683	54,862	102	12,137	828	114,696
19 Aug					13	42,754			10	1,944									23	114,719

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	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
31 May	19	19					2	2	2	2	4	4	78	78	9	9	21	21	135	135
7 Jun	99	118	5	5			2	4	1	3	6	10	201	279	169	178	188	209	671	806
14 Jun			28	33			1	5	2	5	3	13	43	322	112	290	76	285	265	1,071
21 Jun	2	120	20	53			3	8			1	14	27	349	58	348	98	383	209	1,280
28 Jun	27	147	160	213	12	12	9	17			3	17	244	593	70	418	171	554	696	1,976
1 Jul	84	231	843	1,056	26	38							501	1,094	118	536	395	949	1,967	3,943
5 Jul	52	283	694	1,750			39	56	165	170			359	1,453	816	1,352	292	1,241	2,417	6,360
8 Jul	44	327	625	2,375	35	73	246	302	209	379			384	1,837	56	1,408	76	1,317	1,675	8,035
12 Jul	523	850	491	2,866	71	144	315	617	322	701	464	481	349	2,186	127	1,535	237	1,554	2,899	10,934
15 Jul	1,681	2,531	540	3,406	253	397	302	919	575	1,276	221	702	853	3,039	362	1,897	661	2,215	5,448	16,382
19 Jul	434	2,965	2,351	5,757	264	661	322	1,241	955	2,231	233	935	1,450	4,489	1,326	3,223	381	2,596	7,716	24,098
22 Jul	294	3,259	1,175	6,932	1,033	1,694	716	1,957	1,246	3,477	711	1,646	604	5,093	537	3,760	280	2,876	6,596	30,694
26 Jul	11	3,270	262	7,194	59	1,753	161	2,118	596	4,073			260	5,353	141	3,901			1,490	32,184
29 Jul	171	3,441	378	7,572	119	1,872	254	2,372	416	4,489	117	1,763	402	5,755	281	4,182	110	2,986	2,248	34,432
2 Aug	564	4,005	723	8,295	65	1,937	198	2,570	289	4,778	90	1,853	303	6,058	328	4,510	258	3,244	2,818	37,250
5 Aug	320	4,325	227	8,522	13	1,950	70	2,640	96	4,874	22	1,875	134	6,192	43	4,553	68	3,312	993	38,243
9 Aug	288	4,613	251	8,773			19	2,659	7	4,881			84	6,276	17	4,570	24	3,336	690	38,933
12 Aug	49	4,662	91	8,864	11	1,961	6	2,665	23	4,904	7	1,882	31	6,307	219	4,789	92	3,428	529	39,462
16 Aug	35	4,697	80	8,944			2	2,667			9	1,891	92	6,399	3	4,792	139	3,567	360	39,822
19 Aug	18	4,715	20	8,964			8	2,675			3	1,894	59	6,458	23	4,815	21	3,588	152	39,974
23 Aug			7	8,971			3	2,678					35	6,493	20	4,835	14	3,602	79	40,053
26 Aug			2	8,973							1	1,895	8	6,501	11	4,846	17	3,619	39	40,092
30 Aug															4	4,850	13	3,632	17	40,109
2 Sep													2	6,503	6	4,856	10	3,642	18	40,127
6 Sep													1	6,504	46	4,902			47	40,174
9 Sep															1	4,903	1	3,643	2	40,176
13 Sep															1	4,904			1	40,177

-continued-

Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		244-60 Districtwide		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
21 Jun	68					3,135				3,135	3,135
24 Jun	88					5,452				5,452	8,587
27 Jun	<4	66								66	8,653
28 Jun	160					12,376				12,376	21,029
30 Jun	36	2,728								2,728	23,757
1 Jul	220					44,171				44,171	67,928
3 Jul	54	2,293								2,293	70,221
5 Jul	269					110,763				110,763	180,984
6 Jul	42	3,793								3,793	184,777
7 Jul	36	721								721	185,498
8 Jul	301					243,891				243,891	429,389
12 Jul	249					333,303				333,303	762,692
15 Jul	297					246,973				246,973	1,009,665
19 Jul	333					181,110				181,110	1,190,775
21 Jul	229			31,485						31,485	1,222,260
22 Jul	329					124,656				124,656	1,346,916
24 Jul	146			11,696						11,696	1,358,612
25 Jul	61			2,225						2,225	1,360,837
26 Jul	307					89,635				89,635	1,450,472
28 Jul	148			14,050						14,050	1,464,522

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Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		244-60 Districtwide		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
29 Jul	292					76,218				76,218	1,540,740
31 Jul	76			3,357						3,357	1,544,097
2 Aug	200					24,785				24,785	1,568,882
3 Aug	14			377						377	1,569,259
4 Aug	23			1,168						1,168	1,570,427
5 Aug	177					13,387				13,387	1,583,814
8 Aug	10			124						124	1,583,938
9 Aug	108					2,867				2,867	1,586,805
10 Aug	4			39						39	1,586,844
12 Aug	25					580				580	1,587,424
16 Aug	6					29				29	1,587,453
19 Aug	6					45				45	1,587,498
23 Aug	11					76				76	1,587,574
26 Aug	10					25				25	1,587,599
27 Aug	<4							3		3	1,587,602
30 Aug	7					22				22	1,587,624
1 Sep	4							44		44	1,587,668
2 Sep	7					2				2	1,587,670
3 Sep	<4							5		5	1,587,675
6 Sep	<4					6				6	1,587,681
9 Sep	<4					1				1	1,587,682

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

Appendix A5.–Commercial coho salmon catch by area and date, Upper Cook Inlet, 2010.

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
27 Jun	1	1											1	1
28 Jun	2	3											2	3
3 Jul	5	8	3	3	2	2							10	13
5 Jul	5	13		3	1	3							6	19
6 Jul	3	16	8	11	1	4							12	31
8 Jul	15	31	5	16	11	15	3	3	22	22	15	15	71	102
10 Jul	1	32	5	21	11	26		3		22		15	17	119
12 Jul	15	47	54	75	618	644	161	164	436	458	224	239	1,508	1,627
14 Jul	11	58	17	92	88	732		164		458		239	116	1,743
15 Jul	6	64	10	102	48	780	476	640	914	1,372	554	793	2,008	3,751
17 Jul	25	89	22	124	88	868		640		1,372		793	135	3,886
18 Jul	60	149	64	188	35	903		640		1,372		793	159	4,045
19 Jul	84	233	320	508	84	987	182	822	707	2,079	546	1,339	1,923	5,968
21 Jul	25	258	24	532	12	999	23	845	98	2,177	98	1,437	280	6,248

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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
22 Jul	82	340	45	577	46	1,045	98	943	691	2,868	203	1,640	1,165	7,413
24 Jul	83	423	92	669	40	1,085	84	1,027	339	3,207	173	1,813	811	8,224
25 Jul	51	474	61	730	54	1,139	44	1,071	774	3,981	241	2,054	1,225	9,449
26 Jul	140	614	153	883	105	1,244	136	1,207	363	4,344	200	2,254	1,097	10,546
28 Jul	185	799	235	1,118	119	1,363	182	1,389	746	5,090	297	2,551	1,764	12,310
29 Jul	224	1,023	311	1,429	107	1,470	153	1,542	607	5,697	292	2,843	1,694	14,004
31 Jul	222	1,245	123	1,552	61	1,531	89	1,631	536	6,233	326	3,169	1,357	15,361
2 Aug	524	1,769	395	1,947	154	1,685	272	1,903	961	7,194	494	3,663	2,800	18,161
3 Aug	537	2,306	288	2,235	302	1,987	160	2,063	497	7,691	283	3,946	2,067	20,228
4 Aug	499	2,805	206	2,441	116	2,103	240	2,303	719	8,410	432	4,378	2,212	22,440
5 Aug	220	3,025	140	2,581	74	2,177	159	2,462	542	8,952	329	4,707	1,464	23,904
8 Aug	581	3,606	286	2,867	250	2,427	253	2,715	1,150	10,102	592	5,299	3,112	27,016
9 Aug	271	3,877	289	3,156	237	2,664	189	2,904	700	10,802	721	6,020	2,407	29,423
10 Aug	179	4,056	338	3,494	150	2,814	135	3,039	386	11,188	53	6,073	1,241	30,664
12 Aug	269	4,325	19	3,513	144	2,958	152	3,191	1,004	12,192	431	6,504	2,019	32,683

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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
24 Jun					1	1													1	1
28 Jun					1	2													1	2
29 Jun					1	3													1	3
30 Jun					1	4													1	4
1 Jul															23	23	2	2	25	29
2 Jul																			0	29
3 Jul					32	36													32	61
4 Jul					16	52													16	77
5 Jul					24	76									115	138	10	12	149	226
6 Jul					5	81													5	231
7 Jul					15	96													15	246
8 Jul					35	131									567	705	22	34	624	870
9 Jul					55	186													55	925
10 Jul					81	267												34	81	1,006
11 Jul					14	281												34	14	1,020
12 Jul					29	310			25	25					709	1,414	106	140	869	1,889
13 Jul					136	446												140	136	2,025
14 Jul					119	565												140	119	2,144
15 Jul					146	711									755	2,169	41	181	942	3,086
17 Jul					98	809												181	98	3,184
19 Jul					111	920			51	76			21	21	1,289	3,458	235	416	1,707	4,891

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Appendix A5.–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
21 Jul					7	927												416	7	4,898
22 Jul					704	1,631	147	147	445	521			270	291	3,564	7,022	1,716	2,132	6,846	11,744
23 Jul					147	1,778												2,132	147	11,891
24 Jul					285	2,063												2,132	285	12,176
25 Jul					108	2,171												2,132	108	12,284
26 Jul					13	2,184			54	575			121	412	1,826	8,848	265	2,397	2,279	14,563
27 Jul					155	2,339												2,397	155	14,718
28 Jul					86	2,425												2,397	86	14,804
29 Jul					103	2,528			189	764					2,418	11,266	960	3,357	3,670	18,474
31 Jul															1,269	12,535	380	3,737	1,649	20,123
2 Aug					72	2,600			228	992					566	13,101	254	3,991	1,120	21,243
5 Aug					76	2,676			211	1,203					689	13,790	246	4,237	1,222	22,465
7 Aug															599	14,389	205	4,442	804	23,269
9 Aug					649	3,325			157	1,360					488	14,877	146	4,588	1,440	24,709
12 Aug					21	3,346			445	1,805					227	15,104	107	4,695	800	25,509
16 Aug					56	3,402			115	1,920					198	15,302	39	4,734	408	25,917
19 Aug					44	3,446			136	2,056								4,734	180	26,097
23 Aug									46	2,102					65	15,367		4,734	111	26,208
27 Aug	6	6																4,734	6	26,214
1 Sep	39	45																4,734	39	26,253
3 Sep	28	73																4,734	28	26,281

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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
28 Jun	1	1	7	7	2	2	2	2							1	1			13	13
1 Jul	2	3	26	33									9	9		1			37	50
5 Jul			74	107					13	13			15	24	27	28	3	3	132	182
8 Jul			382	489	49	51	11	13	17	30			90	114	9	37	3	6	561	743
12 Jul	48	51	641	1,130	389	440	36	49	30	60	148	148	107	221	7	44	11	17	1,417	2,160
15 Jul	85	136	353	1,483	324	764	97	146	119	179	38	186	158	379	37	81	60	77	1,271	3,431
19 Jul			2,195	3,678	487	1,251	99	245	366	545	215	401	911	1,290	599	680	101	178	4,973	8,404
22 Jul	264	400	1,445	5,123	617	1,868	288	533	415	960	747	1,148	571	1,861	197	877	21	199	4,565	12,969
26 Jul	34	434	379	5,502	105	1,973	94	627	321	1,281			338	2,199	114	991			1,385	14,354
29 Jul	267	701	1,172	6,674	222	2,195	399	1,026	380	1,661	307	1,455	534	2,733	212	1,203	17	216	3,510	17,864
2 Aug	62	763	1,810	8,484	280	2,475	640	1,666	486	2,147	461	1,916	472	3,205	318	1,521	149	365	4,678	22,542
5 Aug	65	828	405	8,889	57	2,532	284	1,950	438	2,585	192	2,108	322	3,527	102	1,623	75	440	1,940	24,482
9 Aug	198	1,026	454	9,343			44	1,994	142	2,727			321	3,848	253	1,876	93	533	1,505	25,987
12 Aug	100	1,126	683	10,026	36	2,568	38	2,032	117	2,844	109	2,217	247	4,095	428	2,304	458	991	2,216	28,203
16 Aug	120	1,246	323	10,349			1	2,033			100	2,317	352	4,447	222	2,526	526	1,517	1,644	29,847
19 Aug	53	1,299	231	10,580			57	2,090			155	2,472	990	5,437	951	3,477	470	1,987	2,907	32,754
23 Aug			53	10,633			20	2,110					347	5,784	759	4,236	517	2,504	1,696	34,450
26 Aug			38	10,671			20	2,130			3	2,475	130	5,914	702	4,938	465	2,969	1,358	35,808
30 Aug			26	10,697					100	2,944	42	2,517			493	5,431	473	3,442	1,134	36,942
2 Sep													165	6,079	266	5,697	268	3,710	699	37,641
6 Sep													72	6,151	83	5,780	108	3,818	263	37,904
9 Sep															72	5,852	12	3,830	84	37,988
13 Sep															10	5,862	17	3,847	27	38,015

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Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		244-60 Districtwide		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
21 Jun	68					2				2	2
24 Jun	88					10				10	12
28 Jun	<4					70				70	82
30 Jun	160	1								1	83
1 Jul	36					402				402	485
3 Jul	220	3								3	488
5 Jul	54					2,272				2,272	2,760
6 Jul	269	9								9	2,769
7 Jul	42	3								3	2,772
8 Jul	36					5,457				5,457	8,229
12 Jul	301					17,922				17,922	26,151
15 Jul	249					5,622				5,622	31,773
19 Jul	297					13,827				13,827	45,600
21 Jul	333			480						480	46,080
22 Jul	229					15,691				15,691	61,771
24 Jul	329			538						538	62,309
25 Jul	146			110						110	62,419
26 Jul	61					11,850				11,850	74,269
28 Jul	307			807						807	75,076

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Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		244-60 Districtwide		245-10 Chinitna Bay		Total	
Date	Deliveries	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
29 Jul	148					11,479				11,479	86,555
31 Jul	292			156						156	86,711
2 Aug	76					6,206				6,206	92,917
3 Aug	200			41						41	92,958
4 Aug	14			140						140	93,098
5 Aug	23					5,897				5,897	98,995
8 Aug	177			109						109	99,104
9 Aug	10					2,775				2,775	101,879
10 Aug	108			29						29	101,908
12 Aug	4					829				829	102,737
16 Aug	25					443				443	103,180
19 Aug	6					607				607	103,787
23 Aug	6					1,899				1,899	105,686
26 Aug	11					1,560				1,560	107,246
27 Aug	10							248		248	107,494
30 Aug	<4					949				949	108,443
1 Sep	7							330		330	108,773
2 Sep	4					972				972	109,745
2 Sep	7							34		34	109,779
3 Sep	<4							256		256	110,035
6 Sep	<4					176				176	110,211
9 Sep	<4					66				66	110,277

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

Appendix A6.–Commercial pink salmon catch by area and date, Upper Cook Inlet, 2010.

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
27 Jun	1	1	1	1		0		0		0		0	2	2
28 Jun		1	1	2	8	8		0		0		0	9	11
30 Jun		1	2	4		8		0		0		0	2	13
1 Jul	2	3	3	7	1	9		0		0		0	6	19
3 Jul		3	1	8		9		0		0		0	1	20
5 Jul	5	8	1	9		9		0		0		0	6	26
6 Jul		8		9	1	10		0		0		0	1	27
7 Jul	2	10	3	12	1	11		0		0		0	6	33
8 Jul	18	28	2	14	3	14		0	4	4	1	1	28	61
10 Jul	4	32	10	24	2	16		0		4		1	16	77
12 Jul	34	66	29	53	19	35	20	20	121	125	71	72	294	371
14 Jul	24	90	18	71	9	44		20		125		72	51	422
15 Jul	25	115	8	79	33	77	56	76	191	316	159	231	472	894
17 Jul	31	146	16	95	13	90		76		316		231	60	954
18 Jul	70	216	67	162	16	106		76		316		231	153	1,107
19 Jul	110	326	310	472	44	150	133	209	654	970	599	830	1,850	2,957
21 Jul	21	347	13	485	7	157	8	217	199	1,169	270	1,100	518	3,475

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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
22 Jul	44	391	82	567	42	199	26	243	398	1,567	396	1,496	988	4,463
24 Jul	111	502	193	760	46	245	87	330	492	2,059	284	1,780	1,213	5,676
25 Jul	140	642	170	930	55	300	61	391	521	2,580	558	2,338	1,505	7,181
26 Jul	373	1,015	557	1,487	146	446	199	590	547	3,127	465	2,803	2,287	9,468
28 Jul	744	1,759	792	2,279	195	641	329	919	1,352	4,479	407	3,210	3,819	13,287
29 Jul	1,394	3,153	1,495	3,774	388	1,029	537	1,456	1,501	5,980	794	4,004	6,109	19,396
31 Jul	1,386	4,539	641	4,415	305	1,334	388	1,844	1,816	7,796	316	4,320	4,852	24,248
2 Aug	2,994	7,533	2,471	6,886	745	2,079	2,576	4,420	3,841	11,637	347	4,667	12,974	37,222
3 Aug	4,705	12,238	2,117	9,003	1,493	3,572	2,012	6,432	3,482	15,119	367	5,034	14,176	51,398
4 Aug	8,271	20,509	1,827	10,830	998	4,570	3,053	9,485	2,250	17,369	190	5,224	16,589	67,987
5 Aug	2,497	23,006	1,367	12,197	731	5,301	1,456	10,941	2,020	19,389	293	5,517	8,364	76,351
8 Aug	4,234	27,240	2,612	14,809	2,334	7,635	2,219	13,160	4,467	23,856	274	5,791	16,140	92,491
9 Aug	3,665	30,905	3,548	18,357	3,437	11,072	2,527	15,687	3,272	27,128	286	6,077	16,735	109,226
10 Aug	1,165	32,070	1,345	19,702	1,190	12,262	951	16,638	1,885	29,013	100	6,177	6,636	115,862
12 Aug	2,511	34,581	113	19,815	563	12,825	449	17,087	1,927	30,940	392	6,569	5,955	121,817

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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
3 Jul					1	1													1	1
6 Jul					1	2													1	2
8 Jul					1	3									4	4			5	7
12 Jul															34	38			34	41
13 Jul					4	7													4	45
14 Jul					3	10													3	48
15 Jul					2	12									134	172			136	184
17 Jul					7	19													7	191
19 Jul					8	27			6	6					123	295	20	20	157	348
22 Jul					41	68	5	5	7	13			8	8	760	1,055	47	67	868	1,216
23 Jul					12	80													12	1,228
24 Jul					10	90													10	1,238
25 Jul					1	91													1	1,239
26 Jul									4	17			2	10	422	1,477	37	104	465	1,704
27 Jul					3	94													3	1,707
28 Jul					3	97													3	1,710
29 Jul					1	98			2	19					362	1,839	109		474	2,184
31 Jul															150	1,989	10	223	160	2,344
2 Aug					4	102			1	20					79	2,068	13	236	97	2,441
5 Aug					5	107			3	23					147	2,215	78	314	233	2,674
7 Aug															166	2,381	12	326	178	2,852
9 Aug					5	112			2	25					134	2,515	15	341	156	3,008
12 Aug									5	30					53	2,568			58	3,066
16 Aug					2	114			1	31					25	2,593	8	349	36	3,102
19 Aug					2	116			2	33									4	3,106

-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. 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
5 Jul													1	1					1	1
8 Jul													2	3			1	1	3	4
12 Jul			1	1									26	29	5	5	8	9	40	44
15 Jul			40	41	11	11							55	84	1	6	15	24	122	166
19 Jul			202	243	22	33	1	1	4	4			354	438	189	195	49	73	821	987
22 Jul	129	129	589	832	35	68	11	12					264	702	288	483	60	133	1,376	2,363
26 Jul			25	857	15	83	9	21	1	5			70	772	121	604		133	241	2,604
29 Jul	6	135	171	1,028	45	128	25	46			1	1	107	879	58	662	56	189	469	3,073
2 Aug			132	1,160	7	135	33	79					39	918	38	700	55	244	304	3,377
5 Aug	1	136	14	1,174	8	143	11	90					60	978	2	702	19	263	115	3,492
9 Aug	4	140	2	1,176			3	93					12	990	1	703	5	268	27	3,519
12 Aug			4	1,180									11	1,001			65	333	80	3,599
16 Aug	6	146	4	1,184			1	94					30	1,031	4	707	40	373	85	3,684
19 Aug	3	149	3	1,187									8	1,039	10	717	19	392	43	3,727
23 Aug														1,039	2	719	2	394	4	3,731
26 Aug													1	1,040	1	720	3	397	5	3,736
30 Aug														1,040			2	399	2	3,738
2 Sep														1,040					0	3,738
6 Sep														1,040	5	725			5	3,743
9 Sep														1,040					0	3,743
13 Sep														1,040					0	3,743

-continued-

Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		244-60 Districtwide		245-10 Chinitna Bay		Total	
Date	Deliv	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
21 Jun	68					1	1			1	1
24 Jun	88					3	4			3	4
28 Jun	160					4	8			4	8
1 Jul	220					24	32			24	32
5 Jul	269					94	126			94	126
7 Jul	36	24	24							24	150
8 Jul	301					325	451			325	475
12 Jul	249					6,004	6,455			6,004	6,479
15 Jul	297					9,722	16,177			9,722	16,201
19 Jul	333					28,443	44,620			28,443	44,644
21 Jul	229			916	916					916	45,560
22 Jul	329					45,796	90,416			45,796	91,356
24 Jul	146			1,197	2,113					1,197	92,553
25 Jul	61			314	2,427					314	92,867
26 Jul	307					21,771	112,187			21,771	114,638
28 Jul	148			1,763	4,190					1,763	116,401
29 Jul	292					15,092	127,279			15,092	131,493
31 Jul	76			517	4,707					517	132,010

-continued-

Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		244-60 Districtwide		245-10 Chinitna Bay		Total	
Date	Deliv	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
2 Aug	200					13,195	140,474			13,195	145,205
3 Aug	14			377	5,084					377	145,582
4 Aug	23			793	5,877					793	146,375
5 Aug	177					13,676	154,150			13,676	160,051
8 Aug	10			101	5,978					101	160,152
9 Aug	108					3,408	157,558			3,408	163,560
10 Aug	4			120	6,098					120	163,680
12 Aug	25					229	157,787			229	163,909
16 Aug	6					7	157,794			7	163,916
19 Aug	6					21	157,815			21	163,937
23 Aug	11					24	157,839			24	163,961
26 Aug	10					15	157,854			15	163,976
27 Aug	<4							12	12	12	163,988
30 Aug	7					5	157,859			5	163,993
1 Sep	4							2	14	2	163,995
2 Sep	7					3	157,862			3	163,998
3 Sep	<4							6	20	6	164,004
6 Sep	<4					2	157,864			2	164,006

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

Appendix A7.–Commercial chum salmon catch by area and date, Upper Cook Inlet, 2010.

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
1 Jul	1	1		0		0		0		0		0	1	1
5 Jul	1	2	1	1		0		0		0		0	2	3
7 Jul		2		1	1	1		0		0		0	1	4
8 Jul	5	7		1		1		0	1	1		0	6	10
10 Jul		7		1	1	2		0		1		0	1	11
12 Jul	2	9		1	2	4	18	18	16	17	23	23	61	72
14 Jul	1	10		1		4		18		17		23	1	73
15 Jul	3	13		1	1	5	7	25	96	113	78	101	185	258
17 Jul	3	16		1		5		25		113		101	3	261
18 Jul	7	23	2	3		5		25		113		101	9	270
19 Jul	9	32	45	48	4	9	6	31	395	508	209	310	668	938
21 Jul	4	36		48	1	10		31	23	531	30	340	58	996
22 Jul	2	38	2	50	1	11	1	32	79	610	47	387	132	1,128
24 Jul	5	43	1	51		11	36	68	96	706	23	410	161	1,289

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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
25 Jul	6	49	7	58	2	13		68	69	775	84	494	168	1,457
26 Jul	3	52	19	77	4	17	3	71	112	887	162	656	303	1,760
28 Jul	19	71	6	83	2	19		71	171	1,058	93	749	291	2,051
29 Jul	5	76	11	94	2	21	7	78	41	1,099	75	824	141	2,192
31 Jul	3	79	4	98		21	1	79	87	1,186	40	864	135	2,327
2 Aug	3	82	6	104	2	23	3	82	23	1,209	32	896	69	2,396
3 Aug	5	87	6	110		23	1	83	19	1,228	48	944	79	2,475
4 Aug	38	125	14	124		23		83	106	1,334	167	1,111	325	2,800
5 Aug	3	128	4	128		23		83	23	1,357	26	1,137	56	2,856
8 Aug	4	132	1	129		23		83	5	1,362	11	1,148	21	2,877
9 Aug	5	137	1	130	3	26		83	29	1,391	95	1,243	133	3,010
10 Aug	1	138	1	131		26		83	8	1,399	5	1,248	15	3,025
12 Aug	4	142		131		26		83		1,399	6	1,254	10	3,035

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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
30 Jun					4	4													4	4
2 Jul					1	5													1	5
3 Jul					9	14													9	14
4 Jul					8	22													8	22
5 Jul					14	36									3	3			17	39
6 Jul					6	42													6	45
7 Jul					8	50													8	53
8 Jul					24	74									26	29			50	103
9 Jul					23	97													23	126
10 Jul					24	121													24	150
11 Jul					4	125													4	154
12 Jul					14	139									18	47			32	186
13 Jul					54	193													54	240
14 Jul					37	230													37	277
15 Jul					56	286									129	176			185	462
17 Jul					46	332													46	508
19 Jul					200	532			8	8			1	1	35	211	9	9	253	761
21 Jul					69	601													69	830

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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
22 Jul					793	1,394	9	9	7	15					203	414	10	19	1,022	1,852
23 Jul					233	1,627													233	2,085
24 Jul					263	1,890													263	2,348
25 Jul					65	1,955													65	2,413
26 Jul					88	2,043			4	19			1	2	233	647	5	24	331	2,744
27 Jul					56	2,099													56	2,800
28 Jul					62	2,161													62	2,862
29 Jul					269	2,430			2	21					79	726	16	40	366	3,228
31 Jul						2,430									149	875	6	46	155	3,383
2 Aug					329	2,759			4	25					75	950	19	65	427	3,810
5 Aug					216	2,975			4	29					133	1,083	151	216	504	4,314
7 Aug						2,975									78	1,161	12	228	90	4,404
9 Aug					94	3,069									74	1,235	8	236	176	4,580
12 Aug					3	3,072			1	30					11	1,246	15	251	30	4,610
16 Aug					21	3,093									28	1,274			49	4,659
19 Aug					16	3,109													16	4,675
27 Aug	102	102																	102	4,777
1 Sep	113	215																	113	4,890
3 Sep	57	272																	57	4,947

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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
5 Jul			2	2					2	2			2	2	1	1			7	7
8 Jul			7	9	4	4	3	3	2	4			1	3					17	24
12 Jul			40	49	7	11	9	12	8	12	70	70	9	12					143	167
15 Jul			42	91	81	92	5	17	58	70	3	73	14	26			1	1	204	371
19 Jul			351	442	25	117	6	23	8	78	58	131	71	97	7	8	2	3	528	899
22 Jul			178	620	230	347	30	53	45	123	124	255	132	229	17	25	1	4	757	1,656
26 Jul			2	622	8	355	20	73	1	124			13	242	10	35			54	1,710
29 Jul	5	5	319	941	95	450	76	149	102	226	14	269	41	283	6	41			658	2,368
2 Aug			132	1,073	8	458	133	282	145	371	177	446	53	336	27	68			675	3,043
5 Aug			72	1,145	5	463	62	344	49	420	31	477	72	408					291	3,334
9 Aug	21	26	17	1,162			18	362	9	429			15	423					80	3,414
12 Aug	46	72	44	1,206	14	477	6	368					1	424			1	5	112	3,526
16 Aug	6	78	102	1,308							3	480	9	433			3	8	123	3,649
19 Aug	14	92	12	1,320			4	372			5	485	5	438	2	70			42	3,691
23 Aug			2	1,322			1	373					1	439					4	3,695
26 Aug							1	374					2	441					3	3,698
30 Aug															1	71			1	3,699
2 Sep																	1	9	1	3,700
9 Sep															2	73			2	3,702
13 Sep															1	74			1	3,703

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Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		244-60 Districtwide		245-10 Chinitna Bay		Total	
Date	Deliv	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
6/21	68					20				20	20
6/24	88					107				107	127
6/28	160					185				185	312
7/1	220					412				412	724
7/3	54	1								1	725
7/5	269					2,747				2,747	3,472
7/6	42	4								4	3,476
7/8	301					7,187				7,187	10,663
7/12	249					21,495				21,495	32,158
7/15	297					8,102				8,102	40,260
7/19	333					38,760				38,760	79,020
7/21	229			986						986	80,006
7/22	329					50,347				50,347	130,353
7/24	146			1,300						1,300	131,653
7/25	61			546						546	132,199
7/26	307					28,070				28,070	160,269
7/28	148			1,622						1,622	161,891
7/29	292					28,373				28,373	190,264
7/31	76			264						264	190,528

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Appendix A7.–Page 6 of 6.

Central District Drift Gillnet

		244-61 Kasilof Section		244-55 Ken/Kas Section		244-60 Districtwide		245-10 Chinitna Bay		Total	
Date	Deliv	Day	Cum	Day	Cum	Day	Cum	Day	Cum	Day	Cum
8/2	200					11,763				11,763	202,291
8/3	14			20						20	202,311
8/4	23			126						126	202,437
8/5	177					10,030				10,030	212,467
8/8	10			4						4	212,471
8/9	108					2,990				2,990	215,461
8/10	4			29						29	215,490
8/12	25					246				246	215,736
8/16	6					123				123	215,859
8/19	6					78				78	215,937
8/23	11					53				53	215,990
8/26	10					775				775	216,765
8/27	<4							64		64	216,829
8/30	7					30				30	216,859
9/1	4							28		28	216,887
9/2	7							1		1	216,888
9/3	<4					4		87		91	216,979
9/6	<4					2				2	216,981
9/9	<4					4				4	216,985

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, 2010.

Gear	District	Subdistrict	Stat Area	Permits[a]	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	378	539	1,587,682	110,277	164,006	216,985	2,079,489
Setnet	Central	Upper	24421	87	976	175,885	4,325	34,581	142	215,909
			24422	80	1,481	183,905	3,513	19,815	131	208,845
			24431	64	1,612	157,800	2,958	12,825	26	175,221
			24432	42	1,041	110,536	3,191	17,087	83	131,938
			24441	51	1,880	391,821	12,624	30,940	1399	438,664
			24442	30	69	65,842	6,504	6,569	1254	80,238
			All	329	7,059	1,085,789	33,115	121,817	3,035	1,250,815
		Kalgin Is.	24610	28	333	54,862	15,367	2,593	1,274	74,429
			24620	<4	2	12,137	4,734	349	251	17,473
			All	29	335	66,999	20,101	2,942	1,525	91,902
		Chinitna	24510	<4	0	0	73	0	272	345
		Western	24520	<4						0
			24530	24	158	42,754	3,446	116	3,109	49,583
			24540	<4		329	147	5	9	490
			24550	4	8	2,084	2,102	33	30	4,257
			All	26	166	45,167	5,695	154	3,148	54,330
		Kustatan	24555	9	52	2,120	0	0	0	2,172
			24560	<4	0	433	412	10	2	857
			All	10	52	2,553	412	10	2	3,029
		All	All	380	7,612	1,200,508	59,396	124,923	7,982	1,400,421
	Northern	General	24710	14	345	4715	1299	149	92	1,441
			24720	23	656	8973	10,697	1187	1322	22,346
			24730	9		1,961	2,568	143	477	9,860
			24741	7	127	2,678	2,130	94	374	4,558
			24742	12	192	4,904	2,944	5	429	8,902
			24743	10	180	1,895	2,517	1	485	2,923
			All	60	1,500	25,126	22,155	1,579	3,179	53,539
		Eastern	24770	18	155	6,504	6,151	1040	441	18,014
			24780	12	46	4904	5,862	725	74	8,863
			24790	7	49	3,643	3,847	399	9	12,639
			All	31	250	15,051	15,860	2,164	524	33,849
		All	All	86	1,750	40,177	38,015	3,743	3,703	87,388
	All	All	All	467	9,362	1,240,685	97,411	128,666	11,685	1,487,809
Seine	All	All	All	0	0	0	0	0	0	0
All	All	All	All	846	9,901	2,828,367	207,688	292,672	228,670	3,567,298

[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, 2010.

Gear	District	Subdistrict	Stat Area	Permits[a]	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	378	1	4,200	292	434	574	5,501
Set	Central	Upper	24421	87	11	2,022	50	397	2	2,482
			24422	80	19	2,299	44	248	2	2,611
			24431	64	25	2,466	46	200	0	2,738
			24432	42	25	2,632	76	407	2	3,141
			24441	51	37	7,683	248	607	27	8,601
			24442	30	2	2,195	217	219	42	2,675
			All	329	21	3,300	101	370	9	3,802
		Kalgin Is.	24610	28	12	1,959	549	93	46	2,658
			24620	<4	na	na	na	na	na	na
			All	29	12	2,310	693	101	53	3,169
		Chinitna	24510	<4	na	na	na	na	na	na
		Western	24520	<4	na	na	na	na	na	na
			24530	24	7	1,781	144	5	130	2,066
			24540	<4	na	na	na	na	na	na
			24550	4	na	na	na	na	na	na
			All	26	6	1,737	219	6	121	2,090
		Kustatan	24555	9	6	236	0	0	0	241
			24560	<4	na	na	na	na	na	na
			All	10	5	255	41	1	0	303
		All	All	380	20	3,159	156	329	21	3,685
	Northern	General	24710	14	25	337	93	11	7	103
			24720	23	29	390	465	52	57	972
			24730	9	0	218	285	16	53	1,096
			24741	7	18	383	304	13	53	651
			24742	12	16	409	245	0	36	742
			24743	10	18	190	252	0	49	292
			All	60	25	419	369	26	53	892
		Eastern	24770	18	9	361	342	58	25	1,001
			24780	12	4	409	489	60	6	739
			24790	7	7	520	550	57	1	1,806
			All	31	8	486	512	70	17	1,092
		All	All	86	20	467	442	44	43	1,016
	All	All	All	467	20	2,657	209	276	25	3,186
Seine	All	All	All	-	-	-	-	-	-	-
All	All	All	All	846	12	3,343	245	346	270	4,217

[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 2010 Upper Cook Inlet fishing season.

Emergency Order No.	Effective Date	Action	Reason
1	11-May	Closed commercial salmon fishing in that portion of the Northern District of Upper Cook Inlet from an ADF&G regulatory marker located 1 mile south of the Chuitna River to the Susitna River for all of the fishing periods scheduled for the 2010 Chinook salmon fishing season. The fishing periods being closed by this announcement are those on Mondays, May 31, June 7, June 14, and June 21, 2010.	Division of Sport Fish closed the Theodore, Lewis, and Chuitna Rivers to sport fishing. The *Northern District King Salmon Management Plan* requires a commercial closure from 1 mile south of the Chuitna River to the Susitna River if sport fishing closures occur.
2	10-Jun	Reduced the open fishing time from 12 hours to 6 hours, or from 7:00 a.m. until 1:00 p.m., for the commercial salmon fishing period scheduled in the Northern District of Upper Cook Inlet on Monday, June 14, 2010.	To reduce the exploitation of Deshka River Chinook salmon.
3	27-Jun	Opened set and drift gillnetting in the Kasilof Section of the Upper Subdistrict from 11:00 a.m. until 11:00 p.m. on Sunday, June 27, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon.
4	28-Jun	Extended set gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 p.m. until 9:00 p.m. on Monday, June 28, 2010. Drift gillnetting was opened in the Kasilof Section from 7:00 p.m. until 9:00 p.m. on Monday, June 28, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon.
5	28-Jun	Opened commercial salmon fishing with set gillnets in that portion of the Western Subdistrict of the Central District south of the latitude of Redoubt Point from 7:00 p.m. on Monday June 28, 2010 until further notice.	To reduce the escapement rate of Crescent River sockeye salmon.
6	29-Jun	Opened set and drift gillnetting in the Kasilof Section of the Upper Subdistrict from 5:00 a.m. until 10:00 p.m. on Wednesday, June 30, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
7	1-Jul	Extended set gillnetting in the Kasilof Section of the Upper Subdistrict from 7:00 p.m. until 10:00 p.m. on Thursday, July 1, 2010. Drift gillnetting was opened in the Kasilof Section from 7:00 p.m. until 10:00 p.m. on Thursday, July 1, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon.
8	2-Jul	Opened set and drift gillnetting in the Kasilof Section of the Upper Subdistrict from 10:00 a.m. until 12:00 midnight on Saturday, July 3, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon.
9	5-Jul	Opened set and drift gillnetting in the Kasilof Section of the Upper Subdistrict from 5:00 a.m. until 7:00 p.m. on Tuesday, July 6, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon.
10	6-Jul	Opened set and drift gillnetting in the Kasilof Section of the Upper Subdistrict from 5:00 a.m. until 8:00 p.m. on Wednesday July 7, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon.
11	9-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 7:00 a.m. until 12:00 p.m. Midnight on Saturday, July 10, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon.
12	12-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 12, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 7:00 p.m. until 10:00 p.m. on Monday, July 12, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon and to facilitate an orderly closure in the Kenai and East Forelands Sections.
13	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 12:00 noon until 9:00 p.m. on Wednesday, July 14, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
14	15-Jul	Extended set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 7:00 p.m. until 11:00 p.m. on Thursday, July 15, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 7:00 p.m. until 11:00 p.m. on Thursday, July 15, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon and to facilitate an orderly closure in the Kenai and East Forelands Sections.
15	17-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 3:00 p.m. until 11:00 p.m. on Saturday, July 17, 2010	To reduce the escapement rate of Kasilof River sockeye salmon.
16	18-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 4:00 p.m. until 12:00 midnight on Sunday, July 18, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon.
17	18-Jul	Closed drift gillnetting in all areas of the Central District of Upper Cook Inlet, except in Drift Gillnet Area One and in the Kenai and Kasilof Sections of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Monday, July 19, 2010.	To comply with the *Susitna River Sockeye Salmon Action Plan*.
18	19-Jul	Extended set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 7:00 p.m. until 9:00 p.m. on Monday, July 19, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 7:00 p.m. until 9:00 p.m. on Monday, July 19, 2010.	To reduce the escapement rate of Kasilof River sockeye salmon and to facilitate an orderly closure in the Kenai and East Forelands Sections.
19	20-Jul	Opened set and drift gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 6:00 a.m. until 5:00 p.m. on Wednesday, July 21, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
20	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 22, 2010.	To comply with the *Susitna River Sockeye Salmon Action Plan*.
21	24-Jul	Opened set and drift gillnetting in the Kenai, Kasilof, and East Forelands Sections of the Upper Subdistrict from 10:00 a.m. until 12:00 midnight on Saturday, July 24, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
22	24-Jul	Opened set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 1:00 p.m. on Sunday, July 25, 2010 until 7:00 a.m. on Monday July 26, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 1:00 p.m. until 11:00 p.m. on Sunday, July 25, 2010 and from 5:00 a.m. until 7:00 a.m. on Monday July 26, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
23	26-Jul	Extended set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 7:00 p.m. until 9:00 p.m. on Monday, July 26, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 7:00 p.m. until 9:00 p.m. on Monday, July 26, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
24	27-Jul	Opened set and drift gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 7:00 a.m. until 9:00 p.m. on Wednesday, July 28, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
25	28-Jul	Closed drift gillnetting in all areas of the Central District of Upper Cook Inlet, except in Drift Gillnet Area 1 and Drift Gillnet Area 2 (see map on following page) and the Kenai and Kasilof Sections of the Upper Subdistrict from 7:00 a.m. until 7:00 p.m. on Thursday, July 29, 2010.	To comply with the *Central District Drift Gillnet Fishery Management Plan* and the *Susitna River Sockeye Salmon Action Plan*.

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Emergency Order No.	Effective Date	Action	Reason
26	28-Jul	Rescinded Emergency Order No. 5 and closed set gillnetting in that portion of the Western Subdistrict south of the latitude Redoubt Point at 7:00 p.m. on Thursday, July 29, 2010. 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 2, 2010.	To reduce the exploitation rate of coho salmon in the Western Subdistrict.
27	29-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 Thursday, July 29, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 7:00 p.m. until 10:00 p.m. on Thursday, July 29, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
28	30-Jul	Opened set and drift gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 10:00 a.m. until 12:00 midnight on Saturday, July 31, 2010. Set gillnetting was also opened in the Kalgin Island Subdistrict from 7:00 a.m. until 7:00 p.m. on Saturday, July 31, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon and Packers Lake sockeye salmon.
29	2-Aug	Extended set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 7:00 p.m. until 12:00 midnight on Monday, August 2, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 7:00 p.m. until 11:00 p.m. on Monday, August 2, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
30	2-Aug	Extended set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 12:00 midnight on Monday, August 2, 2010 until 12:00 midnight on Tuesday, August 3, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 5:00 a.m. until 11:00 p.m. on Tuesday, August 3, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
31	3-Aug	Extended set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 12:00 midnight on Tuesday, August 3, 2010 until 10:00 p.m. on Wednesday, August 4, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 5:00 a.m. until 10:00 p.m. on Wednesday, August 4, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
32	6-Aug	Opened set gillnetting in the Kalgin Island Subdistrict from 7:00 a.m. until 7:00 p.m. on Saturday, August 7, 2010.	To reduce the escapement rate of Packers Lake sockeye salmon.
33	7-Aug	Opened set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 5:00 a.m. on Sunday, August 8, 2010 until 7:00 a.m. on Monday, August 9, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 5:00 a.m. until 11:00 p.m. on Sunday, August 8, 2010 and from 5:00 a.m. until 7:00 a.m. Monday, August 9, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
34	7-Aug	Rescinded Emergency Order No. 19 and returned the legal compliment of gear to four 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 2010 fishing season, except on Fire Island, where no net may be more than 35 fathoms and no more than 105 fathoms in the aggregate may be used, effective at 7:00 a.m. on Monday August 9, 2010.	To comply with the *Susitna River Sockeye Salmon Action Plan*.
35	9-Aug	Extended set gillnetting in the Kenai, Kasilof and East Forelands Sections of the Upper Subdistrict from 7:00 p.m. on Monday, August 9, 2010 until 8:00 p.m. on Tuesday, August 10, 2010. Drift gillnetting was opened in the Kenai and Kasilof Sections of the Upper Subdistrict from 7:00 p.m. until 11:00 p.m. on Monday, August 9, 2010 and from 5:00 a.m. until 8:00 p.m. on Tuesday, August 10, 2010.	To reduce the escapement rate of Kenai and Kasilof River sockeye salmon.
36	24-Aug	Opened drift gillnetting in the Chinitna Bay Subdistrict of the Central District on Mondays, Wednesdays and Fridays from 7:00 a.m. until 7:00 p.m. beginning on Wednesday August 25, 2010, 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.

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Emergency Order No.	Effective Date	Action	Reason
37	26-Aug	Opened set gillnetting in the Chinitna Bay Subdistrict of the Central District on Mondays, Wednesdays and Fridays from 7:00 a.m. until 7:00 p.m. beginning on Friday August 27, 2010, 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, 2010.

Date	Day	Time	Set Gillnet	Drift Gillnet
31-May	Mon	0700-1900	Northern District	
2-Jun	Wed	0700-1900	Kustatan - Big River - Kalgin Island	
4-Jun	Fri	0700-1900	Kustatan - Big River - Kalgin Island	
7-Jun	Mon	0700-1900	N. District - Kustatan - Big River - Kalgin Island	
9-Jun	Wed	0700-1900	Kustatan - Big River - Kalgin Island	
11-Jun	Fri	0700-1900	Kustatan - Big River - Kalgin Island	
14-Jun	Mon	0700-1300	Northern District	
		0700-1900	Kustatan - Big River - Kalgin Island	
16-Jun	Wed	0700-1900	Kustatan - Big River - Kalgin Island	
17-Jun	Thu	0700-1900	Western Subdistrict	
18-Jun	Fri	0700-1900	Kustatan - Big River - Kalgin Island	
21-Jun	Mon	0700-1900	N. Dist - Kustatan - Big River - Kalgin Isl - W. Subdist.	All
23-Jun	Wed	0700-1900	Kustatan - Big River - Kalgin Island	
24-Jun	Thu	0700-1900	Western Subdistrict	All
27-Jun	Sun	1100-2300	Kasilof Section	Kasilof Section
28-Jun	Mon	0700-1900	All except Kenai and E. Forelands Sections	All
		1900-2400	Western Subdistrict south of Redoubt Pt.	
29-Jun	Tue	0000-2400	Western Subdistrict south of Redoubt Pt.	
30-Jun	Wed	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0500-2200	Kasilof Section	Kasilof Section
1-Jul	Thu	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All except Kenai & E. Forelands Sections	All
		1900-2200	Kasilof Section	Kasilof Section
2-Jul	Fri	0000-2400	Western Subdistrict south of Redoubt Pt.	
3-Jul	Sat	0000-2400	Western Subdistrict south of Redoubt Pt.	
		1000-2400	Kasilof Section	Kasilof Section
4-Jul	Sun	0000-2400	Western Subdistrict south of Redoubt Pt.	
5-Jul	Mon	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All except Kenai and E. Forelands Sections	All
6-Jul	Tue	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0500-1900	Kasilof Section	Kasilof Section
7-Jul	Wed	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0500-2000	Kasilof Section	Kasilof Section
8-Jul	Thu	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All	All
9-Jul	Fri	0000-2400	Western Subdistrict south of Redoubt Pt.	

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Date	Day	Time	Set Gill Net	Drift Gill Net
10-Jul	Sat	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-2400	Kasilof Section within 1/2 mile of shore	
11-Jul	Sun	0000-2400	Western Subdistrict south of Redoubt Pt.	
12-Jul	Mon	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All	Drift Area 1
		1900-2200	Kenai, Kasilof, and East Forelands Sections	Kenai and Kasilof Sections
13-Jul	Tue	0000-2400	Western Subdistrict south of Redoubt Pt.	
14-Jul	Wed	0000-2400	Western Subdistrict south of Redoubt Pt.	
		1200-2100	Kasilof Section within 1/2 mile of shore	
15-Jul	Thu	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All	Drift Area 1
		1900-2300	Kenai, Kasilof, and East Forelands Sections	Kenai and Kasilof Sections
16-Jul	Fri	0000-2400	Western Subdistrict south of Redoubt Pt.	
17-Jul	Sat	0000-2400	Western Subdistrict south of Redoubt Pt.	
		1500-2400	Kasilof Section within 1/2 mile of shore	
18-Jul	Sun	0000-2400	Western Subdistrict south of Redoubt Pt.	
		1600-2400	Kasilof Section within 1/2 mile of shore	
19-Jul	Mon	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All	Drift Area 1
		1900-2100	Kenai, Kasilof, and East Forelands Sections	Kenai and Kasilof Sections
20-Jul	Tue	0000-2400	Western Subdistrict south of Redoubt Pt.	
21-Jul	Wed	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0600-1700	Kenai, Kasilof, & East Forelands Sections	Kenai & Kasilof Sections
22-Jul	Thu	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All	All
23-Jul	Fri	0000-2400	Western Subdistrict south of Redoubt Pt.	
24-Jul	Sat	0000-2400	Western Subdistrict south of Redoubt Pt.	
		1000-2400	Kenai, Kasilof, and East Forelands Sections	Kenai and Kasilof Sections
25-Jul	Sun	0000-2400	Western Subdistrict south of Redoubt Pt.	
		1300-2300		Kenai and Kasilof Sections
		1300-2400	Kenai, Kasilof, and East Forelands Sections	
26-Jul	Mon	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0000-0700	Kenai, Kasilof, and East Forelands Sections	
		0500-0700		Kenai and Kasilof Sections
		0700-1900	All	All
		1900-2100	Kenai, Kasilof, and East Forelands Sections	Kenai and Kasilof Sections
27-Jul	Tue	0000-2400	Western Subdistrict south of Redoubt Pt.	

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Date	Day	Time	Set Gill Net	Drift Gill Net
28-Jul	Wed	0000-2400	Western Subdistrict south of Redoubt Pt.	
		0700-2100	Kenai, Kasilof, and East Forelands Sections	Kenai and Kasilof Sections
29-Jul	Thu	0000-0700	Western Subdistrict south of Redoubt Pt.	
		0700-1900	All	Drift Areas 1 & 2
		1900-2200	Kenai, Kasilof, and East Forelands Sections	Kenai and Kasilof Sections
31-Jul	Sat	0700-1900	Kalgin Island Subdistrict	
		1000-2400	Kenai, Kasilof, and East Forelands Sections	Kenai and Kasilof Sections
2-Aug	Mon	0700-1900	All	All
		1900-2300		Kenai and Kasilof Sections
		1900-2400	Kenai, Kasilof, and East Forelands Sections	
3-Aug	Tue	0000-2400	Kenai, Kasilof, and East Forelands Sections	
		0500-2300		Kenai and Kasilof Sections
4-Aug	Wed	0000-2200	Kenai, Kasilof, and East Forelands Sections	
		0500-2200		Kenai and Kasilof Sections
5-Aug	Thu	0700-1900	All	All
7-Aug	Sat	0700-1900	Kalgin Island Subdistrict	
8-Aug	Sun	0500-2400	Kenai, Kasilof, and East Forelands Sections	
		0500-2300		Kenai and Kasilof Sections
9-Aug	Mon	0000-0700	Kenai, Kasilof, and East Forelands Sections	
		0500-0700		Kenai and Kasilof Sections
		0700-1900	All	All
		1900-2300		Kenai and Kasilof Sections
		1900-2400	Kenai, Kasilof, and East Forelands Sections	
10-Aug	Tue	0000-2000	Kenai, Kasilof, and East Forelands Sections	
		0500-2000		Kenai and Kasilof Sections
12-Aug	Thu	0700-1900	All	All
16-Aug	Mon	0700-1900	All, except Kenai, Kasilof, and E. Foreland Sections	Drift Areas 3 and 4
19-Aug	Thu	0700-1900	All, except Kenai, Kasilof, and E. Foreland Sections	Drift Areas 3 and 4
23-Aug	Mon	0700-1900	All, except Kenai, Kasilof, and E. Foreland Sections	Drift Areas 3 and 4
25-Aug	Wed	0700-1900		Chinitna Bay
26-Aug	Thu	0700-1900	All, except Kenai, Kasilof, and E. Foreland Sections	Drift Areas 3 and 4
27-Aug	Fri	0700-1900	Chinitna Bay	Chinitna Bay
30-Aug	Mon	0700-1900	All, except Kenai, Kasilof, and E. Foreland Sections	Drift Areas 3, 4 and Chinitna
1-Sep	Wed	0700-1900	Chinitna Bay	Chinitna Bay
2-Sep	Thu	0700-1900	All, except Kenai, Kasilof, and E. Foreland Sections	Drift Areas 3, 4 and Chinitna
3-Sep	Fri	0700-1900	Chinitna Bay	Chinitna Bay
6-Sep	Mon	0700-1900	All, except Kenai, Kasilof, & E. Foreland Sections	Drift Areas 3, 4 & Chinitna
8-Sep	Wed	0700-1900	Chinitna Bay	Chinitna Bay
9-Sep	Thu	0700-1900	All, except Kenai, Kasilof, and E. Foreland Sections	Drift Areas 3, 4 and Chinitna
10-Sep	Fri	0700-1900	Chinitna Bay	Chinitna Bay
13-Sep	Mon	0700-1900	All, except Kenai, Kasilof, and E. Foreland Sections	Drift Areas 3, 4 and Chinitna

Appendix A12.–Susitna River sockeye salmon studies, 2006–2010.

Yentna River Passage	2006	2007	2008	2009	2010
Bendix	92,051	79,901	90,146	28,428	
DIDSON-adjusted	166,697	125,146	131,772	45,484	

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

Susitna Population Estimates	2006	2007	2008	2009	2010
Mark-Recapture	418,197	327,732	359,760	275,455[a]	
MR: Weirs ratio	3.6	2.2	2.2	2.7	
MR: Bendix ratio	4.5	4.1	4.0	9.7	

[a] Estimated from mark-recapture to weir ratio from 2006–2008.

Appendix A13.–Age composition (in percent) of sockeye salmon escapements, Upper Cook Inlet, 2010.

	Age Group												
Stream	0.2	0.3	1.1	1.2	2.1	1.3	2.2	1.4	2.3	3.1	3.2	3.3	Total
Kenai River	0.1	0.1	0.2	23.4	2.8	44.4	4.7	0.2	23.9		0.1		100.0
Kasilof River	0.2		1.1	27.7	1.5	31.2	31.2		7.1				100.0
Yentna River	12.5	4.2	1.6	39.4	1.5	23.3	5.8		11.5	0.1		0.1	100.0
Crescent River			0.2	10.4	0.2	37.5	15.1	0.2	36.4				100.0
Fish Creek	1.3	1.8	3.4	66.5	0.2	11.7	13.8		1.3				100.0
Hidden Creek				90.8		1.3	7.9						100.0

Appendix A14.–Upper Cook Inlet salmon average weights (in pounds) by area, 2010.

Fishery	CHINOOK	SOCKEYE	COHO	PINK	CHUM
Upper Cook Inlet Total	20.7	6.2	6.6	4.3	6.8
A. Northern District Total	15.9	5.5	6.5	3.3	6.7
1. Northern District West	15.9	5.5	6.3	3.4	6.7
a. Trading Bay 247-10	15.1	6.0	6.0	3.1	6.5
b. Tyonek 247-20	15.6	5.9	6.1	3.4	6.7
c. Beluga 247-30		5.5	6.2	4.2	6.3
d. Susitna Flat 247-41	16.7	4.9	6.7	2.5	6.8
e. Pt. Mackenzie 247-42	17.2	4.7	6.7	4.4	6.2
f. Fire Island 247-43	16.8	5.2	6.8	5.0	7.3
2. Northern District East	15.4	5.5	6.7	3.3	6.7
a. Pt. Possession 247-70	15.7	5.4	6.7	3.3	6.9
b. Birch Hill 247-80	16.0	5.2	6.9	3.2	6.0
c. Number 3 Bay 247-90	14.0	5.9	6.3	3.6	6.0
B. Central District Total	21.8	6.2	6.6	4.3	6.8
1. East Side Set Total	22.5	6.0	6.7	4.7	6.4
a. Salamatof/East Forelands	25.9	6.7	6.6	5.0	6.4
1. Salamatof 244-41	26.2	6.9	6.5	5.2	6.4
2. East Forelands 244-42	18.3	6.0	6.7	3.9	6.3
b. Kalifonsky Beach	22.9	5.6	6.7	4.7	6.7
1. South K-Beach 244-31	21.9	5.2	6.3	4.6	6.1
2. North K-Beach 244-32	24.4	6.0	7.0	4.8	6.9
d. Cohoe/Ninilchik	19.3	5.5	7.2	4.6	6.1
1. Cohoe 244-22	17.6	5.4	6.7	4.8	6.0
2. Ninilchik 244-21	21.8	5.5	7.7	4.4	6.1

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Fishery	CHINOOK	SOCKEYE	COHO	PINK	CHUM
2. West Side Set Total	23.1	5.7	6.3	3.1	6.9
a. Little Jack Slough 245-50	21.6	4.6	6.5	2.9	8.1
b. Polly Creek 245-40		4.9	5.6	4.2	6.7
c. Tuxedni Bay 245-30	23.2	5.7	6.2	3.0	6.9
3. Kustatan Total	20.8	5.1	6.4	3.7	7.0
a. Big River 245-55	20.8	4.9			
b. West Foreland 245-60		5.8	6.4	3.7	7.0
4. Kalgin Island Total	21.8	5.4	6.3	3.8	6.5
a. West Side 246-10	21.9	5.4	6.2	3.7	6.6
b. East Side 246-20	17.5	5.4	6.5	4.8	6.1
5. Chinitna Bay Total		8.1	7.8	6.2	6.0
a. Set 245-10			7.1		6.4
b. Drift 245-10		8.1	7.9	6.2	5.5
5. Central District Set Total	22.4	6.0	6.6	4.7	6.6
6. Central District Drift Total	12.6	6.3	6.6	3.9	6.8
a. Districtwide 244-60	9.5	6.3	6.6	3.9	6.8
b. Kasilof Section 244-61	10.9	5.7	5.9	4.1	6.2
c. Kenai and Kasilof sections	20.9	6.4	6.4	4.2	6.4
d. Chinitna Bay 245-10		8.1	7.9	6.2	5.5

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

Appendix A 15.–Age composition of Chinook salmon harvested in the Upper Subdistrict set gillnet fishery, Upper Cook Inlet, Alaska, 1987–2010.

	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
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, 2010.

Buyer/Processor	Code	Plant Site	Contact	Address
Alaska Salmon Purchasers	F4665	Kenai	Mark Powell	HC01 Box 240 Kenai, AK 99611-0240
The Auction Block	F3785	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.	F1757	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
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 9 9611
Inlet Fish Producers	F2806	Kenai	Ellie Tikka	200 Columbia St Kenai, AK 99611
Kachemak Bay Seafoods	F1330	Homer	William Sullivan	PO Box 4004 Homer, AK 99603
Ocean Beauty	F7479	Kenai	Pat Hardina	Box 8163 Nikiski, AK 99635
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
R & J Seafoods	F6087	Kasilof	Randy Meier	P.O. Box 165 Kasilof, AK 99610
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

Appendix A17.–Number of salmon harvested by gear, area, and species in personal use fisheries, Upper Cook Inlet, 2010.

	Harvest					
Fishery	Chinook	Sockeye	Coho	Pink	Chum	Total
Kasilof Gillnet	136	21,924	23	23	1	22,107
Kasilof Dip Net	31	70,774	1,768	974	279	73,826
Kenai Dip Net	865	389,552	2,870	3,655	508	397,450
Fish Creek Dip Net	12	23,705	3,576	1,721	290	29,304
Beluga Dip Net	unknown	unknown	unknown	unknown	unknown	unknown
No Site Reported	15	8,300	168	109	12	8,604
Total	1,059	514,255	8,405	6,482	1,090	531,291

Note: Preliminary estimates.

Appendix A18.–Age, weight, sex, and size distribution of Pacific herring sampled by gillnet in Upper Cook Inlet, 2010.

Sample date = May 4, 2010

		No. of Fish						Percent	Weight			Length		
Sample Period	Age	Male	Imm. Female	Ripe Female	Spawned Female	Unknown	Total	of Total	Mean (g)	SD	Number Weighed	Mean (mm)	SD	Number Measured
ESSN	3													
	4	1		3			4	4	123	24.0	4	202	8.5	4
	5	9		14			23	21	115	12.9	23	201	7.9	23
	6	16		36			52	47	149	24.2	52	215	10.5	52
	7	7		16			23	21	162	31.8	23	217	11.6	23
	8	3		5			8	7	209	42.1	8	234	11.1	8
	9													
Sample Total		36	0	74	0	0	110	100	148	34.8	110	213	13	110
Sex Composition		33%	0%	67%	0%	0%								

Sample date = May 14, 2010

		No. of Fish						Percent	Weight			Length		
Sample Period	Age	Male	Imm. Female	Ripe Female	Spawned Female	Unknown	Total	of Total	Mean (g)	SD	Number Weighed	Mean (mm)	SD	Number Measured
ESSN	3													
	4	3		7			10	9	105	15.8	10	193	11.8	10
	5	12		52			64	55	120	20.3	64	200	9.7	64
	6	11		19			30	26	144	17.0	30	210	7.1	30
	7	3		7			10	9	153	16.9	10	218	6.2	10
	8	1		1			2	2	160	29.0	2	218	20.0	2
	9	1					1	1	218	NA	1	241	NA	1
Sample Total		31	0	86	0	0	117	100	129	25.1	117	204	11.8	117
Sex Composition		26%	0%	74%	0%	0%								

-continued-

Sample date = May 20, 2010

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	5		1			6	6	117	20.7	6	198	9.2	6
	5	11		38			49	53	130	28.6	49	202	11.6	49
	6	6		23			29	31	156	18.7	29	213	6.6	29
	7			5			5	5	178	29.4	5	220	8.3	5
	8	1		3			4	4	225	19.9	4	235	9.7	4
	9													
Sample Total		23	0	70	0	0	93	100	144	33.9	93	208	12.9	93
Sex Composition		25%	0%	75%	0%	0%								

Sample date = May 28, 2010

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		5			6	5	112	22.4	6	197	8.7	6
	5	17		12	14		43	34	120	22.1	43	205	11.1	43
	6	18		5	19		42	33	133	25.2	42	214	10.3	42
	7	10		1	14		25	20	148	30.2	25	223	11.7	25
	8	6			3		9	7	147	22.3	9	225	10.9	9
	9				1		1	1	192	NA	1	246	NA	1
Sample Total		52	0	23	51	0	126	100	132	27.7	126	213	13.7	126
Sex Composition		41%	0%	18%	40%	0%								

-continued-

Sample date = May 19, 2010

Sample Period	Age	No. of Fish: Male	Imm. Female	Ripe Female	Spawned Female	Unknown	Total	Percent of Total	Weight: Mean (g)	SD	Number Weighed	Length: Mean (mm)	SD	Number Measured
Chinitna	3	1					1	0.4	60	NA	1	173	NA	1
Bay	4	13	1	2			16	7	103	27.8	16	195	13.8	16
	5	37	4	14			55	24	149	18.1	55	216	7.8	55
	6	64	16	35			115	49	169	21.6	115	223	7.5	115
	7	27	2	9			38	16	185	20.5	38	228	8.3	38
	8	5	1	2			8	3	217	42.0	8	237	12.8	8
	9													
Sample Total		147	24	62	0	0	233	100	164	31.9	233	221	12.2	233
Sex Composition		63%	10%	27%	0%	0%								

Appendix A19.–Age, sex, and size distribution of eulachon (smelt) from Upper Cook Inlet commercial dip net fishery, 2006–2009.

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		

Appendix A20.–Seldovia District tide tables, May through August, 2010.

MAY

		HIGH TIDES						LOW TIDES			
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Sat	04:35A	19.7	05:40P	17.3	1	Fri	11:08A	-2.7	11:18P	3.1
2	Sun	05:14A	18.3	06:26P	16.1	2	Sat	11:49A	-1.2		
3	Mon	05:55A	16.7	07:16P	14.8	3	Sun	12:01A	4.4	12:33P	0.4
4	Tue	06:42A	15.1	08:12P	13.8	4	Mon	12:50A	5.5	01:22P	2.0
5	Wed	07:37A	13.7	09:16P	13.3	5	Tue	01:49A	6.4	02:20P	3.3
6	Thu	08:47A	12.6	10:20P	13.4	6	Wed	03:02A	6.8	03:27P	4.2
7	Fri	10:08A	12.3	11:16P	14.0	7	Thu	04:24A	6.3	04:36P	4.6
8	Sat	11:25A	12.7			8	Fri	05:32A	5.2	05:34P	4.5
9	Sun	12:00A	14.9	12:27P	13.6	9	Sat	06:23A	3.6	06:21P	4.2
10	Mon	12:37A	15.9	01:16P	14.7	10	Sun	07:03A	2.0	07:02P	3.9
11	Tue	01:11A	17.0	01:59P	15.8	11	Mon	07:40A	0.5	07:40P	3.5
12	Wed	01:45A	18.0	02:39P	16.7	12	Tue	08:16A	-0.9	08:18P	3.1
13	Thu	02:20A	18.8	03:19P	17.4	13	Wed	08:52A	-2.1	08:56P	2.9
14	Fri	02:56A	19.4	03:59P	17.7	14	Thu	09:30A	-2.9	09:35P	2.8
15	Sat	03:34A	19.7	04:41P	17.6	15	Fri	10:09A	-3.4	10:16P	2.9
16	Sun	04:14A	19.6	05:25P	17.3	16	Sat	10:50A	-3.3	11:00P	3.1
17	Mon	04:57A	19.1	06:12P	16.8	17	Sun	11:35A	-2.9	11:48P	3.5
18	Tue	05:46A	18.1	07:03P	16.3	18	Mon	12:23P	-2.0		
19	Wed	06:42A	16.9	07:59P	16.0	19	Tue	12:43A	3.9	01:17P	-0.9
20	Thu	07:47A	15.6	09:00P	16.0	20	Wed	01:47A	4.1	02:17P	0.3
21	Fri	09:04A	14.7	10:01P	16.3	21	Thu	03:01A	3.8	03:23P	1.3
22	Sat	10:25A	14.4	10:59P	17.1	22	Fri	04:18A	2.8	04:30P	2.0
23	Sun	11:43A	14.8	11:54P	17.9	23	Sat	05:28A	1.2	05:34P	2.3
24	Mon	12:50P	15.7			24	Sun	06:28A	-0.5	06:31P	2.4
25	Tue	12:44A	18.7	01:47P	16.6	25	Mon	07:20A	-1.9	07:23P	2.4
26	Wed	01:30A	19.4	02:36P	17.3	26	Tue	08:07A	-3.0	08:10P	2.3
27	Thu	02:13A	19.7	03:22P	17.8	27	Wed	08:50A	-3.6	08:55P	2.4
28	Fri	02:55A	19.7	04:04P	17.8	28	Thu	09:32A	-3.6	09:37P	2.5
29	Sat	03:35A	19.4	04:46P	17.6	29	Fri	10:11A	-3.2	10:19P	2.9
30	Sun	04:15A	18.8	05:26P	17.1	30	Sat	10:51A	-2.5	11:01P	3.4
31	Mon	04:55A	17.8	06:07P	16.4	31	Sun	11:29A	-1.5	11:44P	4.1

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JUNE

		HIGH TIDES						LOW TIDES			
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Tue	05:36A	16.7	06:49P	15.6	1	Tue	04:05A	2.7	12:08P	-0.3
2	Wed	06:20A	15.5	07:32P	15.0	2	Wed	12:29A	4.7	12:49P	1.0
3	Thu	07:08A	14.2	08:17P	14.6	3	Thu	01:19A	5.3	01:32P	2.4
4	Fri	08:04A	13.0	09:05P	14.4	4	Fri	02:15A	5.6	02:20P	3.6
5	Sat	09:11A	12.2	09:54P	14.4	5	Sat	03:20A	5.5	03:15P	4.7
6	Sun	10:26A	12.0	10:44P	14.8	6	Sun	04:28A	4.8	04:16P	5.4
7	Mon	11:39A	12.5	11:32P	15.5	7	Mon	05:29A	3.7	05:16P	5.6
8	Tue	03:05A	18.2	12:41P	13.4	8	Tue	06:21A	2.2	06:12P	5.5
9	Wed	12:19A	16.4	01:34P	14.5	9	Wed	07:07A	0.7	07:02P	5.0
10	Thu	01:04A	17.4	02:20P	15.6	10	Thu	07:49A	-0.9	07:49P	4.4
11	Fri	01:48A	18.4	03:04P	16.7	11	Fri	08:31A	-2.3	08:34P	3.6
12	Sat	02:32A	19.3	03:46P	17.5	12	Sat	09:13A	-3.5	09:19P	3.0
13	Sun	03:17A	19.9	04:29P	18.0	13	Sun	09:55A	-4.2	10:04P	2.5
14	Mon	04:03A	20.1	05:13P	18.3	14	Mon	10:38A	-4.4	10:51P	2.1
15	Tue	04:51A	19.8	05:57P	18.3	15	Tue	11:23A	-4.1	11:41P	2.0
16	Wed	05:42A	19.0	06:44P	18.2	16	Wed	03:12A	4.8	12:09P	-3.1
17	Thu	06:36A	17.7	07:32P	18.0	17	Thu	12:34A	2.0	12:58P	-1.7
18	Fri	07:37A	16.2	08:24P	17.7	18	Fri	01:33A	2.1	01:50P	0.0
19	Sat	08:46A	14.8	09:19P	17.4	19	Sat	02:39A	2.0	02:48P	1.7
20	Sun	10:04A	13.9	10:17P	17.3	20	Sun	03:51A	1.7	03:52P	3.1
21	Mon	11:25A	13.8	11:17P	17.4	21	Mon	05:03A	0.9	05:00P	4.1
22	Tue	02:07A	20.0	12:40P	14.4	22	Tue	06:10A	0.0	06:05P	4.4
23	Wed	12:15A	17.6	01:41P	15.2	23	Wed	07:07A	-1.0	07:04P	4.3
24	Thu	01:08A	18.0	02:32P	16.1	24	Thu	07:56A	-1.8	07:55P	4.0
25	Fri	01:57A	18.3	03:15P	16.8	25	Fri	08:40A	-2.3	08:42P	3.6
26	Sat	02:41A	18.6	03:55P	17.2	26	Sat	09:20A	-2.6	09:24P	3.2
27	Sun	03:22A	18.7	04:31P	17.4	27	Sun	09:57A	-2.5	10:04P	3.1
28	Mon	04:00A	18.5	05:06P	17.4	28	Mon	10:32A	-2.2	10:43P	3.1
29	Tue	04:39A	18.1	05:40P	17.2	29	Tue	11:06A	-1.5	11:22P	3.3
30	Wed	05:17A	17.3	06:13P	16.9	30	Wed	11:40A	-0.6	03:26P	3.9

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JULY

		HIGH TIDES						LOW TIDES			
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Thu	05:56A	16.3	06:47P	16.4	1	Thu	12:02A	3.6	12:14P	0.6
2	Fri	06:38A	15.1	07:22P	16.0	2	Fri	12:43A	4.0	12:48P	1.9
3	Sat	07:25A	13.9	07:59P	15.5	3	Sat	01:28A	4.3	01:26P	3.3
4	Sun	08:21A	12.7	08:42P	15.2	4	Sun	02:20A	4.6	02:10P	4.7
5	Mon	09:29A	11.9	09:32P	15.0	5	Mon	03:21A	4.5	03:05P	5.9
6	Tue	10:50A	11.8	10:31P	15.2	6	Tue	04:30A	4.0	04:14P	6.7
7	Wed	12:09P	12.5	11:32P	15.9	7	Wed	05:38A	2.8	05:26P	6.7
8	Thu			01:13P	13.7	8	Thu	06:37A	1.3	06:31P	6.1
9	Fri	12:32A	17.0	02:04P	15.2	9	Fri	07:27A	-0.5	07:26P	5.0
10	Sat	01:26A	18.3	02:48P	16.7	10	Sat	08:13A	-2.2	08:17P	3.7
11	Sun	02:17A	19.6	03:30P	18.0	11	Sun	08:57A	-3.7	09:04P	2.3
12	Mon	03:06A	20.6	04:11P	19.1	12	Mon	09:40A	-4.6	09:51P	1.2
13	Tue	03:54A	21.1	04:51P	19.9	13	Tue	10:22A	-4.9	10:38P	0.3
14	Wed	04:42A	20.9	05:32P	20.2	14	Wed	11:04A	-4.5	11:26P	-0.1
15	Thu	05:32A	20.1	06:14P	20.2	15	Thu	11:48A	-3.3		
16	Fri	06:24A	18.6	06:58P	19.7	16	Fri	12:16A	-0.1	12:33P	-1.5
17	Sat	07:20A	16.8	07:45P	18.8	17	Sat	01:10A	0.3	01:21P	0.6
18	Sun	08:25A	15.0	08:37P	17.8	18	Sun	02:10A	0.9	02:14P	2.8
19	Mon	09:42A	13.7	09:37P	16.9	19	Mon	03:20A	1.5	03:18P	4.6
20	Tue	11:11A	13.2	10:46P	16.3	20	Tue	04:38A	1.6	04:32P	5.8
21	Wed	12:35P	13.7	11:56P	16.3	21	Wed	05:55A	1.2	05:49P	6.1
22	Thu			01:38P	14.7	22	Thu	06:59A	0.4	06:55P	5.6
23	Fri	12:58A	16.8	02:26P	15.8	23	Fri	07:49A	-0.4	07:48P	4.8
24	Sat	01:49A	17.5	03:04P	16.7	24	Sat	08:30A	-1.1	08:31P	3.9
25	Sun	02:32A	18.1	03:37P	17.4	25	Sun	09:06A	-1.5	09:10P	3.2
26	Mon	03:10A	18.6	04:07P	17.9	26	Mon	09:38A	-1.7	09:46P	2.6
27	Tue	03:45A	18.8	04:36P	18.3	27	Tue	10:09A	-1.6	10:21P	2.2
28	Wed	04:20A	18.7	05:04P	18.4	28	Wed	10:39A	-1.1	10:56P	2.1
29	Thu	04:55A	18.2	05:32P	18.2	29	Thu	11:08A	-0.3	11:30P	2.3
30	Fri	05:31A	17.3	06:01P	17.8	30	Fri	11:38A	0.8		
31	Sat	06:09A	16.2	06:30P	17.2	31	Sat	12:06A	2.6	12:09P	2.2

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AUGUST

		HIGH TIDES						LOW TIDES			
		AM		PM				AM		PM	
Date	Day	Time	Feet	Time	Feet	Date	Day	Time	Feet	Time	Feet
1	Sun	06:49A	14.8	07:02P	16.6	1	Sun	12:44A	3.1	12:42P	3.6
2	Mon	07:38A	13.4	07:40P	15.9	2	Mon	01:27A	3.7	01:19P	5.2
3	Tue	08:43A	12.2	08:30P	15.3	3	Tue	02:21A	4.1	02:09P	6.6
4	Wed	10:09A	11.7	09:39P	15.1	4	Wed	03:34A	4.2	03:24P	7.6
5	Thu	11:44A	12.3	10:59P	15.5	5	Thu	04:58A	3.5	04:53P	7.6
6	Fri			12:54P	13.8	6	Fri	06:11A	1.9	06:10P	6.6
7	Sat	12:11A	16.8	01:44P	15.6	7	Sat	07:07A	0.0	07:11P	4.9
8	Sun	01:13A	18.5	02:26P	17.5	8	Sun	07:54A	-1.9	08:02P	2.9
9	Mon	02:06A	20.1	03:05P	19.2	9	Mon	08:37A	-3.4	08:49P	1.0
10	Tue	02:55A	21.4	03:44P	20.7	10	Tue	09:19A	-4.3	09:35P	-0.7
11	Wed	03:43A	22.0	04:22P	21.6	11	Wed	10:00A	-4.5	10:20P	-1.7
12	Thu	04:30A	21.9	05:01P	22.0	12	Thu	10:41A	-3.8	11:06P	-2.1
13	Fri	05:18A	20.9	05:40P	21.6	13	Fri	11:22A	-2.4	11:53P	-1.8
14	Sat	06:07A	19.3	06:22P	20.7	14	Sat			12:05P	-0.4
15	Sun	07:01A	17.3	07:06P	19.2	15	Sun	12:43A	-0.8	12:51P	1.9
16	Mon	08:02A	15.2	07:58P	17.6	16	Mon	01:39A	0.6	01:43P	4.2
17	Tue	09:20A	13.6	09:01P	16.0	17	Tue	02:47A	2.0	02:48P	6.2
18	Wed	11:00A	13.1	10:22P	15.2	18	Wed	04:13A	2.8	04:13P	7.2
19	Thu	12:29P	13.7	11:47P	15.3	19	Thu	05:43A	2.6	05:44P	7.1
20	Fri			01:27P	14.9	20	Fri	06:49A	1.8	06:51P	6.1
21	Sat	12:53A	16.0	02:08P	16.0	21	Sat	07:36A	1.0	07:39P	4.8
22	Sun	01:41A	17.0	02:40P	17.1	22	Sun	08:13A	0.2	08:17P	3.6
23	Mon	02:19A	18.0	03:08P	18.0	23	Mon	08:43A	-0.3	08:51P	2.5
24	Tue	02:54A	18.7	03:33P	18.7	24	Tue	09:11A	-0.5	09:24P	1.7
25	Wed	03:27A	19.2	03:58P	19.2	25	Wed	09:39A	-0.5	09:55P	1.1
26	Thu	04:00A	19.3	04:24P	19.4	26	Thu	10:07A	-0.1	10:27P	0.8
27	Fri	04:33A	18.9	04:50P	19.3	27	Fri	10:36A	0.6	10:58P	0.9
28	Sat	05:07A	18.1	05:16P	18.9	28	Sat	11:05A	1.7	11:31P	1.3
29	Sun	05:43A	17.0	05:43P	18.2	29	Sun	11:35A	3.0		
30	Mon	06:21A	15.6	06:14P	17.4	30	Mon	12:06A	1.9	12:07P	4.4
31	Tue	07:08A	14.1	06:51P	16.4	31	Tue	12:46A	2.7	12:44P	5.8

Appendix A21.–Total sockeye salmon harvest from all sources in Upper Cook Inlet, 1996–2010.

	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

[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 2010 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 A22.–Daily commercial harvest of razor clams, Upper Cook Inlet, 2010.

Date	Lb	No. Diggers	Date	Lb	No. Diggers
5/13	2,036	20	6/18	8,418	22
5/14	1,787	19	6/22	8,704	21
5/15	3,807	22	6/23	9,713	22
5/16	3,164	22	6/24	6,585	22
5/17	4,136	22	6/25	8,708	22
5/18	5,335	22	6/26	6,363	22
5/19	7,325	22	6/27	8,529	22
5/20	7,148	22	6/28	4,381	22
5/21	5,729	22	6/29	7,037	22
5/24	4,284	20	6/30	6,447	22
5/25	8,405	22	7/1	8,192	22
5/26	8,546	22	7/2	8,420	22
5/27	8,625	22	7/9	14,420	22
5/28	8,511	22	7/10	6,073	22
5/29	8,951	22	7/11	6,689	22
5/30	8,122	22	7/12	8,339	22
5/31	7,291	22	7/13	7,445	22
6/1	7,375	22	7/14	7,529	22
6/2	6,366	22	7/15	5,106	22
6/9	5,989	22	7/16	6,138	22
6/10	9,193	22	7/17	3,224	22
6/11	8,403	22	7/21	6,094	22
6/12	9,255	22	7/22	6,990	22
6/13	7,228	22	7/23	7,246	22
6/14	7,337	22	7/24	5,668	22
6/15	6,201	22	7/25	4,013	22
6/16	7,183	22	7/26	3,218	22
6/17	6,712	22	7/27	5,414	22
Total for Year = 379,547 lb					

APPENDIX B: HISTORICAL DATA

Appendix B1.–Upper Cook Inlet commercial Chinook salmon harvest by gear type and area, 1966–2010.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	Total
1966	392	4.6	7,329	85.8	401	4.7	422	4.9	8,544
1967	489	6.2	6,686	85.1	500	6.4	184	2.3	7,859
1968	182	4.0	3,304	72.8	579	12.8	471	10.4	4,536
1969	362	2.9	5,834	47.1	3,286	26.5	2,904	23.4	12,386
1970	356	4.3	5,368	64.4	1,152	13.8	1,460	17.5	8,336
1971	237	1.2	7,055	35.7	2,875	14.5	9,598	48.6	19,765
1972	375	2.3	8,599	53.5	2,199	13.7	4,913	30.5	16,086
1973	244	4.7	4,411	84.9	369	7.1	170	3.3	5,194
1974	422	6.4	5,571	84.5	434	6.6	169	2.6	6,596
1975	250	5.2	3,675	76.8	733	15.3	129	2.7	4,787
1976	690	6.4	8,249	75.9	1,469	13.5	457	4.2	10,865
1977	3,411	23.1	9,730	65.8	1,084	7.3	565	3.8	14,790
1978	2,072	12.0	12,468	72.1	2,093	12.1	666	3.8	17,299
1979	1,089	7.9	8,671	63.1	2,264	16.5	1,714	12.5	13,738
1980	889	6.4	9,643	69.9	2,273	16.5	993	7.2	13,798
1981	2,320	19.0	8,358	68.3	837	6.8	725	5.9	12,240
1982	1,293	6.2	13,658	65.4	3,203	15.3	2,716	13.0	20,870
1983	1,125	5.5	15,042	72.9	3,534	17.1	933	4.5	20,634
1984	1,377	13.7	6,165	61.3	1,516	15.1	1,004	10.0	10,062
1985	2,048	8.5	17,723	73.6	2,427	10.1	1,890	7.8	24,088
1986	1,834	4.7	19,824	50.5	2,108	5.4	15,488	39.5	39,254
1987	4,561	11.6	21,159	53.6	1,029	2.6	12,700	32.2	39,449

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Appendix B1.–Page 2 of 2.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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
1966-09 Avg [a]	1,030	6	10,081	66	1,325	9	3,252	18	15,853
2000-09 Avg	1,081	6	11,318	68	1,002	7	2,668	19	16,631

[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.

[b] Harvest data prior to 2010 reflect minor adjustments to historical catch database.

Appendix B2.–Upper Cook Inlet commercial sockeye salmon harvest by gear type and area, 1966–2010.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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
1966-09 Avg [a]	1,594,022	55	1,063,113	35	102,917	5	91,439	5	2,851,491
2000-09 Avg	1,407,241	48	1,408,319	47	101,601	4	32,680	1	2,925,357

[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.

[b] Harvest data prior to 2010 reflect minor adjustments to the historical catch database.

Appendix B3.–Upper Cook Inlet commercial coho salmon harvest by gear type and area, 1966–2010.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	Total
1966	80,901	27.9	68,877	23.8	59,509	20.5	80,550	27.8	289,837
1967	53,071	29.9	40,738	22.9	40,066	22.5	43,854	24.7	177,729
1968	167,383	35.8	80,828	17.3	63,301	13.5	156,648	33.5	468,160
1969	33,053	32.8	18,988	18.9	28,231	28.0	20,412	20.3	100,684
1970	110,070	40.0	30,114	10.9	52,299	19.0	82,722	30.1	275,205
1971	35,491	35.4	16,589	16.5	26,188	26.1	22,094	22.0	100,362
1972	21,577	26.7	24,673	30.5	15,300	18.9	19,346	23.9	80,896
1973	31,784	30.4	23,901	22.9	24,784	23.7	23,951	22.9	104,420
1974	75,640	37.8	36,837	18.4	40,610	20.3	47,038	23.5	200,125
1975	88,579	39.0	46,209	20.3	59,537	26.2	33,051	14.5	227,376
1976	80,712	38.7	47,873	22.9	42,243	20.2	37,835	18.1	208,663
1977	110,184	57.2	23,693	12.3	38,093	19.8	20,623	10.7	192,593
1978	76,259	34.8	34,134	15.6	61,711	28.2	47,089	21.5	219,193
1979	114,496	43.2	29,284	11.0	68,306	25.8	53,078	20.0	265,164
1980	89,510	33.0	40,281	14.8	51,527	19.0	90,098	33.2	271,416
1981	226,366	46.7	36,024	7.4	88,390	18.2	133,625	27.6	484,405
1982	416,274	52.5	108,393	13.7	182,205	23.0	85,352	10.8	792,224
1983	326,965	63.3	37,694	7.3	97,796	18.9	53,867	10.4	516,322
1984	213,423	47.4	37,166	8.3	84,618	18.8	114,786	25.5	449,993
1985	357,388	53.6	70,657	10.6	147,331	22.1	91,837	13.8	667,213
1986	506,818	66.9	76,495	10.1	85,932	11.4	88,108	11.6	757,353
1987	202,506	44.8	74,981	16.6	74,930	16.6	97,062	21.9	449,479

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	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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
1966-09 Avg [a]	151,908	47	37,766	13	52,246	18	66,668	22	308,588
2000-09 Avg	107,220	54	18,938	10	26,353	14	38,909	22	185,465

[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.

[b] Harvest data prior to 2010 reflect minor adjustments to historical catch database.

Appendix B4.–Upper Cook Inlet commercial pink salmon harvest by gear type and area, 1966–2010.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	Total
1966	593,654	29.6	969,624	48.3	70,507	3.5	371,960	18.5	2,005,745
1967	7,475	23.2	13,038	40.5	3,256	10.1	8,460	26.2	32,229
1968	880,512	38.7	785,887	34.5	75,755	3.3	534,839	23.5	2,276,993
1969	8,233	25.3	10,968	33.7	5,711	17.6	7,587	23.3	32,499
1970	334,737	41.1	281,067	34.5	24,763	3.0	174,193	21.4	814,760
1971	6,433	18.1	18,097	50.8	2,637	7.4	8,423	23.7	35,590
1972	115,117	18.3	403,706	64.2	18,913	3.0	90,830	14.5	628,566
1973	91,901	28.2	80,596	24.7	16,437	5.0	137,250	42.1	326,184
1974	140,432	29.0	291,408	60.2	9,014	1.9	42,876	8.9	483,730
1975	113,868	33.9	112,423	33.4	19,086	5.7	90,953	27.0	336,330
1976	599,594	47.7	479,024	38.1	30,030	2.4	148,080	11.8	1,256,728
1977	286,308	51.7	125,817	22.7	25,212	4.6	116,518	21.0	553,855
1978	934,442	55.3	372,601	22.1	54,785	3.2	326,614	19.3	1,688,442
1979	19,554	26.8	19,983	27.4	7,061	9.7	26,382	36.1	72,980
1980	964,526	54.0	299,444	16.8	47,963	2.7	474,488	26.6	1,786,421
1981	53,888	42.4	15,654	12.3	4,276	3.4	53,325	41.9	127,143
1982	270,380	34.2	432,715	54.7	14,242	1.8	73,307	9.3	790,644
1983	26,629	37.9	18,309	26.0	3,785	5.4	21,604	30.7	70,327
1984	273,565	44.3	220,895	35.8	16,708	2.7	106,284	17.2	617,452
1985	34,228	39.0	17,715	20.2	5,653	6.4	30,232	34.4	87,828
1986	615,522	47.3	530,955	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 Gillnet		Kalgin/West Side Set Gillnet		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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
1966-09 Avg [a]	217,666	43	183,774	37	13,794	4	77,640	15	486,395
2000-09 Avg	103,071	53	73,333	39	4,928	5	4,450	4	205,597

[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.

[b] Harvest data prior to 2010 reflect minor adjustments to historical catch database.

Appendix B5.–Upper Cook Inlet commercial chum salmon harvest by gear type and area, 1966–2010.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	Total
1966	424,972	79.8	7,461	1.4	64,725	12.1	35,598	6.7	532,756
1967	233,041	78.5	399	0.1	25,013	8.4	38,384	12.9	296,837
1968	1,002,900	90.5	1,563	0.1	44,986	4.1	58,454	5.3	1,107,903
1969	238,497	89.1	399	0.1	16,954	6.3	11,836	4.4	267,686
1970	678,448	90.4	1,228	0.2	48,591	6.5	22,507	3.0	750,774
1971	274,567	84.8	128	0.0	32,647	10.1	16,603	5.1	323,945
1972	564,726	90.2	1,727	0.3	40,179	6.4	19,782	3.2	626,414
1973	605,738	90.7	1,965	0.3	29,019	4.3	30,851	4.6	667,573
1974	344,496	86.8	506	0.1	15,346	3.9	36,492	9.2	396,840
1975	886,474	93.2	980	0.1	33,347	3.5	30,787	3.2	951,588
1976	405,769	86.5	1,484	0.3	47,882	10.2	14,045	3.0	469,180
1977	1,153,454	93.5	1,413	0.1	54,708	4.4	23,861	1.9	1,233,436
1978	489,119	85.5	4,563	0.8	40,946	7.2	37,151	6.5	571,779
1979	609,239	93.8	867	0.1	30,342	4.7	9,310	1.4	649,758
1980	339,970	87.7	2,147	0.6	28,970	7.5	16,728	4.3	387,815
1981	756,922	91.0	2,386	0.3	26,461	3.2	46,208	5.6	831,977
1982	1,348,510	94.1	4,777	0.3	36,647	2.6	43,006	3.0	1,432,940
1983	1,044,636	93.7	2,822	0.3	38,079	3.4	29,321	2.6	1,114,858
1984	568,097	83.5	3,695	0.5	34,207	5.0	74,727	11.0	680,726
1985	700,848	90.7	4,133	0.5	31,746	4.1	36,122	4.7	772,849
1986	1,012,669	89.2	7,030	0.6	39,078	3.4	76,040	6.7	1,134,817
1987	211,745	60.7	16,733	4.8	53,558	15.3	66,901	19.2	348,937

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	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set Gillnet		Kalgin/West Side Set Gillnet		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	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
1966-09 Avg [a]	414,720	88	2,660	1	23,608	5	26,406	6	458,450
2000-09 Avg	107,486	93	870	1	4,330	4	2,545	2	106,058

[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.

[b] Harvest data prior to 2009 reflect minor adjustments to historical catch database.

Appendix B6.–Upper Cook Inlet commercial salmon harvest by species, 1966–2010.

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
1966-2009 Avg	15,939	2,900,574	309,297	476,874	450,804	4,153,488
2000-2009 Avg	16,068	2,949,842	191,420	205,597	106,058	3,468,985

Note: Catch statistics prior to 2010 reflect minor adjustments to harvest database.

Appendix B7.–Approximate exvessel value of Upper Cook Inlet commercial salmon harvest by species, 1960–2010.

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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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	$ 676,406	3.3%	$ 19,404,381	93.8%	$ 416,193	2.0%	$ 65,861	0.3%	$ 129,794	0.6%	$ 20,692,634
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	$ 359,184	1.1%	$ 30,539,293	92.1%	$ 1,094,312	3.3%	$ 310,964	0.9%	$ 850,195	2.6%	$ 33,153,947

Appendix B8.–Commercial herring harvest by fishery, Upper Cook Inlet, 1973–2010.

	Harvest (Tons)				
Year	Upper Subdistrict	Chinitna Bay	Tuxedni Bay	Kalgin Island	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
991	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

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

Appendix B9.–Commercial harvest of razor clams in Upper Cook Inlet, 1919–2010.

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, 1978–2010.

	Kenai River		Kasilof River		Fish Creek	
Year	Enumeration Goal	Enumeration Estimate [a,f]	Enumeration Goal	Enumeration Estimate [a,f]	Enumeration Goal	Enumeration Estimate[b]
1978	350,000-500,000	398,900	75,000-150,000	116,600	0	3,555
1979	350,000-500,000	285,020	75,000-150,000	152,179	0	68,739
1980	350,000-500,000	464,038	75,000-150,000	184,260	0	62,828
1981	350,000-500,000	407,639	75,000-150,000	256,625	0	50,479
1982	350,000-500,000	619,831	75,000-150,000	180,239	50,000	28,164
1983	350,000-500,000	630,340	75,000-150,000	210,271	50,000	118,797
1984	350,000-500,000	344,571	75,000-150,000	231,685	50,000	192,352
1985	350,000-500,000	502,820	75,000-150,000	505,049	50,000	68,577
1986	350,000-500,000	501,157	75,000-150,000	275,963	50,000	29,800
1987	400,000-700,000	1,596,871	150,000-250,000	249,250	50,000	91,215
1988	400,000-700,000	1,021,469	150,000-250,000	204,000[d]	50,000	71,603
1989	400,000-700,000	1,599,959	150,000-250,000	158,206	50,000	67,224
1990	400,000-700,000	659,520	150,000-250,000	144,289	50,000	50,000
1991	400,000-700,000	647,597	150,000-250,000	238,269	50,000	50,500
1992	400,000-700,000	994,798	150,000-250,000	184,178	50,000	71,385
1993	400,000-700,000	813,617	150,000-250,000	149,939	50,000	117,619
1994	400,000-700,000	1,003,446	150,000-250,000	205,117	50,000	95,107
1995	450,000-700,000	630,447	150,000-250,000	204,935	50,000	115,000
1996	550,000-800,000	797,847	150,000-250,000	249,944	50,000	63,160
1997	550,000-825,000	1,064,818	150,000-250,000	266,025	50,000	54,656
1998	550,000-850,000	767,558	150,000-250,000	273,213	50,000	22,853
1999	750,000-950,000	803,379	150,000-250,000	312,587	50,000	26,667
2000	600,000-850,000	624,578	150,000-250,000	256,053	50,000	19,533
2001	600,000-850,000	650,036	150,000-250,000	307,570	50,000	43,469
2002	750,000-950,000	957,924	150,000-250,000	226,682	20,000 - 70,000	90,483
2003	750,000-950,000	1,181,309	150,000-250,000	359,633	20,000 - 70,000	92,298
2004	850,000-1,100,000	1,385,981	150,000-250,000	577,581	20,000 - 70,000	22,157
2005	850,000-1,100,000	1,376,452	150,000-250,000	348,012	20,000 - 70,000	14,215
2006	750,000-950,000	1,499,692	150,000-250,000	368,092	20,000 - 70,000	32,566
2007	750,000-950,000	867,572	150,000-250,000	336,866	20,000 - 70,000	27,948
2008	650,000-850,000	614,946	150,000-250,000	301,469	20,000 - 70,000	19,339
2009	650,000-850,000	745,170	150,000-250,000	297,125	20,000 - 70,000	83,477
2010	750,000-950,000	970,662	150,000-250,000	267,013	20,000 - 70,000	126,829

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Year	Yentna River Enumeration Goal[c]	Yentna River Enumeration Estimate [a,f]	Crescent River Enumeration Goal	Crescent River Enumeration Estimate [a,f]	Packers Creek Enumeration Goal	Packers Creek Enumeration Estimate[b]
1978	100,000		0	no count	0	N/C
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[e]	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[g]	ND[g]	30,000-70,000	no count	15,000-30,000	1,6473[h]
2010	ND[g]	ND[g]	30,000-70,000	86,333	15,000-30,000	no count

[a] Derived from sonar counters unless otherwise noted.

[b] Weir counts.

[c] Yentna River escapement goal only.

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

[e] Counts through 16 July only.

[f] Enumeration estimates prior to 2010 reflect minor adjustments to the escapement database.

[g] Escapement estimate in 2005 and 2009 via remote camera; an unknown number of salmon escaped into the lake after the camera was removed.

[h] 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, 1970–2010.

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

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, 1970–2010.

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
1970-2009 Avg	26.0	6.3	6.5	3.6	7.4
2010	20.7	6.2	6.6	4.3	6.8

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, 1970–2010.

	DRIFT GILLNET			SET GILLNET			
Year	Resident	Nonresident	Subtotal	Resident	Nonresident	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	617	122	739	1,310
2005	404	167	571	609	128	737	1,308
2006	400	170	570	614	124	738	1,308
2007	399	172	571	609	129	738	1,309
2008	405	166	571	613	125	738	1,309
2009	403	167	570	609	129	738	1,308
2010	405	166	571	612	126	738	1,309

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, 1985–2010.

	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	27,353	174%
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%
Avg.	3,253,846	4,332,202	30%	301,500	322,753	11%	281,058	282,250	23%	339,231	260,357	-11%	18,577	18,587	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, 1980–2010 (harvest estimated from returned permits only, not expanded for non-returned permits).

Tyonek Subsistence Fishery

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

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Yentna Subsistence Fishery

Year	No. of Permits Issued	No. of Permits 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

Appendix B16.–Upper Cook Inlet educational fisheries salmon harvest, 1994–2010.

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

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

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

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

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, 1996–2010.

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
Min.	5	582		9,506		46		0		2		0		9,561	
Mean	9	1,298		19,321		217		86		21		7		19,650	
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
Min.	27	1,091		9,737		16		90		19		17		9,900	
Mean	37	4,229		42,944		69		765		650		94		44,523	
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
Min.	18	10,503		98,262		254		559		619		58		101,771	
Mean	22	16,844		204,287		788		1,864		3,504		306		210,750	
Max.	27	28,342		389,552		1,509		2,870		11,127		551		397,451	

Unknown Fishery (not reported on permit)

	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
Min.		270		3,310		0		39		28		4		3,429	
Mean		810		8,239		68		168		203		36		8,715	
Max.		1,339		15,675		238		366		916		90		16,360	

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Fish Creek Dip Net

Year	Days Open	Days Fished Est.	Days Fished SE	Sockeye Est.	Sockeye SE	Chinook Est.	Chinook SE	Coho Est.	Coho SE	Pink Est.	Pink SE	Chum Est.	Chum SE	Total Est.	Total SE
1996	22	3,749	41	17,260	161	37	8	2,414	25	331	9	153	5	20,195	168
1997	13	991	34	3,277	76	0	0	63	5	53	7	4	1	3,397	84
1998	15	1,141	21	4,036	113	1	0	649	19	80	10	29	2	4,795	117
1999	16	432	16	1,083	138	0	0	17	3	12	7	0	0	1,112	139
2000	16	1,054	25	6,925	211	0	0	958	72	83	12	29	3	7,995	225
2001	3	131	7	436	40	0	0	18	7	2	0	1	0	457	41
2009	7	1,436	8	9,898	73	10	0	53	6	66	3	33	5	10,060	73
2010	8	2,843	14	23,705	161	12	2	3576	84	1721	28	290	9	29,303	184
Min.	3	131		436		0		17		2		0		457	
Mean	13	1,472		8,328		8		969		294		67		9,664	
Max.	22	3,749		23,705		37		3,576		1,721		290		29,303	

Note: fishery not open 2002-2008.

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	
Min.	43			31		0		1		0		0		53	
Mean	43			73		0		38		2		2		115	
Max.	43			140		0		78		7		5		225	

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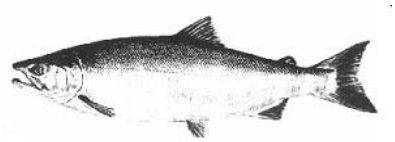
Upper Cook Inlet Personal Use Fisheries Total

	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
Min.	14,923		145,545		452		777		844		88		151,113	
Mean	23,970		279,279		1,146		3,407		4,535		480		288,848	
Max.	41,387		514,302		1,924		8,406		12,434		1,095		531,344	

APPENDIX C: SALMON OUTLOOK AND FORECAST

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



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Date Issued: 2/4/2010

UPPER COOK INLET
2010 OUTLOOK FOR COMMERCIAL SALMON FISHING
SALMON FISHING

SOCKEYE SALMON

The Alaska Department of Fish and Game (department) is forecasting a run of 3.6 million Upper Cook Inlet (UCI) sockeye salmon in 2010, with an expected harvest by all user groups of 2.3 million fish. The forecasted harvest is about 1.7 million sockeye salmon less than the 20-year average harvest of 4.0 million fish.

The Kenai River run forecast is 1.7 million, which is 45% less than the 20-year average of 3.1 million. Age-1.3 sockeye salmon typically comprise about 61% of the Kenai River run. The forecast for age-1.3 sockeye salmon is 1.0 million, or 49% less than the 20-year average return of 2.1 million. The age-1.3 sockeye salmon returning in 2010 are the progeny from an overescapement (1.1 million) in 2005. A sibling model based on the return of age-1.2 sockeye salmon in 2009 (86,000; 20-year average = 238,000) predicted a return of 1.0 million age-1.3 sockeye salmon. The poor age-1.2 return in 2009, and corresponding age-1.3 forecast in 2010, may have been caused by the 2005 overescapement (increased freshwater mortality) or poor marine survival. A fry model based on the abundance of fry rearing in Skilak and Kenai lakes in the fall of 2006 predicted a return of 2.5 million age-1.3 sockeye salmon. In this case, we chose the sibling model because it has recently forecasted age-1.3 returns more accurately than the fry model. Age-2.3 sockeye salmon typically comprise about 16% of the Kenai River run. A sibling model based on the return of age-2.2 sockeye salmon in 2009 predicted a

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return of 317,000 age-2.3 sockeye salmon in 2010. The forecasted return is 42% less than the 20-year average return for this age class. The 2010 predominant age classes should be age 1.3 (57%) and age 2.3 (17%).

The Kasilof River sockeye salmon run forecast is 901,000 fish, which is approximately 6% less than the 20-year average of 958,000. Age-1.3 sockeye salmon typically comprise about 36% of the Kasilof River run. The forecast for age-1.3 sockeye salmon is 324,000, 7% less than the 20-year average return of 348,000. A smolt model based on the abundance of age-1 sockeye salmon smolts in 2007 forecasted the return of age-1.3 sockeye salmon in 2010. The abundance of age-1 smolts in 2007 was 3.1 million, 28% less than the 20-year average of 4.3 million. A sibling model predicted a return of 282,000 age-1.3 sockeye salmon. We chose the sibling model because it has recently forecasted age-1.3 returns more accurately than the smolt model. Age-1.2 sockeye salmon typically comprise about 29% of the run. The age-1.2 sockeye salmon forecast is 281,000, equal to the 20-year average return. A smolt model based on the abundance of age-1 smolts (3.3 million) in 2008 forecasted the return of age-1.2 sockeye salmon in 2010. Age-2.2 sockeye salmon typically comprise about 22% of the run. The forecast for age-2.2 sockeye salmon is 169,000, 21% less than the 20-year average return of 213,000. A smolt model based on the abundance of age-2 smolts in 2008 forecasted the return of age-2.2 sockeye salmon in 2010. In 2008, 1.1 million age-2 smolts left Tustumena Lake; this is 35% less than the 20-year average. The 2010 predominant age classes should be age 1.2 (31%), age 1.3 (36%), and age 2.2 (19%).

The sockeye salmon run forecast for the Susitna River is 542,000 fish, which is 41% less than the 20-year average run of 913,000. This forecast was derived from historical aggregate weir counts rather than sonar and age composition 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 the first year a weir-based method has been used, no comparison to previous forecasts can be estimated. 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 142,000, which is 2% greater than the 20-year average run of 139,000. Age-1.2 and -1.3 sockeye salmon typically comprise 77% of the run to Fish Creek. Sibling models based upon the abundances of age-1.1 and -1.2 sockeye salmon in 2009 were used to forecast the runs of age-1.2 (90,000) and -1.3 (26,000) sockeye salmon in 2010. The age-1.2 forecast is 31% greater than the 20-year average return (68,000) for this age class, while the age-1.3 forecast is 33% less than the 20-year average return (38,000). The predominant age classes in the 2010 run should be age-1.2 (63%), age-1.3 (18%), and age-2.2 (13%).

The sockeye salmon run forecast for Crescent River is 148,000, which is 47% greater than the 20-year average run of 101,000. Age-1.3 and -2.3 sockeye salmon typically comprise 76% of the run to Crescent River. Sibling models based upon returns of age-1.2 and -2.2 sockeye salmon in 2009 were used to forecast returns of age-1.3 (82,000) and -2.3 (48,000) sockeye salmon in 2010. The predominant age classes in the 2010 run should be age-1.3 (55%) and age-2.3 (32%).

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Run forecasts to individual freshwater systems are as follows:

System	Run	Goals
Crescent River	148,000	30,000–70,000
Fish Creek	142,000	20,000–70,000
Kasilof River	901,000	150,000–250,000
Kenai River	1,672,000	650,000–850,000
Susitna River	542,000	
Larson Lake	NA	15,000–50,000
Chelatna Lake	NA	20,000–65,000
Judd Lake	NA	20,000–55,000
Minor Systems	170,000	NA
Total	3,575,000	

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 2010 harvest:

Pink Salmon	305,000
Chum Salmon	70,000
Coho Salmon	179,000
Chinook Salmon	17,000

2010 FISHING STRATEGY

The poor 2010 Cook Inlet sockeye salmon run forecast will likely require closures in the Upper Subdistrict set gillnet and Central District drift gillnet fishery beyond those described in the management plans. Restrictions may also be implemented earlier in the season, depending on the run strength and timing of Kenai River sockeye salmon. If the Kenai River forecast is correct, there is approximately 1 million Kenai River fish available for harvest after the minimum escapement go al of 650,000 is subtracted from the total run. The recent 5-year average (2005–2009) harvest of Kenai River sockeye salmon below the sonar is approximately 310,000 fish. This would leave at most, approximately 700,000 Kenai River sockeye salmon available for harvest in the commercial fishery. Because the Kasilof River run forecast is near the 20-year average, additional restrictions

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limiting set gillnetting to the Kasilof Section within one half mile of shore and/or to the Kasilof River Special Harvest Area (KRSHA) may be necessary.

Northern District Set Gillnet

- The Northern District Chinook salmon fishery will be open for 12-hour (7:00 a.m. to 7:00 p.m.) fishing periods, unless closed by emergency order, on all Mondays from May 25 through June 24. The area from a department regulatory marker located 1 mile south of the Theodore River to the Susitna River remains open for one period only, on the second regular Monday period, this year that period will be June 7.

- The Alaska Board of Fisheries designated Susitna River sockeye salmon as a stock of yield concern. An action plan was developed to conservatively manage the commercial fishery while research studies continue to give us a better understanding of stock productivity. The action plan requires participants of the Northern District set gillnet fishery no more than one net per permit from July 20 through August 6.

Central District Fisheries

Big River Sockeye Fishery

The Big River Sockeye Salmon Management Plan allows fishing in Kustatan Subdistrict and Kalgin Island Subdistrict along the western shore from Light Point at 60° 29.00' N. lat., 151° 50.50' W. long. to the Kalgin Island Light on the southern end of the island at 60° 20.80' N. lat., 152° 05.09' W. long. This fishery occurs on Mondays, Wednesdays and Fridays from June 1 to June 24.

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 have entered the Kasilof River, at which time the commissioner may open the fishery, by Emergency Order (EO); however, the fishery may not open earlier than June 20.

- From the beginning of the fishery through July 7, the department may not allow more than 48 hours of additional fishing time per week (Sun through Sat) and will 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.

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- Beginning July 8, or after the Kenai and East Forelands Sections open, the Kasilof Section will be managed in combination with the Kenai and East Forelands Sections.

Kenai, Kasilof and East Forelands Sections

After July 8, or after the Kenai and East Forelands Section's fishing season opens, the following fishing scenarios are possible, depending on Kenai River sockeye salmon run strength:

- If the Kenai River sockeye salmon run is less than 2 million, there will be no more than 24 hours of additional fishing time per week in Upper Subdistrict and there are no mandatory window closures. If 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. After July 15, if the Kasilof escapement is projected to exceed 300 thousand sockeye salmon, an additional 24 hours of fishing time per week is available within ½ mile of shore in the Kasilof Section.

- If the Kenai River sockeye salmon run is between 2 and 4 million, the department may allow up to 51 hours of additional fishing time per week and will close Upper Subdistrict for a 36-hour period, 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 fishing period per week at the department's discretion. If the Kenai and East Forelands Sections are not fished, the department may limit regular and extra periods in Kasilof Section to within ½ mile of shore.

- If the Kenai River sockeye salmon run is greater than 4 million, the department may allow up to 84 hours of additional fishing time per week, and will close the Upper Subdistrict set gillnet fishery for a 36 hour period, which will begin between 7:00 p.m. on Thursdays and 7:00 a.m. on Fridays. There are no other mandatory no-fishing 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. From August 11–15, the fishery is open for regular periods only.

Central District Drift Gillnet Fishery

- From July 9 through July 15, the Central District Drift Gillnet Fishery Management Plan requires two drift gillnet fishing periods to be restricted to the Kenai and Kasilof Sections and Drift Gillnet Area Number One (Figure 1 & 2). In 2010, these restricted periods will be on July 12 and July 15.

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- From July 16 through July 31, in runs less than 2 million Kenai River sockeye salmon, there will be two regular 12-hour fishing periods restricted to the Kenai and Kasilof Sections of Upper Subdistrict and Drift Area One. For runs between 2 and 4 million sockeye salmon to the Kenai River, there will be two regular 12-hour fishing periods restricted to the Kenai and Kasilof Sections of Upper Subdistrict and in Drift Areas One & Two. In runs of over 4 million sockeye salmon to the Kenai River, there are no mandatory restrictions. The 2010 forecast projects a Kenai River sockeye salmon run of less than 2 million fish, which requires two fishing period restrictions during the July 16–31 time frame. The dates when these two restrictions occur is dependent on forecast accuracy and how the season develops. As stated above, there may be additional closures or more severe restrictions than directed in the plans.

- From August 16 through the end of the year, unless closed by emergency order, Drift Areas Three & Four are open for regular periods (Figure 3).

- Chinitna Bay may be opened by emergency order.

Drift Fishing Areas

(1) Drift Area One: includes those waters of Central District south of Kalgin Island at 60° 20.43' N. lat. (Figure 2);

(2) Drift Area Two: includes those waters of Central District enclosed by a line from 60° 20.43' N. lat., 151° 54.83' W. long. to a point at 60° 41.08' N. lat., 151° 39.00' W. long. to a point at 60° 41.08' N. lat., 151° 24.00' W. long. to a point at 60° 27.10' N. lat., 151° 25.70' W. long. to a point at 60° 20.43' N. lat., 151° 28.55' W. long. (Figure 2);

(3) Drift Area Three: includes those waters of Central District within 1 mile of mean low water (zero tide) south of a point on the West Foreland at 60° 42.70' N. lat., 151° 42.30' W. long. (Figure 3);

(4) Drift Area Four: includes those waters of Central District enclosed by a line from 60° 04.70' N. lat., 152° 34.74' W. long. to the Kalgin Buoy at 60° 04.70' N. lat., 152° 09.90' W. long. to a point at 59° 46.15' N. lat., 152° 18.62' W. long. to a point on the western shore at 59° 46.15' N. lat., 153° 00.20' W. long., not including the waters of Chinitna Bay Subdistrict (Figure 3).

SET NET REGISTRATION AND BUOY STICKERS

All Cook Inlet set net fishermen are required to register prior to fishing for one of three Cook Inlet areas: 1) Upper Subdistrict of Central District; 2) 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 they are registered for the remainder of the year. No transfers will be permitted. Set gillnet permit holders fishing in 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.cf.adfg.state.ak.us/region2/ucihome.php. Fishermen

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wishing to register in 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 2 and continuing through June 23, 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.

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- *Northern District King Salmon Fishery:* May 31. There will be up to four fishing periods in 2010, the remaining periods are scheduled for June 7, 14, and June 21. Weekly fishing periods are Mondays only from 7:00 a.m. to 7:00 p.m. In that area from 1 mile south of the Theodore River to the Susitna River, there is only one period open during this fishery, which will occur on June 7 in 2010.

- *Northern District Regular Season Salmon Fishery*: June 28.

- *Western Subdistrict Set Net Fishery:* June 17.

- *All remaining set gillnet fisheries, except Upper Subdistrict:* June 28.

- *Upper Subdistrict Set Net Fishery:* June 28 for Kasilof Section (that portion south of the Blanchard Line), unless opened earlier by EO (if 50 thousand sockeye are in the river before the June 28 opener), but will not open before June 20. Kenai and East Forelands Sections (that portion north of the Blanchard Line) will open July 8. All sections of Upper Subdistrict will close for the season on or before August 15.

- *Drift Gillnet Fishery*: June 21.

GENERAL INFORMATION

The UCI commercial fisheries information line will again be available by calling 262-9611. The most recent emergency order announcement is always available on the recorded message line and catch, escapement and test fishing information is included whenever possible. All emergency order announcements are also faxed to processors as quickly as possible and posted to the Upper Cook Inlet web page at http://www.cf.adfg.state.ak.us/region2/ucihome.php. For general information, we invite you to visit the Commercial Fisheries web page on the Internet at http://www.cf.adfg.state.ak.us/. If you would like to receive emails of all UCI commercial fisheries emergency orders, please log onto the following site (http://csfish.adfg.state.ak.us/newsrelease/select.php?dist=SOL) and click on "Subscribe" and you will be signed up to automatically receive the emergency orders as soon as they are posted to the

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website.

If, during the summer, fishermen have information or questions concerning the commercial fishery, the Soldotna Commercial Fisheries Division 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).

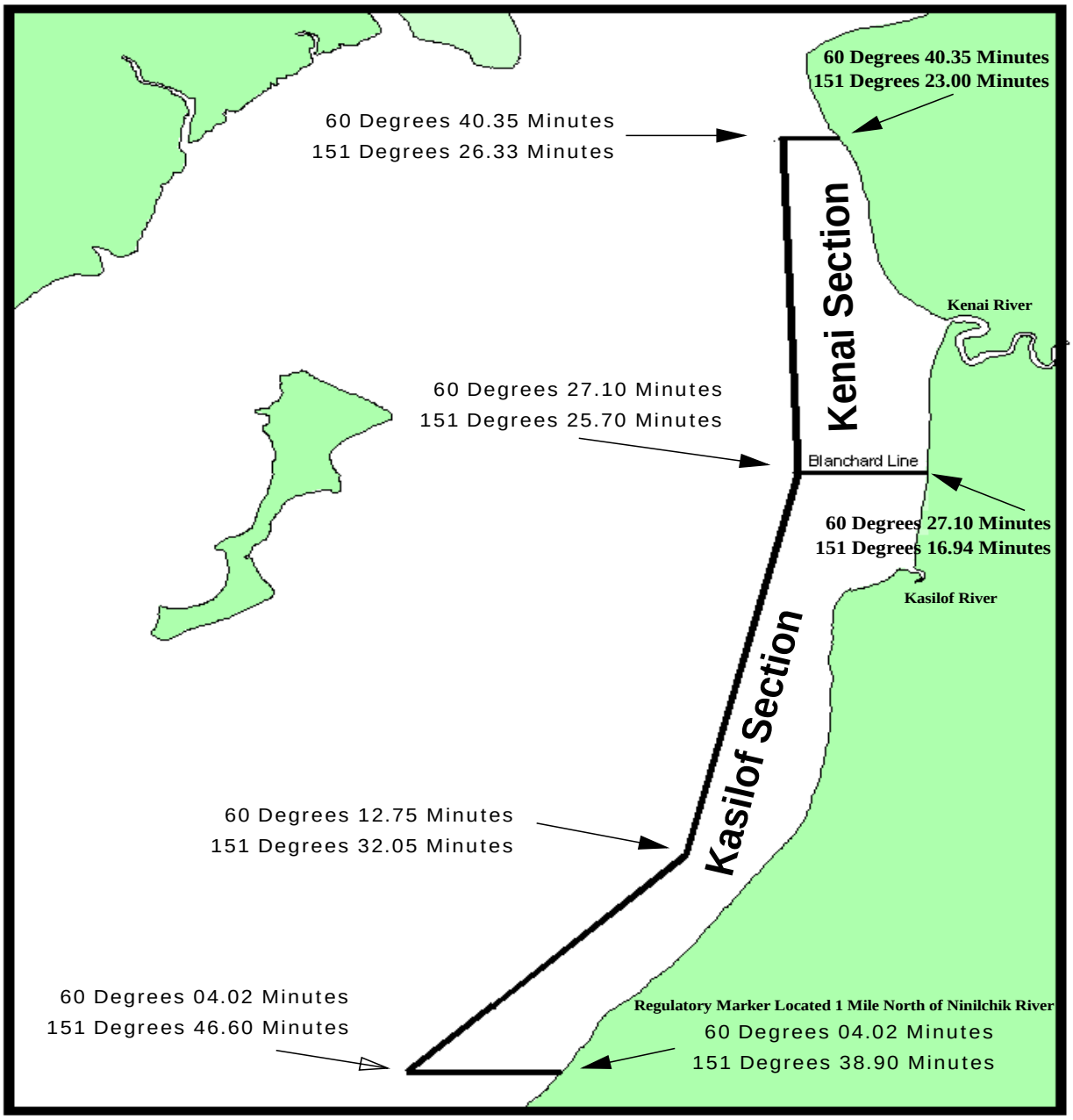

Figure 1. Map of the Kenai and Kasilof Sections with waypoint descriptions.

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Drift Gillnet Area 1 & Area 2 Descriptions

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

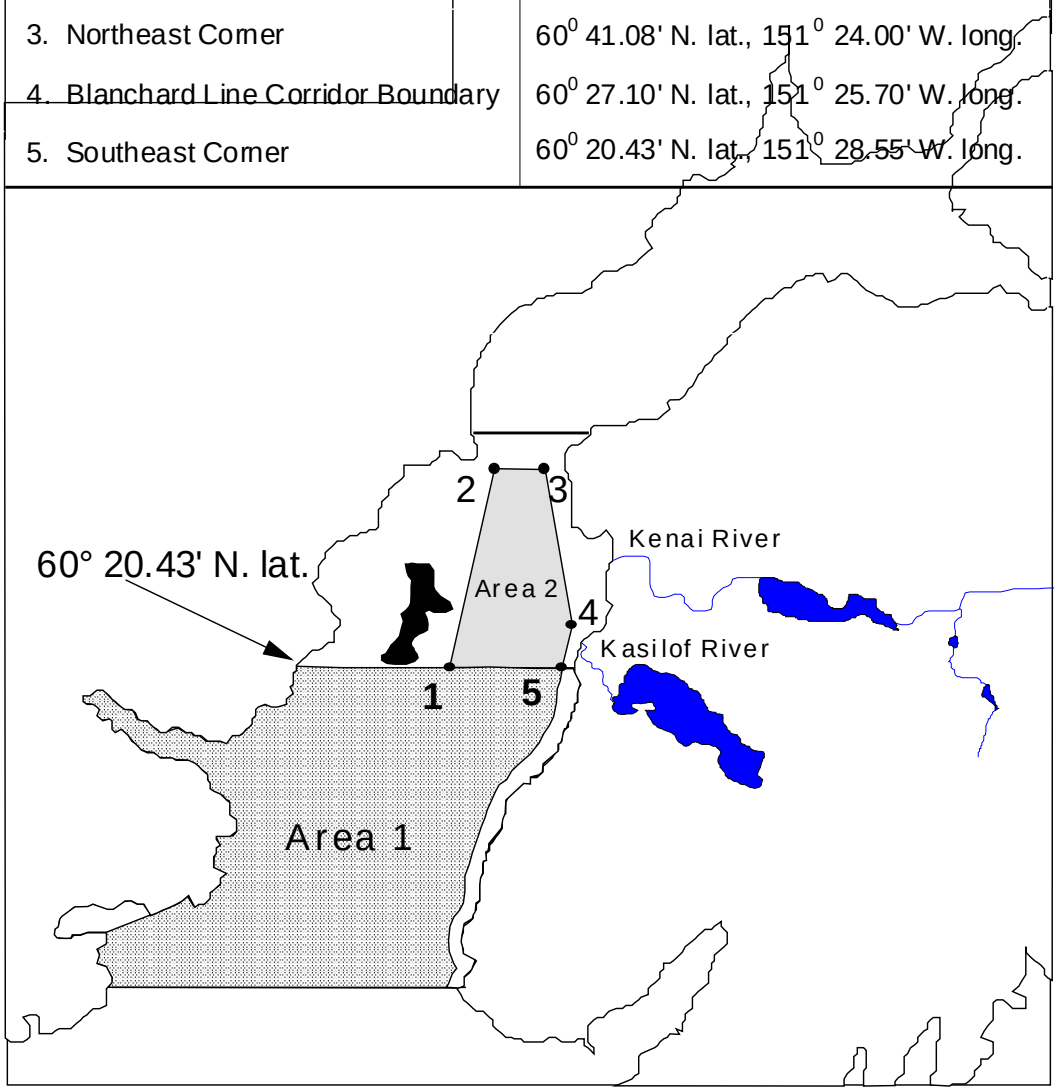

Figure 2. Map of drift gillnet fishing areas one and two.

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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.

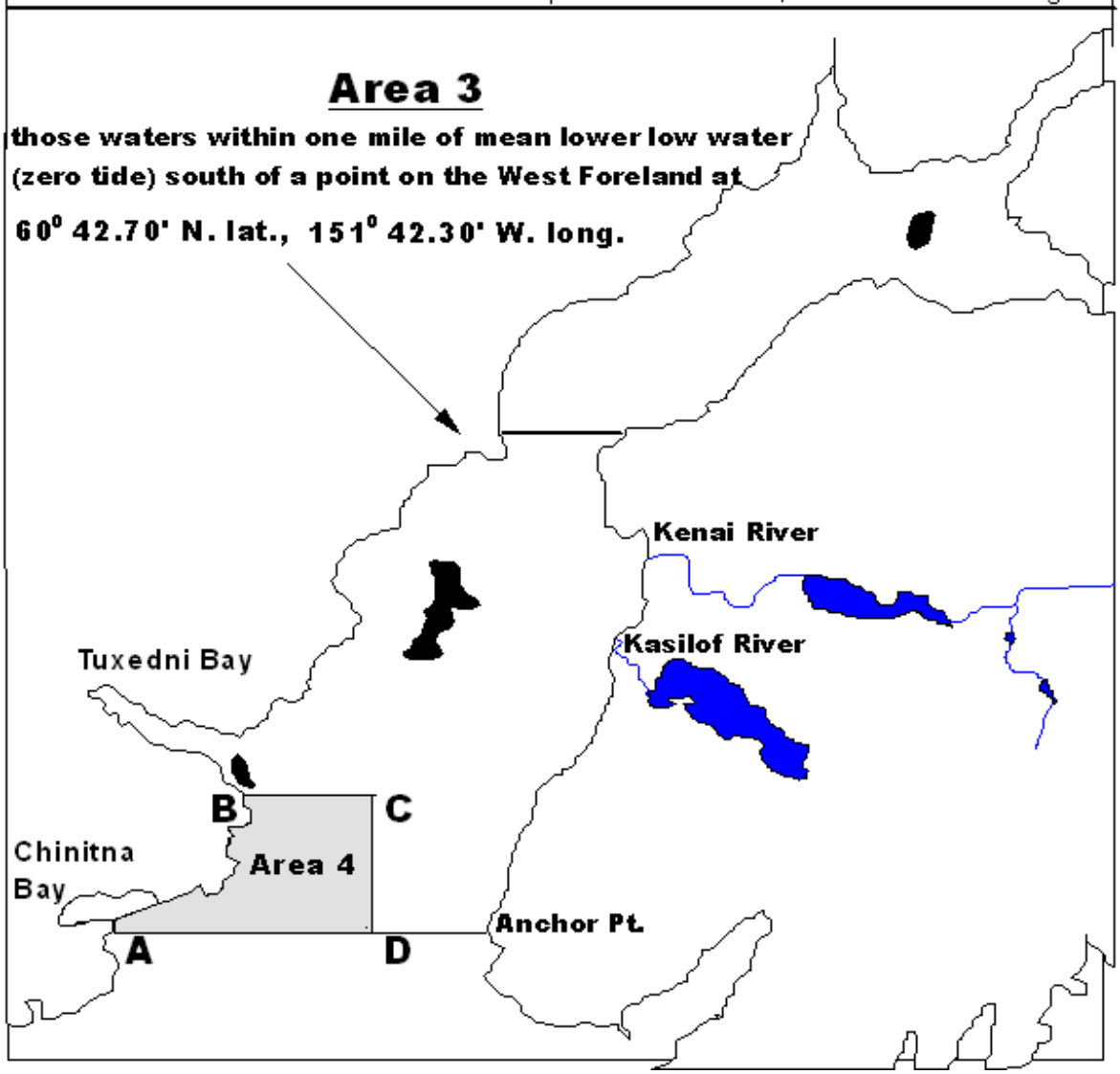
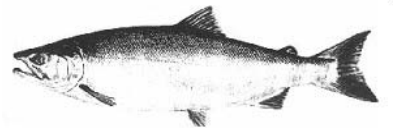


Figure 3. Map of the drift gillnet areas open beginning August 16.

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

2011 UPPER COOK INLET SOCKEYE SALMON FORECAST

The preliminary forecast of the 2011 Upper Cook Inlet sockeye salmon run is as follows:

	Forecast Estimate (millions)	Forecast Range (millions)
TOTAL PRODUCTION:		
Total Run	6.4	4.1–10.3
Escapement	1.6–2.0	
Harvest	4.4–4.8	

Forecast Methods

The major sockeye salmon systems in Upper Cook Inlet (UCI) are the Kenai, Kasilof, Susitna, and Crescent Rivers, and Fish Creek. Spawner, 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 2011: (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 forecasts 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, 2.2, and 2.3 sockeye salmon to the Kenai River in 2011 were forecast 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 2010. A spawner-recruit model prediction of the age 1.2 sockeye salmon return was based upon spawner abundance in 2007. Smolt models were used to forecast the returns of age 1.2, 1.3, 2.2, and 2.3 sockeye

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salmon to the Kasilof River. The smolt model used to forecast the return of age 2.2 sockeye salmon to Kasilof River included smolt weight as a covariate.

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 2006–2009. 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 2007–2009.

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.

An aggregate range of sockeye salmon escapements was calculated for this forecast due to uncertainty regarding actions that may be taken at the upcoming Alaska Board of Fisheries meeting. 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). Beginning in 2011, ADF&G will be counting sockeye salmon escapements on the Kenai and Kasilof rivers using new dual-frequency identification sonar (DIDSON). ADF&G has established new escapement goals for Kenai late-run sockeye salmon (700,000–1,200,000) and Kasilof sockeye salmon (160,000–340,000) based upon this new sonar system. The lower aggregate bound of sockeye salmon escapements was calculated using the midpoint (850,000) of the current Kenai late-run sockeye salmon inriver escapement goal (750,000–950,000) given the 2011 Kenai sockeye salmon forecast (3.9 million). The upper aggregate bound of escapements was calculated by applying the mean expansion factor (1.4) between historical Kenai Bendix and DIDSON sonar counts to the midpoint of the inriver goal (850,000). The total harvest by all user groups was estimated by subtracting the lower and upper bounds of the aggregate escapement range from the total run forecast for all stocks. 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 2001 through 2010.

Forecast Discussion

In 2010, the harvest of sockeye salmon by all user groups in UCI was 3.6 million, while the preseason forecast was 2.3 million. The higher than expected harvest in 2010 was largely due to an above forecast run to the Kenai River. In 2010, the total run was 3.3 million to the Kenai River, 847,000 to the Kasilof River, 256,000 to the Susitna River, 131,000 to the Crescent River, and 209,000 to Fish Creek. The 2010 run forecast was 1.7 million to the Kenai River, 901,000 to the Kasilof River, 542,000 to the Susitna River, 148,000 to the Crescent River, and 142,000 to Fish Creek.

A run of 6.4 million sockeye salmon is forecasted to return to UCI in 2011 with a harvest by all user groups of 4.4–4.8 million. The forecasted harvest in 2011 is 0.6–1.0 million fish above the

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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 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 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% less than the 20-year average run of 780,000. This forecast was derived from historical aggregate weir counts

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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 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%).

Run forecasts to individual freshwater systems are as follows:

System	Run	Goals
Crescent River	131,000	30,000–70,000
Fish Creek	105,000	20,000–70,000
Kasilof River	929,000	160,000–340,000
Kenai River[a]	3,941,000	?
Susitna River	463,000	
Larson Lake	NA	15,000–50,000
Chelatna Lake	NA	20,000–65,000
Judd Lake	NA	20,000–55,000
Unmonitored Systems	835,000	NA
Total	6,404,000	

[a] See methods section for explanation of Kenai late-run sockeye salmon goals.

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OTHER SALMON SPECIES

The preliminary forecast of the 2011 commercial harvest of other salmon species is as follows:

	Commercial Harvest Forecasts
Natural Production:	
Pink Salmon	106,000
Chum Salmon	101,000
Coho Salmon	178,000
Chinook Salmon	14,000

Forecast Methods

The recent 5-year average commercial harvest was used to forecast the harvest of chum, coho, and Chinook salmon in 2011. 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, Jeff Fox, 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

Denby S. Lloyd, Commissioner
John Hilsinger, Director

Contact:
Pat Shields, Assistant Area Management Biologist
Phone: (907) 262-9368
Fax: (907) 262-4709

43961 Kalifornsky Beach Rd.
Suite B
Soldotna, AK 99669
Date Issued: April 6, 2010

2010 UPPER COOK INLET COMMERCIAL SMELT (HOOLIGAN) AND HERRING FISHING SEASONS

A commercial fishery for smelt (hooligan) was reopened by the Alaska Board of Fisheries (board), 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 department 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) was modified by the board at their 2008 Upper Cook Inlet meeting. The areas open to fishing 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. In 2010, commercial fishing for herring will open at 12:01 a.m. on Tuesday, April 20 and close no later than 6:00 p.m. on Friday, May 28. 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 for personal use, to the Soldotna office by 12:00 noon of the next day for each day fished. Fishermen are also reminded that fish tickets are to be filled out and either mailed or dropped off at the Soldotna the department office within 7 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 the department.