

Kodiak Management Area Commercial Salmon Fishery Annual Management Report, 2016

by

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Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	AAC	all standard mathematical signs, symbols and abbreviations	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H _A
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	<i>e</i>
hectare	ha			catch per unit effort	CPUE
kilogram	kg			coefficient of variation	CV
kilometer	km	at	@	common test statistics	(F, t, χ^2 , etc.)
liter	L			confidence interval	CI
meter	m			correlation coefficient (multiple)	R
milliliter	mL	compass directions:		correlation coefficient (simple)	r
millimeter	mm	east	E	covariance	cov
Weights and measures (English)		north	N	degree (angular)	°
		south	S	degrees of freedom	df
		west	W	expected value	<i>E</i>
		copyright	©	greater than	>
		corporate suffixes:		greater than or equal to	≥
		Company	Co.	harvest per unit effort	HPUE
		Corporation	Corp.	less than	<
		Incorporated	Inc.	less than or equal to	≤
		Limited	Ltd.	logarithm (natural)	ln
		District of Columbia	D.C.	logarithm (base 10)	log
	et alii (and others)	et al.	logarithm (specify base)	log ₂ , etc.	
	et cetera (and so forth)	etc.	minute (angular)	'	
	exempli gratia (for example)	e.g.	not significant	NS	
Time and temperature		Federal Information Code	FIC	null hypothesis	H ₀
day	d	id est (that is)	i.e.	percent	%
degrees Celsius	°C	latitude or longitude	lat or long	probability	P
degrees Fahrenheit	°F	monetary symbols (U.S.)	\$, ¢	probability of a type I error (rejection of the null hypothesis when true)	α
degrees kelvin	K	months (tables and figures): first three letters	Jan,...,Dec	probability of a type II error (acceptance of the null hypothesis when false)	β
hour	h	registered trademark	®	second (angular)	"
minute	min	trademark	™	standard deviation	SD
second	s	United States (adjective)	U.S.	standard error	SE
Physics and chemistry		United States of America (noun)	USA	variance	
		U.S.C.	United States Code	population	Var
		U.S. state	use two-letter abbreviations (e.g., AK, WA)	sample	var
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				

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**KODIAK MANAGEMENT AREA COMMERCIAL SALMON FISHERY
ANNUAL MANAGEMENT REPORT, 2016**

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ABSTRACT

This report provides an overview of the 2016 Kodiak Management Area (KMA) salmon resources, stock status, as well as commercial, personal use, and subsistence salmon fisheries.

Sockeye salmon *Oncorhynchus nerka* escapements met or exceeded the established goals for Malina, Afognak, Frazer, Saltery, early-run Karluk, late-run Karluk, early-run Ayakulik, late-run Ayakulik, Buskin, early-run Upper Station, late-run Upper Station, Uganik, and Pasagshak systems. The Mainland District and Kodiak Archipelago pink salmon *O. gorbuscha* and chum salmon *O. keta* escapement goals were not met in 2016. The Chinook salmon *O. tshawytscha* escapement goals were achieved in both the Karluk and Ayakulik rivers. Coho salmon *O. kisutch* escapement goals were achieved in the American and Olds rivers but not in the Buskin and Pasagshak rivers.

The 2016 KMA commercial salmon fishery began on June 2, with the last reported landing on September 26. A total of 305 permits were fished, consisting of 165 purse seine permits, 137 set gillnet permits, and 3 beach seine permits. The total commercial salmon harvest in the KMA, including cost-recovery harvest but excluding test fishery harvest and commercially caught salmon retained for personal use, was 7,478 Chinook, 2,063,566 sockeye, 206,542 coho, 3,245,549 pink, and 403,879 chum salmon. Commercial harvests were lower than projected for all salmon species. The exvessel value for salmon harvested by all gear types totaled approximately \$14.5 million, which was one of the lowest total values on record.

Harvest data from subsistence permits issued in 2016 has not been summarized at the time of this publication.

Key words: Chinook, sockeye, coho, pink, chum, salmon, *Oncorhynchus*, Alaska Department of Fish and Game, AMR, exvessel value, Kodiak Management Area, KMA, BOF, commercial fisheries, subsistence, management plan, annual management report, purse seine, set gillnet, harvest, personal use

INTRODUCTION

This report describes the Kodiak Management Area's (KMA) commercial salmon *Oncorhynchus* spp. fisheries and harvest strategies in effect during the 2016 commercial salmon fishing season. A summary is also provided of the 2016 commercial salmon fishing season and historical commercial harvest, effort levels, escapement, subsistence, and commercial harvest retained for personal use. In addition, this report provides a comparison of salmon escapements as they pertain to the condition of salmon stocks within the KMA.

The KMA includes the waters of the western Gulf of Alaska surrounding the Kodiak Archipelago and that portion of the Alaska Peninsula bordering the Shelikof Strait between Cape Douglas and Kilokak Rocks (Figure 1). The archipelago is approximately 150 miles long, extending from northeast to southwest.

General information concerning escapements, harvest, and economic value is contained in the body of this report. More detail is provided in a series of appendices describing the KMA commercial fishing districts (Appendix A), fishing opportunity and management actions taken during the 2016 season (Appendix B), detailed information on specific fisheries (Appendices C–K), commercial salmon harvest by statistical week and management unit (Appendix L), and indexed peak salmon escapements by species and district (Appendix M). More detailed escapement data by stream are published in a separate escapement report (Fuerst *In prep*).

SALMON RESOURCES

SALMON PRODUCING STREAMS

Salmon migration or spawning has been documented in approximately 900 streams within the KMA (Johnson and Litchfield 2016), but only 442 streams have been documented to support yearly spawning populations of salmon (Table 1). There are Chinook salmon *O. tshawytscha* in

7 streams, sockeye salmon *O. nerka* in 61 streams, coho salmon *O. kisutch* in 235 streams, pink salmon *O. gorbuscha* in approximately 438 streams, and chum *O. keta* in 214 streams. The majority of pink salmon streams are located in the Kodiak Archipelago (Afognak, Northwest Kodiak, Southwest Kodiak, Alitak, Eastside Kodiak, and Northeast Kodiak districts; Appendix A1), with only 101 pink salmon streams located in the Mainland District (on the Alaska Peninsula). In years with very large returns, additional small streams are used by pink salmon.

SUPPLEMENTAL PRODUCTION

There are 2 hatcheries located in the KMA that currently produce salmon to supplement natural salmon production. The Kodiak Regional Aquaculture Association (KRAA) operates both hatcheries: the Kitoi Bay Hatchery on the southeast side of Afognak Island, and Pillar Creek Hatchery (Figure 2). The Kitoi Bay Hatchery primarily produces pink salmon but also cultures sockeye, chum, and coho salmon.¹ KRAA outstocks (placing juvenile salmon in sites other than the hatchery) juvenile coho and sockeye salmon fry from the Kitoi Bay Hatchery, but the majority of hatchery returns are to be harvested in either the common property or cost-recovery fisheries, or to be used as broodstock. Pillar Creek Hatchery is located north of the City of Kodiak at Pillar Creek, which drains into Monashka Bay, and is used primarily as an incubation facility for sockeye salmon outstocking projects. Chinook salmon are also reared at the Pillar Creek Hatchery for outstocking.²

The Kodiak Regional Planning Team (KRPT), a group consisting of representatives from the Alaska Department of Fish and Game (ADF&G), KRAA, and the public, is mandated by law (AS 16.10.375–470) to develop and periodically update comprehensive plans for salmon production in the KMA. KRPT identified sockeye salmon as the priority species for supplemental production (KRPT 1992). The priority status given to sockeye salmon production resulted in remote egg takes, hatchery incubation, and juvenile outstocking by KRAA to enhance harvests, develop broodstocks, and restore depleted runs (Honnold and Schrof 2001). Current enhancement efforts include “put-and-take” projects that involve placement of juvenile salmon at nursery sites where they will return as harvestable adults to systems with no spawning habitat or impassable stream access to spawning habitat.

KRPT summarized its production goals in an update to the Kodiak Regional Comprehensive Management Plan (KRPT 2011). The long-term goal of the plan is to increase the annual harvest of salmon (over and above KMA wild salmon harvest) by an additional 6,000 Chinook, 2,500,000 sockeye, 600,000 coho, 15,000,000 pink, and 1,500,000 chum salmon. The recent 10-year average (2006–2015) supplemental production has included an undetermined number of Chinook salmon and an estimated 315,660 sockeye, 114,067 coho, 5,418,971 pink, and 150,534 chum salmon (Table 2).

In 2016, sockeye salmon were outstocked in saltwater at Anton Larsen, Telrod Cove, and Ouzinkie Harbor and in the freshwater systems of Spiridon, Hidden, Ruth, and Jennifer lakes to produce harvest opportunities in terminal fisheries near the outlets of these systems. Sockeye salmon were also outstocked in 2016 in Little Kitoi Lake and Bay for broodstock development.

¹ 2016 Annual Management Plan Kitoi Bay Hatchery. Unpublished. Available from Kodiak Regional Aquaculture Association, Kodiak, Alaska.

² 2016 Annual Management Plan Pillar Creek Hatchery. Unpublished. Available from Kodiak Regional Aquaculture Association, Kodiak, Alaska.

Coho salmon were outstocked into Crescent Lake (near the community of Port Lions) and Katmai Lake (on Spruce Island near the community of Ouzinkie) to provide subsistence and commercial harvest opportunities (S. T. Schrof, Finfish Research Biologist, ADF&G, Kodiak, personal communication).

ESCAPEMENT GOALS AND MONITORING

ESCAPEMENT GOALS

In 2013, ADF&G staff reviewed previously established escapement goals within the KMA for each system and salmon species and recommended no change to 23 goals, modified 1 goal, and eliminated 1 goal (Sagalkin et al. 2013). The directors of the Division of Commercial Fisheries and the Division of Sport Fish accepted these recommended changes to the escapement goals. In 2016, the KMA commercial salmon fisheries were managed to achieve escapement levels that were within the established ranges or, in some cases, which exceeded lower-bound escapement goals. Established goals in the KMA include 2 for Chinook salmon, 13 for sockeye salmon, 4 for coho salmon, and 2 each for pink and chum salmon (Table 3).

ESCAPEMENT MONITORING

In 2016, weirs were operated on the major systems of the KMA (Table 4; Figure 2; Fuerst *In prep*). The 4 largest systems with weirs are Karluk River (at Karluk Lagoon), Ayakulik River (at the outlet), South Olga Lakes (at the outlet of South Olga Creek at Upper Station), and Dog Salmon Creek. There are 5 smaller systems with weirs at Afognak River (at Litnik), SALTERY Lake, PASAGSHAK River, BUSKIN River (at Buskin Lake and also Lake Louise) and Pauls Bay (at the outlet of Pauls Lake). On Dog Salmon Creek, a fish pass is operated upstream near the outlet of Frazer Lake. To avoid counting fish twice when summing escapement totals, the Dog Salmon weir counts are considered the total escapement for all species in this system except sockeye salmon. In some years, an appreciable number of sockeye salmon that pass the Dog Salmon weir do not ascend the fish pass to Frazer Lake. Sockeye salmon that do not ascend the fish pass to Frazer Lake are not likely to successfully spawn; therefore, the cumulative sockeye salmon count through the fish pass is considered the spawning escapement for the drainage.

The majority of sockeye salmon and Chinook salmon ascending rivers in the KMA were counted through weirs (Tables 3–5; Fuerst *In prep*). The availability of these data allowed for inseason stock-specific management. The remaining KMA sockeye salmon systems were monitored by aerial observation using small fixed-wing aircraft.

Most pink, chum, and coho salmon escapement estimates were collected from fixed-wing aircraft surveys of bays and streams. Coho salmon escapement estimates were incomplete due to poor weather conditions for conducting surveys and limited budgets. Foot surveys were also conducted on a few streams, primarily along the Kodiak road system. Aerial and foot survey counts are considered an index of the actual escapement and are utilized inseason to aid fishery management.

Peak indexed escapements were calculated postseason for all systems surveyed and, together with weir escapement data, were used to estimate an areawide escapement (Table 5). Peak indexed escapement for sockeye, chum, and coho salmon were defined as the highest daily aerial or foot survey count for each system for each year. For pink salmon, peak indexed escapement of each stream surveyed was estimated as the larger of either the highest daily survey count or the

sum of 2 counts that were 30 or more days apart. This was done to compensate for the shorter stream life and more varied spawning dates of pink salmon. For Chinook salmon, peak indexed escapements were defined as the cumulative weir counts minus an estimate of upriver sport fishery harvest. Indexed peak salmon escapement estimates by species and district are listed in Appendix M1. Peak escapement estimates by species for individual streams are published in a separate escapement report (Fuerst *In prep*).

STOCK STATUS

Chinook Salmon

There has been concern regarding the low returns of Chinook salmon escapement in the Karluk and Ayakulik rivers in recent years. In an attempt to increase escapement, regulation 5 AAC 18.395 provides ADF&G emergency order authority to prohibit retention of Chinook salmon 28 inches or greater in length by seine gear during fisheries in the Inner Karluk, Outer Karluk, Inner Ayakulik, and Outer Ayakulik sections and that portion of the Central Section south of the latitude of Cape Kuliuk when weir counts indicate inadequate escapement. Additionally, for the 2014–2016 salmon seasons the Board of Fisheries (BOF) has mandated nonretention of Chinook salmon 28 inches or greater in length for the entire KMA from June 1 to July 5.

The 2016 Karluk River Chinook salmon season total weir count of 3,434 fish (Table 4; Fuerst *In prep*) was within the biological escapement goal (BEG) range of 3,000–6,000 fish (Table 3; Sagalkin et al. 2013). The inriver Chinook salmon sport fishery was closed on the Karluk River for the entire 2016 season; therefore the estimated total escapement is the same as the weir count.

In 2016, a total of 4,594 Chinook salmon were counted through the Ayakulik River weir (Table 4; Fuerst *In prep*). An inriver sport fishery targeting Chinook salmon was closed at the beginning of the season due to expected poor returns. After the lower bound of the BEG was achieved, the sport fishery opened to catch and release only beginning July 6. The sport fishery harvest of 0 Chinook salmon upstream of the weir resulted in an estimated escapement of 4,594 fish, which was within the escapement goal range of 4,000–7,000 fish (Table 3; Sagalkin et al. 2013).

Dog Salmon Creek has a run of Chinook salmon originally introduced in 1970. A total of 94 were counted through the Dog Salmon weir in 2016 (Table 4; Fuerst *In prep*). There is no escapement goal established for this system, but the average total season cumulative weir count in the previous decade (2006–2015) was 141 fish (Fuerst *In prep*). No sport fishery is allowed for Chinook salmon on Dog Salmon Creek, so the escapement is considered to be the total season cumulative weir count.

Sockeye Salmon

Sockeye salmon counted through weirs accounted for about 92% (1,187,795 fish) of all documented sockeye salmon escapements in 2016 (Table 4). Additional escapements of 101,766 sockeye salmon were estimated by aerial and foot surveys in other systems such as Malina Creek, Ocean Beach, Kafia Lake, Uganik Lake, Little River Lake, Thorsheim Lake, Pauls Lake, and Swikshak Lagoon (Fuerst *In prep*). Sockeye salmon escapements met or exceeded the escapement goals in all river systems with established escapement goals within the KMA during the 2016 season (Table 3).

Coho Salmon

Estimating coho salmon escapements to the KMA streams is difficult because of survey conditions and cost. Coho salmon often do not migrate into streams until late fall. Typically during this time, heavy rains will cause reduced water clarity, which creates difficult survey conditions. Late-season escapement surveys are also limited by aerial survey budget constraints. Coho salmon escapement goals were reevaluated in 2013 (Sagalkin et al. 2013). Information adequate to establish escapement goals was only available for the American, Pasagshak, Buskin, and Olds rivers (Table 3). Escapements were estimated using a weir on the Buskin River and foot surveys on the American, Olds, and Pasagshak rivers. In 2016, coho salmon escapement goals were achieved in the American and Olds rivers but not in the Pasagshak and Buskin rivers (Table 3).

With the exception of the Buskin River, all salmon weirs were removed before the peak of the coho salmon run due to high water conditions and budget constraints.

Pink Salmon

The majority of pink salmon streams were monitored by aerial surveys, although approximately 32% (575,274 fish) of the 2016 KMA pink salmon escapement was counted through salmon weirs (Tables 4 and 5). The 2016 indexed pink salmon escapement of 1,699,281 fish in the Kodiak Island Archipelago was well below the escapement goal range of 3,000,000–7,000,000 fish (Table 3; Sagalkin et al. 2013). The Mainland District indexed pink salmon escapement of 65,305 fish was also well below the escapement goal range of 250,000–1,000,000 fish (Table 3; Sagalkin et al. 2013). Districtwide peak escapements are shown in Appendix M1. Due to budget cuts, very few aerial surveys were flown in late August, and ADF&G missed the peak pink salmon escapement timing on many KMA systems.

Chum Salmon

In 2010, ADF&G's salmon management and research staff changed the aggregated chum salmon escapement goals that were developed in 2007 to separate lower-bound sustainable escapement goals (SEGs) for the Kodiak Archipelago and the Mainland District. The majority of the 2016 chum salmon escapement was estimated from aerial surveys, with less than 2% (3,785 fish) counted through weirs (Tables 4 and 5). Estimating chum salmon escapements using aerial observations is more difficult than estimating escapements of other species of salmon. Chum salmon migrate into small sloughs and side creeks as well as into major river systems, and also may occupy more turbid systems, making observations difficult. Due to the remoteness of these systems, limited aerial surveys were conducted on several major KMA chum salmon systems along Kodiak Island's west side and in the Mainland District. Pink salmon, usually in greater numbers, are often present in chum salmon systems and make counting the less numerous chum salmon difficult. Estimates based on aerial surveys are considered minimum estimates of actual escapement.

The 2016 chum salmon escapement in the Mainland District was 68,700 fish, which did not meet the minimum escapement goal of 104,000 fish (Table 3; Sagalkin et al. 2013). The chum salmon escapement for the Kodiak Archipelago of 133,785 fish did not meet the escapement goal of 151,000 fish (Table 3; Sagalkin et al. 2013). Due to budget cuts, very few aerial surveys were flown in late August and ADF&G missed the peak chum salmon escapement timing on many KMA systems.

COMMERCIAL SALMON FISHING

BACKGROUND

Commercial salmon harvest records for the KMA date back to 1882 (Table 6; Roppel 1986). In 1974, a limited entry system was adopted by the State of Alaska that restricted the number of individuals allowed to participate in the commercial salmon fisheries (Rickey et al. 1975). In 2016, there were 592 commercial salmon fishing permits available in the KMA, of which 305 were fished (Table 7; CFEC 2016). This was below the recent 10-year average (2006–2015) of 313 permits fished annually.

Inseason management of the KMA commercial salmon fishery is structured around 7 districts that are subdivided into 56 sections (Appendices A1–A8). These sections are occasionally subdivided further during the season to adjust fishing effort in response to unexpected salmon surpluses or deficits. Each section defines a traditional geographic harvest area managed for specific stocks or traditional fishing patterns. Divisions of sections, groups of sections, or districts that are opened or closed together are referred to as management units. The BOF has also designated 5 special harvest areas (SHAs; 5 AAC 40.085) and 1 terminal harvest area (THA; 5 AAC 18.378) within the KMA to provide harvest opportunity of enhanced salmon runs (Fuerst 2016).

GEAR TYPES

In the KMA, there are restrictions on the types of gear that can be used in specific management units based on historical gear use patterns (5 AAC 18.330). The majority of the KMA is open to seine gear only. Both purse and beach seine gear are allowed to operate in the entire management area. Prior to statehood, the Alitak Bay, Moser Bay, and Olga Bay sections of the Alitak District were designated as set gillnet only areas. In 1970, this regulation was amended such that the Alitak Bay, Moser Bay, and Olga Bay sections remained set gillnet fisheries only through September 4, after which seine gear is legal in the entire Alitak District (5 AAC 18.330(d)(2)).

Set gillnet and seine gear are allowed in the Central Section of the Northwest Kodiak District, making this the only section where all gear types may operate simultaneously for the entire season (5 AAC 18.330(b)).

BOARD OF FISHERIES—APPROVED REGULATORY MANAGEMENT PLANS

To regulate Kodiak commercial salmon fisheries, ADF&G staff are guided by 10 KMA salmon management plans that describe biological and allocative constraints and were adopted into regulation by the BOF (5 AAC 18.360–369; Table 8). These plans reflect traditional fishing opportunities and the subsequent harvest allocations that have resulted between and within gear types participating in specific fisheries, and they were all in effect during the 2016 season. These plans are the *Alitak District Salmon Management Plan* (Appendix D), *Westside Kodiak Salmon Management Plan* (Appendix E), *Eastside Afognak Management Plan* (Appendix G), *Eastside Kodiak Salmon Management Plan* (Appendix I), *Mainland District Salmon Management Plan* (Appendix K), and the *North Afognak/Shuyak Island Salmon Management Plan* (Appendix J). The *Cape Igvak Salmon Management Plan* (Appendix C) and *North Shelikof Strait Sockeye Salmon Management Plan* (Appendix F) affect Kodiak purse seine permit holders' opportunity to target salmon migrating through the KMA to spawning systems in the Chignik and Cook Inlet management areas. The *Crescent Lake Coho Salmon Management Plan* and *Spiridon Bay*

Sockeye Salmon Management Plan (Appendix H) provide for full utilization of enhanced stocks while protecting local natural stocks.

RECENT REGULATION CHANGES

The BOF reviews the salmon fishery regulations every 3 years. The most recent review, in January of 2014, resulted in the following 2 notable changes:

1. Provisions of the *Alitak District Salmon Management Plan* (5 AAC 18.36) with regard to staggered fishing periods within the Alitak District were exempted for the 2014 through 2016 seasons. Provisions pertaining to the management of the Dog Salmon Flats section were also exempted from the 2014 through 2016 seasons. The BOF increased in the Upper Station optimal escapement goal to 30,000 sockeye salmon if the department determines the Frazer Lake upper escapement goal will be exceeded.
2. 5 AAC 18.395(c) For the entire KMA from June 1 through July 5, Chinook salmon 28 inches or greater in length may not be retained in the commercial seine fishery. This provision is currently scheduled to sunset prior to the 2017 salmon season.

In addition, minor changes were made to boundary lines of management units and closed waters. Precise language describing the details is available in the published regulations (ADF&G 2014).

SALMON FORECASTS

ADF&G forecasts salmon runs to inform industry and management staff of the likely magnitude of salmon returns. In addition, the length of the initial fishing periods for pink salmon are determined preseason based on the magnitude of the pink salmon forecast (Fuerst and Jackson 2016). Chinook, coho, pink, and chum salmon harvests are projected by broad geographic area, whereas forecasts are made for major individual sockeye salmon stocks. Projected harvests are summarized by fishery and geographic area (Table 9; Brenner and Munro 2016).

The 2016 commercial Chinook salmon projected harvest was 15,000 fish (Table 9). The sockeye salmon harvest was forecasted to be 3,408,000 fish (Table 9). This projection included formal forecasts for the major sockeye salmon systems of Karluk, Ayakulik, Upper Station, and Dog Salmon, plus projected harvests from minor sockeye salmon systems, supplemental production (from enhancement projects), the Cape Igvak Section, and other minor systems. The 2016 projected KMA harvest also included 330,000 coho, 16,193,000 pink, and 643,000 chum salmon (Table 9). These projections included expected supplemental production of salmon from Kitoi Bay hatchery and the Spiridon Bay enhancement projects.

2016 HARVEST STRATEGY

Seasonal Abundance and Management Consideration

Fluctuations in the abundance of each species of salmon within the KMA follow a general chronology (Figure 3). Generally, early-run sockeye and Chinook salmon are present throughout June to mid-July, and late-run sockeye salmon are present from mid-July through September. Pink and chum salmon are present in July and August. Coho salmon are generally present from August through October. Commercial salmon fisheries are structured around the seasonal abundance of specific salmon species.

The 2016 Kodiak area commercial salmon fishery harvest strategy, published in April 2016, outlined the approaching fishing season (Fuerst and Jackson 2016). This document contains a synopsis of the expected chronology of the 2016 commercial salmon fisheries by species, expected escapements and harvests, an overview of pertinent regulations, and a summary of the management plans that guide management throughout the season.

Sockeye salmon are the primary target species on which fishing periods are scheduled from June through early July. However, some early-run chum salmon stocks may influence management in localized areas. Pink salmon are the primary species managed from early July through mid-August, with some areas managed specifically for local sockeye salmon or chum salmon stocks. Late-run sockeye, coho, and late-run chum salmon are the primary targeted species from mid-August through early September. Coho salmon are the primary species managed after early September.

Anticipated Commercial Fishery Openings

The 2016 harvest strategy listed June 9 as the initial opening date of the early-run sockeye salmon fishery, although the fishery may open as early as June 1 if Karluk River escapement is strong (Figure 3; Fuerst and Jackson 2016). The areas expected to be opened included the Central and North Cape sections of the Northwest Kodiak District. Results of the initial opening would be used to evaluate the actual run strength of the Karluk and Ayakulik early-run sockeye salmon stocks. The Foul Bay and Waterfall Bay SHAs and the Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay, and Izhut Bay sections were scheduled to open to continuous fishing on June 9. A commercial salmon fishing period was not likely to be announced for June 9 in the Alitak District due to the expected weak early-run sockeye salmon forecast for Dog Salmon and Upper Station. The first fishing period in the Cape Igvak Section could occur as early as June 1, if the Chignik River sockeye salmon early run was as strong as expected and run timing was normal.

An initial 33-hour opening was scheduled to start June 9 in the Anton Larsen Bay, Sharatin Bay, Kizhuyak Bay, Terror Bay, Inner Uganik Bay, Spiridon Bay, Zachar Bay, and Uyak Bay sections of the Northwest Kodiak District to test run strength of the local chum and sockeye salmon returns. A second fishing period was scheduled for June 14, but it was to be concurrent with open fishing periods in the Central and North Cape sections. Additionally, more areas could be opened during the second period if sockeye salmon escapements to local minor systems were of sufficient strength. From June 16 to July 5, additional fishing time in Westside Kodiak fisheries was based solely on the strength of the sockeye and early chum salmon runs, as determined by escapements.

Initial fishing periods in the Ayakulik sections of the Southwest Kodiak District were solely dependent on sockeye salmon escapement into Ayakulik River. The preseason forecast (Brenner and Munro 2016) projected a harvestable surplus which could be utilized during openings throughout the sockeye salmon run. Initial periods in the Southeast Afognak Section of the Afognak District were solely dependent on the sockeye salmon escapement into Afognak River.

Additional 33-hour fishing periods were scheduled for June 14 and 21 for select systems with minor sockeye salmon returns. These included the Eastside Kodiak District, the Northwest Afognak Section of the Afognak District, and the Big River and Outer Kukak Bay sections of the Mainland District. These periods were intended to target sockeye salmon runs to Saltery, Ocean Beach, Thorsheim, Long Lagoon, Swikshak, and Kafilja Lake systems.

The initial fishing period targeting pink salmon was scheduled to begin July 6, and subsequent weekly fishing periods were projected for July and August (Fuerst and Jackson 2016). Based on the forecasted pink salmon run strength, the initial pink salmon opening was set at 105 hours in length, with the 3 subsequent fishing periods following in July and August also set at 105 hours per week. Adjustments in fishing time in late July and August in most areas is to be determined by the run strength of local pink and chum salmon runs and on the strength of coho salmon runs in September.

2016 COMMERCIAL SALMON FISHERY SUMMARY

The 2016 Kodiak commercial salmon fishery began on June 2 with a 57-hour fishing period in the majority of the Northwest Kodiak District and the Southeast Afognak Section of the Afognak District and an indefinite period in terminal fisheries at Foul and Waterfall bays and in the Duck Bay, Izhut Bay, Inner Kitoi Bay, and Outer Kitoi Bay sections (Appendix B1 and B2). A total of 9 days of fishing was allowed in the Cape Igvak Section in June because the Chignik early sockeye salmon run was returning as expected. The initial 57-hour fishing period in the Outer Karluk Section was allowed on June 14 and remained open continuously through June 28. There were no fishing periods allowed in the Inner and Outer Ayakulik section in June targeting early-run sockeye salmon. The two 33-hour openings scheduled for June 14 and 21 in the Eastside Kodiak District and the Outer Kukak Bay and Big River sections of the Mainland District occurred as scheduled (Appendix B1 and B2).

The pink salmon fishery started as scheduled with a 105-hour weekly fishing period on July 6. Subsequent fishing periods in July were delayed and fishing periods were reduced as it became apparent that the pink salmon run was likely much weaker than forecasted. The magnitude of the Chignik-bound sockeye salmon run was determined to be sufficient to warrant liberal fishing periods within the Cape Igvak Section from July 11 to July 22.

Beyond the anticipated fishery openings in the harvest strategy, additional fishing opportunities were provided by emergency order to facilitate the harvest of salmon determined to be in excess of escapement needs based on inseason analysis of abundance. A narrative of the management actions is detailed separately for each plan in Appendices C through K.

In 2016, the KMA commercial salmon harvest occurred over a 117-day period, with the last reported landing occurring on September 26 (Figure 3). A total of 15 buyer/locations purchased salmon within the KMA in 2016 (Table 10).

PERMIT HOLDER PARTICIPATION

A total of 305 KMA commercial salmon fishing permit holders reported harvests in the common property fishery in 2016. This was 30 less permits than during the 2015 season and above the recent 10-year average (2006–2015) of 313 permits (Table 7). Purse seine participation during the 2016 season (165 permits) was 15 permits less than the 2015 season (181 permits) but above the previous 10-year average (2006–2015) of 159 permits. Three beach seine permit holders were active during the 2016 season which was equal to the 10-year average (2006–2015). Set gillnet participation in the 2016 KMA commercial salmon fishing season was made up of 137 permits, 17 less than the 2015 season and below the recent 10-year average (2006–2015) of 152 permits (Table 7).

Set gillnet permit participation statistics from 2008 to 2010 are not comparable to either 2011 to 2016 or to years prior to 2008 because from 2008 to 2010, individual set gillnet permit holders were allowed to own 2 permits and operate 2 sets of gear. During the years in which this regulation (5 AAC 18.331(j)) was in effect, ADF&G could not collect accurate effort statistics from the fish ticket data in the KMA set gillnet fishery because fish tickets did not document the number of dual permit holders fishing both sets of gear.

HARVEST

A total of 5,927,014 salmon were harvested in the 2016 KMA commercial fisheries (common property and cost recovery combined), which was well below the recent 10-year (2006–2015) average of 24,068,105 salmon (Table 6).

Not including cost recovery, purse seine permit holders caught 78% (3,889,179 fish) of the total number of salmon harvested, which included 5,755 Chinook, 1,515,938 sockeye, 171,477 coho, 1,894,194 pink, and 301,815 chum salmon in the common property fishery (Table 11). Set gillnet permit holders caught 21.8% (1,087,539 fish) of the salmon harvested, which included 1,715 Chinook, 457,910 sockeye, 28,043 coho, 500,715 pink, and 99,156 chum salmon in the common property fishery (Table 11). Beach seine permit holders harvested 0.1% (7,223 fish) which included 0 Chinook, 4,734 sockeye, 1 coho, 2,451 pink, and 37 chum salmon (Table 11).

CHINOOK SALMON

The Chinook salmon harvest of 7,478 fish was below the 10-year average (2006–2015) of 16,019 fish (Table 6) and below the projected harvest of 15,000 fish (Table 9). The average weight of Chinook salmon sold in the common property fishery was 8.41 lb (Table 11). The majority of the Chinook salmon was harvested in the Mainland and Northwest Kodiak districts in June and July. Chinook harvests ranged from a low of 6 fish harvested in Northeast Kodiak District to a high of 2,694 fish harvested in the Mainland District.

SOCKEYE SALMON

The sockeye salmon harvest of 2,063,566 fish (Table 6) was below the forecast of 3,408,200 fish (Table 9) and slightly below the 10-year average (2006–2015) catch of 2,200,839 fish (Table 6). The average weight of sockeye salmon sold in the common property fishery was 5.19 lb (Table 11). Approximately 42% of the sockeye salmon harvest (856,977 fish) came from the Westside Kodiak fisheries³ (Table 9). Approximately 16% of the sockeye salmon harvest (331,633 fish) came from the Cape Igvak fishery (Table 9). Approximately 9% of the sockeye salmon harvest (183,295 fish) came from Alitak District permit holders (Table 9). Approximately 8% of the sockeye salmon harvest (174,666 fish) came from the Spiridon Bay sockeye salmon project fishery (Table 9). Approximately 7% of the sockeye salmon harvest (141,747 fish) came from the Ayakulik fishery (Table 9). The area near the Kitoi Bay Hatchery accounted for a harvest of 46,872 fish, although an unknown portion of these fish were likely not of hatchery origin.

³ From the Southwest Afognak Section (251-10 & 20) and the Northwest Kodiak District (except the Spiridon and Settler Cove Special Harvest Areas), Inner and Outer Karluk sections, plus 50% of the Halibut Bay Section from June 21 to July 15 and 100% after July 31, minus the estimated contribution bound for the Spiridon SHA.

COHO SALMON

The coho salmon harvest of 206,542 fish (Table 6) was below the forecast of 330,000 fish (Table 9) and also below the 10-year average (2006–2015) of 329,952 fish (Table 6). The average weight of coho salmon sold in the common property fishery was 7.35 lb (Table 11). Westside Kodiak fisheries (excluding the Southwest Afognak Section) harvested approximately 98,286 coho salmon, which was below the forecast of 117,000 fish (Table 9). The Eastside/Northend Kodiak coho salmon harvest⁴ of 30,804 fish was below the forecast of 57,000 fish (Table 9). The Afognak nonhatchery harvest of 39,025 coho salmon was above the forecast of 23,000 fish (Table 9). The coho salmon harvest attributed to the Kitoi Bay Hatchery was 11,788 fish, which was well below the hatchery forecast of 113,000 fish (Table 9).

PINK SALMON

The pink salmon harvest of 3,245,549 fish (Table 6) was well below the harvest forecast of 16,193,000 fish (Table 9) and below the most recent 5 even-year average (2006–2014) of 15,378,988 fish (Table 6). The average pink salmon weight of 4.49 lb (Table 11) was well above the 2015 average weight of 3.34 lb. The nonhatchery (wild stock) pink salmon harvest of 2,100,315 fish was well below the harvest projection of 11,900,000 fish. The Westside Kodiak fisheries harvest of 1,090,581 fish accounted for approximately 52% of the total wild KMA pink salmon harvest, and was well below the Westside Kodiak forecast of 7,925,000 fish (Table 9). All wild stock pink salmon harvests were well below the projected harvests in the 2016 season. The fishery associated with the Kitoi Bay Hatchery accounted for 1,145,234 pink salmon, which was well below the forecast of 4,293,000 fish (Table 9). Kitoi Bay Hatchery cost recovery fishery accounted for 69%, or 792,845, of those fish. Additional hatchery-bound pink salmon were probably harvested along the west side and east side of Kodiak and Afognak islands. However, ADF&G does not have a stock separation program for pink salmon and is unable to differentiate stocks.

CHUM SALMON

The chum salmon harvest of 403,879 fish (Table 6) was below the forecast of 643,000 fish (Table 9) and well below to the 10-year average (2006–2015) of 800,030 fish (Table 6). The average weight of the chum salmon harvested in the common property fishery was 6.85 lb (Table 11). Westside Kodiak fisheries harvested 165,915 chum salmon, which was below the forecast of 210,000 fish (Table 9). The Eastside/Northend Kodiak fishery total harvest of 63,401 chum salmon was well below the forecast of 225,000 fish. The Mainland District total harvest of 67,890 chum salmon was similar to the forecast of 65,000 fish (Table 9). The chum salmon harvest attributed to the Kitoi Bay Hatchery of 72,554 fish was similar to the forecast of 72,000 fish (Table 9).

EXVESSEL VALUE

The estimated total exvessel value of the 2016 KMA commercial salmon fishery (not including cost recovery) was \$14,509,665 (Table 11), which was well below the 10-year (2006–2015) average exvessel value of \$36,258,483 (Table 12). This exvessel value was based on inseason

⁴ From the Eastside Kodiak District (all 258s and 259-40 to 259-42), Northeast Kodiak District (259-21 to 259-25), and the North Cape, Anton Larsen Bay, Sharatin Bay, and Kizhuyak sections, plus part of the Central Section (259-35–259-39).

price estimates and does not reflect additional payments made to fishermen for dock deliveries, refrigerated or iced fish, or postseason adjustments. The average price per pound, by gear and species, can be found in Table 11.

Seine permit holders' gross earnings averaged \$66,243 in 2016 (2006–2015 average \$184,328; Table 12). Gillnet permit holders' gross earnings averaged \$25,972 (2006–2015 average \$41,955; Table 12), whereas the beach seine permit holders earned an estimated \$7,111 per permit (2006-2015 average \$13,188; Table 12) in 2016.

COST RECOVERY

In 2016, due to current and future budget reductions, the ADF&G expanded the test fishery program to help cover the cost of managing the commercial salmon fishery. A total of 4 Chinook, 12,646 sockeye, 863 coho, 35,947 pink, and 1,031 chum salmon were harvested under the ADF&G test fishery program with a total exvessel value of \$114,989.

KRAA has conducted a cost-recovery program to pay for operational costs at the Kitoi Bay Hatchery from 1987 to 1989 and 2003 to 2016. In 2016, KRAA conducted 2 cost-recovery programs in the KMA.⁵ A cost-recovery harvest occurred August 2 to August 19 within the Inner Kitoi Bay Section and included 481 sockeye, 9 coho, 792,845 pink, and 937 chum salmon. A cost-recovery program in Spiridon Bay SHA (in Telrod Cove) was also conducted to cover the cost of running the enhancement program for Spiridon Lake. From June 28 to July 31, 50,883 sockeye, 3,825 pink, and 353 chum salmon were harvested in this program. The entire cost-recovery harvest supporting KRAA programs in the KMA in 2016 included 51,364 sockeye, 9 coho, 796,670 pink, and 1,290 chum salmon.

NONCOMMERCIAL SALMON HARVESTS

SUBSISTENCE SALMON FISHERY

Subsistence salmon permits are available to Alaska residents and are issued annually to obtain harvest data. Since 1989, Kodiak staff has mailed out permits, regulations, and a map showing closed-water areas to all permit holders who returned their harvest report from the previous year. Subsistence fishermen are required to return their permits to ADF&G after the salmon season, listing areas fished by date and salmon harvest by species. With few restrictions, the entire KMA was open to subsistence salmon fishing in recent years. Only the freshwater systems of Afognak Island (which are relatively small, easily accessible, and at risk of overexploitation) and some areas near heavily exploited salmon systems were closed to subsistence salmon fishing by regulation (5 AAC 01.525).

From 2002 to 2007, varying measures to restrict the subsistence fishery were necessary to conserve Afognak Lake sockeye salmon for escapement. In 2008 and 2009, the Afognak Lake sockeye salmon run was sufficient to allow subsistence harvest without increasing closed waters or shortening fishing time, although commercial fishing within the vicinity was not allowed. The 2016 Afognak Lake sockeye salmon run was strong and closed waters were reduced on June 3 to

⁵ 2016 Annual Management Plan Kitoi Bay Hatchery. Unpublished. Available from Kodiak Regional Aquaculture Association, Kodiak, Alaska.
2016 Annual Management Plan Pillar Creek Hatchery. Unpublished. Available from Kodiak Regional Aquaculture Association, Kodiak, Alaska.

allow for more effective subsistence and commercial harvests and to prevent overescapement of sockeye salmon into Afognak Lake.

The 2016 subsistence harvest data were not summarized at the time this report was written. However, in 2015, 1,798 permit holders returned subsistence permits and reported a harvest of 20,713 salmon, including 186 Chinook, 16,043 sockeye, 3,045 coho, 1,168 pink, and 271 chum salmon (Table 13). Historically, the most utilized subsistence fishery areas are the north end of Kodiak Island, the Buskin and Pasagshak rivers, and the southeast side of Afognak Island at Litnik. Reported subsistence salmon harvests averaged 31,409 fish annually for the 10-year period 200–2014 (Table 13). Sockeye salmon have accounted for 80% of the recent 10-year average harvest (25,194 fish), followed by coho salmon at 14% (4,365 fish), pink salmon at 4% (1,383 fish), and both Chinook salmon (188 fish) and chum salmon (279 fish) at about 1% (Table 13).

RETENTION OF SALMON TAKEN IN COMMERCIAL FISHERIES

In 1994, the BOF readopted regulation 5 AAC 39.010, which allowed commercial fishermen to retain legally harvested salmon for their own use. In the KMA, commercial fishermen are required to report the number of salmon taken but not sold on an ADF&G fish ticket at the time of landing (5 AAC 18.355(b)). In 1997, 10 permit holders reported 784 salmon retained for their own use (Table 14). This use increased dramatically in 2003, when 36 permit holders retained 24,985 salmon (Table 14). Many salmon were “custom processed” at local processors, normally as vacuum-packed, frozen fillets. It was reported that these salmon were destined for sale as part of direct marketing efforts.

Because of the significant increase of retained salmon and the likelihood that some of these salmon were being sold illegally, in December of 2003 the BOF rewrote the original regulation (5 AAC 18.355(b)) to clarify the intent and to reiterate the unlawful practice of selling commercially retained salmon without appropriate permits. The BOF also placed the regulation under *General Provisions* (5 AAC 39.010), which reads, “A person engaged in commercial fishing may retain finfish from lawfully taken commercial catch for that person’s own use, including for the use as bait in a commercial fishery. Finfish retained under this section may not be sold or bartered.”

In 2016, 63 permit holders reported retaining 5,427 salmon from their commercial harvest for “home pack” or personal use. This included 239 Chinook, 3,270 sockeye, 1,175 coho, 571 pink, and 172 chum salmon (Table 14).

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TABLES AND FIGURES

Table 1.—Estimated number of streams with documented salmon production by district, and species, in the Kodiak Management Area.

Management District	Number of streams ^a	Number of streams with each species ^b				
		Chinook	Sockeye	Coho	Pink	Chum
Afognak	97	0	24	88	97	16
Northwest Kodiak	69	1	6	36	69	29
Southwest Kodiak	11	2	3	6	11	6
Alitak	31	1	8	16	31	22
Eastside Kodiak	104	1	9	39	104	57
Northeast Kodiak	29	2	4	29	25	14
Mainland	101	0	7	21	101	70
TOTAL	442	7	61	235	438	214

^a The State of Alaska's Division of Sport Fish identifies over 900 streams in the Kodiak Management Area that have documented use by anadromous fish (Johnson and Litchfield 2016). Many of these streams are very small and may only be used by pink salmon in years with very large returns.

^b These estimates are based on current knowledge and are expected to change as more system-specific data are collected.

Table 2.—Estimated commercial harvest of salmon from Kodiak Regional Aquaculture Association projects in the Kodiak Management Area, 1995–2016.

Year	Number of salmon				
	Sockeye	Coho	Pink	Chum	Total
1995	186,371	42,235	4,519,885	215,351	4,963,842
1996	487,900	57,200	979,143	14,189	1,538,432
1997	248,336	110,334	1,213,615	11,029	1,583,314
1998	315,109	148,333	6,272,029	38,118	6,773,589
1999	582,218	116,513	4,057,093	140,896	4,896,720
2000	287,387	133,238	3,659,698	303,783	4,384,106
2001	244,761	151,732	13,126,761	216,266	13,739,520
2002	565,422	209,259	6,696,774	88,724	7,560,179
2003	796,359	144,389	5,533,522	466,205	6,940,475
2004	266,150	128,291	3,962,421	239,610	4,596,472
2005	206,860	151,729	13,603,742	91,814	14,054,145
2006	113,869	168,205	4,158,109	177,548	4,617,731
2007	207,309	125,781	7,884,867	210,699	8,428,656
2008	316,197	120,366	2,118,392	93,025	2,647,980
2009	248,339	154,473	9,080,346	94,905	9,578,063
2010	311,323	116,647	3,292,029	191,998	3,911,997
2011	491,670	70,335	2,174,975	320,578	3,057,558
2012	324,108	49,791	2,971,123	218,794	3,563,816
2013	457,039	53,533	11,772,629	96,909	12,380,110
2014	377,800	231,987	5,779,624	45,621	6,435,032
2015	308,948	49,556	4,957,615	55,266	5,371,385
2016	231,588	12,282	1,122,800	72,890	1,439,560
<u>Average</u>					
2006–2015	315,660	114,067	5,418,971	150,534	5,999,233

Source: ADF&G fish ticket summaries.

Note: Includes harvest from the Kitoi Bay Hatchery (Izhut Bay, Duck Bay, and Kitoi Bay sections [statistical areas 252-30 to 252-32 and 252-35]). SHA harvests are from the returns to the Spiridon Lake project (in the Spiridon SHA, 254-50, and adjacent sections), the Foul Bay SHA (251-41), the Waterfall Bay SHA (251-84), and the Settler Cove SHA (259-35). Includes fish not sold and set aside for personal use by commercial fishermen and cost-recovery harvests.

Table 3.—Comparison of 2016 salmon peak escapements and escapement goals of index streams or districts, by species, in the Kodiak Management Area.

Species	System (or group of systems)	Stream number	Escapement goal		Escapement estimate ^a
			Lower	Upper	
Chinook					
	Karluk ^b	255-101	3,000	6,000	3,434
	Ayakulik ^b	256-201	4,000	7,000	4,594
Sockeye					
	Malina	251-105	1,000	10,000	2,000
	Afognak	252-342	20,000	50,000	32,459
	Uganik	253-122	24,000		34,100
	Karluk	255-101			
	Early run		110,000	250,000	164,760
	Late run		170,000	380,000	324,049
	Ayakulik	256-201			
	Early run		140,000	280,000	182,589
	Late run		60,000	120,000	71,978
	Upper Station	257-304			
	Early run ^c		30,000	93,000	48,047
	Late run		120,000	265,000	145,013
	Frazer	257-403	75,000	170,000	122,585
	Buskin	259-211	5,000	8,000	11,584
	Pasagshak ^d	259-411	3,000		3,200
	Saltery	259-415	15,000	35,000	57,867
Coho					
	Buskin	259-211	3,200	7,200	2,513
	American	259-231	400		500
	Olds (Sid Olds)	259-242	1,000		1,634
	Pasagshak	259-411	1,200		737
Pink					
	Mainland District		250,000	1,000,000	65,305
	Kodiak Archipelago		3,000,000	7,000,000	1,699,281
Chum					
	Mainland District		104,000		68,700
	Kodiak Archipelago		151,000		133,785

^a Escapement estimates in this table are based on the best available information. Some estimates are weir counts. If weir counts are not available, either peak aerial or foot survey counts are depicted. In some cases (such as Malina, for example) the escapement estimate available is a minimal count based on limited information.

^b Escapement of Chinook salmon includes weir counts minus an estimate of sport fish harvest above the weir.

^c Upper Station early-run lower-bound escapement goal based on Optimum Escapement Goal of 30,000 fish.

^d Escapement estimate from aerial survey. The 2016 Pasagshak River sockeye salmon weir count was 7,053 fish.

Table 4.–Fish weir installation and removal dates and cumulative salmon weir counts for systems with weirs in the Kodiak Management Area, 2016.

Weir Locations	2016 Dates		Salmon Species Enumerated ^a				
	Installed	Removed	Chinook	Sockeye	Coho	Pink	Chum
Karluk River	22-May	16-Sep	3,434	488,809	11,613	363,614	421
Ayakulik River	20-May	22-Aug	4,594	254,967	2,390	60,155	132
Dog Salmon Creek ^{b,c}	24-May	8-Aug	94	150,469	26	125,318	2,963
Frazer Lake Fish Pass ^c	25-May	10-Aug	58	122,585	0	0	4
Upper Station (Olga Creek)	18-May	11-Sep	1	193,060	7,394	1,360	7
Litnik (Afognak River) ^d	5-May	27-Jul	0	32,459	4	0	6
Buskin River	18-May	29-Sep	0	11,584	2,513	21,442	34
Lake Louise ^e	27-Jun	13-Sep	0	156	0	0	0
Saltery River ^f	16-Jun	2-Aug	0	57,867	0	2,133	0
Pasagshak River	13-Jun	16-Aug	2	7,053	5	2	1
Pauls Bay	28-May	13-Aug	0	19,255	6,710	1,250	221
Totals			8,125	1,187,795	30,655	575,274	3,785

^a Counts may include estimates of escapement after weirs were removed.

^b Some sockeye salmon that pass Dog Salmon weir are not counted at Frazer Lake fish pass due to mortality or failure to migrate up the fish pass are not likely to spawn; the Frazer Lake fish pass count is considered the best escapement estimate of sockeye salmon, and the Dog Salmon sockeye salmon count is omitted from the totals.

^c Salmon counted at the Frazer Lake fish pass were initially counted at the Dog Salmon weir, and all species except sockeye salmon are not included in totals.

^d Litnik sockeye salmon total reflects 708 fish removed for KRAA hatchery broodstock.

^e All species of salmon, with the exception of sockeye salmon, were already counted at the lower Buskin River weir and are not included in totals.

^f Saltery system sockeye salmon total reflects 3,490 fish removed for KRAA hatchery broodstock.

Table 5.—Indexed salmon escapements by species in the Kodiak Management Area, 1979–2016.

Year	Number of salmon					
	Chinook	Sockeye	Coho	Pink	Chum	Total
1979	14,445	1,417,055	94,155	3,063,724	613,325	5,202,704
1980	5,853	1,816,487	27,300	6,401,258	829,070	9,079,968
1981	15,657	1,391,588	61,150	3,190,677	741,978	5,401,050
1982	10,929	1,604,026	86,497	5,370,249	1,023,923	8,095,624
1983	27,447	1,296,118	100,913	2,095,104	825,564	4,345,146
1984	14,411	1,470,230	119,811	4,519,966	604,441	6,728,859
1985	13,891	2,557,363	193,224	3,209,450	723,402	6,697,330
1986	11,025	2,020,773	160,505	3,926,175	688,705	6,807,183
1987	23,669	1,544,688	169,554	3,018,455	514,763	5,271,129
1988	35,015	1,666,319	92,652	3,773,072	614,332	6,181,390
1989 ^a	26,131	3,021,252	165,387	14,645,387	1,432,609	19,290,766
1990	25,996	1,978,885	163,717	6,074,372	474,618	8,717,588
1991	27,306	2,416,005	259,850	4,317,610	887,736	7,908,507
1992	19,013	1,947,247	287,746	3,512,074	530,128	6,296,208
1993	22,122	1,679,319	159,998	4,291,581	234,381	6,387,401
1994	21,591	1,985,432	201,033	3,637,615	521,691	6,367,362
1995	30,843	1,814,290	231,205	10,498,232	469,856	13,044,426
1996	21,089	1,803,929	193,074	3,349,738	394,784	5,762,614
1997	28,534	1,725,309	235,039	3,260,029	459,293	5,708,204
1998	24,652	1,769,131	234,734	7,088,985	374,381	9,491,883
1999	26,872	2,112,665	133,398	4,081,686	882,257	7,236,878
2000	31,362	1,742,208	136,423	4,508,174	888,592	7,306,759
2001	18,753	1,417,344	250,552	3,390,773	557,925	5,635,347
2002	20,115	1,604,130	171,471	8,399,602	530,591	10,725,909
2003	25,548	2,159,040	122,824	5,096,762	380,523	7,784,697
2004	32,939	1,730,489	71,456	8,786,518	533,091	11,154,493
2005	13,488	1,515,916	106,363	4,039,674	244,255	5,919,696
2006	7,467	984,658	64,954	5,842,942	787,549	7,687,570
2007	8,441	1,260,920	49,848	2,550,653	294,342	4,164,204
2008	3,916	931,517	66,200	3,174,124	223,907	4,399,664
2009	4,053	1,118,444	109,190	5,138,889	293,145	6,663,721
2010	8,569	1,095,458	108,081	3,644,133	300,285	5,156,526

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Table 5.–Page 2 of 2.

Year	Number of salmon					
	Chinook	Sockeye	Coho	Pink	Chum	Total
2011	7,820	1,014,840	83,812	2,780,214	422,130	4,308,816
2012	8,110	1,302,793	119,672	5,524,374	341,334	7,296,283
2013	4,291	1,326,677	77,310	5,071,191	397,499	6,876,968
2014	2,139	1,641,574	85,000	2,987,932	245,920	4,962,565
2015	5,250	1,515,837	38,356	6,369,131	441,576	8,370,150
2016	8,126	1,285,363	65,837	1,764,586	202,485	3,326,397
<u>Average—Previous 10 Years:</u>						
2006–2015	6,006	1,219,272	80,242	4,308,358	374,769	5,988,647
Odd Years Only				4,382,016		
Even Years Only				4,234,701		
<u>Average—Previous Decades:</u>						
2000–2009	16,608	1,446,467	114,928	5,092,811	473,392	7,144,206
1990–1999	24,802	1,923,221	209,979	5,011,192	522,913	7,692,107
1980–1989	18,403	1,838,884	117,699	5,014,979	799,879	7,789,845
<u>Average—Overall:</u>						
1979–2015	17,534	1,659,458	136,012	4,881,906	560,105	7,255,016

Note: Data include peak counts from aerial and foot surveys, plus end-of-season totals from weired systems, except upriver sport harvest of Chinook salmon, which is deducted from weir counts.

^a Commercial fisheries were severely restricted in 1989 due to the M/V Exxon Valdez oil spill. Despite this, 1989 data are included in applicable averages.

Table 6.—Commercial salmon harvest by species in the Kodiak Management Area, 1882–2016.

Year	Number of salmon ^a					Total
	Chinook	Sockeye	Coho	Pink	Chum	
1882	-	58,800	-	-	-	58,800
1883	-	188,706	-	-	-	188,706
1884	-	282,184	-	-	-	282,184
1885	-	468,580	-	-	-	468,580
1886	-	646,100	-	-	-	646,100
1887	-	1,004,500	-	-	-	1,004,500
1888	-	2,781,100	-	-	-	2,781,100
1889	-	3,754,735	-	-	-	3,754,735
1890	-	3,592,707	-	-	-	3,592,707
1891	-	3,846,388	-	-	-	3,846,388
1892	-	3,126,459	-	-	-	3,126,459
1893	-	3,244,609	-	-	-	3,244,609
1894	-	3,830,336	-	-	-	3,830,336
1895	-	2,246,966	8,321	-	-	2,255,287
1896	-	3,328,846	-	-	-	3,328,846
1897	-	2,785,515	1,500	-	-	2,787,015
1898	-	2,033,094	19,175	-	-	2,052,269
1899	1,104	1,934,771	32,475	-	-	1,968,350
1900	4,838	3,450,480	32,239	-	-	3,487,557
1901	3,838	4,826,159	-	2,015	-	4,832,012
1902	2,932	3,868,101	34,972	-	-	3,906,005
1903	1,187	1,826,163	119,541	10,000	-	1,956,891
1904	3,190	2,875,118	103,136	5,180	-	2,986,624
1905	2,496	2,142,367	86,913	-	-	2,231,776
1906	3,640	3,980,462	23,738	-	-	4,007,840
1907	4,015	4,232,454	38,059	-	-	4,274,528
1908	3,028	2,487,848	73,789	286,374	-	2,851,039
1909	3,907	1,915,230	51,500	153,595	-	2,124,232
1910	1,598	1,954,717	44,291	215,382	-	2,215,988
1911	689	2,685,949	21,870	229,551	6,492	2,944,551
1912	686	2,246,467	17,491	547,171	24,588	2,836,403
1913	1,082	1,663,163	27,634	590,039	3,822	2,285,740
1914	1,329	1,255,444	32,063	1,726,411	13,094	3,028,341
1915	939	1,664,426	51,819	252,073	20,331	1,989,588
1916	1,038	3,373,055	49,683	3,181,890	28,962	6,634,628
1917	1,457	3,645,914	30,485	225,335	15,961	3,919,152
1918	2,021	1,894,466	78,169	2,467,325	81,699	4,523,680
1919	1,831	1,619,101	104,233	282,715	60,102	2,067,982
1920	1,637	1,957,636	88,970	1,977,421	55,175	4,080,839
1921	660	2,857,922	45,764	67,688	24,779	2,996,813
1922	703	1,097,359	119,724	2,766,257	223,970	4,208,013
1923	1,915	1,090,117	77,554	928,510	38,653	2,136,749
1924	1,002	1,407,525	120,686	5,435,091	117,883	7,082,187
1925	1,911	1,693,057	92,960	2,673,675	212,492	4,674,095

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Table 6.–Page 2 of 4.

Year	Number of salmon ^a					Total
	Chinook	Sockeye	Coho	Pink	Chum	
1926	596	3,015,366	174,475	4,606,694	324,706	8,121,837
1927	4,358	1,155,202	151,548	5,297,305	417,956	7,026,369
1928	2,546	1,592,003	290,645	1,535,313	726,480	4,146,987
1929	3,200	712,126	144,226	6,108,402	1,057,662	8,025,616
1930	4,991	466,409	228,800	1,651,398	419,011	2,770,609
1931	1,541	1,183,074	170,075	6,839,906	183,737	8,378,333
1932	1,873	1,058,446	52,192	4,719,939	237,023	6,069,473
1933	1,140	1,428,373	91,428	6,573,660	536,935	8,631,536
1934	1,300	1,828,953	89,588	7,641,891	661,341	10,223,073
1935	1,393	1,613,519	76,849	10,780,612	381,753	12,854,126
1936	2,548	2,657,195	183,903	5,647,726	328,218	8,819,590
1937	1,257	1,881,304	164,902	16,787,150	346,238	19,180,851
1938	1,232	1,965,943	154,959	8,397,981	640,119	11,160,234
1939	2,272	1,786,445	112,171	11,741,218	641,693	14,283,799
1940	1,233	1,318,233	148,016	9,997,899	673,265	12,138,646
1941	2,571	1,730,201	199,515	7,601,531	444,521	9,978,339
1942	1,329	1,281,529	106,865	6,092,526	564,924	8,047,173
1943	1,133	1,990,557	59,661	12,479,608	454,205	14,985,164
1944	668	1,817,875	51,675	4,955,354	506,703	7,332,275
1945	2,021	2,041,090	60,122	9,044,544	559,332	11,707,109
1946	129	838,863	56,425	9,545,871	298,486	10,739,774
1947	99	993,394	76,230	8,856,666	294,518	10,220,907
1948	1,401	1,260,465	32,364	5,968,487	330,795	7,593,512
1949	851	892,336	53,737	4,927,779	699,548	6,574,251
1950	2,127	920,885	40,653	5,304,701	685,109	6,953,475
1951	2,402	467,875	48,792	2,100,377	483,057	3,102,503
1952	1,081	603,677	51,567	4,576,726	1,243,227	6,476,278
1953	2,991	317,150	41,681	5,174,645	547,574	6,084,041
1954	942	325,157	66,430	8,439,231	1,250,833	10,082,593
1955	2,428	164,482	34,582	10,794,164	482,425	11,478,081
1956	1,123	271,249	52,844	3,318,841	705,047	4,349,104
1957	1,030	234,253	34,995	4,716,482	1,208,472	6,195,232
1958	1,942	288,014	20,555	4,038,938	930,698	5,280,147
1959	1,837	330,087	14,512	1,967,058	733,784	3,047,278
1960	1,238	362,525	54,308	6,737,817	1,300,386	8,456,274
1961	864	407,979	28,579	3,926,023	518,935	4,882,380
1962	1,095	784,664	54,583	14,113,851	794,727	15,748,920
1963	286	407,040	57,011	5,480,158	305,061	6,249,556
1964	1,306	498,488	35,535	12,044,341	1,134,163	13,713,833
1965	786	346,237	26,672	2,886,831	431,340	3,691,866
1966	599	631,646	67,700	10,755,582	762,766	12,218,293
1967	1,753	308,756	10,354	187,813	226,681	735,357
1968	1,936	760,393	56,629	8,768,122	750,428	10,337,508
1969	2,469	591,481	48,759	12,500,823	534,933	13,678,465

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Table 6.–Page 3 of 4.

Year	Number of salmon ^a					Total
	Chinook	Sockeye	Coho	Pink	Chum	
1970	1,089	917,045	66,421	12,035,549	919,102	13,939,206
1971	920	478,479	22,844	4,334,492	1,541,444	6,378,179
1972	1,300	222,408	16,587	2,478,064	1,163,426	3,881,785
1973	800	167,341	3,573	511,708	317,921	1,001,343
1974	545	418,761	13,631	2,647,196	249,294	3,329,427
1975	101	136,418	23,659	294,280	84,431	3,187,410
1976	766	641,484	23,714	11,077,992	740,495	12,484,451
1977	585	623,468	27,920	6,252,405	1,072,313	7,976,691
1978	3,228	1,071,782	48,795	15,004,065	814,345	16,942,215
1979	1,907	630,756	140,629	11,285,809	358,336	12,417,437
1980	529	651,394	139,154	17,290,615	1,075,557	19,157,249
1981	1,418	1,288,949	121,544	10,336,747	1,345,313	13,093,971
1982	1,214	1,203,787	344,823	8,089,780	1,262,587	10,902,191
1983	3,839	1,231,989	157,612	4,603,371	1,085,165	7,081,976
1984	4,657	1,950,439	229,524	10,844,293	649,092	13,678,005
1985	4,970	1,842,731	284,166	7,334,825	430,757	9,897,449
1986	4,381	3,188,046	168,690	11,807,727	1,134,372	16,303,216
1987	4,613	1,794,224	192,433	4,920,365	680,994	7,592,629
1988	22,374	2,698,349	303,267	14,262,355	1,426,400	18,712,745
1989	106	1,289,511	2,599	6,825,124	19,972	8,137,312
1990	18,808	5,247,569	293,819	5,983,812	577,748	12,121,756
1991	22,234	5,702,754	324,860	16,642,836	1,029,057	23,721,741
1992	24,299	4,166,762	280,085	3,310,639	679,540	8,461,325
1993	41,029	4,377,523	313,467	34,019,390	588,328	39,339,737
1994	22,576	2,876,878	296,311	8,162,564	738,851	12,097,180
1995	18,704	4,487,568	307,795	42,849,294	1,522,786	49,186,147
1996	13,071	4,968,954	201,836	3,486,930	543,729	9,214,520
1997	18,728	2,503,423	381,005	11,035,023	520,264	14,458,443
1998	17,341	3,623,031	425,143	22,062,465	316,107	26,444,087
1999	18,299	4,650,738	296,979	11,898,307	913,817	17,778,140
2000	12,293	2,905,403	332,998	9,927,374	1,194,414	14,372,482
2001	23,827	2,657,601	407,977	19,567,052	1,053,691	23,710,148
2002	19,263	1,824,848	496,073	18,327,818	650,144	21,318,146
2003	18,531	4,041,886	339,457	14,065,615	1,151,757	19,617,246
2004	28,899	4,165,880	489,871	21,440,641	1,121,855	27,247,146
2005	14,411	3,047,142	396,030	30,139,434	477,416	34,074,433
2006	20,283	1,583,876	553,524	31,693,347	1,081,989	34,933,019
2007	17,222	2,012,564	356,063	24,809,213	728,912	27,923,974
2008	17,176	1,819,143	300,793	8,788,655	908,035	11,833,802
2009	7,219	1,726,971	288,744	27,648,943	955,808	30,627,685
2010	14,550	1,436,606	266,431	8,864,796	734,806	11,317,189
2011	18,454	2,266,651	188,474	16,642,402	823,202	19,939,183
2012	14,785	2,232,441	208,514	16,873,244	866,381	20,195,365

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Table 6.—Page 4 of 4.

Year	Number of salmon ^a					Total
	Chinook	Sockeye	Coho	Pink	Chum	
2013	34,028	2,573,757	268,799	28,192,164	794,054	31,862,802
2014	8,382	3,259,037	472,035	10,674,898	336,572	14,750,924
2015	8,087	3,097,344	396,145	33,024,992	770,539	37,297,107
2016	7,478	2,063,566	206,542	3,245,549	403,879	5,927,014
<u>Averages^b</u>						
2006–2015	16,019	2,200,839	392,952	20,721,265	800,030	24,068,105
Even Years, 2006–2014				15,378,988		
Odd Years, 2007–2015				26,063,543		
1882–2015	5,848	1,900,829	140,831	8,798,615	626,134	9,797,536
1949–2015	8,831	1,732,251	183,526	11,681,096	805,460	14,411,163
Even Years, 1950–2014				10,704,029		
Odd Years, 1949–2015				12,658,162		

Source: 1882–1947 data are from processors' case pack information. 1948–2016 data are from ADF&G fish ticket summaries and are considered more accurate than previous data.

^a Harvest numbers include cost-recovery harvest but do not include subsistence or test fishery catches or commercially caught fish retained for personal use.

^b Averages do not include 1989. Commercial fisheries were severely limited due to the M/V Exxon Valdez oil spill.

Table 7.—Summary of limited entry permit activity in the commercial salmon fishery by gear type in the Kodiak Management Area, 1980–2016.

Year	Purse seine		Beach seine		Set gillnet		Total		
	Available	Fished	Available	Fished	Available	Fished	Available	Fished	Percent
1980	387	370	35	33	187	168	609	571	94
1981	387	325	35	30	187	169	609	524	86
1982	386	345	35	30	187	170	608	545	90
1983	383	342	35	27	188	174	606	543	90
1984	384	296	35	25	188	168	607	489	81
1985	384	270	35	21	188	169	607	460	76
1986	385	287	35	14	187	174	607	475	78
1987	386	298	35	18	188	173	609	489	80
1988	387	323	35	21	188	180	610	524	86
1989 ^a	387	5	35	1	189	87	611	93	15
1990	388	354	35	21	189	184	612	559	91
1991	388	348	35	17	189	185	612	550	90
1992	387	335	35	12	189	178	611	525	86
1993	387	324	36	9	190	176	613	509	83
1994	387	285	36	5	190	169	613	459	75
1995	386	312	36	8	189	173	611	493	81
1996	384	261	36	6	189	172	609	439	72
1997	384	261	36	5	188	174	608	440	72
1998	384	217	36	2	188	171	608	390	64
1999	384	220	36	4	188	173	608	397	65
2000	383	223	34	2	188	173	605	398	66
2001	384	182	34	0	188	172	606	354	58
2002	382	149	34	0	188	93	604	242	40
2003	377	143	33	0	188	161	598	304	51
2004	375	140	32	0	188	164	595	304	51
2005	374	135	31	0	188	165	593	300	51
2006	375	130	31	1	188	153	594	284	48
2007	377	140	31	3	188	157	596	300	50
2008 ^b	374	128	31	0	188	148	593	276	47
2009 ^b	374	157	31	1	188	132	593	290	49
2010 ^b	374	155	31	2	188	158	593	315	53
2011	376	175	31	7	188	157	595	339	57
2012	376	168	31	4	188	164	595	336	56
2013	376	170	31	3	188	152	595	325	55
2014	373	184	31	3	188	146	592	333	56

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Table 7.–Page 2 of 2.

Year	Purse Seine		Beach Seine		Set Gillnet		Total		
	Available	Fished	Available	Fished	Available	Fished	Available	Fished	Percent
2015	372	181	31	1	188	154	591	336	57
2016	374	165	30	3	188	137	592	305	52
<u>Recent 10-year Average:</u>									
2006–2015	375	159	31	3	188	152	594	313	53
<u>Average-Previous Decades:</u>									
2000–2009	378	153	32	1	188	152	598	305	51
1990–1999	386	292	36	9	189	176	611	476	78
1980–1988 ^a	385	317	35	24	188	172	608	513	84
<u>Average^a-Overall:</u>									
1980–2015	381	238	34	10	188	164	603	412	68

Source: Commercial Fisheries Entry Commission Summary Information and Reports (CFEC 2016) and ADF&G fish ticket summaries.

^a Commercial fisheries were severely restricted in 1989 due to the M/V Exxon Valdez oil spill. 1989 data are not included in averages.

^b From 2008 to 2010, a provision allowing set gillnet permit holders to fish two permits has resulted in the second permit not being recorded in the harvest data. This provision was discontinued before the 2011 season.

Table 8.—Alaska Board of Fisheries—approved salmon management plans for the Kodiak Management Area, 2016.

Management plan	Year initiated	Management units affected	Dates in effect
Cape Igvak Salmon	1978	Cape Igvak Section Wide Bay Section	6/5–7/25
Alitak District Salmon	1987	Alitak District	6/1–10/31
Westside Kodiak Salmon	1990	NW Kodiak District SW Kodiak District SW Afognak Section	6/1–10/31
Crescent Lake Coho Salmon	1990	Special Harvest Area in the Central Section near Port Lions	7/15–10/31
North Shelikof Strait Sockeye Salmon	1991	SW Afognak Section NW Afognak Section Shuyak Island Section Big River Section Hollo Bay Section Inner and Outer Kukak Bay Sections Dakavak Bay Section	7/6–7/25
Spiridon Bay Sockeye Salmon	1993	Special Harvest Area in Spiridon Bay Section	6/9–10/31
Eastside Afognak Salmon	1993	Southeast Afognak Section Kitoi Bay Section Izhut Bay Section Duck Bay Section Raspberry Strait Section	6/1–10/31
Eastside Kodiak Salmon	1995	Eastside Kodiak District NE Kodiak District	6/14–10/31
Afognak Shuyak Salmon	1995	Perenosa Bay Section Shuyak Island Section NW Afognak Section	6/1–10/31
Mainland District Salmon	1999	Mainland District	6/14–10/31

Table 9.—Projected versus actual 2016 commercial salmon harvest, by species and fishery, for the Kodiak Management Area.

	Number of salmon					
	Chinook	Sockeye	Coho	Pink	Chum	Total
Projected Harvest 2016 ^a	15,000	3,408,000	330,000	16,193,000	643,000	20,589,000
Actual Harvest 2016	7,478	2,063,566	206,540	3,280,808	403,879	5,962,271
	2016 Harvest					
Fishery	Projection ^b			Actual ^c		
Early Sockeye Salmon Fisheries (6/1–7/15 except Cape Igvak which is 6/1–6/26)						
Kitoi Bay Hatchery ^d	70,000			25,461		
Cape Igvak ^e	211,000			154,318		
Karluk ^f	159,000			300,046		
Ayakulik ^g	160,000			48,619		
Alitak District ^h	182,000			86,867		
Minor Enhancement ⁱ	32,000			8,794		
Spiridon ^j	79,200			39,894		
Other ^k	819,000			185,247		
Subtotal	1,712,200			849,246		
Late Sockeye Salmon Fisheries (7/16–10/31 except Cape Igvak which is 7/8–7/25)						
Kitoi Bay Hatchery ^d	30,000			21,411		
Cape Igvak ^e	73,000			177,315		
Karluk ^f	675,000			556,931		
Ayakulik ^g	106,000			93,128		
Alitak District ^h	80,000			96,428		
Spiridon ^j	185,000			134,772		
Other ^k	547,000			134,335		
Subtotal	1,696,000			1,214,320		
Total Sockeye	3,408,200			2,063,566		
Coho Salmon Fisheries						
Kitoi Bay Hatchery ^d	113,000			11,788		
Afognak (non-hatchery) ^l	23,000			39,025		
Westside Kodiak ^m	117,000			98,286		
Alitak District	7,000			7,686		
Eastside/Northend Kodiak ⁿ	57,000			30,804		
Mainland District	13,000			18,953		
Subtotal	330,000			206,542		

-continued-

Table 9.—Page 2 of 2.

Fishery	2016 Harvest	
	Projection ^b	Actual ^c
Pink Salmon Fisheries		
Kitoi Bay Hatchery ^d	4,293,000	1,145,234
Afognak (non-hatchery) ⁱ	1,290,000	532,588
Westside Kodiak ^m	7,925,000	1,090,581
Alitak District ⁿ	1,163,000	182,615
Eastside/Northend Kodiak ⁿ	1,172,000	204,434
Mainland District	350,000	90,097
Subtotal/Wild stock pinks	11,900,000	2,100,315
Subtotal/all pinks	16,193,000	3,245,549
Chum Salmon Fisheries		
Kitoi Bay Hatchery ^d	72,000	72,554
Afognak (non-hatchery) ⁱ	37,000	21,922
Westside Kodiak ^m	210,000	165,915
Alitak District	34,000	12,197
Eastside/Northend Kodiak ⁿ	225,000	63,401
Mainland District	65,000	67,890
Subtotal	643,000	403,879
Grand Total ^o	20,590,089	5,927,014

^a Includes commercial harvest, test fisheries, and cost-recovery harvests, but does not include subsistence, sport, or personal use fisheries.

^b Projected harvests for enhanced and major sockeye systems are based on formal forecasts for those individual stocks (total run minus escapement); the projected harvest from minor sockeye systems and other salmon species are based on less formal escapement-to-return relationships, environmental factors, and interspecies competition (Brenner and Munro 2016).

^c Actual harvest is the number of fish taken in a particular geographic area, not the catch assigned to an individual salmon stock.

^d From the Duck Bay, Izhut Bay, and Inner and Outer Kitoi Bay sections only.

^e From the Cape Igvak Section. Early run is from the beginning of the season through June 26. Late run is from July 8 to July 25.

^f From the Southwest Afognak Section, Northwest Kodiak District (except for Spiridon and Settler Cove Special Harvest Areas), Inner and Outer Karluk sections, plus 50% of Halibut Bay Section from June 21 to July 15 and 100% after July 31 minus the estimated contribution from the Spiridon SHA. Includes the majority of Karluk sockeye salmon harvest.

^g From the Outer and Inner Ayakulik sections, plus 50% of Halibut Bay Section from June 21 to July 15 and 100% from July 16–31.

^h From the Alitak District.

ⁱ From the Foul Bay, Waterfall Bay, and Settler Cove Special Harvest Areas.

^j From the Spiridon Bay Special Harvest Area (Telrod Cove), plus an estimate of the Spiridon-bound sockeye contributing to the Westside Kodiak fishery.

^k Includes sockeye salmon harvested from minor systems at Inner and Outer Ugak Bay (Saltery), Buskin River, Perenosa Bay (Portage), Northwest Afognak (Thorsheim & Long Lagoon), Big River (Swikshak), and Outer Kukak Bay (Kafliia and Kuliuk) sections and migrating fish of undetermined origin.

^l From the Afognak District except the Duck Bay, Izhut Bay, and Inner and Outer Kitoi Bay sections.

^m From the Southwest Kodiak District (all 255s and 256s) and the Northwest Kodiak District (all 253s and 254s), except for the North Cape, Anton Larsen Bay, Sharatin Bay, and Kizhuyak Bay sections and part of the Central Section (259-30 to 259-39).

ⁿ From the Eastside Kodiak District (all 258s, and 259-40 to 259-42), Northeast Kodiak District (259-21 to 259-27, 259-10), and the North Cape, Anton Larsen Bay, Sharatin Bay and Kizhuyak Bay sections, plus part of the Central Section (259-30 to 259-39)

^o Includes the projected 2016 harvest of 15,000 Chinook salmon and the actual harvest of 7,478 Chinook salmon.

Table 10.—Commercial salmon buyers and processing plants active in the Kodiak Management Area, by geographic area and type, 2016.

Buyers/Processors	Shore-based Processors			Floating Processors		
	Kodiak City	Kodiak Borough	Other Areas	Kodiak City	Kodiak Borough	Other Areas
Icicle Seafoods		X				
Alaska Pacific Seafoods	X					
International Seafoods of Alaska	X					
Ocean Beauty Seafoods Kodiak	X					
Ocean Beauty Seafoods Alitak		X				
Global Seafoods Kodiak	X					
Pacific Seafoods Kodiak	X					
Trident Star of Kodiak	X					
Wildsource	X					
Half Moon Bay Fisheries		X				
Cami O		X				
Richard Blanc Akhiok Skiff		X				
Peterson Plus				X		
Adelia Myrick		X				
Tollef Monson		X				
Totals	7	7	0	1	0	0

Table 11.—Commercial salmon harvest and value, by gear and species, in the Kodiak Management Area, 2016.

	Number of salmon						
	Chinook	Sockeye	Coho	Pink	Chum	Total	
Purse							
Total # ^a	5,755	1,515,938	171,477	1,894,194	301,815	3,889,179	78.0
<u>Avg. wt.</u>	<u>8.15</u>	<u>5.19</u>	<u>7.35</u>	<u>4.51</u>	<u>6.77</u>		
Total lb ^a	46,918	7,873,281	1,260,863	8,549,018	2,042,831	19,772,911	78.2
<u>Avg. \$/lb ^b</u>	<u>\$1.93</u>	<u>\$0.98</u>	<u>\$0.60</u>	<u>\$0.21</u>	<u>\$0.28</u>		
Exvessel Value (\$)	\$90,551.74	\$7,715,815.38	\$756,517.80	\$1,795,293.78	\$571,992.68	\$10,930,171.38	75.3
# of Permits = 165							
Average Value (\$)	\$548.80	\$46,762.52	\$4,584.96	\$10,880.57	\$3,466.62	\$66,243.46	
Percent (%)	0.8	70.6	6.9	16.4	5.2	100.0	
Beach Seine							
Total # ^a	0	4,734	1	2,451	37	7,223	0.1
<u>Avg. wt.</u>	<u>0</u>	<u>4.26</u>	<u>10.00</u>	<u>4.33</u>	<u>6.14</u>		
Total lb ^a	0	20,149	10	10,623	227	31,009	0.1
<u>Avg. \$/lb ^b</u>	<u>\$0.00</u>	<u>\$0.95</u>	<u>\$0.00</u>	<u>\$0.20</u>	<u>\$0.30</u>		
Exvessel Value (\$)	\$0.00	\$19,141.55	\$0.00	\$2,124.60	\$68.10	\$21,334.25	0.1
# of Permits = 3							
Average Value (\$)	\$0.00	\$6,380.52	\$0.00	\$708.20	\$22.70	\$7,111.42	
Percent (%)	0.0	89.7	0.0	10.0	0.3	100.0	
Set Gillnet							
Total # ^a	1,715	457,910	28,043	500,715	99,156	1,087,539	21.8
<u>Avg. wt.</u>	<u>9.25</u>	<u>5.17</u>	<u>7.30</u>	<u>4.39</u>	<u>7.11</u>		
Total lb ^a	15,869	2,366,454	204,683	2,199,492	704,662	5,491,160	21.7
<u>Avg. \$/lb ^b</u>	<u>\$1.93</u>	<u>\$1.16</u>	<u>\$0.43</u>	<u>\$0.21</u>	<u>\$0.33</u>		
Exvessel Value (\$)	\$30,627.17	\$2,745,086.64	\$88,013.69	\$461,893.32	\$232,538.46	\$3,558,159.28	24.5
# of Permits = 137							
Average Value (\$)	\$223.56	\$20,037.13	\$642.44	\$3,371.48	\$1,697.36	\$25,971.97	
Percent (%)	0.9	77.1	2.5	13.0	6.5	100.0	
Total All Gear							
Total # ^a	7,470	1,978,582	199,521	2,397,360	401,008	4,983,941	100.0
<u>Avg. wt.</u>	<u>8.41</u>	<u>5.19</u>	<u>7.35</u>	<u>4.49</u>	<u>6.85</u>		
Total Lbs. ^a	62,787	10,259,884	1,465,556	10,759,133	2,747,720	25,295,080	100.0
<u>Avg. \$/lb ^b</u>	<u>\$1.93</u>	<u>\$1.02</u>	<u>\$0.58</u>	<u>\$0.21</u>	<u>\$0.29</u>		
Exvessel Value (\$)	\$121,178.91	\$10,480,043.57	\$844,531.49	\$2,259,311.70	\$804,599.24	\$14,509,664.91	100.0
% of Total Value	0.8	72.2	5.8	15.6	5.5	100.0	

^a Numbers and pounds of fish are derived from ADF&G fish ticket summaries. There were 6,559 fish tickets generated in 2016; each ticket represents a landing. Each gear type had the following landings: Purse Seine – 3,120; Beach Seine – 21; Set Gillnet – 3,418. Numbers do not include commercially harvested salmon retained for personal use or subsistence, sport fishery, or cost-recovery harvests.

^b Figures for average price per pound are based on fish ticket information. Some fish tickets may not show price per pound figures. These average prices may not reflect payments made to fishermen for refrigerated or iced fish, dock deliveries, or postseason settlements.

Table 12.—Commercial salmon harvest, in numbers of fish, exvessel value of the harvest in dollars, and value of average permit holder harvest by gear type, in the Kodiak Management Area, 2006–2016.

Year	Total Catch ^a	Total Value ^b	Average Exvessel Value ^c		
			Purse Seine	Gillnet	Beach Seine
2006	32,595,862	\$24,820,388	\$150,038	\$33,926	^d
2007	26,239,484	\$28,174,695	\$148,504	\$41,404	\$3,484
2008	10,127,638	\$25,806,691	\$143,819	\$43,202	\$0
2009	28,338,446	\$33,698,297	\$174,566	\$44,918	^d
2010	10,291,590	\$24,269,085	\$130,009	\$25,728	^d
2011	18,228,922	\$44,247,720	\$225,633	\$31,155	\$13,750
2012	19,032,409	\$44,988,487	\$219,164	\$52,084	\$16,367
2013	30,145,552	\$59,391,598	\$304,526	\$55,673	\$24,487
2014	13,995,803	\$42,806,102	\$183,451	\$61,504	\$23,796
2015	34,353,663	\$34,381,769	\$163,566	\$29,953	^d
2016	5,031,781	\$14,509,665	\$66,243	\$25,972	\$7,111
Recent 10-year average ^e					
2006–2015	22,334,937	\$36,258,483	\$184,328	\$41,955	\$13,188

^a Number of fish. Does not include fish retained for personal use, ADF&G test fishery, or cost-recovery harvests.

^b Exvessel value is based on inseason price estimates and do not include postseason adjustments or are adjusted for inflation.

^c Exvessel values are based on fish ticket information. These average values may not reflect payments made to harvesters for iced fish or dock deliveries, and does not include any postseason adjustments or adjustments due to inflation.

^d Confidential data.

^e Beach Seine recent 10-year average exvessel value does not include years in which no permit made a delivery.

Table 13.—Subsistence salmon fishery harvest from ADF&G permit reports, by species, for the Kodiak Management Area, 1978–2015.

Year	Permits issued	Permits returned	Percent returned	Number of salmon					
				Chinook	Sockeye	Coho	Pink	Chum	Total
1978	860	539	63	50	7,239	3,699	2,747	572	14,307
1979	1,085	697	64	111	10,376	3,840	3,300	333	17,960
1980	1,239	756	61	67	13,746	4,407	2,755	566	21,541
1981	1,166	658	56	49	12,924	4,029	2,458	484	19,944
1982	1,276	993	78	110	16,615	7,192	3,558	667	28,142
1983	1,307	1,082	83	111	15,526	6,283	2,536	800	25,256
1984	1,240	1,061	86	265	17,620	5,808	1,877	720	26,290
1985	1,476	1,196	81	172	16,231	8,873	2,756	855	28,887
1986	1,244	996	80	90	14,391	6,998	2,371	605	24,455
1987	1,124	878	78	101	13,198	6,463	2,421	1,299	23,482
1988	^a	2,066	-	108	10,081	4,291	1,320	371	16,171
1989	^{a,b}	1,994	-	43	12,638	4,123	1,553	419	18,776
1990	^a	2,340	-	131	17,959	8,627	1,605	655	28,977
1991	^a	2,660	-	177	21,835	8,208	1,743	714	32,677
1992	^a	2,614	-	318	20,684	8,643	1,646	643	31,934
1993	^a	1,774	-	243	19,471	7,176	2,696	838	30,424
1994	^c	2,550	60	205	17,962	7,491	1,758	440	27,856
1995	^c	1,950	62	175	19,416	5,603	1,548	293	27,035
1996	^c	1,567	90	253	28,287	5,117	1,125	381	35,163
1997	^c	2,098	76	383	33,293	6,369	1,458	234	41,737
1998	^c	1,845	57	350	20,459	5,348	1,412	214	27,783
1999	^c	1,422	87	397	26,534	4,974	1,229	388	33,522
2000	^c	1,710	84	351	31,667	6,383	977	375	39,753
2001	^c	2,376	83	273	33,878	5,920	1,158	427	41,656
2002	^c	2,276	90	588	33,844	6,175	1,665	350	42,622
2003	^c	2,268	90	510	32,193	6,098	1,509	388	40,698
2004	^c	2,239	92	379	30,503	5,857	1,403	261	38,403
2005	^c	2,290	85	434	27,664	7,703	2,350	592	38,743
2006	^c	2,096	91	280	22,985	6,640	1,827	441	32,173
2007	^c	2,096	92	207	25,656	4,715	1,585	266	32,429
2008	^c	2,037	85	159	21,852	4,570	1,180	186	27,947
2009	^c	1,926	92	176	23,134	4,127	1,926	345	29,708
2010	^c	2,022	93	158	22,200	4,200	1,266	273	28,097
2011	^c	2,210	90	122	34,037	2,367	1,199	198	37,923
2012	^c	2,120	88	54	24,006	2,920	1,154	166	28,300
2013	^c	2,079	82	119	27,764	2,528	826	175	31,412
2014	^c	1,996	83	183	22,594	3,915	573	184	27,449
2015	^c	1,798	84	186	16,043	3,045	1,168	271	20,713
<u>Recent 10-year average</u>									
2005-2014	2,088	1,843	88	188	25,194	4,365	1,383	279	31,409
species composition by percent				1%	80%	14%	5%	1%	100%
<u>Averages^b - Previous decades:</u>									
1990–1999	1,905	1,742	91	263	22,590	6,756	1,622	480	31,448
1980–1988	1,259	1,076	85	119	14,481	6,038	2,450	707	23,677
1970–1979	973	618	64	81	8,808	3,770	3,024	453	16,053
<u>Average^b - overall</u>									
1978–2015	1,780	1,565	80	218	21,885	5,653	1,802	463	30,021

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Table 13.—Page 2 of 2.

Source: 1981 and 1986 to 2014 data is from the ADF&G subsistence permit database. Data from all other years is from Area Management Reports (AMRs). In some cases, AMRs may show slightly higher harvests than the permit database, likely due to late permits that may not have been entered into the system. The harvest information is only from those permits that were returned, so it may not represent the total KMA subsistence salmon harvest.

- ^a Permits were mailed to all previous applicants, totaling approximately 2,800. Many were returned as undeliverable. Those names were removed from subsequent mailing lists. Accurate counts of the number of permits issued were not kept.
- ^b In 1989 harvest patterns were unusual due to the M/V *Exxon Valdez* oil spill. 1989 data is not included in averages. There was also an Exxon-sponsored subsistence fishery in Karluk Lagoon, and those harvests are not included. Harvest totaled an additional 1 Chinook, 13,329 sockeye, 523 coho, 47 pink, and 19 chum salmon.
- ^c In 1994, the salmon and shellfish subsistence permitting programs were merged. Since then, the total number of permits includes permits mailed to all previous permit holders and permits issued by ADF&G staff in the City of Kodiak and Kodiak Island villages.

Table 14.—Retention of salmon taken in commercial salmon fisheries but not sold, by species, for the Kodiak Management Area, 1997–2016.

Year	Permits	Landings	Number of salmon ^a					Total
			Chinook	Sockeye	Coho	Pink	Chum	
1997	10	10	7	678	91	6	2	784
1998	4	5	8	26	9	0	0	43
1999 ^b								
2000 ^b								
2001	9	14	16	465	1,215	0	33	1,729
2002	33	56	57	5,447	7,542	566	0	13,612
2003 ^c	36	87	72	11,025	12,310	1,492	86	24,985
2004	13	39	8	3,052	290	253	10	3,613
2005	16	37	54	4,432	811	4,385	11	9,693
2006	31	52	100	1,442	2,786	1,140	128	5,596
2007	13	25	26	1,577	520	2,246	8	4,377
2008	19	40	76	2,513	681	0	0	3,270
2009	23	38	49	1,393	936	1,002	6	3,386
2010	42	75	160	2,330	2,976	6,267	15	11,748
2011	57	117	161	1,314	2,009	6,390	67	9,941
2012	57	137	195	4,116	1,971	1,413	31	7,726
2013	64	152	592	3,032	1,164	5,721	1,067	11,576
2014	77	159	189	3,371	2,230	3,035	18	8,843
2015	70	155	293	3,231	1,551	4,008	740	9,823
2016	63	133	239	3,270	1,175	571	172	5,427
10-year Average								
2006–2015	45	95	184	2,432	1,682	3,122	208	7,629

Source: ADF&G fish ticket database.

^a This is the number of salmon taken by CFEC permit holders with commercial gear during commercial fishing periods that was not sold but instead was kept for the crew's own use. Prior to 1997 this data was not recorded on ADF&G fish tickets.

^b Confidential data.

^c In 2003, there was concern that salmon taken as home pack were being custom-processed for later sale for consumptive use. In response, the Alaska Board of Fisheries adopted a regulation clearly stating that these fish were not to be sold or bartered (5 AAC 39.010).

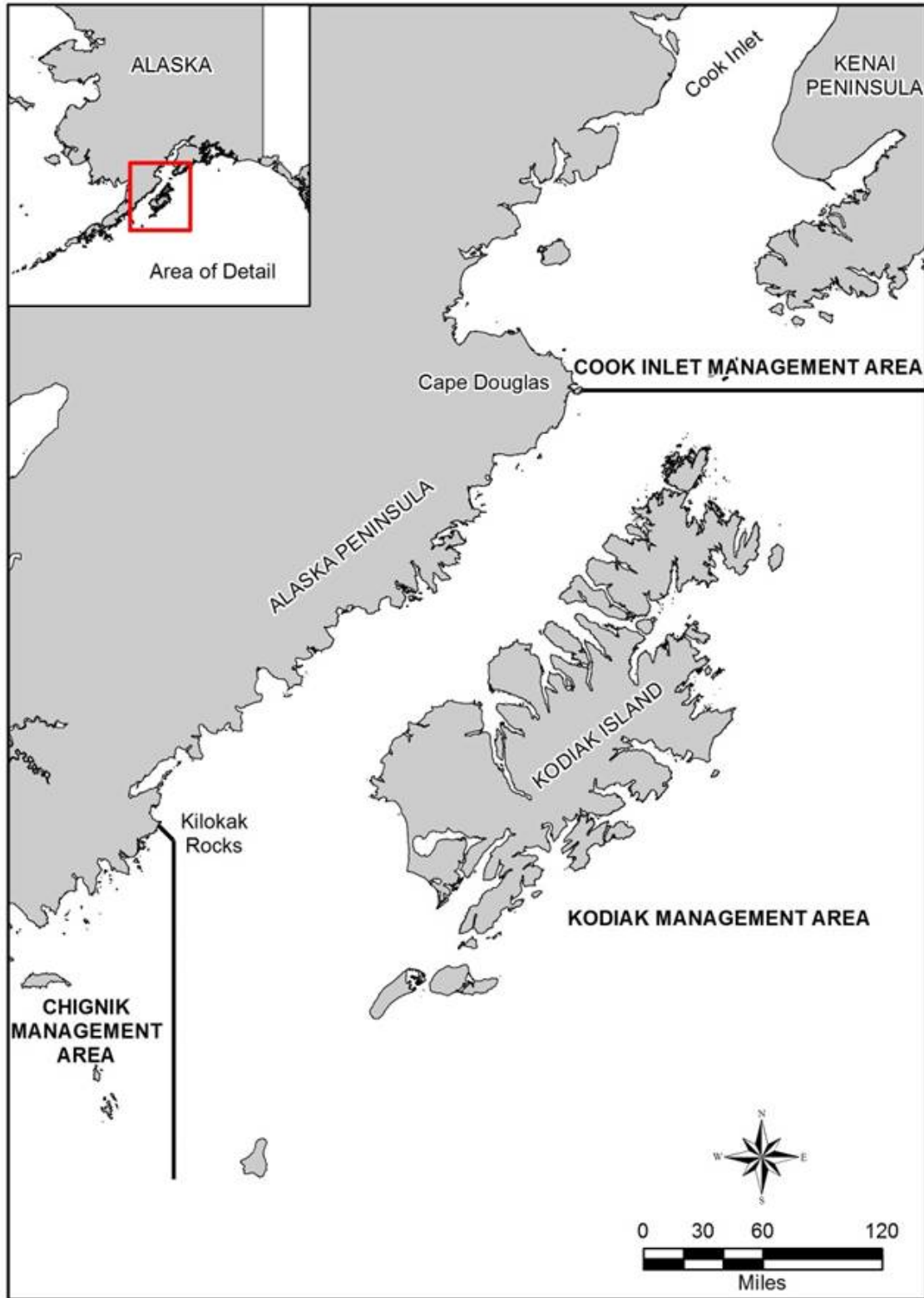


Figure 1.—Map of the Kodiak Management Area and neighboring management areas, 2016.

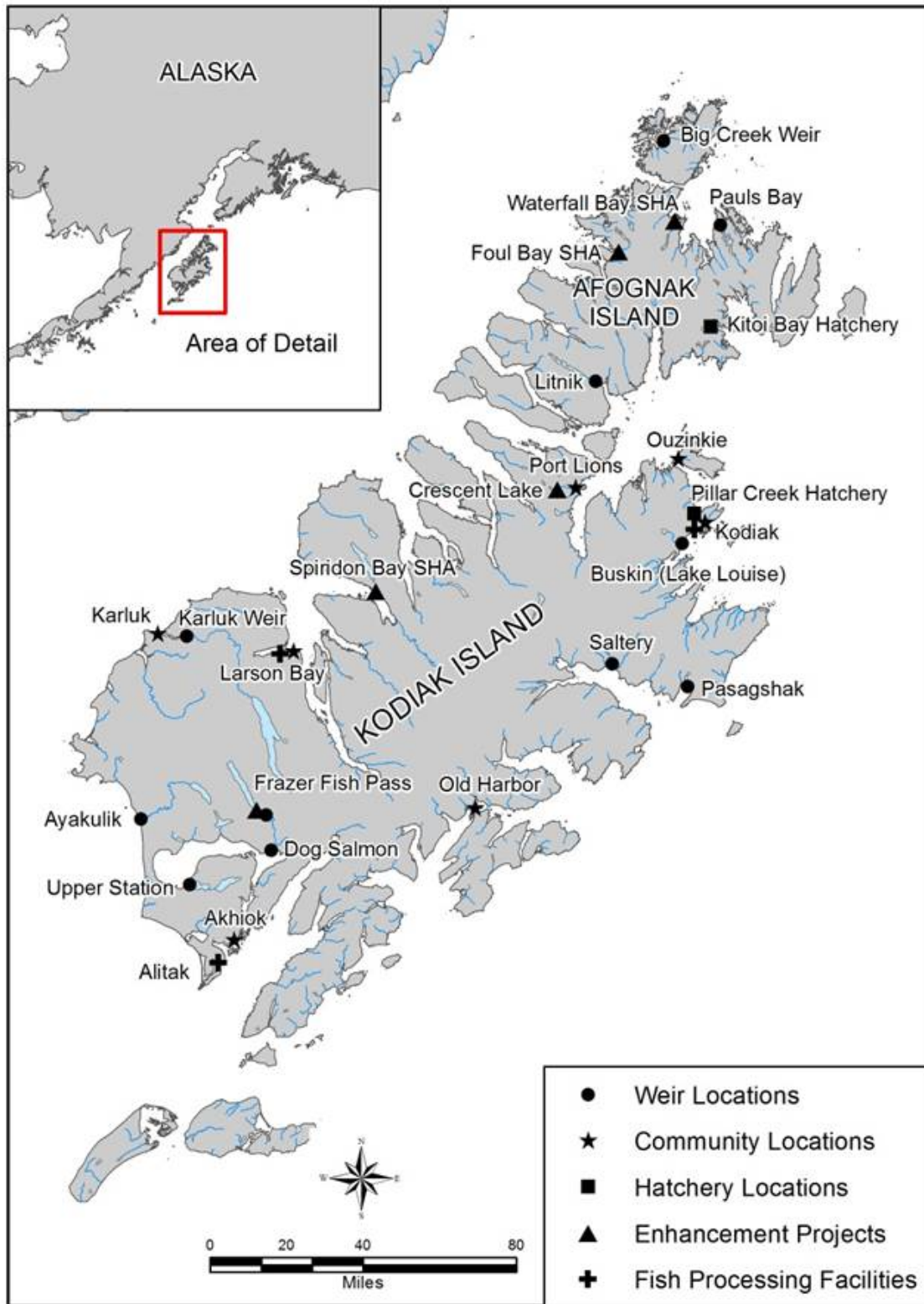


Figure 2.—Map of the Kodiak Archipelago showing communities, fish processing facilities, sockeye salmon enhancement projects, and weir and hatchery locations in the Kodiak Management Area, 2016.

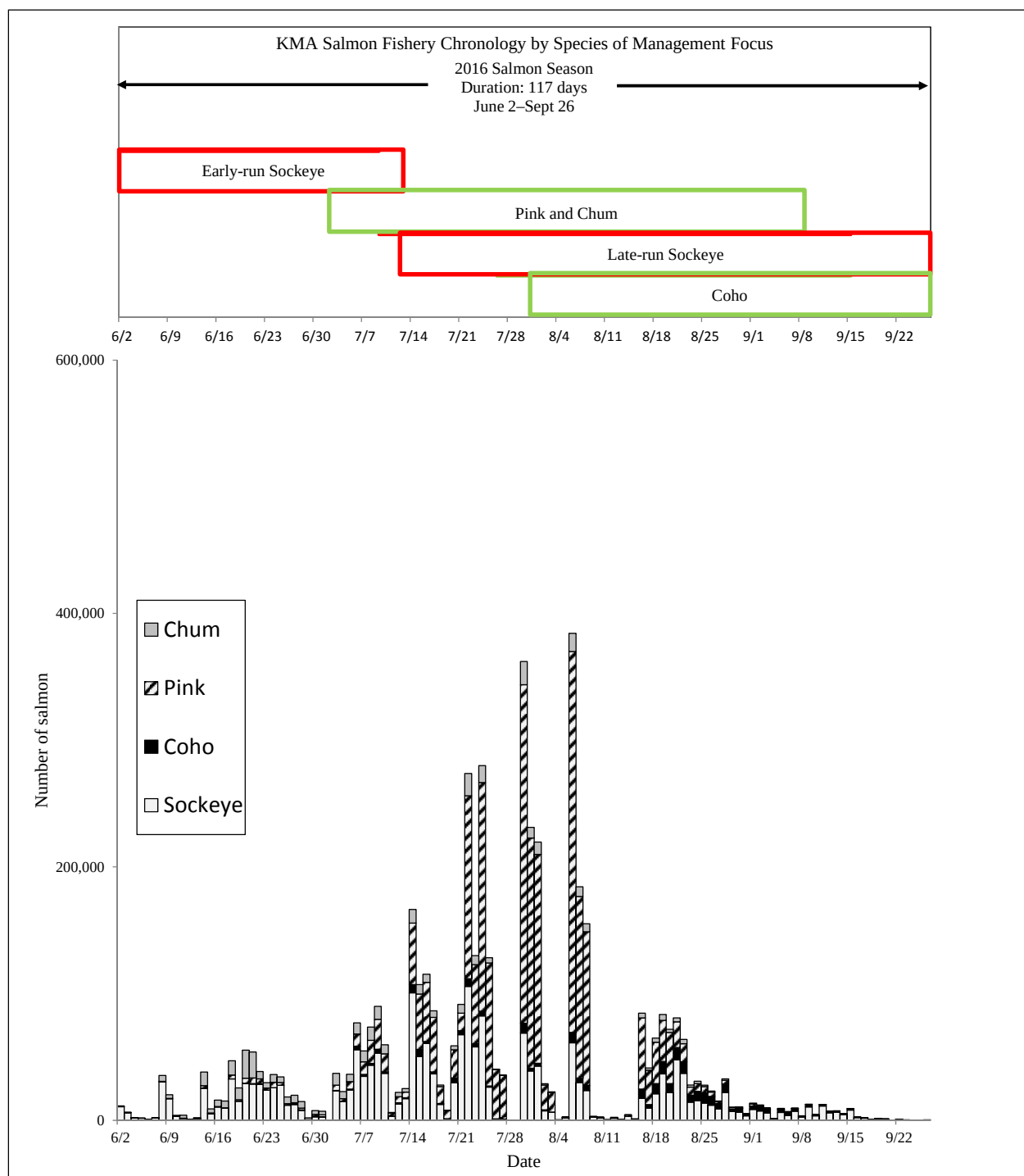
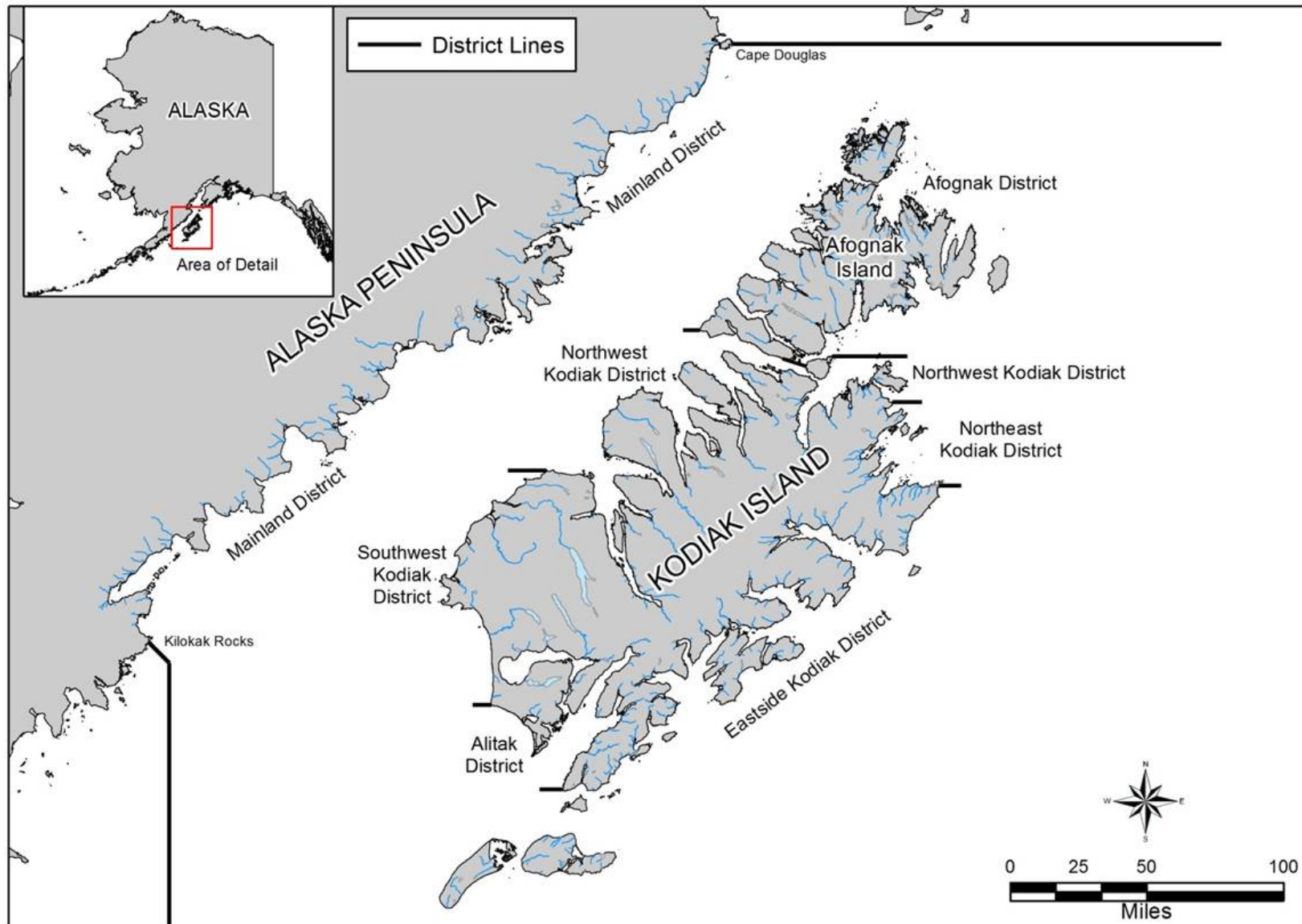


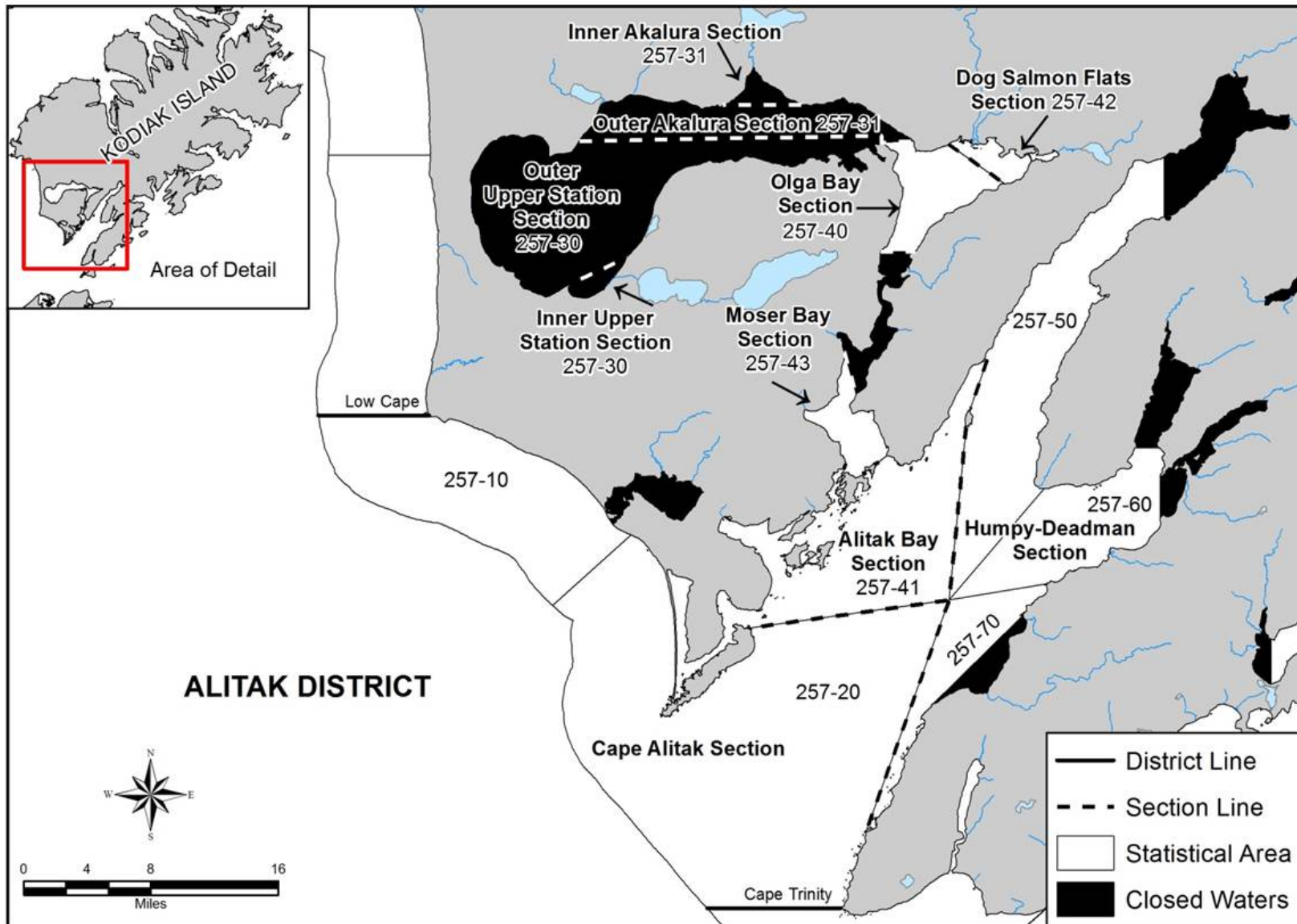
Figure 3.–Commercial salmon fishery chronology and daily harvest by date and species of management focus, Kodiak Management Area, 2016.

APPENDIX A. MAPS OF FISHING DISTRICTS

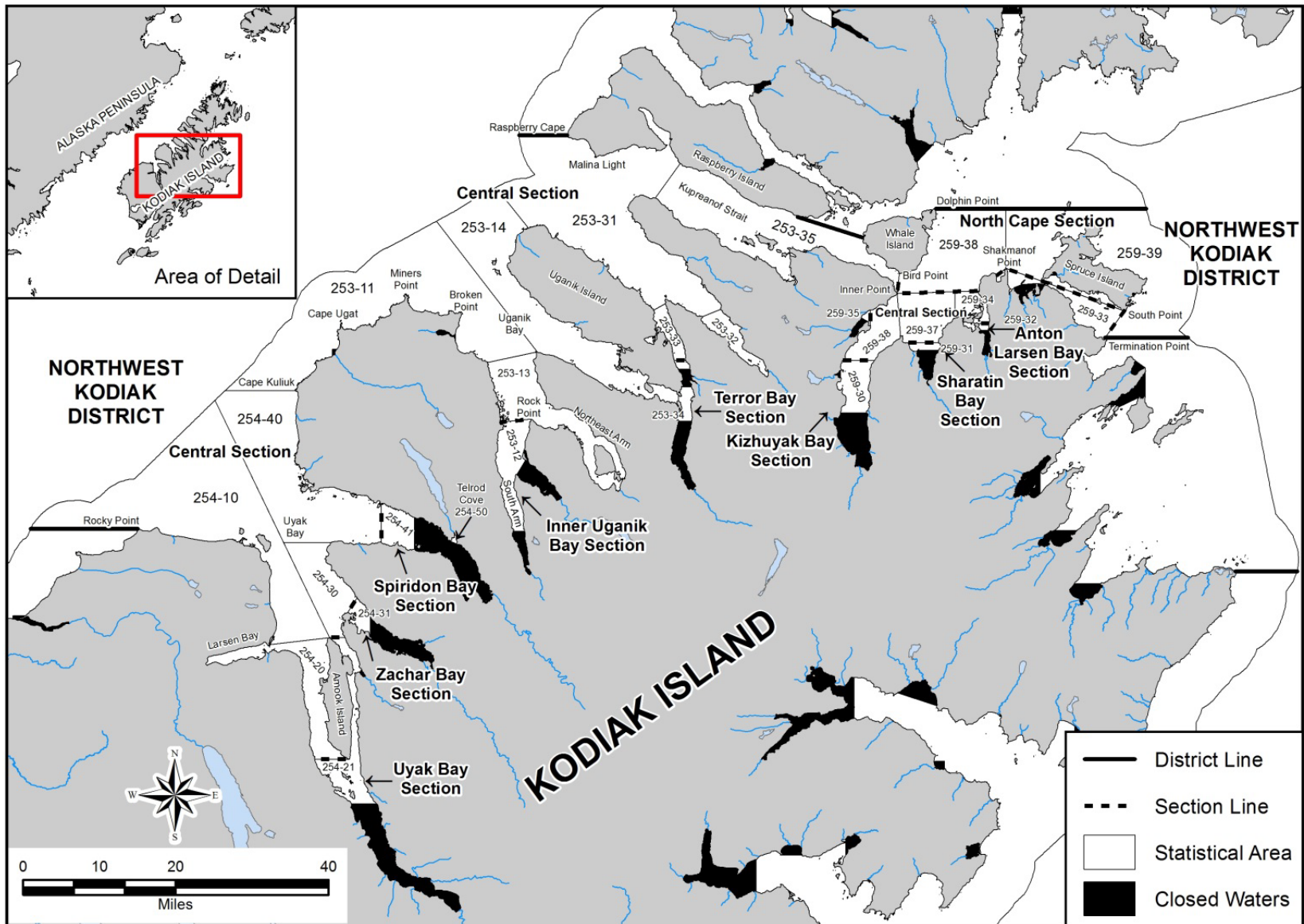
Appendix A1.—Map of the Kodiak Management Area commercial salmon fishing districts.



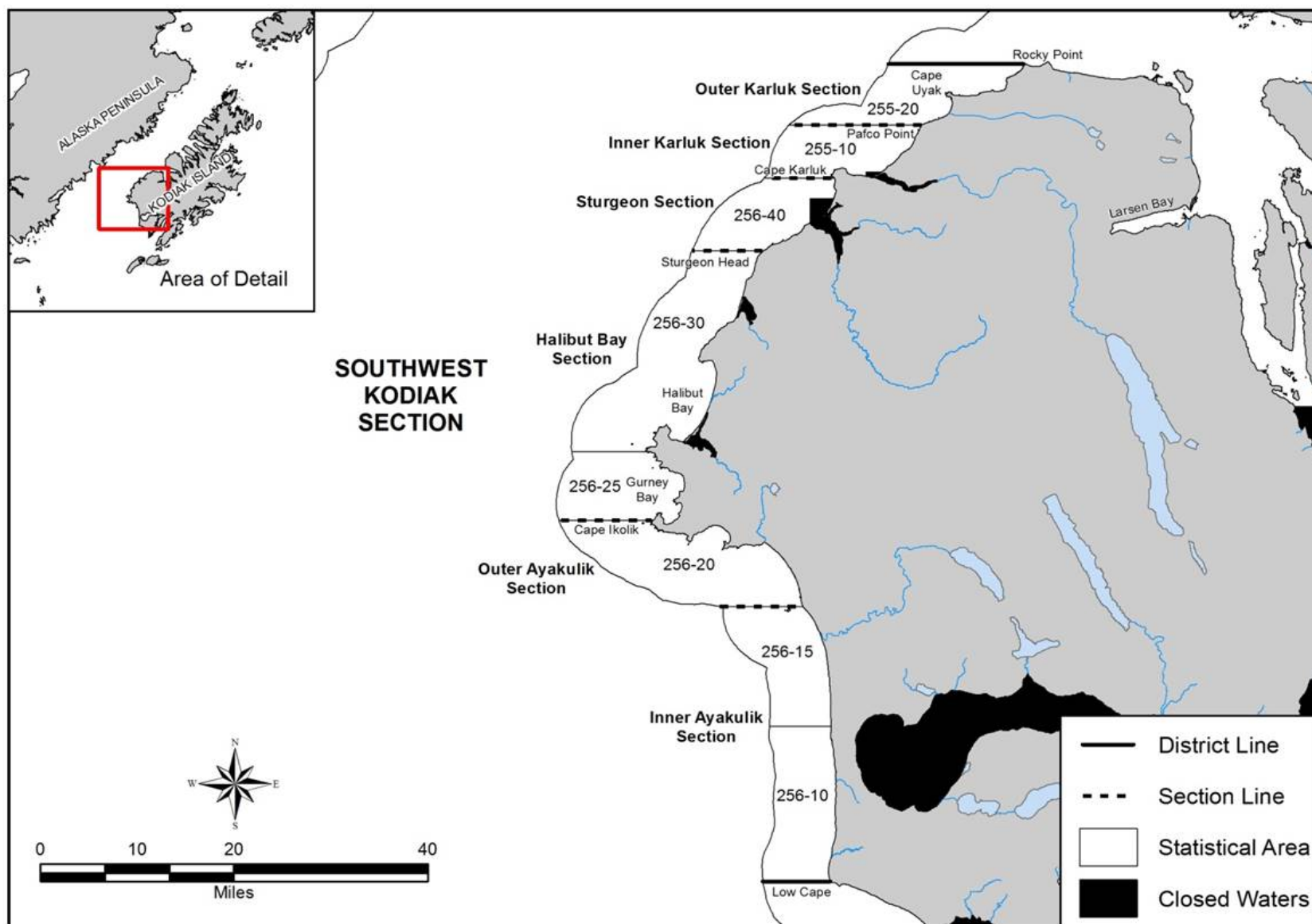
Appendix A2.—Map of the Alitak District commercial salmon fishing sections and statistical areas.



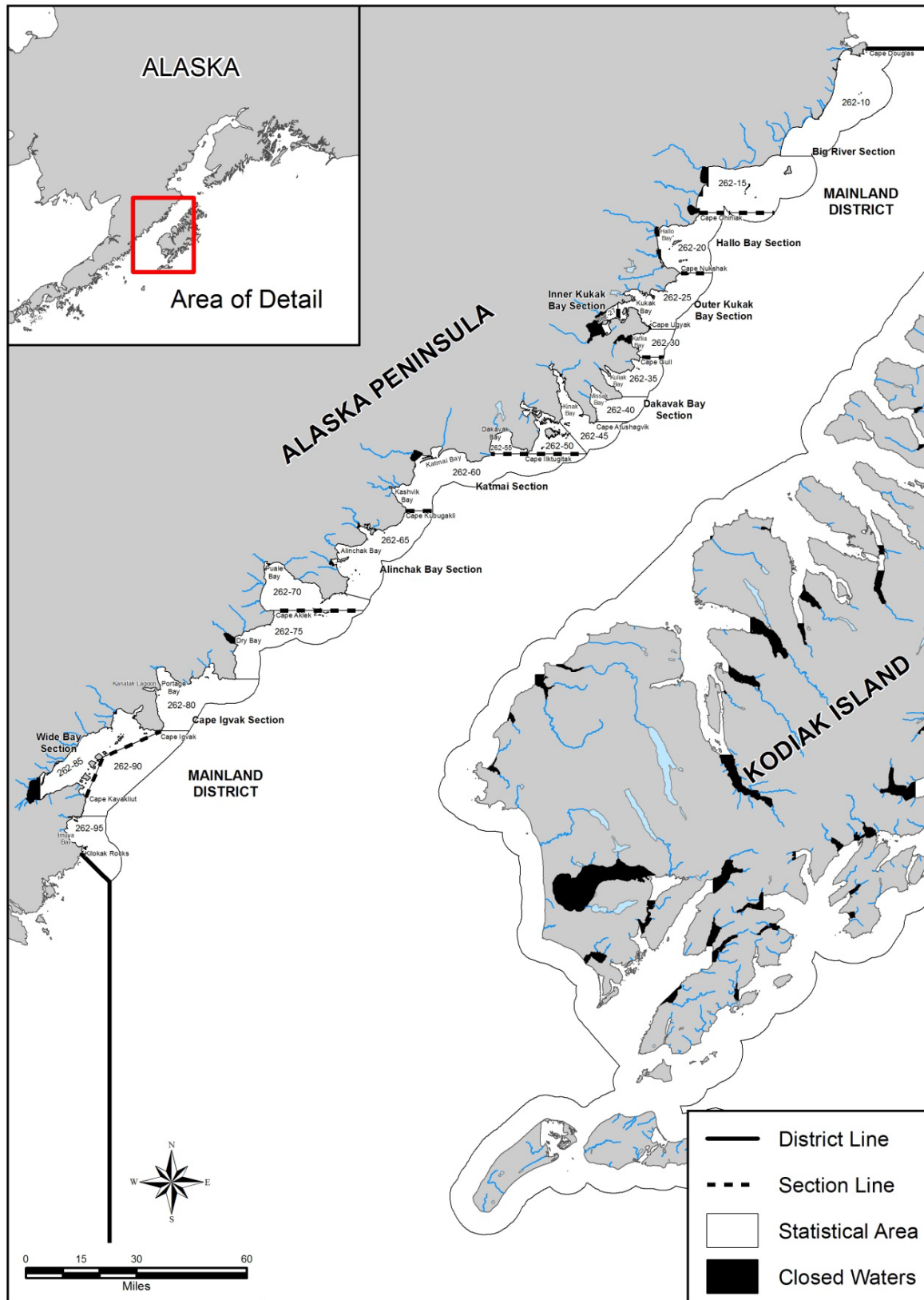
Appendix A3.—Map of the Northwest Kodiak District commercial salmon fishing sections and statistical areas.



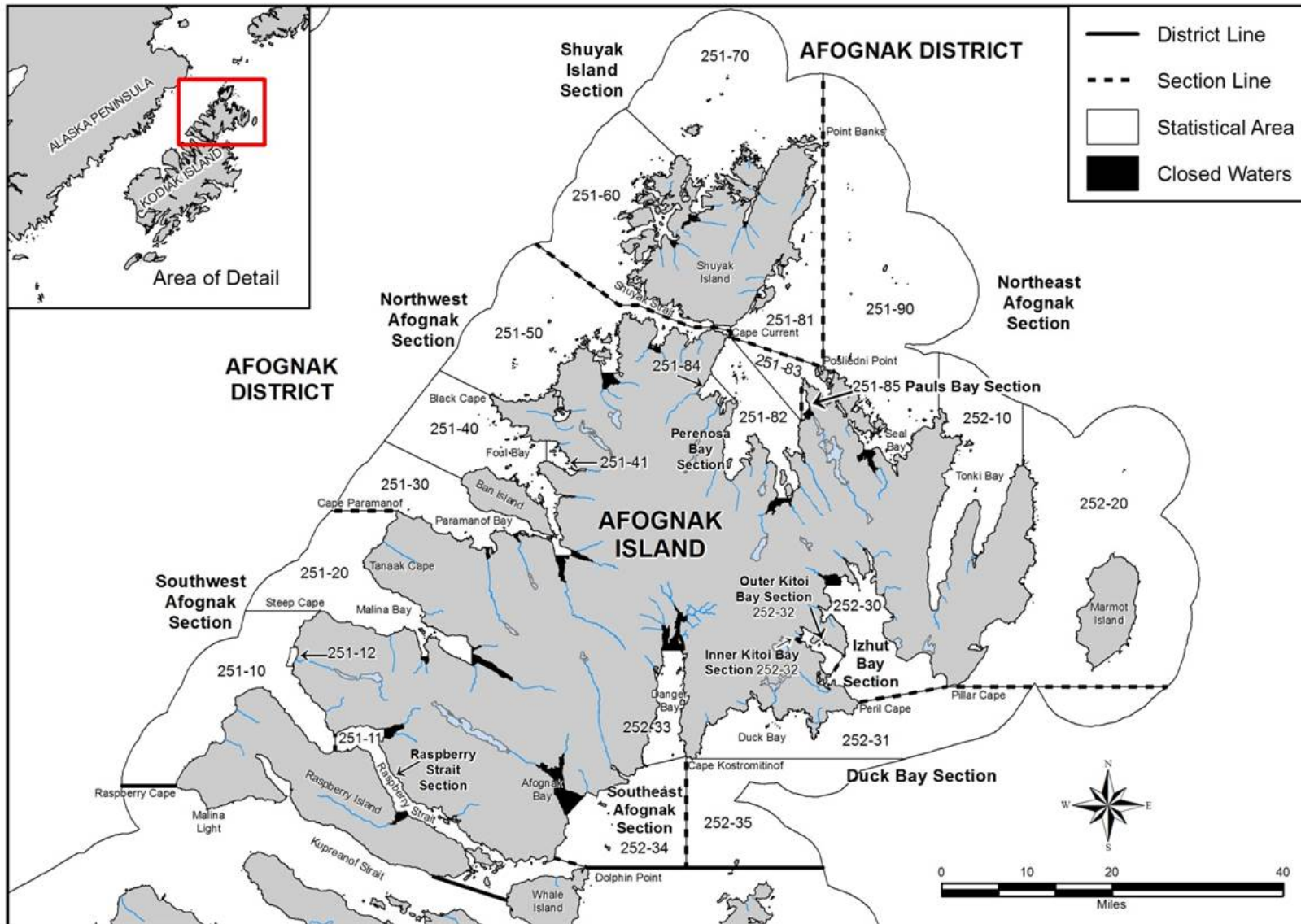
Appendix A4.—Map of the Southwest Kodiak District commercial salmon fishing sections and statistical areas.



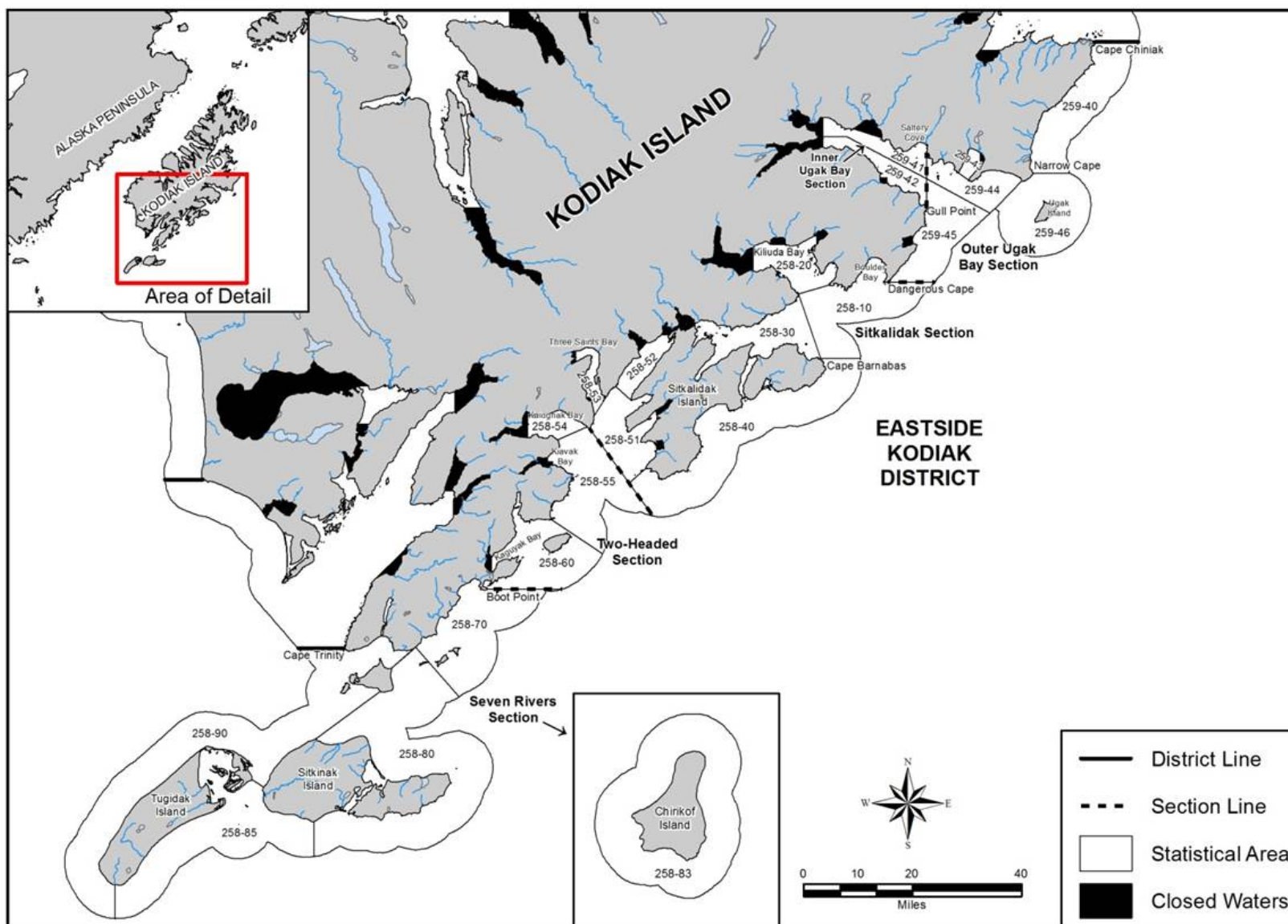
Appendix A5.—Map of the Mainland District commercial salmon fishing sections and statistical areas.



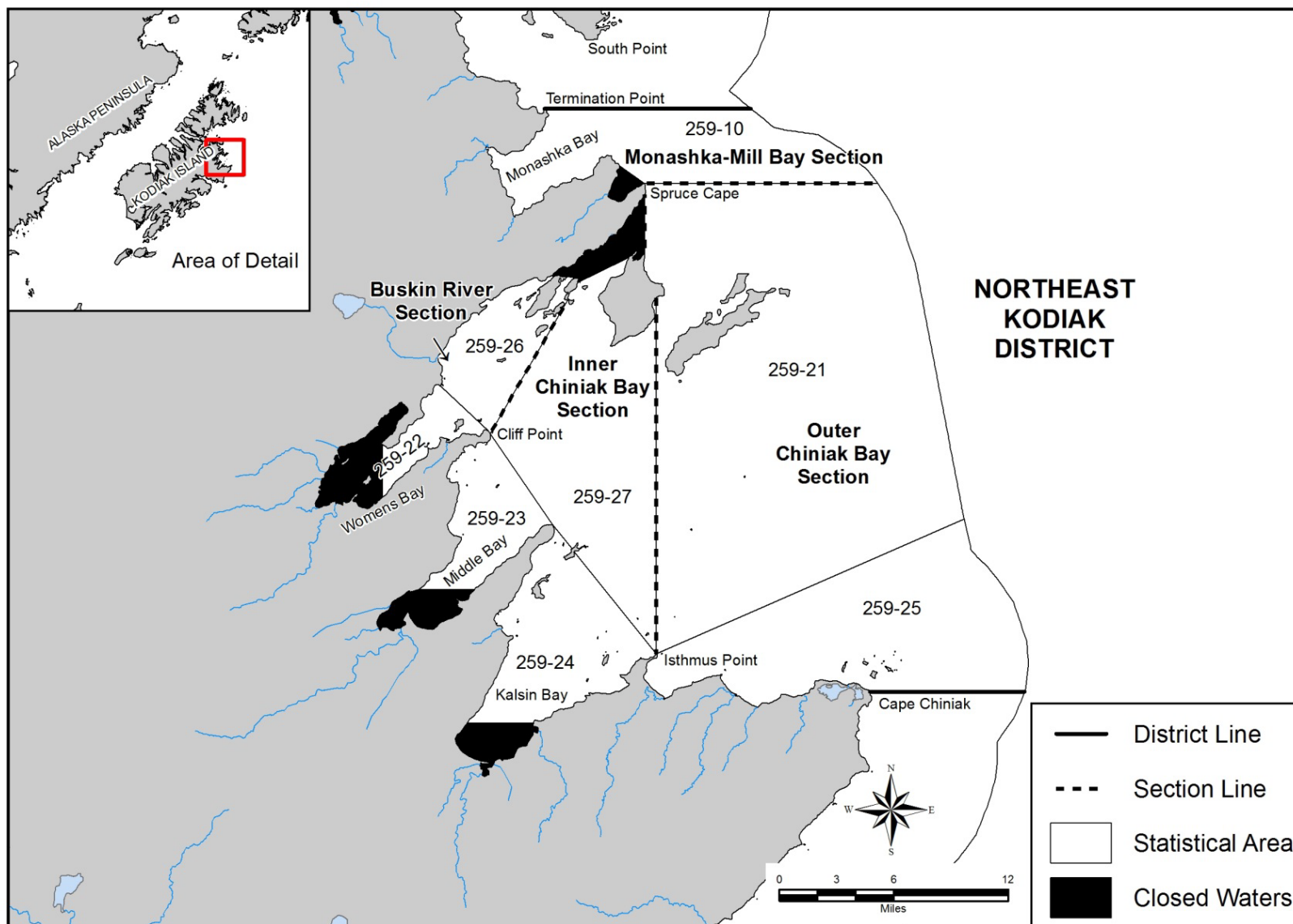
Appendix A6.—Map of the Afognak District commercial salmon fishing sections and statistical areas.



Appendix A7.—Map of the Eastside Kodiak District commercial salmon fishing sections and statistical areas.



Appendix A8.—Map of the Northeast Kodiak District commercial salmon fishing sections and statistical areas.



APPENDIX B. INSEASON MANAGEMENT ACTIONS

Appendix B1.—Commercial salmon fishing time, by district and section, in the Kodiak Management Area, 2016.

Districts/Sections		6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
Northwest Kodiak	Central																														
	North Cape																														
	Anton Larsen																														
	Sharatin Bay																														
	Kizhuyak																														
	Terror Bay																														
	Inner Uganik Bay																														
	Spiridon SHA																														
	Spiridon Bay																														
	Zachar Bay																														
	Uyak Bay																														
Southwest Kodiak		6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
	Outer Karluk																														
	Inner Karluk																														
	Sturgeon																														
	Halibut Bay																														
	Outer Ayakulik																														
	Inner Ayakulik																														
Alitak		6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
	Olga Bay																														
	Moser																														
	Alitak Bay																														
	Cape Alitak																														
	Humpy - Deadman																														
	Dog Salmon Flats																														
	Outer Akalura																														
	Inner Akalura																														
	Outer Upper Station																														
	Inner Upper Station																														
Eastside Kodiak		6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
	Seven Rivers																														
	Two-Headed																														
	Sitkalidak																														
	Outer Ugak Bay																														
	Inner Ugak Bay																														
	fishing time in entire section																														
	fishing time in partial section																														

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Appendix B1.–Page 2 of 8.

Districts/Sections		6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
Northeast Kodiak	Outer Chiniak Bay																														
	Inner Chiniak Bay																														
	Buskin River																														
	Monashka-Mill Bay																														
Afognak		6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
	Southeast Afognak																														
	Duck Bay																														
	Izhut Bay																														
	Inner Kitoi Bay																														
	Outer Kitoi Bay																														
	Northeast Afognak																														
	Pauls Bay																														
	Perenosa Bay																														
	Waterfall Bay SHA																														
	Shuyak Island																														
	Northwest Afognak																														
	Foul Bay SHA																														
	Southwest Afognak																														
	Malina THA																														
	Raspberry Strait																														
Mainland		6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
	Big River																														
	Hallo Bay																														
	Outer Kukak Bay																														
	Inner Kukak Bay																														
	Dakavak Bay																														
	Katmai																														
	Alinchak Bay																														
	Cape Igvak																														
	Wide Bay																														
fishing time in entire section																															
fishing time in partial section																															

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Appendix B1.–Page 3 of 8.

Districts/Sections		7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19	7/20	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	7/31
Northwestern Kodiak	Central																															
	North Cape																															
	Anton Larsen																															
	Sharatin Bay																															
	Kizhuyak																															
	Terror Bay																															
	Inner Uganik Bay																															
	Spiridon SHA																															
	Spiridon Bay																															
	Zachar Bay																															
	Uyak Bay																															
		7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19	7/20	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	7/31
Southwest Kodiak	Outer Karluk																															
	Inner Karluk																															
	Sturgeon																															
	Halibut Bay																															
	Outer Ayakulik																															
	Inner Ayakulik																															
		7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19	7/20	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	7/31
Alitak	Olga Bay																															
	Moser																															
	Alitak Bay																															
	Cape Alitak																															
	Humpy - Deadman																															
	Dog Salmon Flats																															
	Outer Akalura																															
	Inner Akalura																															
	Outer Upper Station																															
	Inner Upper Station																															
		7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19	7/20	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	7/31
Eastside Kodiak	Seven Rivers																															
	Two-Headed																															
	Sitkalidak																															
	Outer Ugak Bay																															
	Inner Ugak Bay																															
fishing time in entire section																																
fishing time in partial section																																

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Appendix B1.–Page 4 of 8.

Districts/Sections		7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19	7/20	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	7/31
Northeast Kodiak	Outer Chiniak Bay																															
	Inner Chiniak Bay																															
	Buskin River																															
	Monashka-Mill Bay																															
		7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19	7/20	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	7/31
Afognak	Southeast Afognak																															
	Duck Bay																															
	Izhut Bay																															
	Inner Kitoi Bay																															
	Outer Kitoi Bay																															
	Northeast Afognak																															
	Pauls Bay																															
	Perenosa Bay																															
	Waterfall Bay SHA																															
	Shuyak Island																															
	Northwest Afognak																															
	Foul Bay SHA																															
	Southwest Afognak																															
	Malina THA																															
	Raspberry Strait																															
		7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19	7/20	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	7/31
Mainland	Big River																															
	Hallo Bay																															
	Outer Kukak Bay																															
	Inner Kukak Bay																															
	Dakavak Bay																															
	Katmai																															
	Alinchak Bay																															
	Cape Igvak																															
	Wide Bay																															
fishing time in entire section																																
fishing time in partial section																																

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Appendix B1.–Page 5 of 8.

Districts/Sections		8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21	8/22	8/23	8/24	8/25	8/26	8/27	8/28	8/29	8/30	8/31
Northwest Kodiak	Central																															
	North Cape																															
	Anton Larsen																															
	Sharatin Bay																															
	Kizhuyak																															
	Terror Bay																															
	Inner Uganik Bay																															
	Spiridon SHA																															
	Spiridon Bay																															
	Zachar Bay																															
	Uyak Bay																															
Southwest Kodiak	Outer Karluk																															
	Inner Karluk																															
	Sturgeon																															
	Halibut Bay																															
	Outer Ayakulik																															
	Inner Ayakulik																															
Alitak	Olga Bay																															
	Moser																															
	Alitak Bay																															
	Cape Alitak																															
	Humpy - Deadman																															
	Dog Salmon Flats																															
	Outer Akalura																															
	Inner Akalura																															
	Outer Upper Station																															
	Inner Upper Station																															
Eastside Kodiak	Seven Rivers																															
	Two-Headed																															
	Sitkalidak																															
	Outer Ugak Bay																															
	Inner Ugak Bay																															
fishing time in entire section																																
fishing time in partial section																																

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Appendix B1.–Page 6 of 8.

Districts/Sections		8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21	8/22	8/23	8/24	8/25	8/26	8/27	8/28	8/29	8/30	8/31
Northeast Kodiak	Outer Chiniak Bay																															
	Inner Chiniak Bay																															
	Buskin River																															
	Monashka-Mill Bay																															
Afognak	Southeast Afognak																															
	Duck Bay																															
	Izhut Bay																															
	Inner Kitoi Bay																															
	Outer Kitoi Bay																															
	Northeast Afognak																															
	Pauls Bay																															
	Perenosa Bay																															
	Waterfall Bay SHA																															
	Shuyak Island																															
	Northwest Afognak																															
	Foul Bay SHA																															
	Southwest Afognak																															
	Malina THA																															
	Raspberry Strait																															
Mainland	Big River																															
	Hallo Bay																															
	Outer Kukak Bay																															
	Inner Kukak Bay																															
	Dakavak Bay																															
	Katmai																															
	Alinchak Bay																															
	Cape Igvak																															
	Wide Bay																															
fishing time in entire section																																
fishing time in partial section																																

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Appendix B1.–Page 7 of 8.

Districts/Sections		9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8	9/9	9/10	9/11	9/12	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20	9/21	9/22	9/23	9/24	9/25	9/26	9/27	9/28	9/29	9/30
Northwest Kodiak	Central																														
	North Cape																														
	Anton Larsen																														
	Sharatin Bay																														
	Kizhuyak																														
	Terror Bay																														
	Inner Uganik Bay																														
	Spiridon SHA																														
	Spiridon Bay																														
	Zachar Bay																														
	Uyak Bay																														
		9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8	9/9	9/10	9/11	9/12	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20	9/21	9/22	9/23	9/24	9/25	9/26	9/27	9/28	9/29	9/30
Southwest Kodiak	Outer Karluk																														
	Inner Karluk																														
	Sturgeon																														
	Halibut Bay																														
	Outer Ayakulik																														
	Inner Ayakulik																														
		9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8	9/9	9/10	9/11	9/12	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20	9/21	9/22	9/23	9/24	9/25	9/26	9/27	9/28	9/29	9/30
Alitak	Olga Bay																														
	Moser																														
	Alitak Bay																														
	Cape Alitak																														
	Humpy - Deadman																														
	Dog Salmon Flats																														
	Outer Akalura																														
	Inner Akalura																														
	Outer Upper Station																														
	Inner Upper Station																														
		9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8	9/9	9/10	9/11	9/12	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20	9/21	9/22	9/23	9/24	9/25	9/26	9/27	9/28	9/29	9/30
Eastside Kodiak	Seven Rivers																														
	Two-Headed																														
	Sitkalidak																														
	Outer Ugak Bay																														
	Inner Ugak Bay																														
fishing time in entire section																															
fishing time in partial section																															

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Appendix B1.–Page 8 of 8.

Districts/Sections		9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8	9/9	9/10	9/11	9/12	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20	9/21	9/22	9/23	9/24	9/25	9/26	9/27	9/28	9/29	9/30
Northeast Koodiak	Outer Chiniak Bay																														
	Inner Chiniak Bay																														
	Buskin River																														
	Monashka-Mill Bay																														
Afognak		9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8	9/9	9/10	9/11	9/12	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20	9/21	9/22	9/23	9/24	9/25	9/26	9/27	9/28	9/29	9/30
	Southeast Afognak																														
	Duck Bay																														
	Izhut Bay																														
	Inner Kitoi Bay																														
	Outer Kitoi Bay																														
	Northeast Afognak																														
	Pauls Bay																														
	Perenosa Bay																														
	Waterfall Bay SHA																														
	Shuyak Island																														
	Northwest Afognak																														
	Foul Bay SHA																														
	Southwest Afognak																														
	Malina THA																														
	Raspberry Strait																														
Mainland		9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8	9/9	9/10	9/11	9/12	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20	9/21	9/22	9/23	9/24	9/25	9/26	9/27	9/28	9/29	9/30
	Big River																														
	Hallo Bay																														
	Outer Kukak Bay																														
	Inner Kukak Bay																														
	Dakavak Bay																														
	Katmai																														
	Alinchak Bay																														
	Cape Igvak																														
	Wide Bay																														
fishing time in entire section																															
fishing time in partial section																															

Appendix B2.–Summary of emergency orders issued in the Kodiak Management Area, 2016.

E.O. #	Issued	Effective	Action in Effect
1	10:00 AM 5/31/16	Noon 6/2/16	<u>Opening</u> for 57 hours, until 9:00 PM 6/4: - Northwest Kodiak District - Southeast Afognak Section <u>Opening</u> until further notice: - Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay and Izhut Bay sections - Foul Bay Special Harvest Area (FBSHA) - Waterfall Bay Special Harvest Area (WBSHA) <u>Closed water adjustments:</u> - Reduced until further notice in Foul Bay and Waterfall Bay - Reduced until further notice in Kitoi Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
2	10:15 AM 6/3/16	9:00 PM 6/4/16	<u>Extended</u> until further notice: - Southeast Afognak Section <u>Closed water adjustments:</u> - Reduced until further notice in Foul Bay and Waterfall Bay - Reduced until further notice in Kitoi Bay - Reduced until further notice in Afognak Bay <u>Open</u> until further notice: - Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay and Izhut Bay sections - Foul Bay Special Harvest Area (FBSHA) - Waterfall Bay Special Harvest Area (WBSHA) <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
3	9:30 AM 6/6/16	12:01 AM 6/8/16 Noon 6/8/16	<u>Opening</u> for 48 hours, until 12:01 AM 6/10: - Cape Igvak Section <u>Opening</u> for 57 hours, until 9:00 PM 6/10: - Northwest Kodiak District <u>Open</u> until further notice: - Southeast Afognak, Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay and Izhut Bay sections - Foul Bay Special Harvest Area (FBSHA) - Waterfall Bay Special Harvest Area (WBSHA) <u>Closed water adjustments:</u> - Reduced until further notice in Foul Bay - Reduced until further notice in Waterfall Bay - Reduced until further notice in Kitoi Bay - Reduced until further notice in Afognak Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice

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E.O. #	Issued	Effective	Action in Effect
4	10:00 AM 6/12/16	Noon 6/14/16	<u>Opening</u> for 57 hours, until 9:00 PM 6/16: • Outer Karluk Section • Central and North Cape sections • Southwest Afognak Section <u>Opening</u> for 33 hours, until 9:00 PM 6/15: • Eastside Kodiak District • Northwest Afognak, Pauls Bay, and Perenos Bay sections • Big River and Outer Kukak Bay sections <u>Closed water adjustments:</u> • Reduced until 9:00 PM 6/15 at Kafli Creek • Reduced until 9:00 PM 6/15 at Saltery Creek <u>Open</u> until further notice: • Southeast Afognak, Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay and Izhut Bay sections • Foul Bay Special Harvest Area (FBSHA) • Waterfall Bay Special Harvest Area (WBSHA) <u>Closed water adjustments:</u> • Reduced until further notice in Afognak Bay • Reduced until further notice in Foul Bay • Reduced until further notice in Waterfall Bay • Reduced until further notice in Kitoi Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
5	10:00 AM 6/16/16	9:00 PM 6/16/16 Noon 6/17/16 12:01 AM 6/18/16	<u>Extension</u> for 72 hours, until 9:00 PM 6/19: • Outer Karluk Section • Central and North Cape sections • Southwest Afognak Section <u>Opening</u> for 57 hours, until 9:00 PM 6/19: • Inner Uganik Bay Section <u>Opening</u> for 48 hours, until 12:01 AM 6/20: • Cape Igvak Section <u>Open</u> until further notice: • Southeast Afognak, Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay and Izhut Bay sections • Foul Bay Special Harvest Area (FBSHA) • Waterfall Bay Special Harvest Area (WBSHA)

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E.O. #	Issued	Effective	Action in Effect
5 (cont.)			<u>Closed water adjustments:</u> • Reduced until further notice in Afognak Bay • Reduced until further notice in Foul Bay • Reduced until further notice in Waterfall Bay • Reduced until further notice in Kitoi Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
6	10:00 AM 6/19/16	9:00 PM 6/19/16	<u>Extension</u> for 72 hours, until 9:00 PM 6/22: • Outer Karluk Sections • Central, North Cape, and Inner Uganik Bay sections • Southwest Afognak Section
		12:01 AM 6/20/16	<u>Extension</u> for 24 hours, until 12:01 AM 6/21: • Cape Igvak Section
		Noon 6/21/16	<u>Opening</u> for 33 hours, until 9:00 PM 6/22: • Eastside Kodiak District • Northwest Afognak, Pauls Bay, and Perenosa Bay sections • Big River and Outer Kukak sections <u>Closed water adjustments:</u> • Reduced from Noon 6/21 until 9:00 PM 6/22 at Kafia Creek • Reduced from Noon 6/21 until 9:00 PM 6/22 at Saltery Creek <u>Open</u> until further notice: • Southeast Afognak, Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay and Izhut Bay sections • Foul Bay Special Harvest Area (FBSHA) • Waterfall Bay Special Harvest Area (WBSHA) <u>Closed water adjustments:</u> • Reduced until further notice in Foul Bay • Reduced until further notice in Waterfall Bay • Reduced until further notice in Kitoi Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
7	10:00 AM 6/20/16	12:01 AM 6/21/16	<u>Extension</u> for 24 hours, until 12:01 AM 6/22: • Cape Igvak Section
		9:00 PM 6/22/16	<u>Closure</u> in the following areas: • Inner Kitoi Bay and Outer Kitoi Bay sections <u>Open</u> until further notice: • Southeast Afognak, Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay and Izhut Bay sections • Foul Bay Special Harvest Area (FBSHA) • Waterfall Bay Special Harvest Area (WBSHA)

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E.O. #	Issued	Effective	Action in Effect
7 (cont.)			<u>Closed water adjustments:</u> - Reduced until 9:00 PM 6/22 at Kaflia Creek - Reduced until 9:00 PM 6/22 at Saltery Creek <u>Closed water adjustments:</u> - Reduced until further notice in Afognak Bay - Reduced until further notice in Foul Bay - Reduced until further notice in Waterfall Bay - Reduced until further notice in Kitoi Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
8	10:00 AM 6/21/16	12:01 AM 6/22/16	<u>Extension</u> for 24 hours, until 12:01 AM 6/23: - Cape Igvak Section <u>Open</u> until further notice: - Southeast Afognak, Duck Bay, and Izhut Bay sections - Foul Bay Special Harvest Area (FBSHA) - Waterfall Bay Special Harvest Area (WBSHA) <u>Closed water adjustments:</u> - Reduced until further notice in Afognak Bay - Reduced until further notice in Foul Bay and Waterfall Bay - Reduced until further notice in Kitoi Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
9	10:15 AM 6/22/15	12:01 AM 6/23/16 9:00 PM 6/22/16	<u>Extension</u> for 24 hours, until 12:01 AM 6/24: - Cape Igvak Section <u>Extension</u> for 72 hours, until 9:00 PM 6/25: - Outer Karluk Section - Central, North Cape, and Inner Uganik sections - Southwest Afognak Section - Inner Ugak Bay Section <u>Closed water adjustments:</u> - Reduced until 9:00 PM 6/25 at Saltery Creek <u>Open</u> until further notice: - Southeast Afognak, Duck Bay, and Izhut Bay sections - Foul Bay Special Harvest Area (FBSHA) - Waterfall Bay Special Harvest Area (WBSHA) <u>Closed water adjustments:</u> - Reduced until further notice in Afognak Bay for commercial fishing - Reduced until further notice in Foul Bay and Waterfall Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice

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E.O. #	Issued	Effective	Action in Effect
10	10:30 AM 6/23/16	12:01 AM 6/24/15 Noon 6/25/16	<u>Extension</u> for 24 hours, until 12:01 AM 6/25: • Cape Igvak Section <u>Opening</u> for 57 hours, until 9:00 PM 6/27: • Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections <u>Open</u> until further notice: • Southeast Afognak, Duck Bay, and Izhut Bay sections • Foul Bay Special Harvest Area (FBSHA) • Waterfall Bay Special Harvest Area (WBSHA) <u>Closed water adjustments:</u> • Reduced until 9:00 PM 6/25 at Saltery Creek • Reduced until further notice in Afognak Bay, Foul Bay, and Waterfall Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
11	10:15 AM 6/24/16	9:00 PM 6/25/16	<u>Extension</u> for 48 hours, until 9:00 PM 6/27: • Outer Karluk Section • Central, North Cape, and Inner Uganik Bay sections • Southwest Afognak Section • Inner Ugak Bay Section <u>Open</u> until further notice: • Southeast Afognak, Duck Bay, and Izhut Bay sections • Foul Bay Special Harvest Area (FBSHA) • Waterfall Bay Special Harvest Area (WBSHA)) <u>Closed water adjustments:</u> • Reduced until 9:00 PM 6/25 at Saltery Creek • Reduced until further notice in Afognak Bay • Reduced until further notice in Foul Bay and Waterfall Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
12	10:00 AM 6/25/16	9:00 PM 6/25/16 9:00 PM 6/27/16	<u>Extension</u> for 48 hours, until 9:00 PM 6/27: • Outer Karluk Section • Central, North Cape, and Inner Uganik Bay sections • Southwest Afognak Section • Inner Ugak Bay Section <u>Closure</u> in the following area: • Izhut Bay Section <u>Closed water adjustments:</u> • Reduced until 9:00 PM 6/27 at Saltery Creek

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E.O. #	Issued	Effective	Action in Effect
12 (cont.)			<u>Open</u> until further notice: • Southeast Afognak, and Duck Bay sections • Foul Bay Special Harvest Area (FBSHA) • Waterfall Bay Special Harvest Area (WBSHA)) <u>Closed water adjustments:</u> • Reduced until further notice in Afognak Bay • Reduced until further notice in Foul Bay and Waterfall Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
13	10:00 AM 6/27/16	9:00 PM 6/27/16	<u>Extension</u> for 24 hours, until 9:00 PM 6/28: • Outer Karluk Section • Central, North Cape, and Inner Uganik Bay sections • Southwest Afognak Section • Inner Ugak Bay Section <u>Closed water adjustments:</u> • Reduced until 9:00 PM 6/28 at Saltery Creek <u>Open</u> until further notice: • Southeast Afognak, and Duck Bay sections • Foul Bay Special Harvest Area (FBSHA) • Waterfall Bay Special Harvest Area (WBSHA)) <u>Closed water adjustments:</u> • Reduced until further notice in Afognak Bay • Reduced until further notice in Foul Bay and Waterfall Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
14	2:00 PM 6/27/16	Noon 6/28/16	<u>Opening</u> of Cost Recovery Fishery: • Telrod Cove Special Harvest Area <u>Closed water adjustments:</u> • Reduced until 9:00 PM 6/28 at Saltery Creek <u>Open</u> until further notice: • Southeast Afognak, and Duck Bay sections • Foul Bay Special Harvest Area (FBSHA) • Waterfall Bay Special Harvest Area (WBSHA)) <u>Closed water adjustments:</u> • Reduced until further notice in Afognak Bay • Reduced until further notice in Foul Bay and Waterfall Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
15	10:00 AM 7/1/16	9:00 PM 7/2/16	<u>Closure</u> in the following area: • Duck Bay Section

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E.O. #	Issued	Effective	Action in Effect
15 (cont.)		Noon 7/3/16	<u>Opening</u> for 81 hours until 9:00 PM 7/6: • Outer Karluk Section • Central, North Cape, and Inner Uganik Bay sections • Southwest Afognak Section • Inner Ugak Bay Section <u>Closed water adjustments:</u> • Reduced until 9:00 PM 7/6 at Saltery Creek <u>Open</u> until further notice: • Southeast Afognak Sections • Foul Bay Special Harvest Area (FBSHA) • Waterfall Bay Special Harvest Area (WBSHA)) <u>Closed water adjustments:</u> • Reduced until further notice in Afognak Bay • Reduced until further notice in Foul Bay and Waterfall Bay <u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice
16	10:00 AM 7/4/16	Noon 7/5/16	<u>Opening</u> for 57 hours, until 9:00 PM 7/7: • Cape Alitak, Jumpy-Deadman, Alitak Bay, Moser Bay, Olga Bay Dog Salmon Flats sections
		9:00 PM 7/6/16	<u>Extension</u> 96 hours, until 9:00 PM 7/10: • Outer Karluk Section • Central, North Cape, and Inner Uganik sections • Southwest Afognak Section • Inner Ugak Bay section
		Noon 7/6/16	<u>Opening</u> for 57 hours until 9:00 PM 7/8: • Mainland District (except Wide Bay and Cape Igvak sections remain closed)
		Noon 7/6/16	<u>Opening</u> for 105 hours, until 9:00 PM 7/10: • Uyak Bay, Zachar Bay, Spiridon Bay, Terror Bay, Sharatin Bay, and Anton Larsen Bay sections • Northwest Afognak, Raspberry Strait, Shuyak Island, Pauls Bay, Perenosa Bay, and Northeast Afognak sections • Northeast Kodiak District • Eastside Kodiak District (except Pasagshak Bay remains close, and Inner Ugak Bay Section is open until 9:00 PM 7/10)
		9:00 PM 7/10/16	<u>Closure</u> in the following areas: • Southeast Afognak Section • Foul Bay Special Harvest Area • Waterfall Bay Special Harvest Area

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E.O. #	Issued	Effective	Action in Effect
16 (cont.)			<u>Closed water adjustments:</u> - Reduced until 9:00 PM 7/10 at Saltery Creek - Reduced until 9:00 PM 7/10 in Afognak Bay, Foul Bay, and Waterfall Bay <u>Non-retention</u> of Chinook salmon 28 inches in length or greater until further notice: - That portion of the Northwest Kodiak and Southwest Kodiak districts south of the latitude of Cape Kuliuk
17	10:30 AM 7/10/16	9:00 PM 7/10/16	<u>Extension</u> for 48 hours until 9:00 PM 7/12: - Inner Ugak Bay Section Noon 7/11/16 <u>Opening</u> until further notice: - Duck Bay Section 12:01 AM 7/12/16 <u>Opening</u> for 48 hours, until 12:01 AM 7/14: - Cape Igvak Section <u>Closed water adjustments:</u> - Reduced until 9:00 PM 7/10 at Saltery Creek - Reduced until 9:00 PM 7/10 in Afognak Bay, Foul Bay, and Waterfall Bay <u>Non-retention</u> of Chinook salmon 28 inches in length or greater until further notice: - That portion of the Northwest Kodiak and Southwest Kodiak districts south of the latitude of Cape Kuliuk
18	10:00 AM 7/12/16	9:00 PM 7/12/16	<u>Extension</u> for 120 hours, until 9:00 PM 7/17 - Inner Ugak Bay Section Noon 7/13/16 <u>Opening</u> for 57 hours, until 9:00 PM 7/15: - Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections 12:01 AM 7/14/16 <u>Extension</u> for 24 hours, until 12:01 AM 7/15: - Cape Igvak Section Noon 7/14/16 <u>Opening</u> for 57 hours, until 9:00 PM 7/16: - Alinchak Bay, Katmai Bay, Dakavak Bay, Inner Kukak Bay, Outer Kukak Bay, Hallo Bay, and Big River sections - Outer Ayakulik Section

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E.O. #	Issued	Effective	Action in Effect
18 (cont.)			<u>Opening</u> for 81 hours, until 9:00 PM 7/17: • Central, North Cape, Uyak Bay, Spiridon Bay, Sharatin Bay, and Anton Larsen Bay sections • Southeast Afognak, Southwest Afognak, Northwest Afognak, Raspberry Strait, Shuyak Island, Pauls Bay, Perenosa Bay, and Northeast Afognak sections • Northeast Kodiak District • Eastside Kodiak District <u>Closure</u> in the following areas: • The Seaward Zones of the Dakavak Bay, Outer Kukak Bay, Hallo Bay, and Big River sections • The Seaward Zones of the Northwest Afognak and Shuyak Island sections <u>Open</u> until further notice: • Duck Bay Section <u>Closed water adjustments:</u> • Reduced until 9:00 PM 7/17 at Saltery Creek • Reduced until 9:00 PM 7/17 in Anton Larsen Bay • Expanded from Noon 7/14 until further notice in Afognak Bay
19	10:30 AM 7/13/16	Noon 7/14/16	<u>Opening</u> until further notice: • Izhut Bay Section <u>Open</u> until further notice: • Duck Bay Section <u>Closed water adjustments:</u> • Reduced until 9:00 PM 7/17 at Saltery Creek • Reduced until 9:00 PM 7/17 in Anton Larsen Bay • Expanded from Noon 7/14 until further notice in Afognak Bay
20	10:30 AM 7/14/16	12:01 AM 7/15/16 9:00 PM 7/15/16	<u>Extension</u> for 24 hours, until 12:01 AM 7/16: • Cape Igvak Section <u>Extension</u> for 24 hours, until 9:00 PM 7/16: • Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections <u>Open</u> until further notice: • Duck Bay Section • That portion of Izhut Bay Section north of a line from Haystack Rock to Pillar Cape (opening at noon 7/14) <u>Closed water adjustments:</u> • Reduced until 9:00 PM 7/17 at Saltery Creek • Reduced until 9:00 PM 7/17 in Anton Larsen Bay • Expanded from Noon 7/14 until further notice in Afognak Bay

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E.O. #	Issued	Effective	Action in Effect
21	10:30 AM 7/15/16	12:01 7/16/16	<u>Extension</u> for 48 hours, until 12:01 AM 7/18: • Cape Igvak Section 9:00 PM 7/16/16 <u>Extension</u> for 24 hours, until 9:00 pm 7/17: • Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats section • Outer Ayakulik Section <u>Open</u> until further notice: • Duck Bay Section • That portion of Izhut Bay Section north of a line from Haystack Rock to Pillar Cape <u>Closed water adjustments:</u> • Reduced until 9:00 PM 7/17 at Saltery Creek • Reduced until 9:00 PM 7/17 in Anton Larsen Bay • Expanded until further notice in Afognak Bay
22	9:30 AM 7/17/16	12:01 AM 7/18/16	<u>Extension</u> for 48 hours, until 12:01 AM 7/20: • Cape Igvak Section <u>Open</u> until further notice: • Duck Bay Section • That portion of Izhut Bay Section north of a line from Haystack Rock to Pillar Cape <u>Closed water adjustments:</u> • Reduced until 9:00 PM 7/17 at Saltery Creek • Reduced until 9:00 PM 7/17 in Anton Larsen Bay • Expanded until further notice in Afognak Bay
23	11:30 AM 7/19/15	12:01 AM 7/20/16	<u>Extension</u> for 72 hours, until 12:01 AM 7/23: • Cape Igvak Section Noon 7/22/16 <u>Opening</u> for 57 hours, until 9:00 PM 7/24: • Alinchak Bay, Katmai, Dakavak Bay, Inner Kukak Bay, Outer Kukak Bay, Hallo Bay, and Big River sections (the seaward zones remain closed) Noon 7/22/16 <u>Opening</u> for 81 hours, until 9:00 PM 7/25: • Outer Ayakulik Section • Northwest Kodiak District (Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, Terror Bay, and Kizhuyak Bay sections remain closed) • Afognak District (Duck Bay and Izhut Bay sections remain open until further notice and Inner Kitoi Bay and Outer Kitoi Bay sections remain closed) • Northeast Kodiak District • Eastside Kodiak District • Humpy-Deadman Section <u>Open</u> until further notice: • Duck Bay Section • That portion of Izhut Bay Section north of a line from Haystack Rock to Pillar Cape

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E.O. #	Issued	Effective	Action in Effect
23 (cont.)			<u>Closed water adjustments:</u> Reduced from until 9:00 PM 7/25 in Anton Larsen Bay
24	10:00 AM 7/21/16	Noon 7/22/16	<u>Extension</u> for 81 hours, until 9:00 PM 7/25: - Cape Alitak, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats section <u>Open</u> until further notice: - Duck Bay Section - That portion of Izhut Bay Section north of a line from Haystack Rock to Pillar Cape <u>Closed water adjustments:</u> - Reduced from until 9:00 PM 7/25 in Anton Larsen Bay
25	10:00 AM 7/25/16	9:00 PM 7/25/16	<u>Closure</u> in the following area: - Duck Bay Section <u>Open</u> until further notice: - That portion of Izhut Bay Section north of a line from Haystack Rock to Pillar Cape <u>Closed water adjustments:</u> - Reduced from until 9:00 PM 7/25 in Anton Larsen Bay
26	10:00 AM 7/26/16	9:00 PM 7/27/16	<u>Closure</u> in the following area: Izhut Bay Section
27	10:00 AM 7/27/16	Noon 7/30/16	<u>Opening</u> for 57 hours, until 9:00 PM 8/1: - Outer Ayakulik Section - Northwest Kodiak District (except Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, and Kizhuyak Bay remain closed) - Afognak District (except Duck Bay, Inner Kitoi Bay, and Outer Kitoi Bay sections remain closed, and Izhut Bay Section closes at 9:00 PM 7/27) - Northeast Kodiak District - Eastside Kodiak District - Humpy-Deadman Section - Mainland District (except Wide Bay Section remains closed)
		Noon 8/1/16	<u>Opening</u> until further notice: Spiridon Bay Special Harvest Area
28	10:00 AM 7/28/16	Noon 7/30/16	<u>Opening</u> for 57 hours, until 9:00 PM 8/1: - Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay Sections (Dog Salmon Flats Section remains closed) <u>Closed water adjustments:</u> - Expanded in Anton Larsen Bay to normal closed waters until further notice <u>Open</u> until further notice: - Spiridon Bay Special Harvest Area

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E.O. #	Issued	Effective	Action in Effect
29	9:00 AM 7/30/16	Noon 7/31/16	<u>Opening</u> until further notice: • Inner Uganik Section <u>Closed water adjustments:</u> • Expanded in Anton Larsen Bay to normal closed waters until further notice <u>Open</u> until further notice: • Spiridon Bay Special Harvest Area
30	10:00 AM 8/1/16	9:00 PM 8/1/16	<u>Extension</u> for 48 hours until 9:00 PM 8/3: • Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay sections (Dog Salmon Flats Section remains closed) <u>Closed water adjustments:</u> • Expanded in Anton Larsen Bay to normal closed waters until further notice <u>Open</u> until further notice: • Spiridon Bay Special Harvest Area
31	10:00 AM 8/3/16	Noon 8/6/16	<u>Opening</u> for 57 hours, until 8/8: • Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay Sections (Humpy-Deadman and Dog Salmon Flats sections remain closed) • Northwest Kodiak District (except Zachar Bay, Spiridon Bay, and Kizhuyak Bay sections remain closed) • Afognak District (except Shuyak Island, Duck Bay, Izhut Bay, Inner Kitoi Bay, and Outer Kitoi Bay sections remain closed) <u>Open</u> until further notice: • Spiridon Bay Special Harvest Area
32	3:00 PM 8/10/16	Noon 8/16/16	<u>Opening</u> for 57 hours, until 9:00 PM 8/18: • Northwest Kodiak District (except Zachar Bay, Spiridon Bay, and Kizhuyak Bay sections remain closed) • Afognak District (except Duck Bay, Izhut Bay, Inner Kitoi Bay, and Outer Kitoi Bay sections remain closed) • Humpy-Deadman Section <u>Open</u> until further notice: • Spiridon Bay Special Harvest Area
33	10:00 AM 8/17/16	Noon 8/18/16	<u>Opening</u> for 54 hours, until 6:00 PM 8/20: • Outer Karluk Section
		9:00 PM 8/18/16	<u>Extension</u> for 45 hours, until 6:00 PM 8/20: • Northwest Kodiak District (except Zachar Bay, Spiridon Bay, and Kizhuyak Bay sections remain closed) • Afognak District (except Duck Bay, Izhut Bay, Inner Kitoi Bay, and Outer Kitoi Bay sections remain closed)
		Noon 8/19/16	<u>Opening</u> until further notice: • Duck Bay Section

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E.O. #	Issued	Effective	Action in Effect
33 (cont.)		6:00 PM 8/20/16	<u>Closure</u> in the following area: • Spiridon Bay Special Harvest Area
34	10:00 AM 8/18/16	Noon 8/19/16 Noon 8/20	<u>Opening</u> for 30 hours until 6:00 PM 8/20: • Inner Karluk Section <u>Opening</u> until further notice: • Izhut Bay Section <u>Open</u> until further notice: • Duck Bay Section
35	10:00 AM 8/20/16	6:00 PM 8/20/16 Noon 8/21/16	<u>Extension</u> for 72 hours until 9:00 PM 8/23: • Inner Karluk and Outer Karluk section • Northwest Kodiak District (except Zachar Bay, Spiridon Bay, and Kizhuyak Bay sections remain closed) • Afognak District (except Inner Kitoi Bay and Outer Kitoi Bay sections remain closed, Duck Bay Section remains open until further notice, and Izhut Bay Section opens at noon 8/20) <u>Opening</u> for 54 hours, until 9:00 PM 8/23: • Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay sections <u>Open</u> until further notice: • Duck Bay Section
36	1:30 PM 8/22/16	Noon 8/23/16 6:00 PM 8/23/16	<u>Opening</u> for 78 hours, until 6:00 PM 8/26: • Halibut Bay and Sturgeon sections <u>Extension</u> for 72 hours, until 6:00 PM 8/26: • Inner Karluk and Outer Karluk sections • Northwest Kodiak District (except Zachar Bay, Spiridon Bay, and Kizhuyak Bay sections remain closed) • Southwest Afognak Section <u>Extension</u> for 48 hours, until 6:00 PM 8/25: • Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay sections <u>Closure</u> in the following areas: • Northwest Afognak, Shuyak Island, Pauls Bay, Perenosa Bay, Northeast Afognak, Raspberry Strait, Southeast Afognak, and Duck Bay sections <u>Open</u> until further notice: • Duck Bay Section
37	10:00 AM 8/25/16	6:00 PM 8/26/16	<u>Closure</u> in the following area: • Izhut Bay Section <u>Extension</u> for 72 hours, until 6:00 PM 8/29: • Inner Karluk, Outer Karluk, Halibut Bay, and Sturgeon sections • Central and North Cape sections • Southwest Afognak Section

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E.O. #	Issued	Effective	Action in Effect
38	10:00 PM 8/29/16	6:00 PM 8/29/16	<u>Extension</u> for 72 hours, until 6:00 PM 9/1: • Central and North Cape sections • Southwest Afognak Section <u>Closure</u> for the following areas: • Outer Karluk, Inner Karluk, Halibut Bay, and Sturgeon sections
39	10:00 AM 8/31/16	Noon 9/1/16	<u>Opening</u> for 54 hours until 6:00 PM 9/3: • Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay sections
40	10:00 AM 9/1/16	6:00 PM 9/1/16	<u>Extension</u> for 96 hours, until 6:00 PM 9/5: • Central and North Cape sections • Southwest Afognak Section
		Noon 9/5/16	<u>Opening</u> for 54 hours, until 6:00 PM 9/7: • Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, Terror Bay, Kizhuyak Bay, Sharatin Bay, and Anton Larsen Bay sections • Humpy-Deadman Section • Eastside Kodiak District • Southeast Afognak, Raspberry Strait, Northwest Afognak, Shuyak Island, Pauls Bay, Perenosa Bay, and Northeast Afognak sections • Outer Ayakulik Section
41	9:00 AM 9/5/16	6:00 PM 9/5/16	<u>Extension</u> for 96 hours, until 6:00 PM 9/9: • Central and North Cape sections • Southwest Afognak Section
		Noon 9/6/16	<u>Opening</u> for 78 hours until 6:00 PM 9/9: • Outer Karluk Section
42	10:00 AM 9/7/16	Noon 9/8/16	<u>Opening</u> until further notice: • Inner Karluk, Sturgeon, and Halibut Bay sections
		6:00 PM 9/9/16	<u>Extension</u> until further notice: • Central and North Cape sections • Southwest Afognak Section • Outer Karluk Section
43	10:00 AM 9/13/16	Noon 9/14/16	<u>Opening</u> for 54 hours, until 6:00 PM 9/16: • Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, Terror Bay, Kizhuyak Bay, Sharatin Bay, and Anton Larsen Bay sections • Humpy-Deadman Section • Eastside Kodiak District • Southeast Afognak, Raspberry Strait, Northwest Afognak, Shuyak Island, Pauls Bay, Perenosa Bay, and Northeast Afognak sections • Outer Ayakulik Section <u>Open</u> until further notice: • Central and North Cape sections • Southwest Afognak Section • Humpy-Deadman Section • Outer Karluk, Inner Karluk, Sturgeon, and Halibut Bay sections

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E.O. #	Issued	Effective	Action in Effect
44	10:00 AM 9/20/16	Noon 9/22/16	<u>Opening</u> for 54 hours, until 6:00 PM 9/24: • Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, Terror Bay, Kizhuyak Bay, Sharatin Bay, and Anton Larsen Bay sections • Humpy-Deadman Section • Eastside Kodiak District • Southeast Afognak, Raspberry Strait, Northwest Afognak, Shuyak Island, Pauls Bay, Perenosa Bay, and Northeast Afognak sections • Outer Ayakulik Section <u>Open</u> until further notice: • Central and North Cape sections • Southwest Afognak Section • Humpy-Deadman Section • Outer Karluk, Inner Karluk, Sturgeon, and Halibut Bay sections

APPENDIX C. CAPE IGVAK FISHERY SUMMARY

INTRODUCTION

Beginning in 1964, a purse seine fishery developed along the capes in the Cape Igvak Section of the Mainland District (Appendix C2). Tagging studies and stock identification studies using average weight and age composition conducted in 1968 and 1969 concluded that up to 80% of the sockeye salmon harvested in the Cape Igvak Section were of Chignik origin (from the unpublished Kodiak Area Annual Report, 1969, ADF&G, Kodiak). The issue of interception of Chignik-bound sockeye salmon in the Cape Igvak Section came before the Board of Fisheries (BOF) several times over the next 10 years, and management of this section was modified many times. From 1974 to 1977, this area was managed for “day for day” equal fishing time with the Chignik Bay District of the Chignik Management Area (CMA).

In 1978, a specific management plan for the Cape Igvak Section was adopted by the BOF. The *Cape Igvak Salmon Management Plan* (CISMP; 5 AAC 18.360) covered the time period from the start of the season through July 25 for fishing activity in the Cape Igvak Section of the Mainland District. This management plan stipulated that 80% of the sockeye salmon harvest from the Cape Igvak Section during this period would be considered Chignik bound. In 2002, the BOF modified the CISMP such that 90% of the Cape Igvak Section sockeye salmon catch was now considered to be Chignik bound. The CISMP allows the Kodiak Management Area fleet to harvest up to 15% of the Chignik-bound sockeye salmon harvest.¹ The CISMP also stipulated strict allocative and biological requirements. Through July 25 in Chignik, a minimum harvest of 600,000 sockeye salmon must be expected (300,000 each for both the early and late run), and sockeye salmon escapement must be at desired levels for a harvest to be allowed. Commercial fisheries must begin in CMA before fisheries are allowed in the Cape Igvak Section (Fuerst and Jackson 2016).

Since this plan was adopted in 1978, the catch of Chignik-bound sockeye salmon from the Cape Igvak Section has ranged from 0% to 19.2% of the total Chignik sockeye salmon harvest (Appendix C3). In years that an allocation fishery has been prosecuted in the Cape Igvak Section, the sockeye salmon harvest has averaged 12.0% of the total CMA sockeye salmon harvest (Appendix C4). The Cape Igvak harvest has met or exceeded its 15% allocation level in 10 of the 38 years the plan has been in place (Appendices C3 and C4).

2016 Cape Igvak Fishery

Early Run

The 2016 preseason forecast for the Chignik system predicted a return of approximately 1,807,000 early-run (Black Lake) sockeye salmon. The early-run escapement goal is 350,000 to 450,000 sockeye salmon through late July (Sagalkin et al. 2013). This left a forecasted harvestable surplus of 1,407,000 early-run sockeye salmon (Brenner and Munro 2016).

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¹ Chignik-bound sockeye salmon are also harvested in the Southeastern Mainland District of the Alaska Peninsula Management Area, in accordance with the regulatory *Southeastern District Mainland Salmon Management Plan*, 5 AAC 09.360.

The Chignik sockeye salmon early run was strong and the allocative and biological requirements were met, allowing the Cape Igvak Section to open for 48 hours beginning on June 8. After a weeklong closure, a subsequent fishing period was announced for June 18 and ultimately extended through June 25. The CISMP provides for an “overlap period” between the first and second runs (June 26 to July 9) during which fishing in the Cape Igvak Section is closed or severely limited until the strength of the late run (Chignik Lake) can be assessed. In Accordance with the CISMP, the Cape Igvak fishery remained closed from June 26 to July 9.

Through June 25, a total of 154,318 sockeye salmon were harvested in the Cape Igvak Section, of which 138,886 were considered Chignik bound.

Late Run

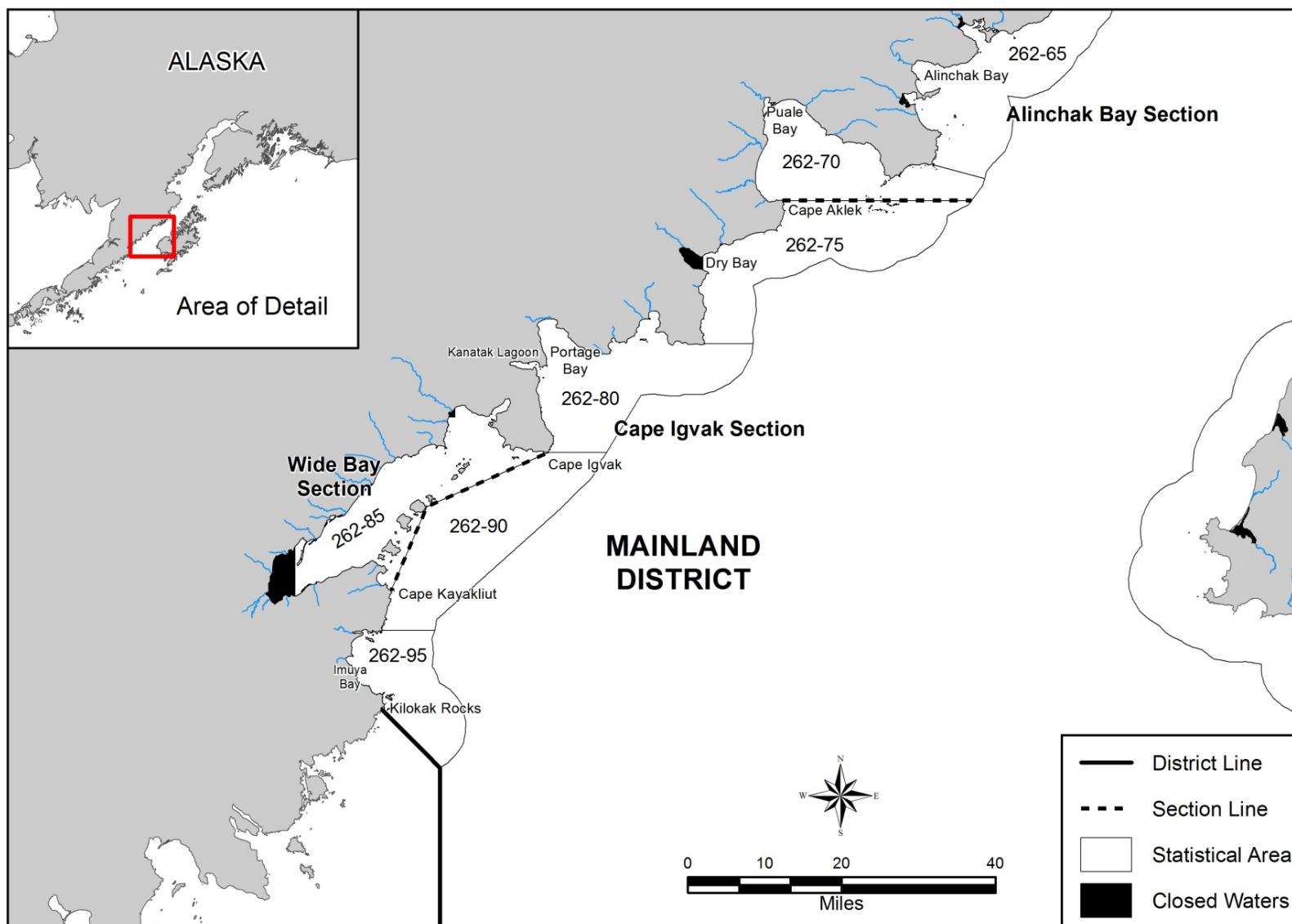
The preseason forecast for late-run (Chignik Lake) sockeye salmon was approximately 1,108,000 fish in 2016. The late-run escapement objective was 250,000 to 400,000 sockeye salmon (Sagalkin et al. 2013) resulting in a harvestable surplus forecast of 783,000 sockeye salmon (Brenner and Munro 2016).

Adequate Chignik late-run (Chignik Lake) escapement and a harvestable surplus of Chignik early-run fish allowed for liberal commercial fishing time within the Chignik Area from the overlap period through the end of the allocation period. After ADF&G determined that the allocative criteria were met, a commercial fishing period was announced for July 12 in the Cape Igvak Section. Low harvest rates of sockeye salmon within the Cape Igvak Section persisted through July 19 allowing the Cape Igvak Section to remain open. Despite very limited fishing effort present in the Cape Igvak Section, harvest rates increased substantially beginning on July 20. Over the final 48 hour of fishing time within the Cape Igvak Section, over 123,000 sockeye salmon were harvested—increasing the Cape Igvak Section Chignik-bound harvest. The department determined the 15% allocation would be met and closed the Cape Igvak Section on July 23. For the 2016 Cape Igvak allocation period the cumulative total harvest of Chignik-bound sockeye salmon was 298,470 fish or 19.2% of the total Chignik-bound sockeye salmon harvest (Appendix C3). The allocation period cumulative harvest from the Cape Igvak Section was 331,633 sockeye salmon.

REFERENCES CITED

- Brenner, R. E., and A. R. Munro, editors. 2016. Run forecasts and harvest projections for 2016 Alaska salmon fisheries and review of the 2015 season. Alaska Department of Fish and Game, Special Publication No. 16-07, Anchorage.
- Fuerst, B. A., and J. Jackson. 2016. Kodiak management area harvest strategy for the 2016 commercial salmon fishery. Alaska Department of Fish and Game, Fishery Management Report No. 16-11, Anchorage
- Sagalkin, N. H., A. St. Saviour, J. W. Erickson, and H. Finkle. 2013. Review of salmon escapement goals in the Chignik Management Area, 2013. Alaska Department of Fish and Game, Fishery Manuscript Series No. 13-06, Anchorage

Appendix C2.—Map of the Cape Igvak Section of the Kodiak Management Area, 2016.



Appendix C3.—Harvest of sockeye salmon considered to be Chignik bound in the Chignik, Cape Igvak, and Southeastern District Mainland commercial salmon fisheries, from 1978 to 2016.

Year	Chignik		Cape Igvak ^a		Southeastern District Mainland ^a		Total
	Catch ^b	Percent	Catch ^b	Percent	Catch ^b	Percent	
1978 ^c	1,454,389	86.60	225,078	13.40	N/A	N/A	1,679,467
1979 ^d	794,504	98.27	13,950	1.73	N/A	N/A	808,454
1980	670,001	91.31	32	0.00	63,724	8.68	733,757
1981	1,606,300	79.87	282,727	14.06	122,198	6.08	2,011,225
1982	1,250,768	84.49	166,756	11.26	62,789	4.24	1,480,313
1983	1,450,832	72.68	318,048	15.93	227,392	11.39	1,996,272
1984	2,474,405	73.93	449,372	13.43	423,292	12.65	3,347,069
1985 ^e	690,698	79.78	123,627	14.28	51,421	5.94	865,746
1986	1,456,729	82.64	188,017	10.67	118,006	6.69	1,762,752
1987	1,659,236	77.99	321,506	15.11	146,886	6.90	2,127,628
1988	675,487	95.77	10,520	1.49	19,320	2.74	705,327
1989	496,044	99.10	^f	0.00	4,485	0.90	500,529
1990	1,205,575	84.29	107,706	7.53	117,065	8.18	1,430,346
1991 ^g	1,962,583	80.45	324,195	13.29	152,714	6.26	2,439,492
1992 ^h	1,054,309	81.19	150,434	11.58	93,845	7.23	1,298,588
1993	1,495,098	77.72	300,055	15.60	128,536	6.68	1,923,689
1994 ⁱ	1,632,435	80.61	250,230	12.36	142,350	7.03	2,025,015
1995	1,024,785	79.85	169,530	13.21	89,086	6.94	1,283,401
1996 ^j	1,710,249	79.70	308,327	14.37	127,201	5.93	2,145,777
1997	443,892	100.00	^f	0.00	^f	0.00	443,892
1998 ^k	786,466	91.22	8,813	1.02	66,893	7.76	862,172
1999	2,326,811	78.70	456,039	15.43	173,621	5.87	2,956,471
2000	1,509,652	80.11	271,344	14.40	103,419	5.49	1,884,415
2001 ^l	1,134,991	79.41	215,214	15.06	79,037	5.53	1,429,242
2002 ^m	849,980	80.99	136,488	13.01	63,026	6.01	1,049,494
2003	854,673	81.67	121,887	11.65	69,935	6.68	1,046,495
2004	681,139	75.94	160,665	17.91	55,123	6.15	896,927
2005	1,098,718	70.84	274,328	17.69	177,906	11.47	1,550,952
2006	741,887	87.72	41,834	4.95	62,010	7.33	845,731
2007 ⁿ	601,213	91.97	52,527	8.03	^f	0.00	653,740
2008	455,199	100.00	^f	0.00	^f	0.00	455,199
2009	871,890	83.26	126,968	12.12	48,322	5.54	1,047,180
2010	1,125,135	80.62	185,193	13.27	85,267	7.58	1,395,595
2011	2,277,681	77.77	494,538	16.89	156,637	6.88	2,928,856
2012	1,640,517	78.44	324,895	15.53	126,083	7.69	2,091,495
2013	2,244,918	81.10	354,179	12.79	169,029	7.53	2,768,126
2014	330,302	100.00	^f	0.00	^f	0.00	330,302

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Appendix C3.–Page 2 of 2.

Year	Chignik		Cape Igvak ^a		Southeastern District Mainland ^a		Total
	Catch ^b	Percent	Catch ^b	Percent	Catch ^b	Percent	
2015	1,014,550	90.67	5,936	0.53	98,473	9.71	1,118,959
2016	1,167,326	74.92	298,470	19.16	92,238	7.90	1,558,034

^a Through 2001, the Cape Igvak and Southeastern District Mainland figures represent 80% of the total sockeye salmon catch for those areas, based on the premise that 80% of the sockeye salmon caught in those areas are destined for Chignik (excluding sockeye salmon caught in the Northwest Stepovak Section from 1964 to 1991 and during July from 1996 to 2009, and Orzinski Bay from 1992 to 1995). In 2002, for the Cape Igvak fishery, the BOF increased the percentage of the sockeye salmon harvest considered to be Chignik bound from 80% to 90%.

^b Beginning in 1978, the Cape Igvak Salmon Management Plan allocated up to 15% of the total catch of Chignik-bound sockeye salmon to Kodiak Management Area fishermen.

^c In 1978, seining prior to July 11 was disallowed in the Southeastern District Mainland. Set gillnet fisheries were allowed for 3 days per week through July 10, after which the fishery was based on local stock abundance.

^d From 1979 to 1984, fishing in the Southeastern District Mainland was allowed for 5 days per week prior to July 11, with an estimated ceiling of 60,000 Chignik-bound sockeye. If the Chignik Management Area catch was 1,000,000 or more before July 11 then the ceiling was removed.

^e Beginning in 1985, the Southeastern District Mainland (excluding the Northwest Stepovak Section and Orzinski Bay) was allowed an allocation of 6.2% of the total harvest of Chignik-bound sockeye salmon through July 25. After July 25 the Southeast District Mainland was managed based on local stock abundance. The allocation level changed to 6.0% beginning in 1988, with seining still not allowed prior to July 11.

^f No fishery.

^g Includes overescapement of 208,305 sockeye salmon counted through the Chignik weir during a Chignik Area seiners strike (June 23 to July 4).

^h Beginning in 1992, after a BOF review of historical records, the allocation of Chignik-bound sockeye salmon to the Southeastern District Mainland fishery (excluding Orzinski Bay) was increased to 7.0%, through July 25.

ⁱ Includes overescapement of 208,921 sockeye salmon counted through the Chignik weir during a Chignik Area seiners strike (June 2 to June 25).

^j In January 1996, the BOF increased the area managed for local Orzinski Lake sockeye salmon from only Orzinski Bay to the entire Northwest Stepovak Section. Prior to July 1, the entire Northwest Stepovak Section will be managed by allocation based on Chignik sockeye salmon run strength. Beginning July 1, the Northwest Stepovak Section is managed entirely on local stocks. The BOF also decreased the percentage of Chignik-bound sockeye salmon allocated to the Southeastern District Mainland fishery from 7.0% to 6.0%.

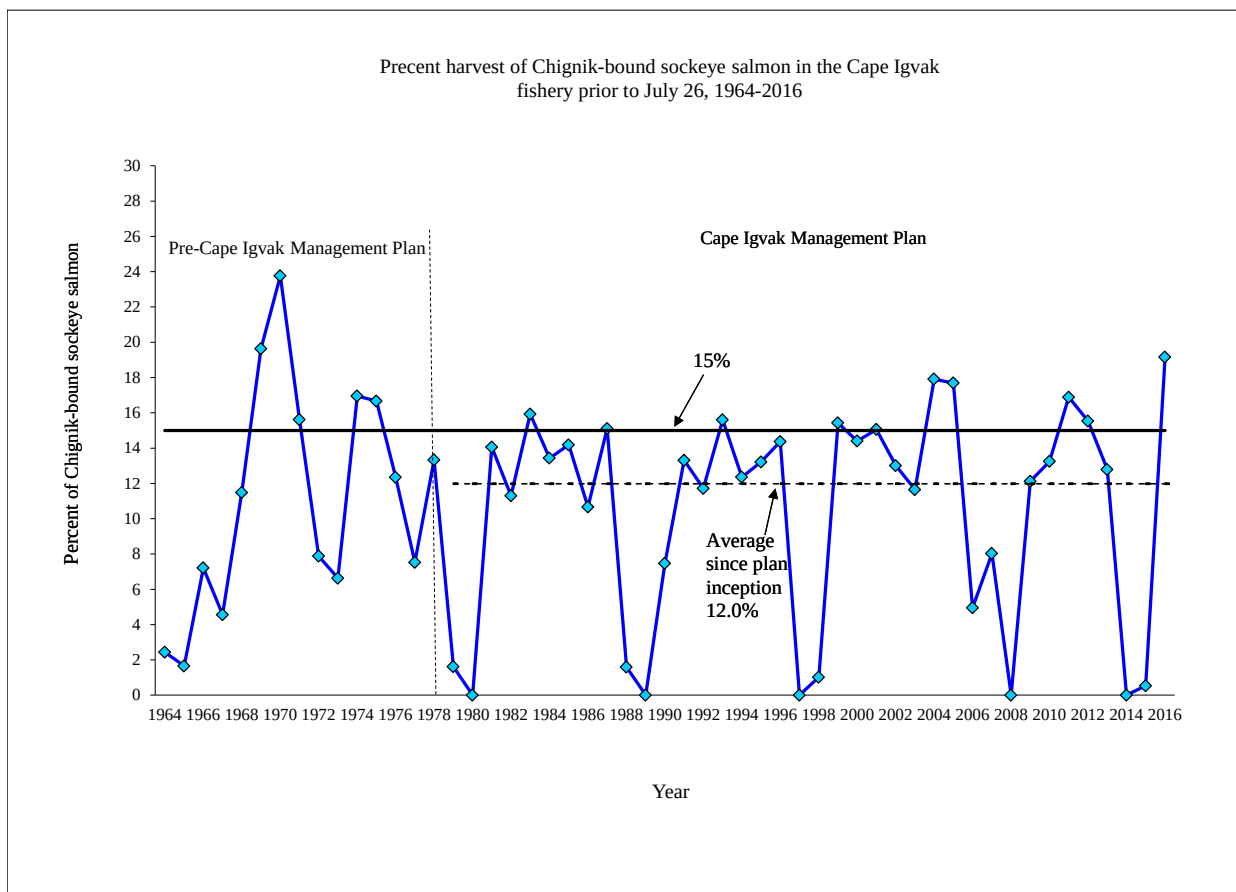
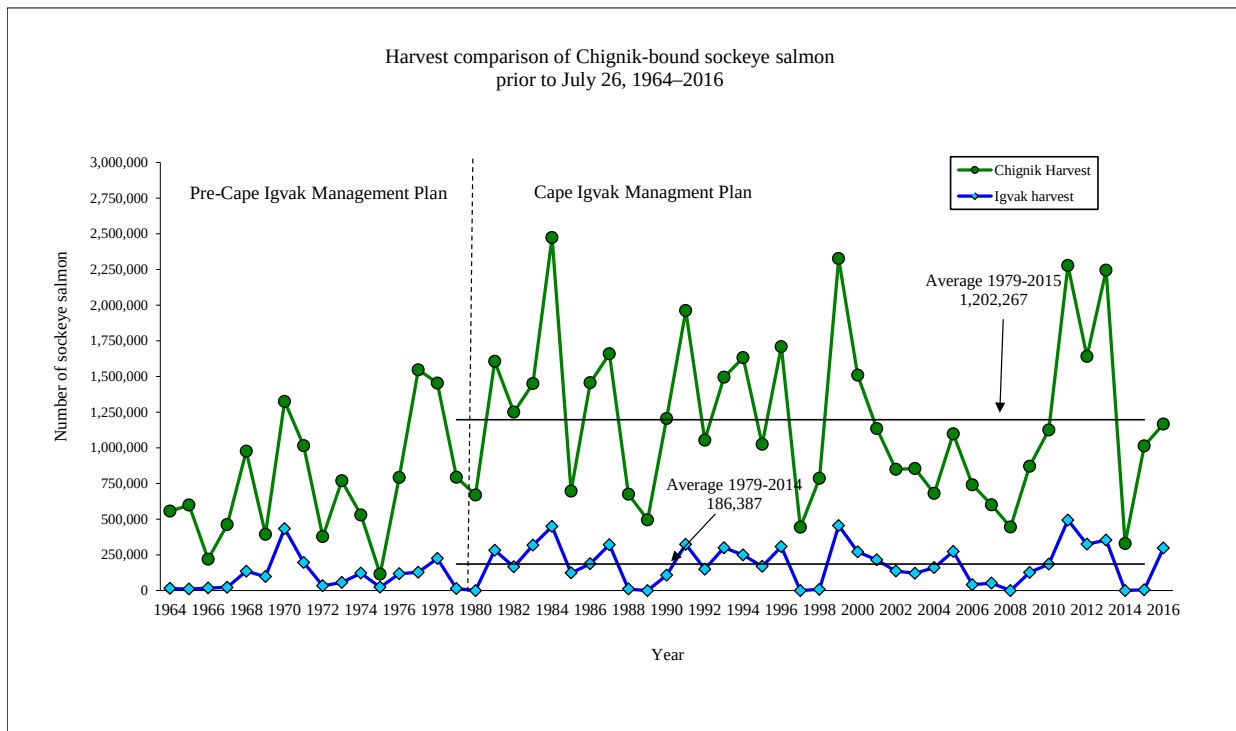
^k Includes 7,714 sockeye salmon caught on June 18 by the Chignik Seiners Association, and an overescapement of 52,131 sockeye salmon counted through the weir during the Chignik Seiners Association boycott (June 16 to June 29).

^l Includes 176,605 sockeye salmon caught June 16–29 by the Chignik Seiners Association, and foregone harvest due to overescapement of 398,887 in the CMA and 27,896 in the Southeastern District Mainland during the fishermen's strike (June 14 to July 2).

^m In 2002, the BOF changed the regulations such that 90% (up from 80%) of sockeye salmon harvested in the Cape Igvak Section through July 25 are to be considered Chignik bound.

ⁿ In 2007, the BOF changed the Southeastern District Mainland allocation from 6.0% of the total Chignik-bound harvest to 7.6% of the total Chignik Area harvest.

Appendix C4.–Impact of the Cape Igvak Salmon Management Plan.



Appendix C5.–Purse seine daily harvest, by species, for the Cape Igvak sockeye salmon fishery, 2016.

		Chinook			Sockeye		Coho		Pink		Chum		
Date		Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
First Period (June 8–June 9)													
8-Jun		36	36	33	315	22,739	112,999	3	14	361	1,053	3,768	26,053
9-Jun		19	19	13	257	7,982	42,974	0	0	154	398	1,466	12,198
Subtotal		41	55	46	572	30,721	155,973	3	14	515	1,451	5,234	38,251
Second Period (June 18–June 25)													
18-Jun		41	48	92	680	28,246	146,643	16	78	2,668	8,134	7,633	50,791
19-Jun		17	17	21	144	9,537	48,702	0	0	933	2,770	2,716	17,251
20-Jun		46	47	479	2,640	21,870	121,313	2	7	3,196	8,809	7,029	46,888
21-Jun		16	16	46	402	10,293	60,819	6	28	1,289	4,405	831	5,730
22-Jun		30	30	325	2,036	19,527	116,793	7	38	2,916	8,591	1,672	12,720
23-Jun		19	28	154	1,105	9,882	58,844	4	19	1,094	3,208	716	5,142
24-Jun		22	24	92	581	16,697	92,988	2	18	3,833	13,174	1,912	13,228
25-Jun		13	13	8	68	7,545	44,616	3	25	1,702	5,043	713	5,324
Subtotal		56	223	1,217	7,656	123,597	690,718	40	213	17,631	54,134	23,222	157,074
Third Period (July 12–July 22)													
12-Jul		7	7	354	2,855	9,627	54,974	733	5,794	2,883	9,303	2,160	17,184
13-Jul		4	5	7	135	4,433	24,286	267	1,694	689	3,606	971	6,130
15-Jul	a												
17-Jul	a												
18-Jul	a												
20-Jul		3	3	112	1,112	27,571	153,192	3,392	18,139	7,787	29,500	2,463	15,229
21-Jul		5	10	146	1,272	67,359	380,425	3,111	18,072	12,491	54,126	6,867	49,596
22-Jul		9	9	154	1,361	55,767	340,477	3,250	22,622	11,873	56,315	8,504	55,817
Subtotal		19	40	908	7,766	177,315	1,013,568	11,668	72,654	39,619	169,004	22,247	153,540
Season Total		64	318	2,171	15,994	331,633	1,860,259	11,711	72,881	57,765	224,589	50,703	348,865
Avg.Wt.					7.4		5.6		6.2		3.9		6.9

^a Confidential.

APPENDIX D. ALITAK DISTRICT FISHERY SUMMARY

INTRODUCTION

Within the Alitak District fishery set gillnet and seine are legal gear types for commercial salmon fishing. Set gillnets are allowed only in the inside waters of the Alitak Bay, Moser Bay, and Olga Bay sections, whereas seine gear is limited to the outer waters of the Cape Alitak and Humpy-Deadman sections until September 5 (5 AAC 18.330(d)(2); Appendix D2). Prior to the mid-1980s, various strategies were applied in the Alitak District to conserve and build sockeye salmon stocks returning to the Frazer, Akalura, and Upper Station systems, while offering some protection to local pink, chum, and coho salmon stocks. In the fall of 1987, the existing harvest strategy was formalized into a regulatory management plan and was adopted by the Board of Fisheries (BOF; 5AAC 18.361). This plan details the key species and targeted stocks managed in each section of the district throughout the fishing season. The stated intent of this plan is that salmon be harvested in the “traditional” fisheries located in the Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, and Olga Bay sections (Fuerst and Jackson 2016).

This management plan has been in effect since 1988 and was most recently revised by the BOF in 2014. The BOF eliminated the staggered opening and closing times introduced in 2005 for the Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay sections; beginning in 2014 commercial salmon season, these sections opened and closed at the same time. The BOF also mandated ADF&G manage the Upper Station sockeye salmon early-run for sustained yield by an optimal escapement goal of 30,000 fish, instead of the optimal escapement goal of 25,000 fish, but only if ADF&G determines that the upper end of the Frazer system sockeye salmon escapement goal will be achieved (5 AAC 18.361(c); Fuerst *In prep*). The BOF also liberalized the opening criteria for the Dog Salmon Flats Section. For the 2014–2016 seasons the Dog Salmon Flats Section could be opened prior to exceeding the escapement goals. Also, there shall be a minimum closure of 69 consecutive hours in every 10-day period, to apply to each section individually as each section closes, unless ADF&G determines that the sockeye salmon escapement goals will be achieved for both the Frazer and Upper Station sockeye salmon runs.

2016 Alitak Fishery

The total run forecast for the Upper Station early run was 94,000 sockeye salmon, with an estimated harvestable surplus of approximately 28,000. The 2016 total run forecast for the Frazer Lake system was 342,000 sockeye salmon (Brenner and Munro 2016), with an estimated harvestable surplus of approximately 205,000 sockeye salmon. The total run forecast for Upper Station late run was 215,000 sockeye salmon, with an estimated harvestable surplus of approximately 29,000 sockeye salmon (Brenner and Munro 2016).

The early-run Upper Station sockeye salmon run has a biological escapement goal (BEG) of 43,000 to 93,000 fish, except the BOF directed ADF&G to manage for an optimal escapement goal of 30,000 fish if the upper end of the Frazer system sockeye salmon escapement goal will be exceeded. The Frazer Lake sockeye salmon BEG range is 75,000 to 170,000 fish. The 2016 targeted sockeye salmon escapement for Frazer Lake was based on a maximum sustained yield calculation of 117,000 fish (Sagalkin et al. 2013). Sockeye salmon escapement are first enumerated through a lower weir near the outlet of the Dog Salmon River (Dog Salmon weir) and then enumerated through the fish pass (Frazer Lake fish pass) below the outlet of the lake.

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Some sockeye salmon that have been enumerated at the Dog Salmon weir do not ascend the Frazer fish pass and remain in Dog Salmon Creek. For the past 5 years the number of sockeye salmon remaining in the river has averaged approximately 15,738 fish. The 2016 targeted Dog Salmon weir sockeye salmon escapement was determined to be 137,000 fish. However, if appropriate, the Dog Salmon weir target escapement goal will also be further increased to account for jack sockeye salmon (jacks). The department defines jack sockeye salmon as sexually mature males that return after only 1 year in the ocean. The Upper Station late run has a BEG of 120,000 to 265,000 fish. The 2016 target sockeye salmon escapement for the Upper Station late run was based on a maximum sustained yield calculation of 186,000 fish (Sagalkin et al. 2013).

Frazer Jack Salmon and Alitak Salmon Management

The Frazer Lake sockeye salmon run has a 2-year cycle of runs with large numbers of jacks. In order to maintain an appropriate escapement sex ratio and size range, the Frazer Lake target sockeye salmon escapement is further increased to account for excess jacks. When the total number of jacks counted through Dog Salmon weir exceeds 10% of the overall cumulative sockeye salmon counted through the weir, then jacks in excess of 10% are not considered toward the inseason management objectives. To further limit the number of jacks that could potentially spawn, if the number of jacks exceed 10% of the overall cumulative sockeye salmon counted through the weir, jacks were also trapped and culled prior to passing the weir. It was anticipated that the 2016 season would not be a year with large numbers of jacks and ADF&G targeted only the mid-range of the Frazer Lake sockeye salmon escapement goal of 120,000 fish; or 140,000 fish past Dog Salmon weir.

Olga Bay, Moser Bay, Alitak Bay, and Cape Alitak Salmon Management

The *Alitak District Management Plan* (5AAC 18.361) states that to the extent possible commercial salmon fishing must be managed in the traditional fishing areas of the Cape Alitak, Humpy-Deadman Bay, Alitak Bay, Moser Bay, and Olga Bay sections based on the sockeye salmon returning to the Frazer and Upper Station systems. However, from June 1 to August 20, the terminal Dog Salmon Flats Section of the Alitak District must be managed based on Frazer sockeye and pink salmon.

The Upper Station weir was fish tight on May 18, and Dog Salmon Creek weir was fish tight on May 24 (Fuerst *In prep*). Early-run escapement through the Upper Station weir was weak. In order to allow for additional escapement to the Upper Station system the usual 33-hour test fishery in early June did not take place.

By June 22, early-run escapement through the Upper Station weir had improved (Fuerst *In prep*) and ADF&G projected the early run would meet the lower value of the escapement goal (BEG 43,000 fish; Sagalkin et al. 2013). Early escapement through Dog Salmon weir was moderate and ADF&G announced a 57-hour commercial salmon fishing period in the traditional fishing areas of the Alitak District beginning on June 25. To facilitate shorter openings and longer closures in the Alitak District, the nontraditional Dog Salmon Flats Section also opened simultaneously with the traditional areas. This strategy effectively harvested more Frazer sockeye salmon per commercial salmon opening, allowing less Frazer sockeye salmon

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escapement and permitting the longer Alitak District closures. Shorter openings and longer closures allowed more escapement into other Olga Bay systems. Harvests were below average and the fishery shut down as scheduled on June 27.

By July 3, both early-run escapement through the Upper Station weir and Dog Salmon weir again improved. The department announced a 57-hour commercial salmon fishing period in the traditional fishing areas of the Alitak District beginning on July 5. Again, to facilitate shorter openings and longer closures, the nontraditional Dog Salmon Flats Section also opened simultaneously with the traditional areas. Harvest was still below average and the fishery then shut down to allow more fish to escape past Upper Station.

By July 11, both early-run escapement through the Upper Station weir and Dog Salmon weir again improved, and ADF&G announced a 57-hour commercial salmon fishing period in the traditional fishing areas of the Alitak District beginning on July 13. Again, to facilitate shorter openings and longer closures, the nontraditional Dog Salmon Flats Section also opened simultaneously with the traditional areas. Harvest was below average, but with more than adequate escapement past Dog Salmon weir the fishery was extended for an additional 48 hours.

After the closure on July 17, there were 3 more salmon commercial openings in the traditional sockeye salmon fishing areas of the Alitak District. These openings were based solely on Frazer sockeye salmon and only 1 of those openings included the Dog Salmon Flats Section. The commercial salmon openings beginning July 30 and August 6 did not include the Dog Salmon Flats Section due to concern for Dog Salmon creek pink salmon escapement.

The final 2016 sockeye salmon escapement at Dog Salmon weir was 150,469 sockeye salmon (Fuerst *In prep*). The final 2016 Frazer fish pass escapement was 122,585 sockeye salmon, within the established BEG of 75,000 to 170,000 fish (Sagalkin et al 2013; Fuerst *In prep*). A total of 27,884 sockeye salmon were enumerated at the Dog Salmon weir but did not ascend the Frazer fish pass. Due to budget cuts, the Frazer fish pass was closed earlier than in the past 10 years.

The final 2016 early run sockeye salmon escapement at Upper Station weir (through July 15) was 48,047 sockeye salmon; within the established BEG of 43,000 to 93,000 fish (Sagalkin et al. 2013; Fuerst *In prep*).

No jacks were culled at Dog Salmon weir in 2016. A total of 5,294 jacks (3.5% of the Dog Salmon escapement) passed Dog Salmon weir. A total of 3,124 jacks passed the Frazer fish pass, bringing the nonjack adult total sockeye salmon escaped into Frazer fish pass to 119,461 fish.

Humpy-Deadman Section Salmon Management

The Humpy-Deadman Section (HDS) is managed from June 1 to July 15 with equal fishing time in the Cape Alitak Section. After July 15, HDS is managed based on the strength of the local salmon returns.

On July 15, HDS was extended for an additional 48 hours until July 17. Pink salmon harvests and early aerial surveys indicated well below average abundance of pink salmon in the Alitak District. Due to a very weak pink salmon run, there were few pink salmon openings in the HDS for the remainder of the fishing season. In total, 73,378 pink salmon were harvested in the HDS,

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the second lowest in the past 15 years. The Alitak District escapement was 311,878 pink salmon in 2016, well below the 10-year average (Fuerst *In prep*).

Season Totals

In 2016, set gillnet harvest in the Olga Bay Section (statistical area 257-40) by 21 permit holders included 17,844 sockeye, 728 coho, 8,463 pink, and 753 chum salmon (Appendix D3). Set gillnet harvest in the Moser Bay Section (statistical area 257-43) by 21 permit holders included 23,541 sockeye, 565 coho, 9,769 pink, and 896 chum salmon (Appendix D3). Set gillnet harvest in the Alitak Bay Section (statistical area 257-41) by 26 permit holders included 11 Chinook, 27,012 sockeye, 438 coho, 18,199 pink, and 1,382 chum salmon (Appendix D3). Set gillnet harvest in the Dog Salmon Flats Section (statistical area 257-42) by 17 permit holders included 17,231 sockeye, 0 coho, 449 pink, and 2,516 chum salmon (Appendix D3).

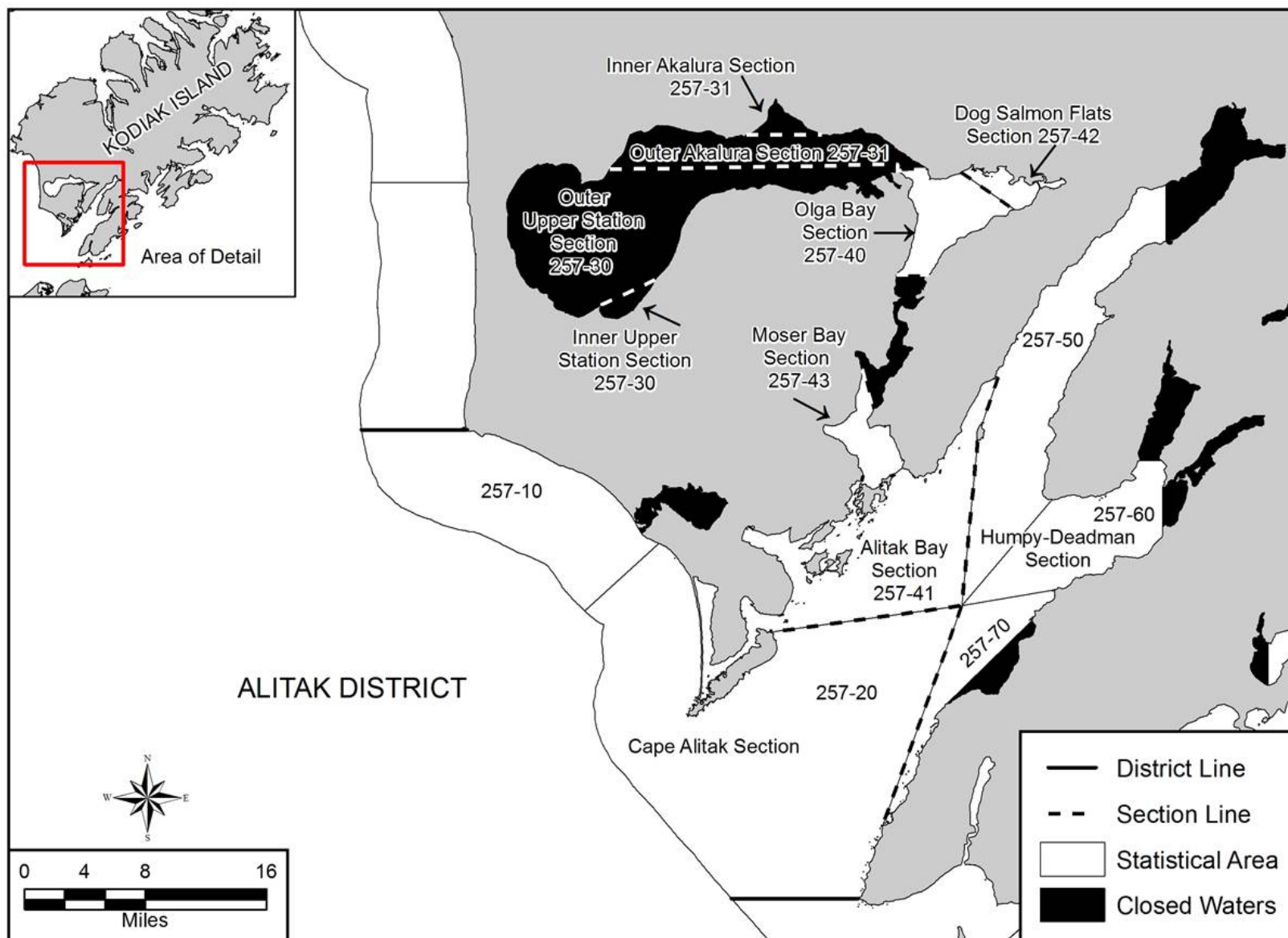
In 2016, seine harvest in the Cape Alitak Section (statistical areas 257-10 and -20) by 35 permit holders included 286 Chinook, 66,133 sockeye, 5,611 coho, 72,357 pink, and 4,919 chum salmon (Appendix D4). Seine harvest in the HDS (statistical areas 257-50, -60, and -70) by 17 permit holders included 62 Chinook, 31,534 sockeye, 344 coho, 73,378 pink and 1,731 chum salmon (Appendix D4).

A total of 38 purse seine permit holders fished in the Alitak District in 2016 with a total harvest of 348 Chinook (92% of the total Alitak District Chinook harvest), 97,667 sockeye (53%), 5,955 coho (23%), 145,735 pink (80%), and 6,650 chum salmon (55%; Appendices D4, D5, and D6). A total of 53 gillnet permit holders fished in Alitak District and harvested 29 Chinook (8%), 85,628 sockeye (47%), 5,547 coho (47%), 36,880 pink (20%), and 5,547 chum salmon (45%; Appendices D3, D5, and D6).

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- Sagalkin, N. H., B. Foster, M. B. Loewen, and J. W. Erickson. 2013. Review of salmon escapement goals in the Kodiak Management Area, 2013. Alaska Department of Fish and Game, Fishery Manuscript Series No. 13-11, Anchorage.

Appendix D2.—Map of the Alitak District showing sections, statistical areas, and closed waters, 2016.



Appendix D3.–Set gillnet daily salmon harvest, by species and section, for the Alitak District, 2016.

Statistical Area	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Olga Bay Section 257-40	25-Jun	6	7	0	0	1,249	5,627	0	0	1	4	38	313
	26-Jun	7	8	0	0	787	3,230	0	0	0	0	25	224
	27-Jun	6	7	0	0	262	1,208	0	0	0	0	22	168
	5-Jul	5	5	0	0	347	1,571	0	0	1	2	47	357
	6-Jul	4	5	0	0	171	781	0	0	0	0	21	164
	7-Jul	5	6	0	0	313	1,456	0	0	0	0	10	67
	13-Jul	5	5	0	0	562	2,459	0	0	17	68	39	298
	14-Jul ^a												
	15-Jul	3	5	0	0	137	583	0	0	2	12	20	145
	16-Jul	4	4	0	0	82	348	0	0	0	0	5	36
	17-Jul	3	3	0	0	82	310	0	0	0	0	5	32
	22-Jul	5	5	0	0	605	2,715	0	0	69	365	7	51
	23-Jul	5	8	0	0	515	2,045	0	0	17	96	17	127
	24-Jul	4	5	0	0	272	1,123	0	0	79	442	14	103
	25-Jul	4	4	0	0	343	1,224	2	8	78	396	10	75
	30-Jul	6	9	0	0	978	5,112	2	14	610	3,695	11	81
	31-Jul	7	12	0	0	658	3,154	5	37	906	5,181	12	108
	1-Aug	7	9	0	0	429	1,957	4	43	487	2,820	6	48
	2-Aug	6	11	0	0	725	3,231	5	34	826	4,512	5	39
	3-Aug	8	13	0	0	724	3,658	3	24	1,196	6,793	10	77
	6-Aug	6	9	0	0	1,493	8,539	13	109	1,809	10,679	28	180
	7-Aug	7	12	0	0	862	4,463	21	153	917	5,357	12	90
	8-Aug	8	12	0	0	993	5,612	23	154	1,108	6,556	12	96
	21-Aug	4	8	0	0	2,064	10,504	103	891	104	561	74	572
	22-Aug	6	10	0	0	916	5,052	79	624	60	303	71	497
	23-Aug	3	6	0	0	415	2,392	131	1,223	96	431	104	769
	24-Aug	3	6	0	0	414	2,079	109	920	42	191	41	280
	25-Aug	4	5	0	0	186	1,018	41	353	4	15	6	43
	1-Sep	3	5	0	0	584	3,208	63	525	13	67	18	111

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Statistical Area	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Olga Bay	2-Sep	4	5	0	0	345	1885	53	459	13	63	32	228
Section	3-Sep ^a												
257-40													
(cont.)													
Total		21	212	0	0	17,844	88,366	728	6,196	8,463	48,651	753	5,591
Average weight					0.0		4.95		8.51		5.75		7.42
Moser Bay	25-Jun	5	9	2	33	945	4,251	0	0	0	0	19	182
Section	26-Jun	6	8	1	14	688	2,908	0	0	1	3	14	86
(257-43)	27-Jun	6	9	1	16	1,034	4,761	0	0	1	3	23	182
	5-Jul	6	7	0	0	512	2,251	0	0	4	14	28	296
	6-Jul	9	11	2	31	500	2,427	0	0	1	4	49	286
	7-Jul	7	11	0	0	1,509	7,249	0	0	8	25	38	239
	13-Jul	7	9	1	10	718	3,635	1	10	70	277	56	394
	14-Jul	6	10	3	33	1,194	5,762	2	10	49	176	54	383
	15-Jul	6	9	5	63	430	2,143	0	0	29	122	25	154
	16-Jul	8	12	1	18	845	3,844	1	10	19	94	32	150
	17-Jul	7	10	0	0	636	3,135	1	5	41	194	26	181
	22-Jul	7	7	1	18	452	2,211	2	24	308	1,370	20	130
	23-Jul	8	12	0	0	877	4,271	1	6	313	1,499	11	91
	24-Jul	10	13	0	0	1,076	5,390	0	0	373	1,792	21	137
	25-Jul	7	10	1	23	786	3,937	1	6	258	1,163	15	87
	30-Jul	8	12	0	0	903	4,537	4	24	912	4,980	5	25
	31-Jul	6	9	0	0	779	3,950	2	13	747	4,112	8	50
	1-Aug	7	10	0	0	516	2,644	1	6	619	3,411	5	34
	2-Aug	8	12	0	0	1,017	5,229	10	55	1,361	7,471	14	97
	3-Aug	6	9	0	0	1,170	5,852	6	60	1,376	7,496	8	55
	6-Aug	7	10	0	0	1,076	5,412	12	94	1,040	5,253	21	139
	7-Aug	7	11	0	0	1,038	5,272	39	281	992	5,466	25	152
	8-Aug	8	11	0	0	1,997	10,583	54	409	1,078	6,115	48	349

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Statistical Area	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Moser Bay Section (257-43) (cont.)	21-Aug	4	5	0	0	498	2,483	54	458	39	177	74	468
	22-Aug	6	10	0	0	690	3,522	107	761	57	245	147	600
	23-Aug	7	8	0	0	546	2,772	139	1,000	31	137	54	390
	24-Aug	6	8	0	0	588	2,924	85	610	32	156	29	189
	25-Aug	5	5	0	0	161	811	1	6	5	26	10	58
	1-Sep	^a											
	2-Sep	^a											
	3-Sep	^a											
Total		21	270	18	259	23,541	115,981	565	4,219	9,769	51,802	896	5,697
Average weight					14.39		4.93		7.47		5.30		6.36
Alitak Bay Section (257-41)	25-Jun	7	11	0	0	1,642	8,866	1	10	3	12	22	161
	26-Jun	6	9	5	99	1,220	5,965	0	0	3	9	35	234
	27-Jun	6	8	0	0	654	3,385	0	0	0	0	21	147
	5-Jul	9	9	2	14	535	2,699	1	3	27	84	63	368
	6-Jul	8	8	0	0	1,091	5,387	0	0	33	154	42	352
	7-Jul	11	12	1	10	2,574	12,773	1	8	123	406	87	795
	13-Jul	8	10	0	0	1,280	6,565	2	12	304	1,241	115	827
	14-Jul	12	17	2	33	2,319	11,594	0	0	629	3,107	115	816
	15-Jul	9	13	0	0	1,528	7,356	2	13	210	954	48	324
	16-Jul	7	10	0	0	1,224	6,172	1	7	134	532	50	339
	17-Jul	10	10	1	16	824	4,142	0	0	189	766	49	286
	22-Jul	5	5	0	0	691	3,463	0	0	794	3,540	49	341
	23-Jul	5	6	0	0	806	4,033	0	0	686	3,391	33	238
	24-Jul	7	10	0	0	1,015	5,104	0	0	673	3,100	45	243
	25-Jul	9	11	0	0	639	3,204	0	0	1,158	5,731	41	279
	30-Jul	7	11	0	0	654	3,270	2	12	1,571	8,582	26	184
	31-Jul	7	7	0	0	467	2,334	2	15	997	5,470	15	108
	1-Aug	9	11	0	0	1,008	4,935	7	44	2,491	13,726	27	194
	2-Aug	6	6	0	0	552	2,792	3	18	2,288	12,561	18	124

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Statistical Area	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Alitak Bay Section (257-41) (cont.)	3-Aug	9	11	0	0	851	4,279	8	52	1,983	10,991	32	219
	6-Aug	6	8	0	0	966	4,805	25	221	1,222	6,225	44	313
	7-Aug	9	12	0	0	1,156	5,805	23	184	1,172	6,371	81	567
	8-Aug	7	9	0	0	1,520	7,659	29	205	1,424	7,785	87	612
	21-Aug ^a												
	22-Aug	4	4	0	0	89	451	5	32	10	44	26	137
	23-Aug	5	8	0	0	498	2,547	50	357	11	48	53	331
	24-Aug	4	5	0	0	190	957	44	349	14	60	32	232
	25-Aug	5	5	0	0	257	1,273	49	350	9	35	32	244
	1-Sep	3	3	0	0	224	1,115	56	484	4	12	21	145
	2-Sep ^a												
	3-Sep	3	3	0	0	216	1,081	96	769	11	44	46	233
Total		26	256	11	172	27,012	135,623	438	3,394	18,199	95,083	1,382	9,558
Average weight					15.64		5.02		7.75		5.22		6.92
Dog Salmon Flats Section (257-42)	25-Jun	6	8	0	0	1,715	7,654	0	0	0	0	55	384
	26-Jun	10	16	0	0	2,003	8,532	0	0	0	0	103	901
	27-Jun	6	7	0	0	924	3,623	0	0	0	0	47	398
	5-Jul	8	12	0	0	1,413	6,382	0	0	1	3	434	3,532
	6-Jul	3	4	0	0	285	1,274	0	0	1	3	94	755
	7-Jul	3	3	0	0	143	655	0	0	0	0	63	519
	13-Jul	8	14	0	0	2,345	10,216	0	0	21	116	546	4,251
	14-Jul	6	10	0	0	1,356	5,700	0	0	11	65	269	2,137
	15-Jul	4	5	0	0	680	2,782	0	0	4	19	143	1,115
	16-Jul	4	6	0	0	658	2,752	0	0	1	5	105	805
	17-Jul	3	6	0	0	982	3,912	0	0	5	31	263	2,142
	22-Jul	7	11	0	0	1,127	5,017	0	0	61	320	165	1,234
	23-Jul	7	16	0	0	1,419	5,943	0	0	125	708	116	860

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Statistical Area	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Dog Salmon	24-Jul	6	7	0	0	514	1,970	0	0	35	181	33	245
Flats Section (257-42)	25-Jul	7	8	0	0	1,667	6,233	0	0	184	1,037	80	603
Total		17	133	0	0	17,231	72,645	0	0	449	2,488	2,516	19,881
Average weight					0.0		4.22		0.00		5.54		7.90
Grand Total		53	871	29	431	85,628	412,615	1,731	13,809	36,880	198,023	5,547	40,726
Average weight					14.86		4.82		7.98		5.37		7.34

^a Confidential.

Appendix D4.–Purse seine daily salmon harvest, by species and section, for the Alitak District, 2016.

Statistical Area	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Cape Alitak Section (257-10 & 20)	25-Jun	14	14	64	632	7,140	36,729	6	22	61	185	482	2,798
	26-Jun ^a												
	27-Jun	10	10	24	231	3,324	17,542	0	0	20	69	110	868
	6-Jul	3	3	0	0	6,689	35,444	35	229	718	2,768	290	1,992
	7-Jul ^a												
	13-Jul	3	3	16	168	2,708	14,722	10	76	342	1,445	41	258
	14-Jul	10	10	42	408	9,298	51,048	42	286	2,218	8,664	163	1,184
	16-Jul	4	5	35	364	7,204	40,427	16	102	2,852	12,263	151	1,053
	17-Jul	4	4	39	374	4,809	25,694	14	109	2,700	10,546	146	1,211
	31-Jul ^a												
	1-Aug	4	4	2	48	1,823	9,320	184	1,125	10,617	53,892	166	1,391
	2-Aug	5	5	2	31	3,598	16,781	816	5,291	14,801	65,016	859	5,558
	3-Aug	8	8	16	234	974	4,791	243	1,769	9,548	47,971	184	1,463
	6-Aug	10	11	28	310	5,499	27,073	922	7,445	14,806	80,549	707	4,639
	7-Aug	6	6	10	162	2,197	12,781	298	3,370	7,676	36,263	338	2,403
	21-Aug ^a												
	22-Aug	5	5	4	65	2,499	14,593	944	8,594	1,094	4,981	306	2,175
	25-Aug	4	4	4	42	2,123	11,162	641	6,400	822	3,282	270	1,555
	1-Sep	3	3	0	0	1,442	7,709	413	4,555	214	960	223	994
	2-Sep ^a												
	3-Sep ^a												
Total		35	102	286	3,070	66,133	351,626	5,611	48,004	72,357	344,642	4,919	32,673
Average weight					10.73		5.32		8.56		4.76		6.64
Humpy-Deadman Section (257-50,60 & 70)	6-Jul	5	5	23	181	5,792	30,325	0	0	240	1,069	340	2,251
	7-Jul	6	6	4	41	6,293	34,991	178	1,454	463	2,363	301	1,899
	13-Jul ^a												
	14-Jul ^a												
	15-Jul	4	4	2	28	4,311	19,616	3	22	1,731	7,874	66	476
	16-Jul ^a												
	17-Jul	5	5	5	63	4,051	21,917	8	74	1,940	7,186	78	635

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Statistical Area	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Humpy-Deadman	22-Jul	7	7	1	14	1,133	5,165	2	18	10,019	50,086	262	1,901
Section	23-Jul	3	3	0	0	930	4,992	9	56	8,147	26,970	143	886
(257-50,60 & 70)	24-Jul	5	7	8	92	2,642	11,211	16	122	10,588	56,862	158	1,140
	30-Jul	3	3	0	0	421	2,342	13	122	13,531	75,252	65	518
	31-Jul	6	6	0	0	1,081	5,775	62	512	24,619	131,100	113	859
	16-Aug	7	7	0	0	370	1,781	51	487	186	1,035	58	456
Total		17	57	62	639	31,534	161,159	344	2,882	73,378	367,395	1,731	12,053
Average weight					10.31		5.11		8.38		5.01		6.96
Grand Total		38	159	348	3,709	97,667	512,785	5,955	50,885	145,735	712,037	6,650	44,726
Average weight					10.66		5.25		8.54		4.89		6.73

^a Confidential.

Appendix D5.–Salmon harvest by gear type and species for the Alitak District, 2016.

			Chinook		Sockeye		Coho		Pink		Chum		Total	
	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
<u>Seine</u>														
Total	38	159	348	3,709	97,667	512,785	5,955	50,885	145,735	712,037	6,650	44,726	256,355	1,324,142
Average weight				10.66		5.25		8.54		4.89		6.73		
<u>Set Gillnet</u>														
Total	53	826	29	431	85,628	412,615	1,731	13,809	36,880	198,023	5,547	40,726	129,815	665,604
Average weight				12.35		5.40		7.47		3.84		7.03		
Year Total	91	1,534	377	4,140	183,295	925,400	7,686	64,694	182,615	910,060	12,197	85,452	386,170	1,989,746
Average weight				10.98		5.05		8.42		4.98		7.01		

Appendix D6.–Commercial salmon harvest, by species with percent harvest by gear type, in the Alitak District, 1954–2016.

Year	Chinook ^a			Sockeye ^a			Coho ^a			Pink ^a			Chum ^a			Total ^a		
	Number	GN%	PS%	Number	GN%	PS%	Number	GN%	PS%	Number	GN%	PS%	Number	GN%	PS%	Number	GN%	PS%
1954	3	33%	67%	44,448	94%	6%	1,118	93%	7%	490,038	47%	53%	55,788	19%	81%	591,395	48%	52%
1955	38	74%	26%	56,058	89%	11%	410	68%	32%	1,656,363	15%	85%	100,031	17%	83%	1,812,900	18%	82%
1956	10	10%	90%	62,673	77%	23%	904	25%	75%	335,669	30%	70%	55,967	11%	89%	455,223	34%	66%
1957	7	14%	86%	15,365	88%	12%	378	31%	69%	410,620	12%	88%	49,661	27%	73%	476,031	16%	84%
1958	11	0%	100%	30,542	79%	21%	488	33%	67%	770,851	29%	71%	81,255	8%	92%	883,147	29%	71%
1959	11	18%	82%	24,888	59%	41%	378	30%	70%	544,592	23%	77%	70,589	8%	92%	640,458	23%	77%
1960	29	17%	83%	68,472	77%	23%	2,129	77%	23%	1,561,476	25%	75%	102,432	13%	87%	1,734,538	26%	74%
1961	23	4%	96%	145,781	67%	33%	1,470	49%	51%	1,589,027	14%	86%	60,600	18%	82%	1,796,901	19%	81%
1962	5	20%	80%	124,496	75%	25%	1,792	79%	21%	1,886,769	23%	77%	54,115	26%	74%	2,067,177	26%	74%
1963	30	7%	93%	54,992	60%	40%	1,202	31%	69%	1,522,856	14%	86%	42,836	10%	90%	1,621,916	15%	85%
1964	29	10%	90%	50,167	72%	28%	2,324	76%	24%	1,408,731	46%	54%	34,460	13%	87%	1,495,711	46%	54%
1965	16	6%	94%	68,876	68%	32%	688	16%	84%	1,129,185	11%	89%	20,604	17%	83%	1,219,369	14%	86%
1966	2	50%	50%	70,526	91%	9%	585	78%	22%	429,204	40%	60%	33,153	18%	82%	533,470	46%	54%
1967	6	0%	100%	14,227	82%	18%	50	0%	100%	84,918	66%	34%	17,377	55%	45%	116,578	66%	34%
1968	16	44%	56%	40,662	86%	14%	3,701	79%	21%	1,046,221	21%	79%	29,450	35%	65%	1,120,050	24%	76%
1969	27	37%	63%	98,722	54%	46%	7,240	7%	93%	3,768,917	8%	92%	45,134	15%	85%	3,920,040	10%	90%
1970	8	50%	50%	81,528	76%	24%	4,540	73%	27%	949,488	27%	73%	93,306	15%	85%	1,128,870	30%	70%
1971	33	30%	70%	124,480	55%	45%	2,261	66%	34%	1,066,180	10%	90%	191,437	7%	93%	1,384,391	14%	86%
1972	15	40%	60%	22,127	70%	30%	1,270	51%	49%	187,154	17%	83%	93,236	6%	94%	303,802	18%	82%
1973	4	50%	50%	10,338	62%	38%	125	70%	30%	49,932	35%	65%	24,408	19%	81%	84,807	34%	66%
1974	19	16%	84%	66,605	52%	48%	1,284	49%	51%	363,389	9%	91%	22,220	9%	91%	453,517	16%	84%
1975	0	0%	0%	16,515	72%	28%	1,627	3%	97%	235,720	11%	89%	2,855	40%	60%	256,717	15%	85%
1976	18	28%	72%	96,668	71%	29%	3,518	53%	47%	1,804,003	26%	74%	66,183	14%	86%	1,970,390	28%	72%
1977	20	40%	60%	78,805	69%	31%	1,343	57%	43%	961,673	23%	77%	70,978	12%	88%	1,112,819	26%	74%
1978	694	58%	42%	218,165	59%	41%	2,788	52%	48%	4,191,756	12%	88%	72,166	16%	84%	4,485,569	14%	86%
1979	108	24%	76%	317,906	50%	50%	15,007	54%	46%	1,664,249	7%	93%	22,454	32%	68%	2,019,724	14%	86%
1980	34	21%	79%	208,200	83%	17%	12,972	34%	66%	2,033,236	12%	88%	67,471	12%	88%	2,321,913	18%	82%
1981	45	13%	87%	346,073	74%	26%	17,011	55%	45%	2,073,629	13%	87%	61,513	37%	63%	2,498,271	22%	78%
1982	43	30%	70%	476,862	86%	14%	29,378	40%	60%	519,880	27%	73%	101,543	22%	78%	1,127,706	52%	48%
1983	159	12%	88%	460,087	59%	41%	28,953	45%	55%	1,318,526	7%	93%	107,786	21%	79%	1,915,511	21%	79%
1984	290	11%	89%	382,729	67%	33%	25,299	51%	49%	433,806	25%	75%	84,924	24%	76%	927,048	43%	57%
1985	199	21%	79%	703,186	63%	37%	43,914	48%	52%	1,057,912	14%	86%	84,760	33%	67%	1,889,971	34%	66%

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Year	Chinook ^a			Sockeye ^a			Coho ^a			Pink ^a			Chum ^a			Total ^a		
	Number	GN%	PS%	Number	GN%	PS%	Number	GN%	PS%	Number	GN%	PS%	Number	GN%	PS%	Number	GN%	PS%
1989 ^b	106	100%	0%	1,284,174	100%	0%	1,613	100%	0%	182,217	100%	0%	19,911	100%	0%	1,488,021	100%	0%
1990	807	17%	83%	1,435,461	52%	48%	18,176	65%	35%	144,927	13%	87%	50,304	36%	64%	1,649,675	48%	52%
1991	821	10%	90%	2,062,718	58%	42%	24,601	52%	48%	2,373,516	5%	95%	83,003	24%	76%	4,544,659	30%	70%
1992	1,056	9%	91%	525,158	53%	47%	24,548	55%	45%	59,268	28%	72%	34,580	43%	57%	644,610	50%	50%
1993	1,828	10%	90%	998,751	53%	47%	19,271	40%	60%	3,465,473	6%	94%	53,636	27%	73%	4,538,959	17%	83%
1994	1,946	8%	92%	931,328	54%	46%	32,312	44%	56%	1,120,832	9%	91%	112,191	18%	82%	2,198,609	29%	71%
1995	848	15%	85%	1,674,169	47%	53%	19,000	47%	53%	7,065,939	6%	94%	105,224	17%	83%	8,865,180	14%	86%
1996	569	18%	82%	1,458,215	54%	46%	35,529	47%	53%	553,424	39%	61%	65,250	29%	71%	2,112,987	49%	51%
1997	291	31%	69%	685,635	59%	41%	33,549	41%	59%	955,253	15%	85%	85,710	34%	66%	1,760,438	33%	67%
1998	1,487	6%	94%	1,003,245	57%	43%	32,185	47%	53%	1,704,581	26%	74%	40,554	40%	60%	2,782,052	37%	63%
1999	271	12%	88%	633,579	70%	30%	13,126	74%	26%	1,353,933	12%	88%	79,000	16%	84%	2,079,909	30%	70%
2000	433	10%	90%	558,674	57%	43%	10,131	51%	49%	243,161	30%	70%	67,189	17%	83%	879,588	47%	53%
2001	651	11%	89%	461,785	64%	36%	2,471	24%	76%	1,439,930	7%	93%	52,521	21%	79%	1,957,358	26%	74%
2002	13	0%	100%	14,575	0%	100%	1,060	0%	100%	1,078,120	0%	100%	10,164	0%	100%	1,103,932	0%	100%
2003	298	3%	97%	341,402	67%	33%	10,592	45%	55%	497,822	18%	82%	31,866	22%	78%	881,980	38%	62%
2004	1,316	4%	96%	1,156,539	61%	39%	15,897	54%	46%	1,420,188	24%	76%	38,348	40%	60%	2,632,288	41%	59%
2005	602	8%	92%	777,905	60%	40%	6,977	56%	44%	4,193,022	4%	96%	22,839	40%	60%	5,001,027	87%	13%
2006	55	7%	93%	86,286	76%	24%	4,449	63%	37%	2,872,970	5%	95%	46,904	5%	95%	3,010,664	7%	93%
2007	23	26%	74%	85,469	80%	20%	2,456	62%	38%	474,016	15%	85%	47,931	9%	91%	609,895	24%	76%
2008	265	3%	97%	743,052	63%	37%	15,390	17%	83%	712,242	22%	88%	78,694	7%	93%	1,549,643	41%	59%
2009	204	4%	96%	631,312	64%	36%	7,883	40%	60%	3,996,164	3%	97%	72,497	10%	90%	4,708,060	11%	89%
2010	158	3%	97%	116,065	79%	21%	14,585	25%	75%	146,363	44%	56%	18,843	20%	80%	296,014	55%	45%
2011	2,633	1%	99%	318,208	56%	44%	6,094	21%	79%	4,896,501	1%	99%	44,699	17%	83%	5,268,135	5%	95%
2012	224	3%	97%	361,287	54%	46%	3,044	32%	68%	1,563,557	10%	90%	26,896	12%	88%	1,955,008	18%	82%
2013	646	1%	99%	223,126	60%	40%	4,056	41%	59%	2,664,435	1%	99%	34,324	8%	92%	2,926,587	6%	94%
2014	194	5%	95%	254,517	52%	48%	4,260	72%	28%	661,789	9%	91%	13,601	34%	66%	934,361	22%	78%
2015	1,554	1%	99%	364,946	37%	63%	19,847	83%	17%	5,812,572	1%	99%	52,682	17%	83%	6,251,601	4%	96%
2016	377	8%	92%	183,295	47%	53%	7,686	77%	23%	182,615	20%	80%	12,197	45%	55%	386,170	40%	60%
Averages ^b																		
1954–2015	361	17%	81%	415,925	65%	35%	11,084	48%	52%	1,492,570	18%	82%	59,326	21%	79%	1,979,262	29%	71%
2006–2015	596	5%	95%	318,427	62%	38%	8,206	46%	54%	2,380,061	11%	90%	43,707	14%	86%	2,750,997	19%	81%

Note: GN = gillnet; PS = purse seine

^a ADF&G test fish harvest is not included.

^b The harvest during 1989 is not included in averages because of fishery restrictions and unusual fishing patterns due to the M/V *Exxon Valdez* oil spill.

APPENDIX E. WESTSIDE FISHERY SUMMARY

INTRODUCTION

Westside Kodiak Harvest Strategy

The Westside Kodiak Salmon Management Plan is the result of long-term management strategies that were initially implemented in 1971 and placed into regulation in 1990. Placing the management plan in regulation clarified the management strategy and helped maintain the biological integrity of local salmon stocks while alleviating allocative concerns of local fishermen (Prokopowich et al. 1991).

The intent of this management plan is to harvest salmon bound to local systems in traditional fisheries. Due to the mixing of various local salmon stocks during inshore migration, the plan is complex, but it provides a predictable framework for the harvest of major sockeye, pink, chum, and coho salmon stocks from the west side of Kodiak. The plan is in effect for the entire salmon season and covers the Southwest and Northwest Kodiak districts, as well as the Southwest Afognak Section (Appendix E2). The management plan guides the prosecution of early- and late-run sockeye salmon fisheries, including those targeting the major systems of Karluk and Ayakulik and other minor sockeye salmon systems, as well as local pink, chum, and coho salmon fisheries.

The Northwest Kodiak District and Southwest Afognak Section

The Northwest Kodiak District and the Southwest Afognak Section can be broken up into 2 distinct areas: the outer cape areas and the inner bays. The Central, North Cape, and Southwest Afognak sections consist of the outer capes between Rocky Point in the west, Cape Paramanof in the north, and Monashka Bay in the east. The inner bays consist of the 8 bays in the Northwest Kodiak District: Anton Larsen, Sharatin, Kizhuyak, Terror, Inner Uganik, Spiridon, Zachar, and Inner Uyak bays (Appendix E2).

The Central, North Cape, and Southwest Afognak Sections

The Central Section is open to seine and set gillnet gear types. The Southwest Afognak and North Cape sections are only open to seine gear. In June these areas are opened and closed based on Karluk Lake early-run sockeye salmon escapement. From June 1 to June 15, ADF&G is directed to open 2 mandatory 33-hour fishing periods to gauge the run strength of sockeye salmon returning to Karluk, Ayakulik, and Olga Bay systems. The Southwest Afognak Section can only open for one 33-hour fishing period from June 1 to June 15. From June 15 to July 5, openings are based on the early-run sockeye salmon returning to Karluk Lake.

The pink salmon fishery opens on July 6, and the length of the initial weekly fishing periods is based on the current year's (wild stock) pink salmon forecast. During the peak pink salmon harvest period, from late July to mid-August, fishing periods are adjusted to match the actual strength of pink salmon returning to systems within the Northwest Kodiak District. However, the Southwest Afognak Section is also tied to the allocative considerations of the *North Shelikof Strait Sockeye Salmon Management Plan* between July 6 and July 25 and has a harvest cap of 50,000 sockeye salmon.

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From approximately August 16 to August 24, the Central, North Cape, and Southwest Afognak sections are opened and closed based on both Karluk Lake late-run sockeye and pink salmon returning to the major systems of the Northwest Kodiak District and Southwest Afognak Section. By this time, the majority of the pink salmon have been harvested and Karluk Lake late-run sockeye salmon escapement has begun to increase. From August 25 to September 5, these areas are managed based on late-run sockeye salmon returning to Karluk. After September 5, the fishery is managed both on late-run sockeye salmon returning to Karluk and coho salmon returning to the major systems of the Northwest Kodiak District and Southwest Afognak Section. This blended management has allowed for the protection of both Northwest Kodiak District and Southwest Afognak Section pink salmon, as well as Karluk Lake sockeye salmon.

Northwest Kodiak District Inner Bays

The inner bays of the Northwest Kodiak District are open to seine gear only. From June 1 to June 15, ADF&G is directed to open 2 mandatory 33-hour fishing periods at the same time as those in the Central and North Cape sections. From June 16 to July 5, openings are based on local sockeye and early-run chum salmon returning to each individual section.

From July 6 to July 31, the inner bays are opened to commercial salmon fishing based on local sockeye, pink, and early-run chum salmon returning to each section. The lengths of the initial weekly fishing periods are based on the current year's (wild stock) pink salmon forecast. However, the inner bays may be closed due to weak early-run chum or sockeye salmon escapement. Openings from August 1 to August 24 are based on pink and late-run chum salmon returning to each individual section. From August 25 to September 5 fishery openings are based on local pink, late-run chum, and coho salmon returning to each individual section. After September 5, openings are based only on coho salmon.

The Southwest Kodiak District

The Southwest Kodiak District is a seine gear only area and extends from Low Cape in the south to Rocky Point in the north. The Southwest Kodiak District can be broken down into 3 different areas: Inner and Outer Karluk sections in the north, Inner and Outer Ayakulik sections in the south, and the Halibut Bay and Sturgeon sections between the two. Management decisions within the Inner and Outer Karluk sections are primarily determined by salmon returning to the Karluk system. The Inner and Outer Ayakulik sections are managed on salmon returning to the Ayakulik system. The Halibut Bay and Sturgeon sections are managed based on a mixture of Olga Bay, Ayakulik, Karluk, and local salmon stocks. Both the Karluk and Ayakulik systems have very defined even-year-dominant pink salmon runs (Donnelly 1983; Eggers et al. 1991). Differences in system dynamics between even and odd years in July has resulted in different management practices depending on the relative pink salmon run strength within a year.

Inner and Outer Karluk Sections

From June 1 to July 15, the Inner and Outer Karluk sections are opened based on early-run sockeye salmon returning to Karluk Lake. However, the Inner Karluk Section cannot be opened during this timeframe unless ADF&G determines that the early-run Karluk sockeye salmon escapement goal will be exceeded.

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In odd years, from July 16 to August 24, Inner and Outer Karluk sections' commercial salmon fishing periods are based on late-run sockeye salmon. In even years, openings are based on both late-run sockeye salmon and pink salmon returns. Openings from August 25 to September 5 are based on late-run Karluk Lake sockeye salmon. After September 5, openings are based on both late-run sockeye and coho salmon returning to the Karluk system.

Inner and Outer Ayakulik sections

From June 1 to July 15, commercial salmon fishing periods within the Inner and Outer Ayakulik sections are based on early-run sockeye salmon returning to Red Lake (Ayakulik River). In odd years, from July 16 to August 24, fishing periods are based on late-run sockeye salmon run strength. In even years during this timeframe, Inner and Outer Ayakulik sections fishing periods are based on late-run sockeye salmon and pink salmon run strengths. After approximately August 24, fishing periods are based on coho salmon returning to the Ayakulik system.

Sturgeon and Halibut Bay Sections

The Sturgeon and Halibut Bay sections are closed from June 1 to June 22 because of mixed Karluk, Ayakulik, and Olga Bay sockeye salmon stocks present at this time. From June 23 to July 15, openings are based on early-run sockeye salmon returning to Ayakulik and Karluk lakes. However, the Sturgeon River has one of the largest documented chum salmon runs in the Kodiak Management Area, and this early-run chum salmon system must also be taken into consideration when opening the Sturgeon Section during this time frame. From July 16 to August 24 in either even or odd years, fishing periods are determined based on Ayakulik or Karluk late-run sockeye salmon or pink salmon. After August 25, fishing periods are based on Karluk and Ayakulik late-run sockeye salmon run strength, as well as local coho salmon stocks.

2016 Westside Kodiak Fisheries

ADF&G's preseason salmon forecasts predicted a surplus (in excess of escapement needs) of early-run sockeye salmon returning to Karluk Lake (159,000 fish), Frazer Lake (205,000 fish), Ayakulik River (267,000 fish), and early-run Upper Station (28,000 fish; Brenner and Munro 2016).

The Karluk early-run sockeye salmon biological escapement goal (BEG) is 110,000 to 250,000 fish. The 2016 targeted sockeye salmon escapement for Karluk Lake early-run was 175,000 fish. The Ayakulik early-run sockeye salmon sustainable escapement goal (SEG) is 140,000 to 280,000 fish. The 2016 targeted sockeye salmon escapement for the Ayakulik early run was 210,000 fish.

The Karluk late-run sockeye salmon BEG is 170,000 to 380,000 fish. The 2016 targeted sockeye salmon escapement of 270,000 fish for Karluk Lake late run was based on a maximum sustained yield calculation (Sagalkin et al. 2013). The Ayakulik late-run sockeye salmon SEG is 60,000 to 120,000 fish. The 2016 targeted sockeye salmon escapement of 90,000 fish for the Ayakulik late run was based on a maximum sustained yield calculation (Sagalkin et al. 2013).

Karluk Early Run

The Karluk River weir was fish tight on May 22 (Fuerst *In prep*). Early sockeye salmon escapement was strong. Due to strong early escapement, the first commercial test fishing period in the Northwest Kodiak District began on June 2 for a total 57 hours. The resulting harvest indicated a weaker than expected run of sockeye salmon traveling along the Westside fishery and the fishing period was not extended.

Through June 5, 54,032 sockeye salmon had passed the Karluk River weir, which was within the escapement objectives for that date. On June 6, a second fishing period for the Northwest Kodiak District was announced for 57 hours beginning at noon June 8. The resulting harvest continued to indicate a weaker than expected sockeye salmon run of sockeye salmon traveling on the Westside fishery and the fishing period was not extended.

By June 11, the cumulative early-run Karluk River escapement remained above the escapement objectives for that date with a cumulative escapement of 76,336 fish. A 57-hour commercial salmon fishing period in the Central and North Cape sections of the Northwest Kodiak District and the Outer Karluk Section of the Southwest Kodiak District was scheduled to begin June 14. Although the resulting harvest indicated a weaker than expected run of sockeye salmon traveling along the Westside fishery, an aerial survey conducted on June 15 indicated a large buildup of fish in Karluk Lagoon. Escapement remained adequate throughout the fishing period and a 72-hour extension was announced.

By June 18, the cumulative early-run Karluk River escapement remained within the escapement objectives for that date with a cumulative escapement of 107,593 fish, and the majority of the Westside was extended for an additional 72 hours. An aerial survey conducted on June 21 indicated a large buildup of fish in Karluk Lagoon. With a large buildup of fish in the lagoon and continued adequate escapement, the majority of the Westside was extended until June 28.

The 2016 Karluk Lake early-run sockeye salmon escapement of 164,760 fish (Fuerst *In prep*) was within the escapement goal range of 110,000 to 250,000 fish (Sagalkin et al. 2013). From June 1 to July 15, approximately 300,046 sockeye salmon were harvested in the Westside fishery opened based on Karluk early-run sockeye (Table 9). Of this harvest, approximately 41,884 fish were estimated to be of Karluk Lake origin (Wattum *In prep*).

Pink Run

On July 6, the majority of the Kodiak Area opened to commercial salmon fishing for 105 hours based on the preseason wild stock pink salmon forecast of 11.9 million fish. With regard to the Westside of Kodiak, the Sturgeon Section of the Southwest Kodiak District and the Westside inner bay of Kizhuyak remained closed due to weak early chum salmon escapement. The Inner Karluk, Inner and Outer Ayakulik, and Halibut Bay sections of the Southwest Kodiak District also remained closed for early-run sockeye salmon escapement. Pink salmon harvests for the first pink salmon fishing period were the weakest since the 1970s.

Due to the extremely weak pink salmon harvest on the initial areawide pink salmon fishing period, the fishery was closed for an additional day and the majority of the Kodiak Area opened for 81 hours on July 14 (originally scheduled for 105 hours beginning July 13). The Inner

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Ayakulik, Halibut Bay, Sturgeon, and Inner and Outer Karluk sections of the Southwest Kodiak District remained closed to protect early pink salmon escapement, and the Westside inner bays of Zachar, Inner Uganik, Terror, and Kizhuyak bays all remained closed due to weak early chum escapement. Pink salmon harvests for the second pink salmon fishing period continued to be extremely weak.

The next areawide weekly pink salmon opening was delayed for an extra 2 days and the majority of the Kodiak Area opened for 81 hours on July 22 (originally scheduled for 105 hours beginning July 20). Again, the Inner Ayakulik, Halibut Bay, Sturgeon, and Inner and Outer Karluk sections of the Southwest Kodiak District remained closed to protect pink salmon escapement, and the Westside inner bays of Uyak, Zachar, Spiridon, Inner Uganik, Terror, and Kizhuyak bays all remained closed due to weak early chum escapement. Pink salmon harvest continued to be extremely weak and early aerial surveys continued to indicate weaker than average wild stock pink salmon escapement.

The next areawide weekly pink salmon opening was delayed for an extra 3 days and the majority of the Kodiak Area opened for 57 hours on July 30 (originally scheduled for 105 hours beginning July 27). Again, the Inner Ayakulik, Halibut Bay, Sturgeon, and Inner and Outer Karluk sections of the Southwest Kodiak District remained closed to protect pink salmon escapement, and the Westside inner bays of Uyak, Zachar, Spiridon, Inner Uganik, and Kizhuyak bays all remained closed due to weak early-run chum and pink escapement. Pink salmon harvest continued to be extremely weak and aerial surveys indicated the pink run was very weak.

After a the fourth weekly pink salmon fishing period, many sections and districts in the Kodiak Area had very weak pink salmon escapement and did not open again until coho salmon management in September. Following a 4.5-day closure, much of Afognak, the Northwest Kodiak, and Alitak districts opened for 57 hours on August 6 (originally scheduled for 105 hours beginning August 3). Again, the Ayakulik, Halibut Bay, Sturgeon, and Inner and Outer Karluk sections of the Southwest Kodiak District remained closed to protect pink salmon escapement, and the Westside inner bays of Zachar, Spiridon, and Kizhuyak bays all remained closed due to weak pink escapement. Pink salmon harvest continued to be extremely weak and aerial surveys indicated the pink run continued to be very weak. The fishery then shut down until August 16 when late-run Karluk escapement management began. The 2016 Kodiak Area pink salmon run was the weakest since 1975 and the Westside fishery harvested a total of 1,090,581 pink salmon (Table 9).

Karluk Late Run

Due to very limited Westside fishing time during the pink salmon fishery in July and August, Karluk late-run escapement was well above average in August. On August 16, the Central and North Cape sections of the Northwest Kodiak District, and the Southwest Afognak Section of the Afognak District opened to commercial salmon fishing. The resulting harvest indicated a large abundance of sockeye salmon traveling along the Westside fishery. With above average harvest and escapement, the fishery was extended and the Outer Karluk Section of the Southwest Kodiak District opened on August 18, and the Inner Karluk Section opened on August 19. Later the Halibut Bay and Sturgeon Section of the Southwest Kodiak District were also opened.

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After extended fishing in late August, Karluk late-run sockeye salmon escapement dropped off, and the Inner and Outer Karluk, Sturgeon, and Halibut Bay sections of the Southwest Kodiak District closed on August 30. However, in early September Karluk late-run sockeye salmon escapement again picked up, and the Outer Karluk Section opened again for the remainder of the season. Later, the Inner Karluk Section also opened again for the remainder of the season.

The Karluk late-run sockeye salmon escapement of 318,638 fish was within the desired escapement goal range of 170,000 to 380,000 fish (Sagalkin et al. 2013), and the Westside post-July 15 sockeye salmon harvest was 670,592 fish, which included an estimated 461,350 Karluk late-run sockeye salmon (Wattum *In prep*).

Ayakulik

The Ayakulik River weir was fish tight on May 20 (Fuerst *In prep*). The 2016 Ayakulik early-run sockeye salmon run was weak, and prior to July 15 only 2 short fishing periods were allowed in the Outer Ayakulik Section of the Southwest Kodiak District. Through July 15, the cumulative Ayakulik early-run sockeye salmon escapement of 182,589 fish (Fuerst *In prep*) was within the escapement goal range of 140,000 to 280,000 fish (Sagalkin et al. 2013).

The 2016 Ayakulik late-run sockeye salmon run was weak, and prior to August 24 only 3 short fishing periods were allowed in the Outer Ayakulik Section of the Southwest Kodiak District. Through weir removal on August 22, the cumulative late-run Ayakulik sockeye salmon escapement of 71,978 fish was within the escapement goal range of 60,000 to 120,000 fish (Sagalkin et al. 2013).

The total sockeye salmon escapement through the Ayakulik weir was 254,567 fish (Fuerst *In prep*), and was within the combined early- and late-run escapement goals (200,000 to 400,000 fish; Sagalkin et al. 2013). For the season, 141,747 sockeye salmon were harvested based on Ayakulik sockeye salmon (Table 9). Of this, approximately 108,191 fish were estimated to be of Ayakulik (Red Lake) origin (Wattum *In prep*).

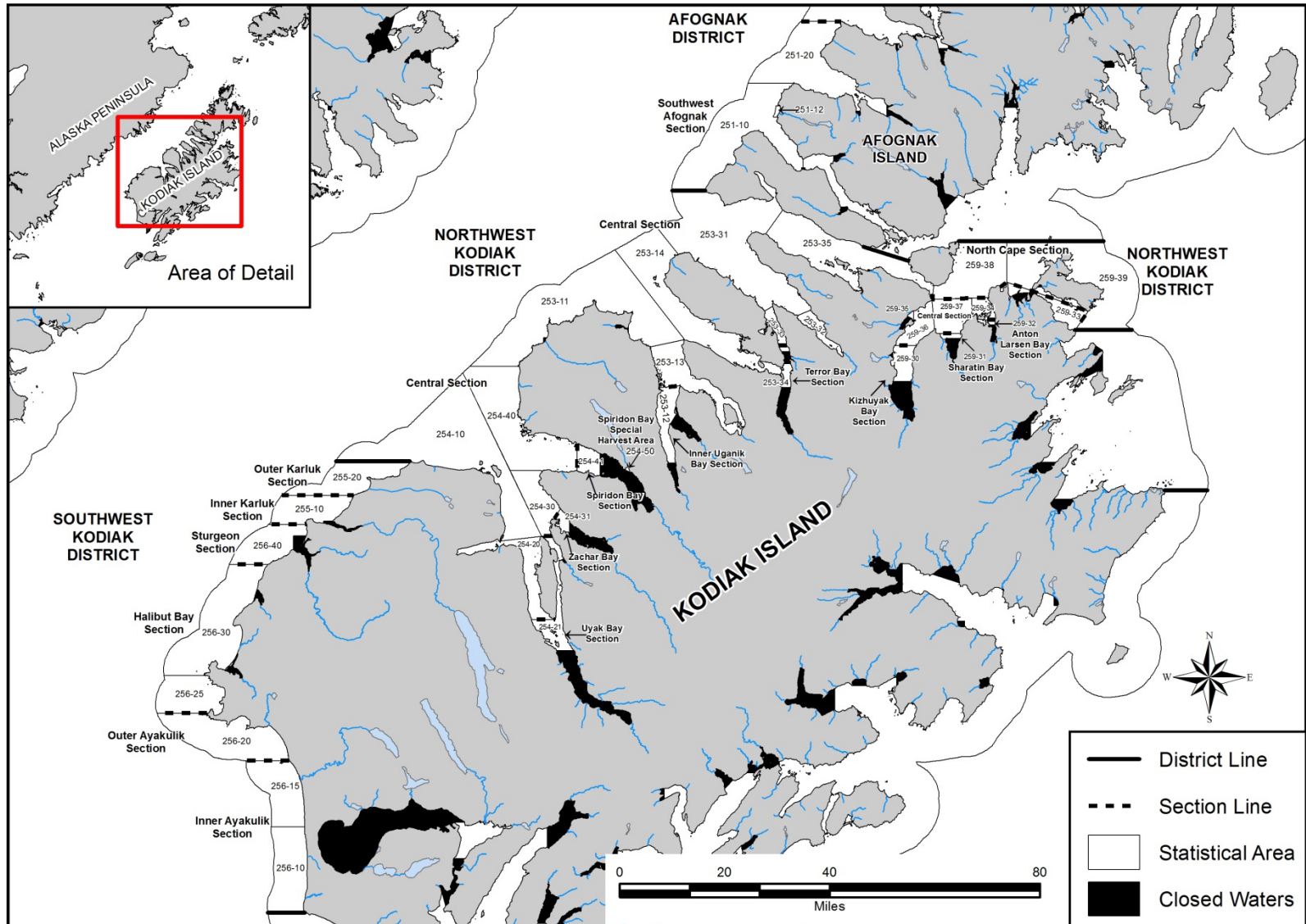
In 2016, there were a total of 4,326 landings made in Westside Kodiak management units (Southwest Afognak to Ayakulik¹) consisting of a total commercial harvest of 2,871,252 salmon, including 3,253 Chinook, 1,109,165 sockeye, 133,375 coho, 1,421,142 pink, and 204,317 chum salmon (Appendix E3). There were 153 seine permit holders that made 1,734 landings with a harvest of 1,567 Chinook, 734,801 sockeye, 106,654 coho, 957,257 pink, and 110,536 chum salmon (Appendix E4). There were 84 set gillnet permit holders that made 2,592 landings for 1,686 Chinook, 374,364 sockeye, 26,721 coho, 463,885 pink, and 93,781 chum salmon. Commercial salmon harvests, by gear type, for individual Westside Kodiak management units can be found in Appendices E5 and E6.

¹ Westside Kodiak salmon harvest totals in Appendix E do not include salmon taken in the Spiridon Bay Special Harvest Area (SBSHA). Sockeye salmon from an enhancement project return to this area. SBSHA is managed under a separate plan; see Appendix H for a description of the SBSHA fishery. These tables do include sockeye salmon destined for Spiridon Bay that were caught outside the SBSHA in the Westside fishery. These totals also do not include salmon taken in Settler Cove (259-35). Commercial fisheries in Settler Cove are managed under a separate plan.

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Appendix E2.—Map of the west side of Kodiak Island, including Southwest Kodiak and Northwest Kodiak districts and the Southwest Afognak Section of the Afognak District.



Appendix E3.—Commercial salmon harvest, by species, for Westside management units in the Kodiak Management Area, 1990–2016.

Year	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
1990	455	12,604	12,090	3,383,351	176,475	3,674,278	218,883	7,465,077
1991	434	11,957	11,780	2,842,802	179,852	5,588,982	346,193	8,969,609
1992	429	11,121	17,238	2,306,791	128,737	1,538,305	302,779	4,293,850
1993	406	12,106	21,019	2,426,540	124,497	10,344,080	300,571	13,216,707
1994	350	8,024	16,930	1,236,314	135,365	3,873,574	329,281	5,591,464
1995	369	13,104	13,819	2,071,281	147,204	21,025,711	722,649	23,980,664
1996	328	7,808	10,437	2,536,733	71,984	1,780,755	365,034	4,764,943
1997	334	7,752	11,152	1,412,061	108,459	6,520,085	214,730	8,266,487
1998	290	9,623	13,886	2,220,631	163,102	12,335,360	176,636	14,909,615
1999	317	8,494	12,794	2,733,598	104,806	4,114,397	267,329	7,232,924
2000	306	7,554	9,382	1,600,248	111,908	5,343,028	379,439	7,444,005
2001	265	6,799	18,301	1,613,978	143,681	3,687,193	381,083	5,844,236
2002	228	5,365	14,911	1,178,677	166,321	9,442,576	250,137	11,052,622
2003	227	7,508	13,765	2,973,555	156,308	5,406,272	329,512	8,879,412
2004	225	8,919	23,744	2,413,242	259,500	14,756,880	604,428	18,057,794
2005	204	6,671	11,034	1,457,611	183,158	6,178,927	243,153	8,073,883
2006	211	8,252	16,139	1,200,137	249,668	20,198,535	402,146	22,066,625
2007	219	6,865	13,373	1,511,395	167,153	8,718,322	219,554	10,629,797
2008	199	3,387	13,124	634,056	92,170	3,732,346	223,658	4,695,354
2009	197	3,505	1,621	577,893	57,363	4,936,956	353,915	5,927,748
2010	235	2,982	6,061	640,336	75,327	3,837,741	227,171	4,786,636
2011	222	2,438	4,676	507,603	58,970	955,492	134,701	1,661,442
2012	250	5,780	5,858	1,021,551	127,529	9,555,127	334,333	11,044,398
2013	241	5,080	12,702	1,483,699	106,994	5,103,909	241,555	6,948,859
2014	271	5,701	4,940	2,348,820	182,890	2,603,984	160,406	5,301,040
2015	257	6,953	4,534	2,094,753	247,564	12,488,343	484,559	15,319,753
2016	237	4,326	3,253	1,109,165	133,375	1,421,142	204,317	2,871,252
Average ^a								
2006–2015	230	5,094	8,303	1,202,024	136,563	7,213,076	278,200	8,838,165
1978–2015	319	7,425	9,394	1,456,448	123,894	6,773,380	309,795	8,672,911

Note: Westside Kodiak Management Plan units include the Southwest Afognak Section, the Northwest Kodiak District (except the Spiridon Bay Special Harvest Area and Settler Cove), and the Southwest Kodiak District. Harvest numbers do not include test fish harvests or commercial harvest retained for personal use.

Appendix E4.—Commercial salmon harvest, by gear type and species, for Westside management units, 2016.

Gear	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum		Total	
			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Seine	153	1,734	1,567	14,514	734,801	3,639,150	106,654	819,272	957,257	4,380,810	110,536	754,266	1,910,815	9,608,012
Average weight				9.26		4.95		7.68		4.58		6.82		
Set Gillnet	84	2,592	1,686	15,438	374,364	1,964,877	26,721	194,335	463,885	2,001,699	93,781	665,025	960,437	4,841,374
Average weight				9.16		5.25		7.27		4.32		7.09		
Grand total	237	4,326	3,253	29,952	1,109,165	5,604,027	133,375	1,013,607	1,421,142	6,382,508	204,317	1,419,291	2,871,252	14,449,386
Average weight				9.21		5.05		7.60		4.49		6.95		

Note: Westside Kodiak Management Plan units include the Southwest Afognak Section, the Northwest Kodiak District (except for the Spiridon Bay Special Harvest Area and Settler Cove Special Harvest Area), and the Southwest Kodiak District. Harvest numbers do not include test fish harvests or commercial harvest retained for personal use.

Appendix E5.–Seine daily salmon harvest, by species, for the Westside Management Plan units, 2016.

Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Southwest	14-Jun	7	7	1	4	3,219	11,825	1	6	31	64	952	6,401
Afognak	15-Jun ^a												
Section	16-Jun	5	5	0	0	740	3,352	1	4	5	15	108	834
	20-Jun ^a												
	21-Jun ^a												
	22-Jun ^a												
	24-Jun ^a												
	3-Jul	10	10	1	11	2,900	17,812	16	97	776	2,402	1,301	8,914
	4-Jul	7	7	12	88	1,113	5,551	12	73	505	1,614	1,035	6,324
	5-Jul	6	6	0	0	1,432	7,153	13	86	826	2,553	568	4,291
	6-Jul ^a												
	7-Jul ^a												
	8-Jul	3	3	14	121	1,458	7,381	20	140	605	1,971	348	2,597
	9-Jul	8	8	4	49	3,671	17,606	108	636	3,118	10,981	1,119	7,296
	14-Jul	4	4	0	0	741	3,752	79	655	2,360	9,523	241	2,397
	16-Jul	6	6	0	0	1,800	8,644	52	380	2,468	12,336	303	2,252
	22-Jul	9	9	10	99	2,498	12,221	229	1,674	15,038	72,910	808	5,942
	23-Jul ^a												
	24-Jul	11	11	1	9	6,120	29,504	183	1,270	19,119	98,314	913	6,444
	25-Jul	4	4	5	59	1,873	9,835	44	298	6,427	30,220	231	1,602
	30-Jul	15	17	46	449	10,132	50,486	596	4,833	39,940	194,553	1,747	13,406
	31-Jul	8	8	19	168	3,294	16,101	330	2,083	14,804	61,892	747	4,637
	1-Aug	12	12	4	63	3,718	18,815	348	2,749	18,139	83,326	825	5,896
	6-Aug	22	23	26	569	8,393	46,780	1,433	11,677	55,995	287,505	2,455	18,665
	7-Aug	4	4	1	10	940	4,743	408	1,978	7,136	28,544	232	1,623
	8-Aug	16	16	10	115	2,753	14,409	695	5,113	19,672	98,183	1,107	7,332
	16-Aug	14	14	11	104	1,612	8,444	772	5,595	7,252	37,136	243	1,685
	17-Aug ^a												
	18-Aug	8	8	20	183	1,952	10,540	2,025	13,719	7,548	32,033	504	3,301
	19-Aug	5	5	0	0	1,654	7,728	1,338	11,013	3,498	15,457	264	1,744
	20-Aug	6	6	2	14	1,162	6,349	1,909	12,351	3,430	10,367	276	1,782

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Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Southwest	21-Aug ^a												
Afognak	22-Aug	3	3	0	0	344	1,894	393	2,755	593	1,780	36	228
Section (cont.)	24-Aug ^a												
	25-Aug ^a												
	26-Aug ^a												
	28-Aug	3	3	1	16	580	3,047	1,373	7,181	225	1,290	80	352
	29-Aug	3	3	0	0	254	1,073	418	3,001	159	530	13	89
	30-Aug	5	5	1	7	747	3,656	1,080	7,987	86	384	34	203
	1-Sep	4	4	0	0	743	3,672	785	5,866	85	360	15	98
	2-Sep	4	4	4	38	860	4,653	1,147	7,066	99	453	7	56
	3-Sep	9	12	0	0	1,862	9,530	1,391	8,878	149	642	72	476
	5-Sep	4	4	5	58	1,356	6,715	529	3,867	32	144	12	72
	6-Sep	4	4	0	0	1,340	7,511	540	5,501	37	151	12	93
	7-Sep	4	4	0	0	951	4,624	277	2,185	2	8	0	0
	8-Sep ^a												
	9-Sep												
	10-Sep	4	5	0	0	1,197	5,748	352	2,710	9	29	19	119
	11-Sep ^a												
	12-Sep ^a												
	13-Sep	3	3	0	0	644	3,536	228	1,726	1	6	12	68
	14-Sep	3	3	0	0	312	1,550	142	1,090	3	10	4	20
	17-Sep ^a												
Total		65	273	201	2,261	80,789	408,303	22,568	159,318	235,645	1,125,498	17,765	124,835
Average weight					11.3		5.1		7.1		4.8		7.0

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Management				Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Northwest Kodiak District ^b	2-Jun	19	19	1	3	2,876	11,976	2	7	16	45	454	3,029
	3-Jun	5	5	0	0	713	3,710	1	5	1	2	12	70
	4-Jun	4	4	0	0	298	1,204	0	0	0	0	45	314
	8-Jun	9	9	22	161	2,475	10,837	0	0	0	0	601	3,488
	9-Jun	10	11	6	50	1,855	7,232	0	0	5	19	406	2,390
	10-Jun	9	9	6	36	2,117	7,928	5	19	2	8	312	2,141
	14-Jun	24	24	9	84	5,084	20,774	0	0	25	77	2,715	17,394
	15-Jun	7	7	0	0	698	2,813	0	0	14	30	498	2,736
	16-Jun	14	14	6	41	2,512	10,996	0	0	11	35	803	5,355
	17-Jun	4	4	0	0	2,340	10,601	0	0	8	28	506	3,559
	18-Jun	5	5	0	0	775	3,623	2	8	105	352	652	3,968
	19-Jun ^a												
	20-Jun	3	3	0	0	202	1,030	4	26	35	105	363	1,844
	21-Jun ^a												
	22-Jun ^a												
	23-Jun	4	4	0	0	1,958	9,484	0	0	94	239	528	3,702
	24-Jun	7	7	0	0	1,689	7,982	10	56	146	520	1,558	8,900
	25-Jun	3	3	0	0	469	2,003	15	77	64	198	256	1,577
	26-Jun	6	6	0	0	580	2,674	9	63	250	799	836	5,877
	27-Jun	3	3	0	0	283	1,127	0	0	57	205	203	1,340
	28-Jun	6	6	0	0	908	4,266	148	854	270	935	505	3,420
	3-Jul	25	25	27	231	5,952	34,720	148	1,004	1,899	6,054	3,331	23,041
	4-Jul	5	6	15	87	3,525	12,554	13	84	358	1,277	858	3,947
	5-Jul	14	14	13	101	7,989	41,450	560	3,709	3,437	11,697	2,307	15,739
	6-Jul	16	16	8	118	3,328	16,258	137	901	2,067	6,608	1,695	12,160
	7-Jul	14	14	32	287	5,149	24,560	48	318	4,471	16,431	3,861	23,563
	8-Jul	18	18	27	258	11,934	51,706	230	1,385	9,353	31,203	4,152	28,737
	9-Jul	34	34	58	483	23,926	124,186	557	3,320	12,817	47,821	5,728	40,602
	10-Jul	26	26	8	64	11,576	58,101	143	923	7,416	27,039	3,132	22,497
	14-Jul	23	23	63	429	8,437	41,658	975	6,000	11,375	47,116	2,347	17,004
	15-Jul	12	12	35	244	2,896	14,263	808	5,076	8,640	38,942	821	6,610

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Management				Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Northwest Kodiak	16-Jul	10	10	5	27	2,893	14,038	106	779	4,267	16,606	436	2,865
District ^b (cont.)	17-Jul	14	14	4	28	2,520	12,475	210	1,221	8,071	30,463	558	3,869
	22-Jul	28	28	38	332	10,152	50,887	623	3,660	30,093	156,043	1,771	12,448
	23-Jul	7	7	0	0	3,542	17,310	352	2,313	8,951	40,970	489	4,083
	24-Jul	17	17	11	114	7,646	35,992	608	4,250	33,374	138,766	1,397	9,175
	25-Jul	27	27	18	208	6,220	30,950	356	2,818	30,290	141,722	1,194	8,469
	30-Jul	25	25	81	1,271	13,768	58,620	724	4,855	61,379	265,572	2,458	16,766
	31-Jul	27	27	6	93	13,834	63,747	528	3,351	58,792	271,660	2,694	17,182
	1-Aug	37	37	44	434	13,451	66,132	666	4,846	52,122	267,614	2,473	18,416
	6-Aug	64	69	38	475	25,011	123,154	3,058	20,471	108,114	482,194	6,665	42,816
	7-Aug	18	20	10	114	5,782	28,408	708	4,605	29,574	127,584	2,162	13,536
	8-Aug	41	42	15	231	7,133	36,645	1,391	9,868	38,467	171,948	1,781	12,758
	16-Aug	40	41	10	129	7,617	38,772	1,933	15,470	17,348	83,860	1,633	11,528
	17-Aug	23	23	11	91	2,667	12,993	805	5,310	7,125	36,252	489	3,454
	18-Aug	18	18	39	378	7,056	35,739	1,648	13,577	6,464	30,882	632	4,501
	19-Aug	16	17	14	143	12,564	56,014	2,728	21,891	8,133	48,812	2,095	13,332
	20-Aug	8	8	6	67	3,145	15,662	1,119	9,956	4,675	22,770	721	5,251
	21-Aug	8	8	28	339	20,276	100,563	2,177	21,330	4,882	23,524	804	5,873
	22-Aug	12	12	5	60	4,778	23,813	1,445	9,598	2,861	13,238	518	3,364
	23-Aug	13	14	8	82	2,210	10,497	1,221	9,164	2,496	10,149	685	4,267
	24-Aug	14	14	5	68	2,394	11,471	1,743	12,684	1,274	5,445	412	2,660
	25-Aug	12	12	9	88	3,172	15,989	2,364	18,888	785	3,331	252	1,668
	26-Aug	11	11	3	41	1,209	6,204	693	5,292	399	1,562	125	857
	27-Aug	8	8	8	64	1,209	6,433	889	6,442	322	1,411	127	731
	28-Aug	16	16	11	111	2,897	15,770	1,178	9,587	584	2,602	235	1,401
	29-Aug	8	8	8	55	1,180	6,094	518	3,801	212	911	37	228
	30-Aug	11	12	1	14	1,736	9,095	654	5,566	341	1,759	93	657
	31-Aug	5	5	2	16	1,439	7,235	454	4,140	488	1,906	46	299
	1-Sep	11	11	0	0	1,813	8,854	637	5,597	323	1,220	102	788
	2-Sep	8	8	2	28	1,963	10,057	959	6,949	147	632	95	585
	3-Sep	9	9	3	29	1,606	8,218	686	6,255	268	1,169	71	575

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Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Northwest	4-Sep	3	3	0	0	433	2,110	101	893	20	82	4	34
Kodiak	5-Sep	9	9	0	0	1,578	7,976	870	8,301	73	292	67	420
District ^b (cont.)	6-Sep ^a												
	7-Sep	6	8	4	27	997	4,749	279	2,343	38	167	22	119
	9-Sep	3	3	5	62	726	3,714	112	850	9	41	9	53
	11-Sep	4	4	0	0	2,574	14,008	280	2,711	3	8	32	196
	12-Sep ^a												
	13-Sep ^a												
	14-Sep ^a												
	15-Sep ^a												
	16-Sep ^a												
	17-Sep ^a												
	18-Sep ^a												
	19-Sep ^a												
Total		142	953	791	7,905	316,702	1,536,036	39,143	297,344	585,752	2,641,117	73,531	493,385
Average weight					10.0		4.9		7.6		4.5		6.7
Inner and Outer	14-Jun	11	11	7	22	3,490	15,205	3	21	9	40	1,405	9,505
Karluk Section	16-Jun	6	7	29	155	2,167	8,584	7	45	3	11	562	3,967
	17-Jun	4	4	9	65	2,415	8,445	0	0	1	4	250	1,865
	18-Jun ^a												
	19-Jun ^a												
	20-Jun ^a												
	21-Jun ^a												
	22-Jun ^a												
	23-Jun ^a												
	24-Jun ^a												
	28-Jun	3	3	0	0	310	1,086	1	6	6	19	32	232
	3-Jul	5	5	3	20	2,651	12,682	1	6	298	714	462	3,316
	4-Jul	3	3	18	80	728	2,951	0	0	53	262	683	5,253

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Management				Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Inner and Outer Karluk Section	5-Jul	8	8	27	179	4,184	18,849	6	42	449	1,885	604	4,651
	6-Jul	4	4	5	37	1,842	8,577	13	99	509	1,703	504	3,040
	7-Jul	4	4	16	125	392	2,295	12	63	250	749	176	1,237
	9-Jul ^a												
	18-Aug	24	25	16	145	6,674	32,958	1,773	13,908	2,990	15,128	700	4,608
	19-Aug	21	23	4	41	13,850	67,781	2,306	18,313	3,559	16,163	777	5,995
	20-Aug	8	8	9	111	6,740	35,677	1,073	9,358	1,783	8,756	232	1,780
	21-Aug	16	16	7	83	18,490	89,387	3,071	27,006	3,414	15,400	620	5,044
	22-Aug	17	17	6	44	21,073	108,190	4,173	32,002	3,299	14,796	859	5,602
	23-Aug	14	14	6	43	5,521	27,703	1,566	12,190	1,482	6,136	331	2,288
	24-Aug	21	22	6	52	8,852	44,490	3,277	27,923	1,906	7,971	596	3,373
	25-Aug	17	17	7	77	4,868	24,472	1,959	15,589	887	3,718	214	1,460
	26-Aug	20	20	3	27	5,492	27,996	2,234	18,427	842	3,198	216	1,610
	27-Aug	15	15	0	0	4,316	21,790	1,437	12,024	437	2,637	187	1,202
	28-Aug	21	22	7	82	12,630	61,115	2,209	18,371	807	3,467	353	2,551
	29-Aug	9	9	0	0	3,186	14,045	355	3,061	109	483	46	319
	6-Sep	14	14	0	0	887	4,262	296	2,622	19	78	41	271
	7-Sep	16	18	2	31	3,118	14,921	912	5,820	69	245	83	478
	8-Sep	4	4	0	0	262	1,277	20	170	0	0	2	16
	9-Sep	11	11	0	0	7,494	37,952	937	6,704	37	170	201	1,219
	10-Sep ^a												
	11-Sep	12	12	0	0	8,457	43,882	839	6,419	12	61	92	545
	12-Sep	8	8	0	0	4,906	26,009	859	6,356	17	54	140	944
	13-Sep	9	9	0	0	3,431	18,955	555	4,649	6	28	47	362
	14-Sep	12	12	3	30	4,060	23,576	558	5,382	11	39	83	699
	15-Sep	19	19	0	0	7,172	34,548	889	7,670	2	8	163	1,035
	16-Sep	7	7	0	0	1,830	8,425	312	2,433	0	0	41	296
	17-Sep	4	4	0	0	1,135	6,885	195	1,442	1	4	24	176
	18-Sep	3	3	0	0	192	849	52	291	0	0	4	19
	19-Sep	4	4	0	0	808	4,040	72	662	0	0	20	137
	20-Sep ^a												

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Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Inner and Outer Karluk Section (cont.)	22-Sep ^a												
	23-Sep ^a												
	24-Sep ^a												
	26-Sep ^a												
Total		88	404	348	2,311	182,195	899,721	32,266	261,422	23,602	105,430	11,265	78,965
Average weight					6.6		4.9		8.1		4.5		7.0
Remainder of Southwest Kodiak District	14-Jul	17	17	68	563	31,733	160,670	207	1,411	5,278	19,016	902	6,351
	15-Jul	9	9	25	242	16,886	92,253	119	875	5,077	20,258	729	5,496
	16-Jul	11	12	12	88	25,760	138,748	344	2,436	11,257	39,742	1,393	10,059
	17-Jul	5	5	19	151	9,852	54,066	149	1,010	6,144	21,510	659	4,953
	22-Jul ^a												
	23-Jul ^a												
	24-Jul	13	13	28	297	26,357	120,211	590	4,744	22,466	101,550	1,839	12,975
	25-Jul	3	3	1	18	5,667	28,365	59	331	1,770	10,163	149	981
	30-Jul	14	19	19	108	14,196	72,782	777	5,830	42,069	200,318	908	6,537
	31-Jul	5	5	1	13	4,252	23,990	190	1,125	7,938	43,308	192	1,275
	1-Aug	5	5	0	0	1,642	8,969	114	691	4,424	24,863	128	1,036
	23-Aug	6	6	10	89	3,486	18,216	1,151	9,443	746	4,644	231	1,424
	24-Aug	4	4	0	0	1,184	5,924	1,101	9,374	397	1,931	80	679
	25-Aug	4	4	7	86	1,995	9,792	2,407	16,245	390	1,995	165	1,075
	26-Aug	8	8	15	163	2,711	13,426	2,247	18,925	480	2,799	135	1,073
	27-Aug	3	3	0	0	1,221	5,811	632	5,240	129	559	32	211
	28-Aug	6	6	18	197	2,771	13,576	1,036	9,238	229	955	80	653
	5-Sep	5	5	0	0	1,242	6,144	473	4,262	64	343	62	409
	6-Sep	4	4	0	0	227	991	919	8,835	27	110	7	49
	7-Sep ^a												
Total		43	133	227	2,037	155,115	795,090	12,677	101,187	112,258	508,764	7,975	57,082
Average weight					9.0		5.1		8.0		4.5		7.2
Grand Total		153	1,763	1,567	14,514	734,801	3,639,150	106,654	819,272	957,257	4,380,810	110,536	754,266
Average weight					9.3		5.0		7.7		4.6		6.8

Note: Harvest numbers do not include test fish harvests or commercial harvest retained for personal use.

^a Confidential.

^b Does not include Spiridon Special Harvest Area (254-50) or Settler Cove Special Harvest Area (259-35).

Appendix E6.–Set gillnet salmon harvest, by species, for Westside Management Plan units, 2016.

Management				Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Northwest	2-Jun	28	30	11	130	3,840	19,078	0	0	0	0	72	516
Kodiak District ^b	3-Jun	30	44	20	301	4,525	25,516	0	0	0	0	93	646
	4-Jun	16	17	5	61	1,236	7,020	0	0	0	0	29	193
	8-Jun	39	40	13	151	4,184	20,672	0	0	15	47	185	1,183
	9-Jun	35	47	42	489	4,776	24,731	0	0	18	54	547	3,645
	10-Jun	16	17	7	96	910	4,659	0	0	1	3	97	642
	14-Jun	43	48	31	280	7,099	36,465	2	10	65	207	671	4,411
	15-Jun	27	28	27	182	3,498	17,591	2	10	41	140	386	2,637
	16-Jun	37	39	52	502	4,312	22,281	5	35	51	163	803	5,508
	17-Jun	28	40	47	418	4,526	23,394	5	30	67	232	696	4,845
	18-Jun	32	33	62	525	3,045	15,601	0	0	72	242	780	5,264
	19-Jun	24	26	32	276	3,729	19,094	10	58	127	465	703	4,895
	20-Jun	37	37	45	346	4,882	25,664	19	95	196	609	976	6,496
	21-Jun	41	44	58	538	7,474	39,460	29	152	204	706	1,224	8,269
	22-Jun	35	35	19	185	5,463	28,760	7	41	132	470	989	6,396
	23-Jun	42	44	33	263	7,538	39,266	11	62	135	535	1,207	8,139
	24-Jun	41	43	56	425	6,302	33,006	11	69	139	551	1,202	8,049
	25-Jun	35	36	51	400	5,178	27,470	24	127	192	711	1,312	8,906
	26-Jun	42	48	35	263	3,992	20,971	72	400	217	806	1,165	7,889
	27-Jun	31	32	25	239	3,975	21,314	207	1,105	259	965	911	6,514
	28-Jun	34	37	48	424	2,926	15,827	28	177	180	760	1,485	9,527
	3-Jul	34	40	64	445	9,152	48,569	284	1,739	1,127	4,301	2,909	21,779
	4-Jul	40	43	81	691	8,145	43,455	192	1,108	1,087	4,381	2,971	21,310
	5-Jul	38	40	54	563	5,413	28,627	108	670	987	4,156	1,743	12,080
	6-Jul	45	55	62	437	5,560	29,159	82	524	1,423	5,745	2,635	18,072
	7-Jul	28	29	51	434	4,459	23,938	309	1,868	1,957	7,794	1,994	14,005
	8-Jul	49	69	8	107	10,028	54,022	292	1,762	5,556	22,418	4,230	29,325
	9-Jul	35	39	18	159	7,967	42,916	141	882	3,144	12,387	2,084	15,963
	10-Jul	29	42	30	286	10,362	56,022	67	436	3,840	16,591	3,436	23,721
	14-Jul	47	56	75	564	7,449	39,875	718	4,567	12,375	53,046	3,256	23,771
	15-Jul	47	56	39	374	8,819	47,426	585	3,663	15,569	66,045	3,772	27,442

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Management		Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Northwest	16-Jul	40	46	42	431	10,718	56,693	415	2,671	15,987	69,883	3,243	23,251
Kodiak District ^b	17-Jul	43	50	45	359	7,657	41,933	298	1,905	14,282	61,564	2,379	17,677
(cont.)	22-Jul	45	53	41	368	10,396	55,049	223	1,457	28,180	118,892	2,386	17,605
	23-Jul	35	43	25	191	8,989	47,517	525	3,286	27,598	123,913	3,221	22,693
	24-Jul	51	63	39	318	9,418	50,713	236	1,557	32,714	140,434	3,454	25,683
	25-Jul	28	43	29	296	3,414	18,672	98	699	15,559	70,094	1,420	10,705
	30-Jul	52	68	29	312	13,402	70,987	360	2,459	41,953	180,360	3,421	25,228
	31-Jul	40	60	40	544	12,936	68,034	549	3,833	42,293	194,002	4,226	29,675
	1-Aug	40	49	26	320	11,162	59,605	286	1,996	28,795	121,223	2,980	22,333
	6-Aug	52	65	6	91	11,787	56,078	446	2,953	36,645	157,917	3,249	23,824
	7-Aug	40	57	26	283	12,452	63,536	1,000	6,567	38,224	172,426	3,869	28,072
	8-Aug	36	49	26	234	6,218	32,208	485	3,410	24,706	104,917	2,307	16,627
	16-Aug	42	45	5	61	6,689	35,058	938	6,435	15,367	65,074	1,618	11,482
	17-Aug	34	37	22	213	5,328	26,886	1,367	9,735	13,093	56,617	1,301	8,832
	18-Aug	44	53	13	136	4,671	24,349	1,035	7,394	8,867	35,131	1,369	10,021
	19-Aug	32	36	8	102	8,132	41,703	1,287	9,366	8,250	33,699	1,452	9,046
	20-Aug	25	32	6	44	9,677	51,476	861	6,757	4,372	15,806	967	6,799
	21-Aug	33	36	6	74	5,123	26,194	1,204	8,512	5,181	22,312	1,197	7,689
	22-Aug	39	53	3	26	6,526	34,092	1,162	8,435	4,468	18,100	1,428	10,064
	23-Aug	18	19	2	30	1,496	7,824	384	2,921	542	2,570	332	2,422
	24-Aug	28	36	1	6	1,700	8,671	826	6,782	1,436	5,887	565	3,631
	25-Aug	6	6	0	0	553	2,777	125	952	316	1,462	191	1,368
	26-Aug	37	38	3	31	2,164	10,849	722	5,698	721	3,009	465	3,106
	27-Aug	20	27	1	12	2,330	12,325	1,044	7,486	651	2,857	318	2,225
	28-Aug	27	34	4	42	3,093	16,400	899	7,327	1,029	4,306	385	2,504
	29-Aug	24	27	4	31	2,309	11,781	596	4,252	709	2,928	190	1,268
	30-Aug	28	30	3	31	3,882	20,111	1,198	9,578	539	2,229	216	1,572
	31-Aug	14	14	5	52	2,063	10,289	252	1,906	401	1,712	71	464
	1-Sep	27	29	0	0	3,540	18,485	760	6,339	882	3,710	231	1,606
	2-Sep	22	23	3	40	2,778	14,543	882	6,379	375	1,639	204	1,387
	3-Sep	19	21	11	84	1,165	6,239	457	3,905	149	652	133	962

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Management				Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Northwest	4-Sep	10	10	0	0	397	2,082	102	948	49	214	28	183
Kodiak District ^b	5-Sep	21	24	2	29	2,000	10,375	617	5,201	124	548	141	983
(cont.)	6-Sep	10	12	4	38	1,132	5,972	188	1,328	41	201	38	261
	7-Sep	16	18	0	0	2,011	10,588	437	3,978	112	424	91	737
	8-Sep	8	8	2	24	1,036	5,464	141	1,104	21	111	15	108
	9-Sep	13	13	1	13	2,004	10,377	457	3,149	34	166	29	196
	10-Sep	17	17	2	18	2,081	10,805	321	3,039	26	109	44	342
	11-Sep ^a												
	12-Sep	7	7	0	0	403	2,156	116	1,153	11	47	19	148
	13-Sep	6	6	0	0	567	3,065	156	1,553	7	24	19	152
Total		84	2,592	1,686	15,438	374,364	1,964,877	26,721	194,335	463,885	2,001,699	93,781	665,025
Average weight					9.2		5.2		7.3		4.3		7.1

Note: Harvest numbers do not include test fish harvests or commercial harvest retained for personal use.

^a Confidential.

^b Does not include Spiridon Special Harvest Area (254-50) or Settler Cove (259-35).

APPENDIX F. NORTH SHELIKOF FISHERY SUMMARY

INTRODUCTION

In 1988, there was a significant harvest of large (greater than 6 lb) sockeye salmon in management units bordering the northern portion of Shelikof Strait (Appendix F2). Analysis of average weights, age composition of the harvest, review of past tagging studies, and estimates of migratory timing led to the determination that the majority of these sockeye salmon were bound for Cook Inlet (Barrett 1989). Although the Cook Inlet sockeye salmon run was at a record level, the Board of Fisheries felt that this was an expanding, nontraditional harvest pattern. In 1990, the *North Shelikof Strait Sockeye Salmon Management Plan* (NSSSSMP; 5 AAC 18.363) was adopted into regulation.

The NSSSSMP limits purse seine fishing opportunities in those sections of the KMA bordering the north Shelikof Strait (those waters of Shelikof Strait from Dakavak Bay to Cape Douglas in the Mainland District and from Raspberry Cape to Shuyak Island in the Afognak District; Appendix F2). The plan covers the time period from July 6 to July 25 and establishes 2 specific sockeye salmon harvest “triggers” for defined management units within the affected zone. These triggers were established to protect Cook Inlet-bound sockeye salmon that migrate through the Shelikof Strait. The Southwest Afognak management unit (composed of the Southwest Afognak Section) and the North Shelikof management unit (made up of the Dakavak Bay, Outer Kukak Bay, Hallo Bay, and Big River sections of the Mainland District, and the Shuyak Island and Northwest Afognak sections of the Afognak District) have separate sockeye salmon harvest triggers (Appendix F2). If the sockeye salmon harvest within either of these units reaches an established cap, then commercial fishing opportunities within that unit are restricted.

By regulation, “seaward zones” are established in each management unit. These zones are made up of all waters seaward of a line that is drawn from cape to cape.¹ The seaward zone of the Southwest Afognak management unit closes to fishing if 50,000 sockeye salmon are harvested between July 6 and July 25. The seaward zone of the North Shelikof management unit closes to fishing if 15,000 sockeye salmon are harvested between July 6 and July 25. If a seaward zone closure occurs, only the inshore “shoreward zone” (all waters inside the line) will remain open to commercial fishing during normal fishing periods (Appendix F2; Fuerst and Jackson 2016).

In the 20 years the NSSSSMP has been in effect, the North Shelikof management unit has had seaward zone closures every year except 1991, 2000, and 2008 (Appendix F3). The seaward zone of the Southwest Afognak management unit has been closed only 3 times (in 1992, 1993, and 2003; Appendix F4).

First Fishing Period (July 6 to 10)

The first fishing period was characterized by above average fishing effort and moderate harvest rates. A total of 24 permit holders harvested 230 Chinook, 14,591 sockeye, 157 coho, 1,965 pink,

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¹ In 1993, the seaward zone boundary of the Southwest Afognak unit was modified by the Alaska Board of Fisheries. The seaward zone boundary was moved ½ mile offshore of the line running cape to cape in order to allow for traditional harvest opportunities of pink salmon. In 2008, the seaward zone boundary of that portion of the North Shelikof unit in the Northwest Afognak Section was moved ½ mile offshore of the line running cape to cape in order to allow for traditional harvest opportunities for pink salmon.

and 3,601 chum salmon during the first fishing period in the North Shelikof management unit (Appendix F5). Fishing effort was average in the Southwest Afognak management unit with 13 permit holders harvesting 19 Chinook 5,788 sockeye, 134 coho, 4,047 pink, and 1,881 chum (Appendix F6).

Second Fishing Period (July 14 to 17)

Prior to the start of the second fishing period, ADF&G determined that the 15,000 fish harvest cap for the North Shelikof management units was nearly reached and the seaward zones did not open. During the second fishing period, the number of the vessels fishing in the North Shelikof management unit was average with moderate harvest rates. During the second fishing period, 19 permit holders harvested of 31 Chinook, 25,247 sockeye, 373 coho, 4,777 pink, 1,948 chum salmon (Appendix F5).

There was a slight decrease in fishing effort within the Southwest Afognak management unit during the second fishing period with 9 permit holders harvesting zero Chinook, 2,541 sockeye, 131 coho, 4,828 pink, and 544 chum (Appendix F6).

Third Fishing Period (July 20 to 25)

Effort increased during the third period within the North Shelikof management unit. During the third period 25 permit holders harvested 61 Chinook, 62,018 sockeye, 1,876 coho, 17,837 pink, and 6,017 chum salmon (Appendix F5).

Harvest rates in the Southwest Afognak Section remained moderate to low throughout the third fishing period, therefore a seaward zone closure was not necessary in 2016. From July 22 to July 25, 17 permit holders harvested 16 Chinook, 10,910 sockeye, 480 coho, 42,159 pink, and 2,017 chum salmon in the Southwest Afognak unit (Appendix F6).

Season Totals

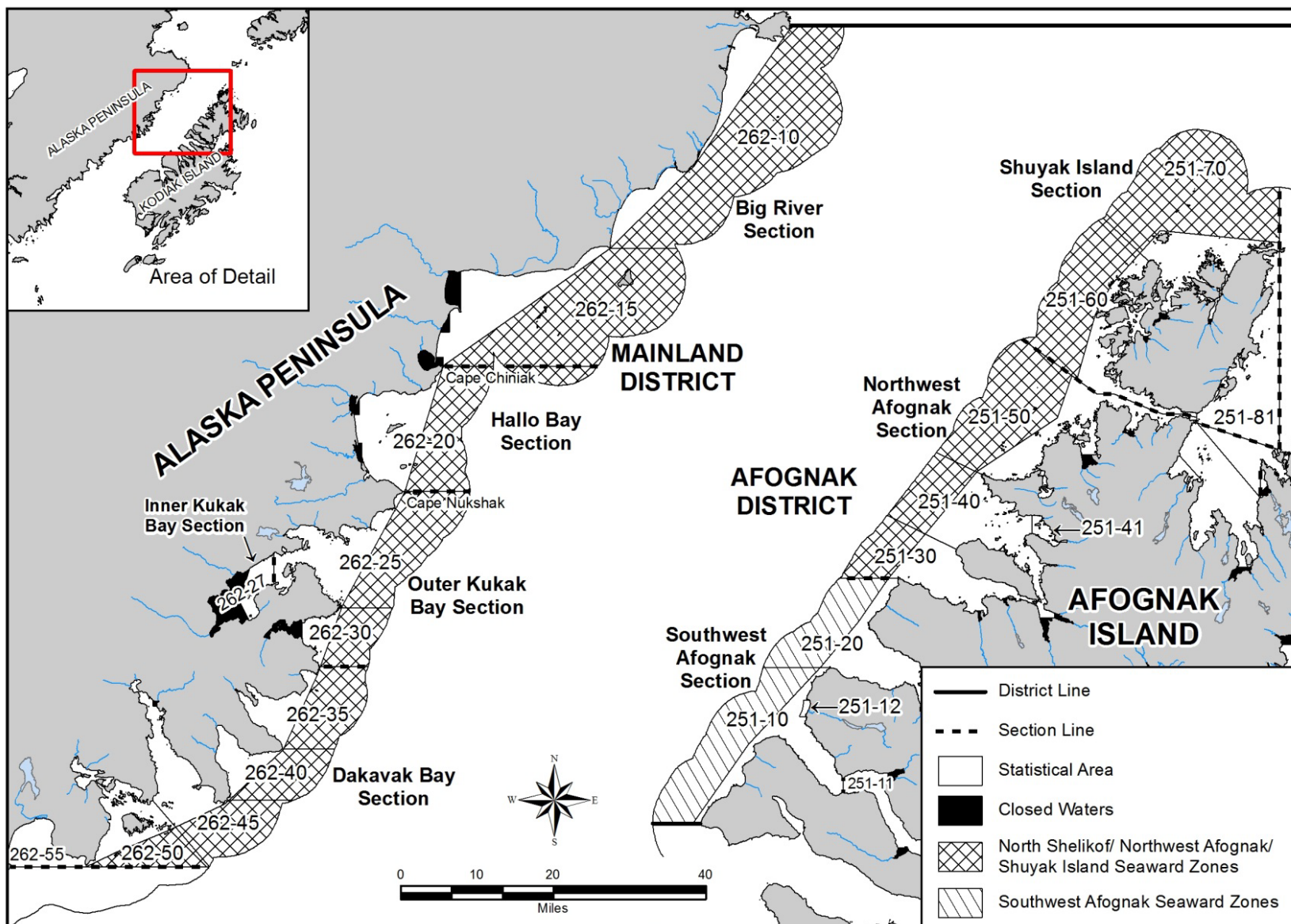
The 2016 North Shelikof management unit harvest for the time period from July 6 to July 25 totaled 387 Chinook, 101,856 sockeye, 2,406 coho, 24,579 pink, and 11,566 chum salmon, taken by 49 permit holders (Appendix F3 and F5). The average weight of the sockeye salmon harvested in the North Shelikof Unit was 5.61 lb.

The 2016 Southwest Afognak Unit harvest for the time period from July 6 to July 25 totaled 35 Chinook, 19,239 sockeye, 745 coho, 51,034 pink, and 4,442 chum salmon, taken by 28 permit holders (Appendices F4 and F6). The average weight of the sockeye salmon harvested in the Southwest Afognak management unit was 4.92 lb (Appendix F6).

REFERENCES CITED

- Barrett, B. M. 1989. North Shelikof Strait 1988 sockeye catch distribution, timing, and stock composition. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K88-6, Kodiak.
- Fuerst, B. A., and J. Jackson. 2016. Kodiak management area harvest strategy for the 2016 commercial salmon fishery. Alaska Department of Fish and Game, Fishery Management Report No. 16-11, Anchorage.

Appendix F2.—Map showing the North Shelikof management area.



Appendix F3.—Summary of fishing time, zone closures, effort, and harvest by species, for the North Shelikof management unit of the Kodiak Management Area, 1995–2016.

Year	Mainland		N. Afognak		Zone Closure		Sockeye Harvest at time of zone closure	Number of Vessels	Total Salmon Harvest by Species: July 6 to July 25					Upper Cook Inlet sockeye harvest (in millions)
	# of days open to fishing	# of days Seaward Zone closed	# of days open to fishing	# of days Seaward Zone closed					Chinook	Sockeye	Coho	Pink	Chum	
					Date	Time								
1995	7.1	3.3	13.3	8.5	13-Jul	10:00 PM	15,770	77	150	37,400	1,260	178,800	16,590	2.9
1996	7.1	4.3	7.1	4.3	15-Jul	10:00 PM	11,675	77	260	73,720	1,820	30,050	14,585	3.9
1997	7.1	4.9	10.1	7.9	8-Jul	5:00 PM	19,850	80	1,940	59,140	1,840	38,190	4,550	4.1
1998	7.1	2.4	10.1	4.4	16-Jul	9:00 PM	17,812	39	140	40,630	5,380	59,535	6,370	1.2
1999	7.1	3.3	10.1	6.4	13-Jul	10:00 PM	13,021	45	310	30,830	230	31,920	7,795	2.7
2000	7.1	0.0	10.1	0.0	none	none	no closure	31	68	9,225	1,045	20,215	22,155	1.3
2001	7.1	2.7	10.1	4.7	16-Jul	1:00 PM	14,729	26	245	22,321	9,943	33,534	10,348	1.8
2002	7.1	2.4	10.1	4.7	15-Jul	5:00 PM	16,600	35	295	35,290	13,181	238,734	13,708	2.8
2003	7.1	5.1	13.1	11.1	8-Jul	12:00 PM	16,448	37	120	33,122	1,054	35,151	6,500	3.5
2004	7.1	3.5	13.1	7.5	13-Jul	5:00 PM	16,000	36	533	53,334	3,756	44,886	14,710	4.9
2005	7.1	3.8	13.1	8.3	13-Jul	12:01 AM	17,400	22	87	59,856	1,809	27,269	5,361	5.1
2006	8.6	4.3	17.3	9.9	14-Jul	NOON	15,000	31	482	82,538	8,312	146,445	33,075	2.4
2007	7.1	4.7	13.8	8.9	8-Jul	9:00 PM	12,688	28	266	17,407	566	14,340	5,083	3.3
2008	8.6	0.0	8.6	0.0	none	none	no closure	7	175	5,227	512	18,924	5,082	2.8
2009	7.1	2.4	13.1	6.4	15-Jul	9:00 PM	12,626	14	179	15,645	620	47,694	6,061	2.3
2010	7.1	5.1	10.1	8.1	8-Jul	1:00 PM	14,441	19	609	18,920	2,009	75,481	10,820	2.8
2011	7.1	0.3	13.1	2.3	22-Jul	1:00 PM	25,625	26	386	28,805	2,275	16,162	8,688	5.4
2012	7.1	0.3	13.1	2.3	22-Jul	1:00 PM	33,173	26	141	42,184	691	78,244	16,655	3.1
2013	7.1	2.4	9.1	4.3	15-Jul	9:00 PM	15,565	16	427	15,565	387	14,146	6,258	2.6
2014	7.1	2.4	13.1	10.8	8-Jul	5:00 PM	21,099	50	164	143,909	4,808	133,580	12,085	2.3
2015	7.1	2.8	13.1	7.8	15-Jul	3:00 PM	22,332	35	152	82,225	7,292	288,989	11,605	2.6
2016	7.1	4.7	11.1	9.0	8-Jul	9:00 PM	14,591	24	387	101,856	2,406	24,579	11,566	2.4

Note: In 1988, the Upper Cook Inlet sockeye salmon run was strong, with a commercial harvest of approximately 6,800,000 sockeye salmon. In the Kodiak Area, within the North Shelikof management unit from 7/6–7/25, 1988, with 6.9 days open to fishing, 392,000 sockeye salmon were harvested. This led to adoption of regulations to limit the sockeye salmon harvest in the North Shelikof (15,000 fish) and Southwest Afognak (50,000 fish) management units (5 AAC 18.363).

Appendix F4.–Summary of fishing time, zone closures, effort, and harvest by species, for the Southwest Afognak management unit of the Kodiak Management Area, 1995–2016.

Year	# of days open to fishing	# of days Seaward Zone closed	Zone Closure		Sockeye Harvest at time of zone closure	Number of Vessels	Total Salmon Harvest by Species: July 6 to July 25					Upper Cook Inlet sockeye harvest (in millions)
			Date	Time			Chinook	Sockeye	Coho	Pink	Chum	
1995	13.6	0.0	none	none	no closure	64	760	21,360	1,750	490,510	22,200	2.9
1996	7.6	0.0	none	none	no closure	32	185	10,510	803	79,205	10,785	3.9
1997	10.6	0.0	none	none	no closure	61	1,500	18,120	1,760	62,730	8,440	4.1
1998	10.6	0.0	none	none	no closure	22	240	10,340	2,290	82,685	1,900	1.2
1999	10.6	0.0	none	none	no closure	38	700	18,725	375	41,960	4,720	2.7
2000	10.6	0.0	none	none	no closure	31	90	17,810	1,220	37,340	7,225	1.3
2001	10.6	0.0	none	none	no closure	48	517	33,289	7,139	191,947	15,913	1.8
2002	10.6	0.0	none	none	no closure	32	502	23,691	3,742	122,892	4,821	2.8
2003	13.1	6.4	16-Jul	8:00 PM	66,000	41	125	119,490	6,006	238,088	15,829	3.5
2004	13.1	0.0	none	none	no closure	25	3,048	24,515	7,918	227,062	19,315	4.9
2005	13.1	0.0	none	none	no closure	29	492	30,262	1,501	156,150	2,754	5.1
2006	16.7	0.0	none	none	no closure	22	1,858	24,182	3,626	154,352	15,151	2.4
2007	13.1	0.0	none	none	no closure	26	2,222	20,704	2,899	191,203	5,353	3.3
2008	8.6	0.0	none	none	no closure	22	2,105	17,216	1,564	99,923	11,727	2.8
2009	14.3	0.0	none	none	no closure	26	182	42,687	1,957	169,217	12,828	2.3
2010	10.1	0.0	none	none	no closure	33	785	26,023	1,751	292,004	12,841	2.8
2011	13.1	0.0	none	none	no closure	17	282	14,672	2,107	23,355	8,257	5.4
2012	10.6	0.0	none	none	no closure	30	365	33,921	1,075	150,497	14,995	3.1
2013	9.6	0.0	none	none	no closure	21	353	17,578	708	95,814	6,708	2.6
2014	13.6	0.0	none	none	no closure	41	58	56,688	3,756	91,897	9,175	2.3
2015	13.6	0.0	none	none	no closure	25	202	38,294	7,459	300,593	11,260	2.6
2016	11.1	0.0	none	none	no closure	28	35	19,239	745	51,034	4,442	2.4

Note: In 1988, the Upper Cook Inlet sockeye salmon run was very strong, with a commercial harvest was approximately 6,800,000 sockeye salmon. In the Kodiak Area, within the North Shelikof management unit from 7/6–7/25, 1988, with 6.9 days open to fishing, 392,000 sockeye salmon were harvested. This led to adoption of regulations to limit the sockeye salmon harvest in the North Shelikof (15,000 fish) and Southwest Afognak (50,000 fish) management units (5 AAC 18.363).

Appendix F5.—Daily salmon harvest by species for the North Shelikof management units of the North Shelikof Strait Sockeye Salmon Management Plan, 2016.

			Chinook		Sockeye		Coho		Pink		Chum	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
First Period (July 6–July 8)												
6-Jul	12	12	172	1,393	4,606	25,812	36	240	408	1,610	1,358	10,139
7-Jul	13	14	34	260	5,958	36,893	92	678	767	2,794	1,417	10,337
8-Jul	8	8	24	250	4,027	22,228	29	215	790	2,464	826	6,136
Total	24	34	230	1,903	14,591	84,932	157	1,133	1,965	6,867	3,601	26,612
Average weight				8.27		5.82		7.21		3.49		7.39
Second Period (July 14–July 17)												
14-Jul	19	19	93	930	21,140	117,643	339	2,047	3,620	15,659	1,837	12,344
15-Jul ^a												
16-Jul ^a												
17-Jul ^a												
Total	21	22	96	958	25,247	137,392	373	2,259	4,777	20,040	1,948	13,145
Average weight				9.98		5.44		6.06		4.20		6.75
Third Period (July 22–July 24)												
22-Jul	13	13	8	78	14,281	74,233	504	3,380	7,427	36,375	1,495	9,943
23-Jul	10	11	44	539	34,195	196,696	942	6,374	6,067	26,787	2,376	16,307
24-Jul	6	6	9	92	13,542	78,431	430	2,625	4,343	18,737	2,146	14,110
Total	25	30	61	709	62,018	349,360	1,876	12,378	17,837	81,898	6,017	40,359
Average weight				11.62		5.63		6.60		4.59		6.71
<u>North Shelikof Management Harvest July 6–July 25</u>												
Total	49	86	387	3,570	101,856	571,683	2,406	15,770	24,579	108,805	11,566	80,116
Average weight				9.22		5.61		6.55		4.43		6.93

^a Confidential.

Appendix F6.–Daily salmon harvest by species in the Southwest Afognak management units of the North Shelikof Strait Sockeye Salmon Management Plan, 2016.

Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum		
			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	
First Period (July 6–July 10)													
6-Jul ^a													
7-Jul ^a													
8-Jul	3	3	14	121	1,458	7,381	20	140	605	1,971	348	2,597	
9-Jul	8	8	4	49	3,671	17,606	108	636	3,118	10,981	1,119	7,296	
Total	13	14	19	176	5,788	28,227	134	836	4,047	14,440	1,881	12,798	
Avg. Wt.				9.24		4.88		6.24		3.57		6.80	
Second Period (July 14–July 17)													
14-Jul	4	4	0	0	741	3,752	79	655	2,360	9,523	241	2,397	
16-Jul	6	6	0	0	1,800	8,644	52	380	2,468	12,336	303	2,252	
Total	9	10	0	0	2,541	12,396	131	1,035	4,828	21,859	544	4,649	
Avg. Wt.				0.0		4.88		7.90		4.53		8.55	
Third Period (July 22–July 25)													
22-Jul	9	9	10	99	2,498	12,221	229	1,674	15,038	72,910	808	5,942	
23-Jul ^a													
24-Jul	11	11	1	9	6,120	29,504	183	1,270	19,119	98,314	913	6,444	
25-Jul	4	4	5	59	1,873	9,835	44	298	6,427	30,220	231	1,602	
Total	17	25	16	167	10,910	54,072	480	3,402	42,159	211,681	2,017	14,444	
Avg. Wt.				10.45		4.96		7.09		5.02		7.16	
SW Afognak Management Harvest July 6–July 25													
Total	28	49	35	343	19,239	94,695	745	5,272	51,034	247,981	4,442	31,891	
Avg. Wt.				9.79		4.92		7.08		4.86		7.18	

^a Confidential.

APPENDIX G. EASTSIDE AFOGNAK FISHERY SUMMARY

INTRODUCTION

In 1990, the Board of Fisheries adopted the *Eastside Afognak Management Plan* (5 AAC 18.365) into regulation to manage the fisheries in the vicinity of the Kitoi Bay Hatchery. The plan has been in effect with occasional modification since 1981 and was formulated jointly by Kodiak Management Area (KMA) commercial fishery managers and the Kitoi Bay Hatchery manager. This hatchery, on the east side of Afognak Island (Appendix G2), produces significant returns of pink, chum, and coho salmon. The goal of this plan is to achieve escapement and harvest objectives for salmon stocks of the Raspberry Straits, Southeast Afognak, Duck Bay, Izhut Bay, and Kitoi Bay sections, and ensure broodstock for the hatchery. This plan details the key species and targeted stocks that are managed in each of these sections throughout the fishing season.

2016 Eastside Afognak Fishery

Management of the Southeast Afognak Section is based on local salmon runs. Fisheries can be allowed from June 1 to July 5 based on the sockeye salmon returning to the Afognak Lake system, and after July 5 based on local pink, chum, and coho salmon. Due to strong Afognak Lake sockeye salmon escapement, the Southeast Afognak Section was opened with the initial opening for KMA sockeye salmon on June 2. On June 3, closed waters for the subsistence fishery were reduced to the old bridge near the stream terminus of Afognak River; on June 4, the commercial fishery closed waters were reduced to markers located at Last Point and Rivermouth Point. Afognak Lake sockeye salmon escapement continued to be moderate to strong and Southeast Afognak Section remained open to continuous fishing until July 10. After July 10, fishing time in the Southeast Afognak Section occurred at the same time as most of the Afognak District with normal closed waters. A total of 38 permit holders harvested 8 Chinook, 10,095 sockeye, 1,431 coho, 109,511 pink, and 550 chum salmon (Appendix G3). The 2016 sockeye salmon escapement into Afognak Lake was 32,459 fish (Fuerst *In prep*), which was within the escapement goal range of 20,000 to 50,000 fish (Sagalkin et al. 2013).

The salmon fishery (both commercial and cost recovery) targeting Kitoi Bay Hatchery fish began on June 2 with the last delivery occurring on September 15. In fisheries targeting the Kitoi Bay Hatchery return, which include the Duck Bay, Izhut Bay, Inner Kitoi Bay, and Outer Kitoi Bay sections, 101 permit holders harvested 113 Chinook, 47,727 sockeye, 12,188 coho, 1,168,544 pink, and 72,855 chum salmon (Appendix G3). The hatchery chum salmon harvest was similar to the preseason forecast, but early-run sockeye, late-run sockeye, coho, and pink salmon harvests were all below harvest forecasts (Brenner and Munro 2016).

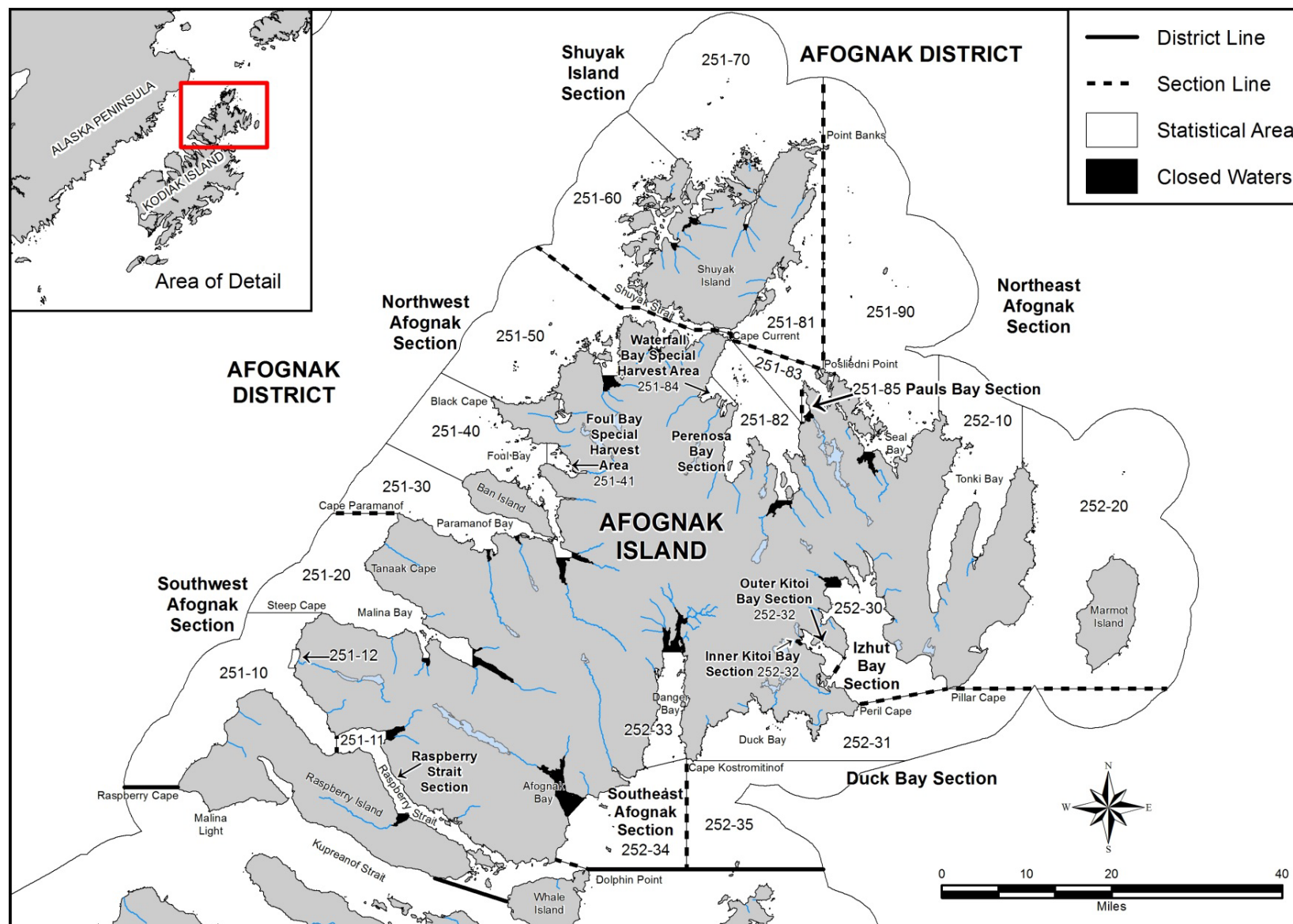
There was a cost-recovery fishery near the Kitoi Bay Hatchery, with the harvest sold by Kodiak Regional Aquaculture Association. The cost-recovery fishery took approximately 792,845 pink salmon (4 million lb), about 71% of the 2016 Kitoi Bay Hatchery pink salmon harvest. In 2016, 481 sockeye, 9 coho, and 937 chum salmon were also harvested in the cost-recovery fishery.

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Appendix G2.—Map of the Afognak District of the Kodiak Management Area.



Appendix G3.–Daily salmon harvest by species for the management units of the East Afognak Management Plan, 2016.

Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Raspberry Strait	22-Jul ^a												
Section	24-Jul ^a												
251-11	30-Jul ^a												
	16-Aug ^a												
	18-Aug ^a												
Total		4	5	5	77	1,280	5,954	262	2,313	6,683	36,440	315	2,369
Average weight					15.40		4.65		8.83		5.45		7.52
S.E. Afognak	2-Jun	3	3	0	0	586	2,603	0	0	0	0	1	5
Section	3-Jun ^a												
252-33 & 34	4-Jun ^a												
	5-Jun ^a												
	6-Jun ^a												
	7-Jun ^a												
	8-Jun ^a												
	9-Jun	3	3	0	0	888	4,047	0	0	0	0	10	72
	10-Jun ^a												
	11-Jun ^a												
	12-Jun	3	3	0	0	467	2,106	0	0	0	0	10	50
	13-Jun ^a												
	14-Jun ^a												
	16-Jun ^a												
	17-Jun ^a												
	18-Jun ^a												
	19-Jun ^a												
	20-Jun ^a												
	22-Jun ^a												
	30-Jul	5	5	0	0	228	1,027	36	267	9,378	49,016	25	167
	31-Jul ^a												
	1-Aug	9	9	2	12	751	3,319	89	644	20,075	96,789	89	649

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Management				Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
S.E. Afognak	6-Aug	10	10	0	0	394	1,790	256	1,704	23,161	108,025	93	663
Section	7-Aug	11	12	0	0	678	3,566	257	2,051	40,376	153,304	169	1,047
252-33 & 34 (cont.)	8-Aug	4	4	0	0	38	205	47	293	3,852	13,593	11	65
	16-Aug	11	11	0	0	173	719	277	2,451	3,783	19,367	15	106
	17-Aug	6	6	0	0	65	314	276	1,932	3,499	17,210	13	85
	18-Aug	4	4	0	0	45	201	147	1,172	1,456	7,634	6	51
	19-Aug ^a												
Total		38	98	8	78	10,095	44,810	1,431	10,827	109,511	484,368	550	3,728
Average weight					9.75		4.44		7.57		4.42		6.78
Izhut Bay Section	9-Jun ^a												
252-30	10-Jun ^a												
	11-Jun ^a												
	12-Jun ^a												
	15-Jun ^a												
	16-Jun ^a												
	20-Jun ^a												
	22-Jun	3	3	0	0	74	312	1	7	28	86	616	3,877
	23-Jun ^a												
	24-Jun ^a												
	25-Jun ^a												
	26-Jun ^a												
	14-Jul ^a												
	15-Jul	4	4	9	52	1,007	5,017	228	1,370	1,821	7,506	213	1,496
	16-Jul	5	5	4	27	1,640	9,692	196	1,363	5,995	24,137	264	1,332
	17-Jul	4	5	1	3	730	3,620	58	354	1,320	4,648	219	1,184
	18-Jul	5	5	2	13	479	2,518	39	258	2,493	10,766	228	1,475
	19-Jul	3	3	0	0	523	2,336	39	298	2,723	11,080	103	800
	20-Jul ^a												
	21-Jul	3	3	0	0	169	795	62	399	1,363	5,867	95	750

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Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Izhut Bay Section 252-30	22-Jul	5	5	2	5	372	1,894	55	469	4,225	18,062	216	1,512
	24-Jul	7	7	0	0	427	2,124	61	446	14,663	63,219	190	1,243
	25-Jul	11	11	0	0	1,049	5,311	99	674	30,713	129,647	388	2,698
	26-Jul	18	18	0	0	995	5,101	155	1,107	38,777	177,123	411	2,825
	27-Jul	18	18	1	7	789	3,793	190	1,355	34,325	151,404	369	2,312
	18-Aug ^a												
	20-Aug	39	39	2	39	813	4,131	816	5,414	19,158	98,063	84	574
	21-Aug	5	5	0	0	9	39	59	478	4,267	21,329	3	20
	22-Aug	3	3	0	0	3	14	1	9	256	1,048	0	0
	23-Aug ^a												
	24-Aug ^a												
	25-Aug ^a												
	26-Aug ^a												
Total		80	157	27	177	10,618	54,215	2,681	18,417	174,993	780,306	6,858	46,860
Average weight					6.56		5.11		6.87		4.46		6.83
Duck Bay Section 252-31 & 35	2-Jun	4	4	0	0	1,112	4,791	1	7	17	48	103	697
	3-Jun ^a												
	7-Jun ^a												
	9-Jun ^a												
	10-Jun ^a												
	11-Jun	3	3	3	9	567	2,970	1	9	89	256	1,274	8,972
	15-Jun ^a												
	16-Jun ^a												
	18-Jun ^a												
	20-Jun	3	3	0	0	845	3,423	87	372	611	1,685	1,991	14,092
	21-Jun ^a												
	22-Jun	4	4	0	0	182	727	14	85	107	306	656	4,653
	23-Jun	3	3	0	0	280	1,474	0	0	72	193	283	1,800
	24-Jun	3	3	0	0	269	1,214	4	27	105	325	972	7,130

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Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Duck Bay	25-Jun ^a												
Section	26-Jun	5	5	0	0	1,454	7,366	177	1,010	532	1,659	2,835	22,036
252-31 & 35	27-Jun	5	5	8	38	1,440	7,060	335	1,622	587	2,012	4,586	26,399
	28-Jun	10	11	0	0	3,368	17,255	476	2,620	919	3,555	3,116	22,419
	29-Jun	3	3	0	0	361	1,929	64	366	134	467	1,389	9,918
	30-Jun	14	14	4	18	2,707	13,139	654	3,293	1,199	4,286	3,110	20,009
	1-Jul	13	13	0	0	2,368	10,503	617	3,754	1,402	4,699	2,829	17,444
	10-Jul ^a												
	11-Jul	4	4	4	31	1,013	5,081	218	1,881	2,542	7,852	216	2,000
	12-Jul	4	4	19	142	1,166	6,157	259	1,632	1,652	6,770	663	5,273
	13-Jul	6	6	5	45	1,189	6,218	465	3,019	2,286	7,368	1,055	6,981
	14-Jul ^a												
	15-Jul	4	4	13	213	1,735	8,377	738	4,621	3,461	14,612	549	3,937
	16-Jul ^a												
	17-Jul	5	5	2	18	1,548	7,021	334	2,282	5,745	24,733	246	1,829
	18-Jul	5	5	2	11	1,863	9,503	217	1,577	8,650	29,500	246	1,264
	19-Jul ^a												
	20-Jul	6	6	12	106	1,432	7,565	346	2,363	11,264	59,423	408	2,948
	22-Jul	14	15	4	34	2,692	12,751	732	5,286	27,539	105,924	1,210	7,335
	23-Jul	4	4	0	0	664	3,481	338	2,053	5,672	25,192	258	1,786
	24-Jul	11	11	8	123	2,171	11,133	780	4,909	35,062	143,389	849	4,876
	25-Jul ^a												
	26-Jul ^a												
	27-Jul ^a												
	19-Aug	22	23	1	5	509	2,460	1,096	7,333	8,251	37,570	123	780
	20-Aug	13	13	0	0	294	1,449	469	3,908	5,524	24,102	155	1,059
	21-Aug ^a												
	22-Aug ^a												
	23-Aug ^a												
Total		68	202	86	795	35,907	174,127	9,485	61,498	154,561	664,139	32,920	223,810
Average weight					9.24		4.85		6.48		4.30		6.80

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Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Inner & Outer	3-Jun ^a												
Kitoi Bay	6-Jun ^a												
Sections	7-Jun ^a												
252-32	8-Jun ^a												
	10-Jun ^a												
	11-Jun ^a												
	13-Jun ^a												
	14-Jun ^a												
	15-Jun	3	3	0	0	9	35	0	0	2	8	1,283	8,965
	16-Jun ^a												
	17-Jun	4	4	0	0	31	111	0	0	17	52	3,973	22,522
	18-Jun	3	3	0	0	40	159	2	20	4	14	1,915	14,095
	19-Jun	5	5	0	0	252	1,221	0	0	133	334	5,777	41,862
	20-Jun	7	7	0	0	179	770	9	45	76	208	11,139	64,588
	21-Jun	4	4	0	0	42	176	1	5	2	9	1,559	10,586
	22-Jun ^a												
	2-Aug ^a												
	4-Aug ^a												
	5-Aug ^a												
	7-Aug ^a												
	8-Aug ^a												
	9-Aug ^a												
	10-Aug ^a												
	11-Aug ^a												
	12-Aug ^a												
	13-Aug ^a												
	14-Aug ^a												
	15-Aug ^a												
	16-Aug ^a												
	18-Aug ^a												
	19-Aug ^a												

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Management		Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Inner & Outer	2-Sep ^a												
Kitoi Bay	4-Sep ^a												
Sections	6-Sep ^a												
252-32	9-Sep ^a												
	10-Sep ^a												
	13-Sep ^a												
	15-Sep ^a												
Total		16	67	0	0	1,202	5,211	22	135	838,990	4,279,982	33,077	209,759
Average weight					0.0		4.34		6.15		5.10		6.34
Management Units Targeting Kitoi Hatchery (Inner & Outer Kitoi, Izhut and Duck Bay Sections)													
Subtotal		101	426	113	972	47,727	233,553	12,188	80,051	1,168,544	5,724,427	72,855	480,428
Average weight					8.60		4.89		6.57		4.90		6.59
East Afognak Management Units													
Grand Total		105	529	126	1,127	59,102	284,317	13,881	93,191	1,284,738	6,245,235	73,720	486,525
Average weight					8.94		4.81		6.71		4.86		6.60

^a Confidential.

APPENDIX H. SPIRIDON BAY SPECIAL HARVEST AREA FISHERY SUMMARY

INTRODUCTION

Adult sockeye salmon return each year to Telrod Cove in Spiridon Bay as a result of a juvenile stocking program of Spiridon Lake conducted by Kodiak Regional Aquaculture Association (KRAA; Appendix H2). Some of these fish were harvested in Westside Kodiak commercial fisheries, and the remainder was harvested in a terminal fishery in the Spiridon Bay Special Harvest Area (SBSHA) in Telrod Cove. A total return of approximately 264,200 Spiridon Lake, (including Telrod Cove net pen production) sockeye salmon was expected in 2016 (Brenner and Munro 2016). Sockeye salmon stocked into Spiridon Lake were from Saltery Lake broodstock. Spiridon Lake sockeye salmon are expected to return in late June to early July, peak in mid- to late July, and end by mid-August. This run timing should follow the Saltery Lake sockeye salmon stock.

2016 Spiridon Bay Sockeye Salmon Fishery

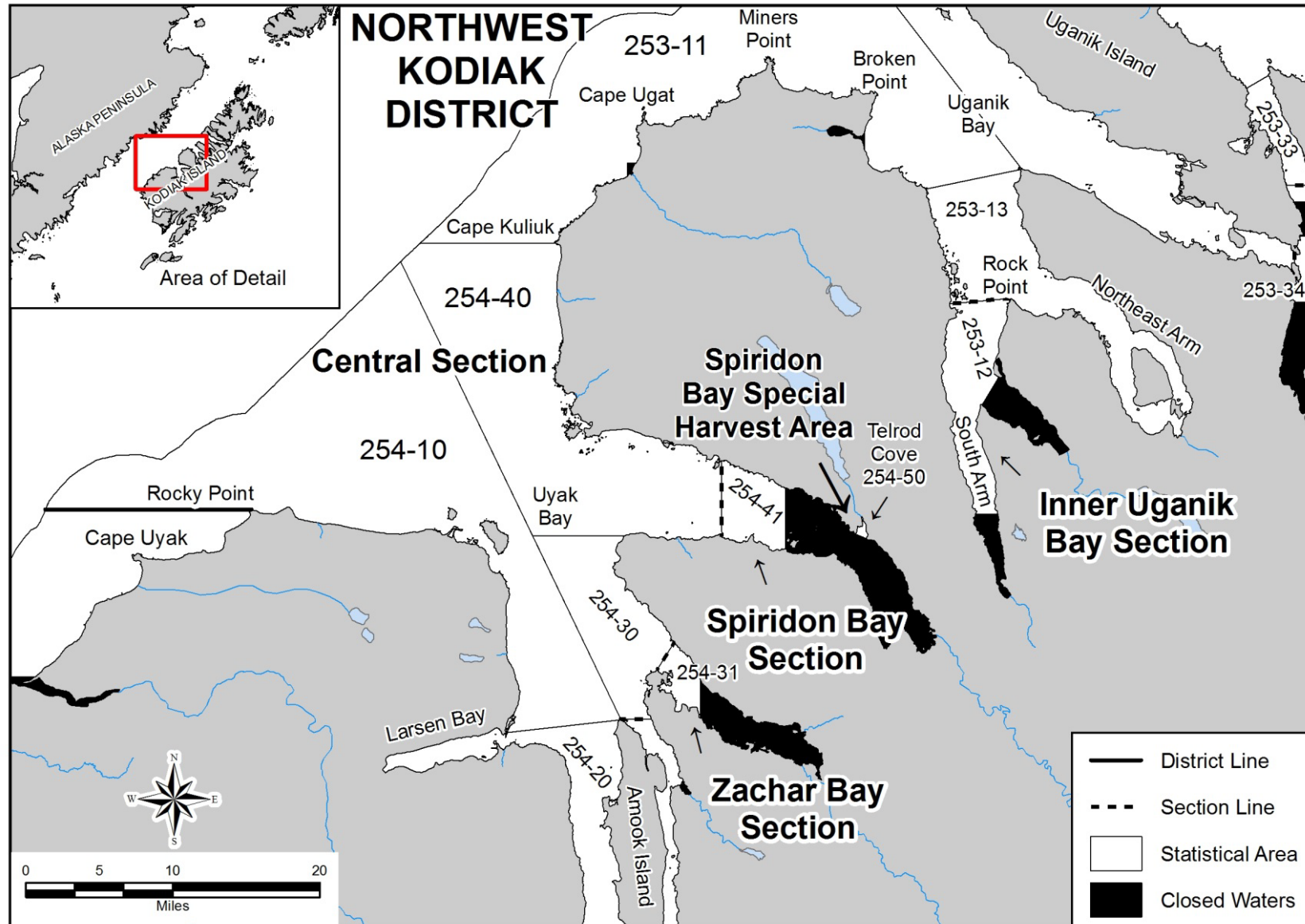
KRAA conducted a cost-recovery harvest to help fund a portion of the stocking program. The cost-recovery harvest began on June 28, continued until August 1, and harvested 50,883 sockeye, 3,825 pink, and 353 chum salmon. With the conclusion of the cost-recovery harvest, the common property fishery was opened on August 1 and remained open until the sockeye salmon run began to subside (August 20). Twenty-three purse seine permit holders harvested a total of 1 Chinook, 31,766 sockeye, 54 coho, 11,543 pink, and 982 chum salmon in the common property fishery in SBSHA (Appendix H3). The total number of sockeye salmon harvested in Telrod Cove was 82,649 fish, 62% (50,883 fish) of which was harvested for cost recovery (Appendix H4).

In 2016, liberal fishing time along the west side of Kodiak Island for salmon in early July gave way to less fishing time as the month progressed as it became known that the pink salmon run was well below the preseason forecast. As a result of the decreased fishing time in July, the percentage of Spiridon-bound sockeye salmon harvested in areas outside of SBSHA was lower than in some previous years, when a large pink salmon return resulted in increased fishing time. The total number of sockeye salmon returning to the Spiridon enhancement project that were sold in 2016 was estimated at 174,666 fish, with approximately 47% (82,649 fish) harvested within SBSHA and an estimated 53% (92,017 fish) harvested in the Southwest Afognak Section and Central and North Cape sections of the Northwest Kodiak District (Appendix H4). This estimate was based on the correlation between the number of days fish were harvested in the Central Section of the Northwest Kodiak District (excluding the SBSHA) and the previously estimated portion of Spiridon Lake sockeye salmon harvested in the SBSHA determined from scale pattern analyses from commercial harvests from 2008 to 2012 (Moore 2013).

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- Moore, M. L. 2013. Kodiak Management Area salmon escapement and catch sampling results, 2012. Alaska Department of Fish and Game, Fishery Data Series No. 13-48, Anchorage.

Appendix H2.—Map of the Spiridon Bay Special Harvest Area in the Northwest Kodiak District.



Appendix H3.–Daily salmon harvest by species in the Spiridon Bay Special Harvest Area, 2016.

Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Spiridon Bay SHA 254-50	1-Aug	7	8	1	3	5,969	27,144	4	30	2,626	14,141	229	1,711
	2-Aug	3	3	0	0	1,527	7,258	0	0	283	1,446	74	507
	3-Aug	11	12	0	0	2,538	12,677	6	33	1,492	7,289	172	1,277
	4-Aug	2	2	0	0	203	1,042	0	0	69	366	18	147
	5-Aug	5	5	0	0	1,861	9,168	1	8	614	2,870	74	565
	6-Aug	5	7	0	0	3,600	15,978	7	57	2,029	10,964	108	1,049
	7-Aug	4	4	0	0	2,827	13,886	0	0	508	2,617	109	761
	8-Aug	3	3	0	0	832	3,335	4	16	369	2,039	28	244
	9-Aug	8	8	0	0	2,369	11,022	0	0	525	2,715	16	121
	10-Aug	7	7	0	0	1,962	8,128	1	9	359	2,367	27	182
	11-Aug ^a												
	12-Aug	8	8	0	0	1,689	6,753	3	22	515	3,234	16	137
	13-Aug	3	3	0	0	370	1,499	3	23	211	1,029	11	83
	14-Aug	7	8	0	0	3,166	12,821	21	177	954	6,233	78	527
	15-Aug	3	3	0	0	611	2,722	1	10	354	2,113	6	44
	16-Aug ^a												
	17-Aug	3	3	0	0	1,114	4,943	2	18	250	1,575	5	32
	18-Aug ^a												
	20-Aug ^a												
Total		23	89	1	3	31,766	143,385	54	417	11,543	62,853	982	7,455
Average weight					3.00		4.51		7.72		5.45		7.59

Note: Harvest does not include fish set aside for personal use or fish harvested in cost recovery fisheries.

^a Confidential

Appendix H4.—Estimated contribution to the commercial harvest from the Spiridon Lake sockeye salmon enhancement project by locality in the Kodiak Management Area, 2016.

	Actual	Estimated	
	Telrod Cove	Southwest Afognak Section and Northwest Kodiak District	Westside total
Cost recovery	50,883	0	50,883
Common property	31,766	92,017	123,783
Total harvest	82,649	92,017	174,666
Percent	47%	53%	100%

APPENDIX I. EASTSIDE KODIAK FISHERY SUMMARY

INTRODUCTION

The goal of the *Eastside Kodiak Salmon Management Plan* is to achieve escapement and harvest objectives for sockeye, pink, chum, and coho salmon returning to spawning streams in the Northeast Kodiak and Eastside Kodiak districts. This plan details the key species and targeted stocks that are managed in each of these sections throughout the fishing season (5 AAC 18.367).

For the Northeast Kodiak District (Appendix I2), all sections are to remain closed to commercial salmon fishing until July 6, when the pink salmon fishery begins for most of the Kodiak Management Area (Fuerst and Jackson 2016). Fishing opportunities through August 24 are based on the abundance of local and mixed pink and chum salmon, except that in the Buskin River Section from July 6 to July 15 fishing could be allowed based on local pink salmon and Buskin River sockeye salmon. From August 25 to September 5, fishing periods are based on the abundance of local pink and coho salmon, and after September 5, on local coho salmon.

For most of the Eastside Kodiak District in 2016 (Appendix I3), not more than two 33-hour fishing periods could occur between June 14 and July 5 to harvest local and migrating sockeye salmon. The Inner Ugak Bay Section could not open for more than two 33-hour fishing periods between June 14 and June 21. From June 22 to July 5, fishing opportunities are based on sockeye salmon bound to either the Pasagshak River in Outer Ugak Bay Section or the Saltery River in Inner Ugak Bay Section. From July 6 to August 24, fishing opportunities in all sections are based on the abundance of local and mixed pink and chum salmon, except that in Inner Ugak Bay Section, Saltery Lake sockeye salmon escapement must be considered through July 31. From August 25 to September 5, fishing periods are based on the abundance of local pink, chum, and coho salmon, and after September 5, on local coho salmon abundance (5 AAC 18.367).

Within the Buskin River Section of the Northeast Kodiak District, the Buskin Lake system produces a significant run of sockeye salmon that is targeted by a large number of subsistence fishermen. A weir is operated on the Buskin River to enumerate escapement. Within the Inner Ugak Bay Section of the Eastside Kodiak District, the Saltery Lake system produces a significant run of sockeye salmon. A weir is operated on this stream by Kodiak Regional Aquaculture Association and ADF&G to enumerate sockeye salmon. Additionally, ADF&G has operated a weir on the Pasagshak River since 2011 to enumerate sockeye salmon that are targeted by subsistence and sport fishermen. Other minor sockeye salmon systems are present in the Eastside Kodiak District, including Lake Miam and Ocean Beach.

2016 Eastside Kodiak Fisheries

The Saltery River sockeye salmon run was strong with a cumulative escapement past Saltery weir of 57,867 fish (Fuerst *In prep*) above the desired escapement goal range of 15,000 to 35,000 fish (Fuerst and Jackson 2016). There were two 33-hour fishing periods in the Inner Ugak Bay Section beginning on June 14 and June 21. In the Inner Ugak Bay Section the second fishing period was extended through June 28 to harvest Saltery sockeye salmon. The Inner Ugak Bay Section again opened on July 3 and remained open through July 17 due to an exceptionally strong sockeye salmon run to Saltery River. The first general pink salmon opener for the Eastside District was scheduled for 105 hours and began on July 6. Two subsequent pink salmon

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fishing periods beginning on July 14 and July 22 were reduced from 105 hours to 81 hours due to low pink salmon harvest and escapements, and the final general pink salmon opener was scheduled on July 30 for only 57 hours.

Throughout July and early August, it was apparent that the pink salmon abundance throughout the Kodiak Archipelago was well below the preseason forecast, and the majority of the Eastside Kodiak District remained closed to commercial salmon fishing from August 2 through early September in an attempt to increase pink salmon escapements into Eastside District systems.

The Buskin River sockeye salmon run was moderate during the 2016 season, and no restrictions to the subsistence fishery were necessary. A total of 11,584 sockeye salmon passed above the Buskin River weir (Fuerst *In prep*), which was above the escapement goal range of 5,000 to 8,000 fish (Sagalkin et al. 2013).

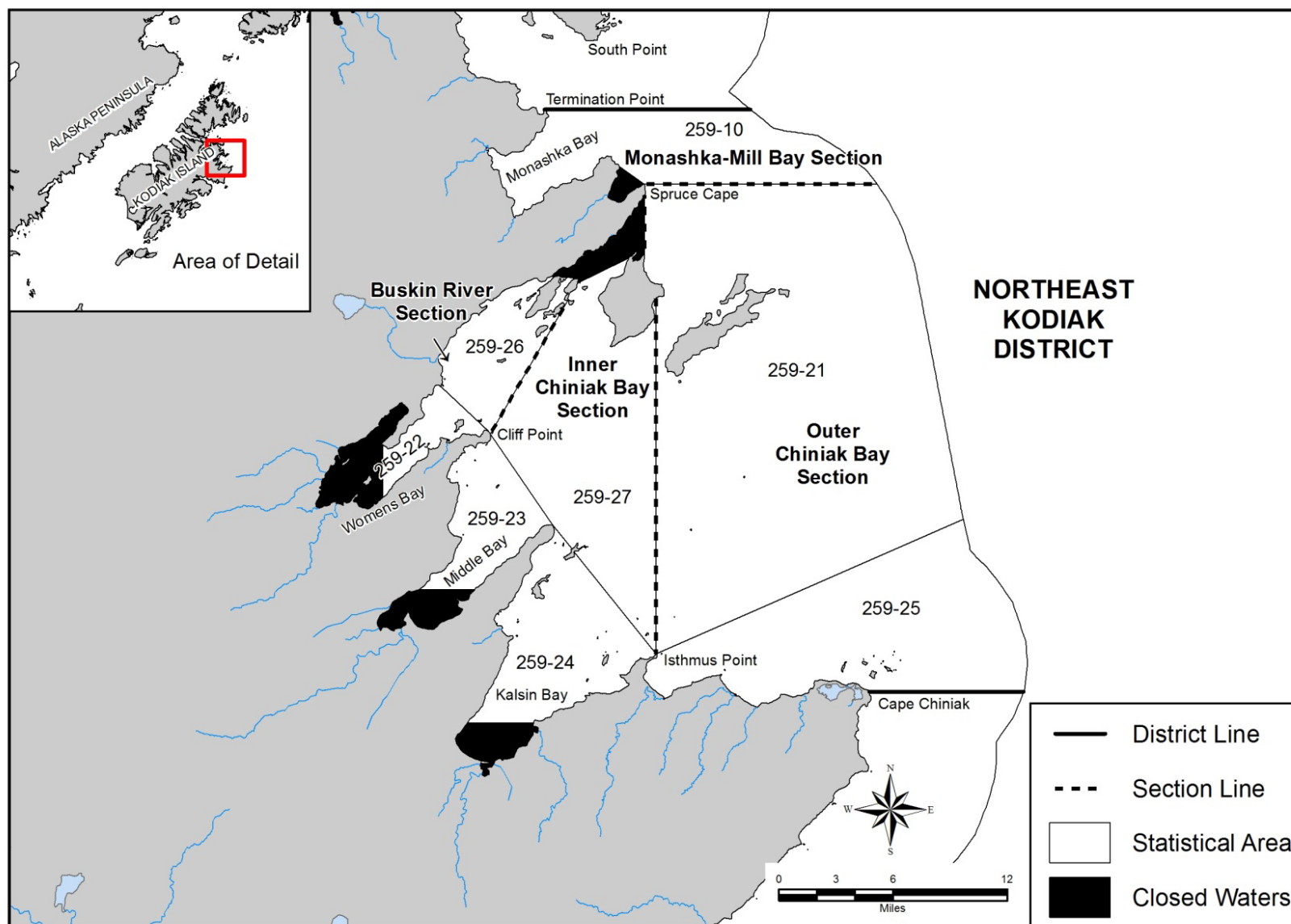
In 2011, a weir was established at the outlet of Lake Rose Tead on the Pasagshak River to enumerate sockeye salmon. As the 2016 season progressed, it became apparent that the lower-bound sustainable escapement goal (SEG) may not be reached, and the subsistence and commercial fishery closed within Pasagshak Bay on July 2. Escapement into the Pasagshak River steadily increased over the next week and the subsistence and commercial fisheries within Pasagshak Bay reopened on July 14. A total of 7,053 sockeye salmon were estimated to have passed the Pasagshak River weir in 2016 (Fuerst *In prep*), well above the lower-bound SEG of 3,000 fish (Sagalkin et al. 2013).

The total commercial harvest for the Eastside Kodiak management units by 72 permit holders included 1,013 Chinook, 160,452 sockeye, 18,407 coho, 94,351 pink, and 41,457 chum salmon (Appendix I4). The last day of commercial salmon harvest in the Eastside Kodiak District was September 6.

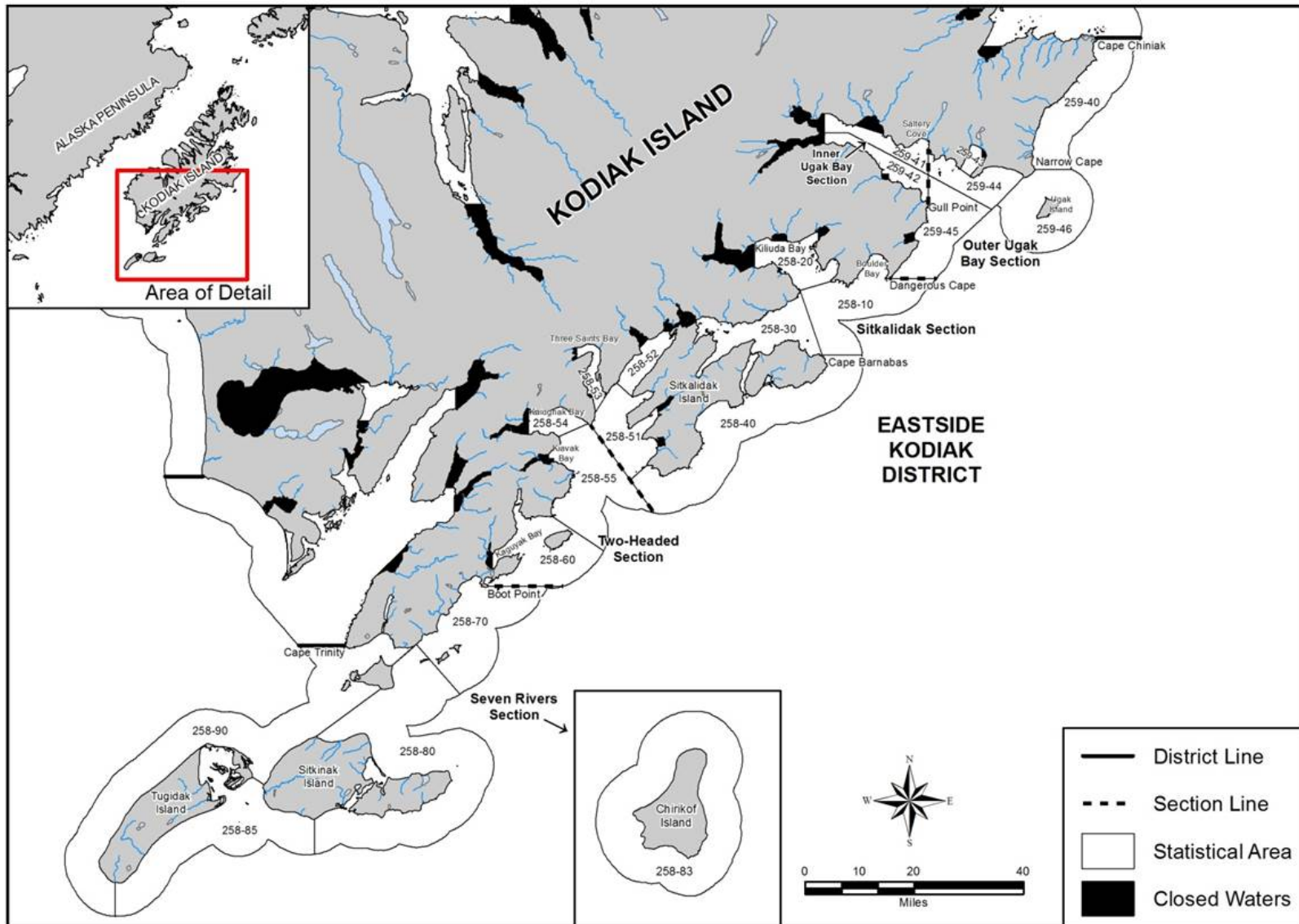
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- Fuerst, B. A., and J. Jackson. 2016. Kodiak Management Area harvest strategy for the 2016 commercial salmon fishery. Alaska Department of Fish and Game, Fishery Management Report No. 16-11, Anchorage.
- Sagalkin, N. H., B. Foster, M. B. Loewen, and J. W. Erickson. 2013. Review of salmon escapement goals in the Kodiak Management Area, 2013. Alaska Department of Fish and Game, Fishery Manuscript Series No. 13-11, Anchorage.

Appendix I2.—Map of the Northeast Kodiak District commercial salmon fishing sections and statistical areas.



Appendix I3.—Map of the Eastside Kodiak District commercial salmon fishing sections and statistical areas.



Appendix I4.–Daily commercial salmon harvest by species for the Eastside Kodiak Management Plan units, 2016.

Management				Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Eastside Kodiak District	14-Jun	7	7	25	51	3,261	16,811	23	132	1,724	5,484	3,043	19,098
	15-Jun	3	3	0	0	647	4,028	0	0	405	1,117	424	3,554
	21-Jun	12	12	327	890	6,760	36,091	287	1,673	2,700	7,863	15,588	108,150
	22-Jun	4	4	2	10	1,726	9,849	59	370	750	2,546	1,631	11,556
	23-Jun ^a												
	25-Jun	4	4	2	19	1,708	8,397	39	237	23	61	356	2,505
	26-Jun ^a												
	27-Jun ^a												
	28-Jun ^a												
	3-Jul	8	8	2	13	2,467	12,741	10	71	54	137	1,326	9,128
	4-Jul	3	3	0	0	1,263	9,456	36	145	24	130	62	538
	5-Jul ^a												
	6-Jul	29	30	77	374	25,372	141,212	2,486	15,407	4,074	14,815	1,419	9,161
	7-Jul	10	10	1	8	6,099	33,225	807	4,884	1,367	4,712	454	3,042
	8-Jul	21	21	48	264	16,017	83,119	814	4,213	1,930	7,086	1,032	7,689
	9-Jul	16	17	45	333	16,092	90,233	2,022	14,034	3,669	14,948	917	6,186
	10-Jul	17	17	21	232	14,972	74,513	896	5,715	2,885	10,573	548	3,531
	11-Jul	4	4	24	233	2,121	10,494	9	37	56	242	38	274
	12-Jul	4	4	0	0	5,177	26,297	209	1,110	551	2,287	528	5,056
	13-Jul	6	7	15	204	3,158	16,115	0	0	226	1,155	113	862
	14-Jul	16	16	24	181	12,892	71,764	3,884	23,363	7,019	26,736	1,102	7,028
	15-Jul	11	11	9	113	10,727	58,279	3,035	18,160	6,625	22,628	807	5,997
	16-Jul	10	10	18	151	3,055	15,610	358	2,241	1,297	4,656	233	1,457
	17-Jul	5	5	9	75	1,525	7,804	250	1,602	1,376	5,908	127	1,025
	22-Jul	4	4	0	0	2,747	13,705	444	3,123	4,255	20,293	390	2,994
	23-Jul ^a												
	24-Jul	4	5	15	103	4,497	24,227	424	2,589	5,031	24,299	1,577	4,420
	25-Jul	6	6	35	356	4,154	20,630	202	1,629	6,200	31,479	469	3,535
	30-Jul	9	9	21	219	4,231	18,686	583	3,523	22,140	121,263	4,839	26,043
	31-Jul ^a												
	1-Aug	6	6	1	15	1,506	8,272	482	3,311	17,081	83,190	2,543	17,200

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Appendix I4.–Page 2 of 4.

Management				Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Eastside Kodiak District (cont.)	5-Sep ^a 6-Sep ^a												
Total		67	238	1,007	6,373	159,622	849,968	18,220	114,287	93,200	420,537	41,168	271,109
Average weight					6.33		5.32		6.27		4.51		6.59
Northeast Kodiak District	9-Jul ^a 16-Jul ^a 30-Jul ^a 1-Aug ^a	3	3	6	58	760	4,560	170	1,142	746	3,283	272	1,932
Total		6	7	6	58	830	4,933	187	1,248	1,151	5,193	289	2,033
Average weight					9.67		5.94		6.67		4.51		7.03
Eastside Management Plan													
Total		72	245	1,013	6,431	160,452	854,901	18,407	115,535	94,351	425,730	41,457	273,142
Average weight					6.35		5.33		6.28		4.51		6.59

^a Confidential.

**APPENDIX J. NORTH AFOGNAK/SHUYAK FISHERY
SUMMARY**

INTRODUCTION

In November of 1995, the Board of Fisheries adopted the *North Afognak/Shuyak Island Salmon Management Plan* into regulation (5 AAC 18.368). This plan governs all commercial salmon fisheries on the north end of the Kodiak Archipelago. Though no comprehensive regulatory management plan was in effect prior to that date, the commercial fisheries of the area had followed a framework developed by fishery managers in the early 1970s, with the harvest strategy remaining nearly unchanged after 1987. The goal of this plan is to achieve escapement and harvest objectives for sockeye, pink, and coho salmon returning to spawning systems located in the Northeast Afognak, Perenos Bay, Pauls Bay, Shuyak Island, and Northwest Afognak sections of the Afognak District (Appendix J2). This plan details the key species and targeted stocks that are managed in each of these sections throughout the fishing season. This plan went into effect during the 1996 season and was most recently modified in 2005.

For the Northeast Afognak and Shuyak Island sections, commercial salmon fishing was to remain closed until July 6 when the general pink salmon fishery began for most of the Kodiak Management Area (KMA). Fishing opportunities in the Northeast Afognak Section were based on the abundance of local and migrating pink salmon through August 24, local pink and coho salmon from August 25 to September 5, and on local coho salmon after September 5. Fishing opportunities in the Shuyak Island Section were to be based on the abundance of local and mixed pink salmon through August 1, then on local coho salmon through the end of the season. From July 6 to July 25, the Shuyak Island Section was also managed in accordance with the *North Shelikof Strait Sockeye Salmon Management Plan* (5 AAC 18.363).

For the Perenos Bay Section, from June 1 to July 5, fishing opportunities were based on sockeye salmon returning to the Pauls Bay and Portage Lake systems. Additional fishing time could be allowed to harvest enhanced sockeye salmon bound for the Little Waterfall system, but only inside the Waterfall Bay Special Harvest Area (WBSHA). From July 6 to July 20, management for the Perenos Bay Section was based on local and migrating Kodiak pink salmon, and sockeye salmon migrating to Pauls and Portage lakes. From July 21 to August 20, management was based on the abundance of local and migrating pink salmon, from August 21 to September 5, on local pink and coho salmon, and after September 5, on the abundance of local coho salmon.

For the Northwest Afognak Section, from June 1 to July 5, fishing opportunities were based on sockeye salmon bound to the minor systems at Thorsheim Lake and Long Lagoon, although there could be no more than two 33-hour fishing periods. Additional fishing time could be allowed to harvest enhanced sockeye salmon bound for the Hidden Lake system, but only in the Foul Bay Special Harvest Area (FBSHA). From July 6 to August 24, management was based on the abundance of local and mixed pink salmon, and after August 24, fishing periods were based on the abundance of local coho salmon. Additional fishing time may be allowed to harvest enhanced coho salmon bound for the Hidden Lake System, but only in the FBSHA. From July 6 to July 25, the Northwest Afognak Section was also managed in accordance with the *North*

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Shelikof Strait Sockeye Salmon Management Plan (5 AAC 18.363). For the Pauls Bay Section, from June 1 to July 5, fishing opportunities were based on sockeye salmon returning to Pauls Lake. From July 6 to August 1, management of the Pauls Bay Section was based on local and mixed pink and sockeye salmon bound for Pauls Lake. After August 1, management was based on the abundance of local coho salmon.

2016 North Afognak/Shuyak Island Fisheries

In 2016, the first commercial salmon fishing period for the North Afognak/Shuyak Island management units began June 2, and was limited initially to the FBSHA and the WBSHA. Within the FBSHA, 3 permit holders harvested a total of 8,794 sockeye, 1 pink, and 35 chum salmon (Appendix J3). No fishing effort occurred in the WBSHA during the 2016 season (Appendix J3).

The Northwest Afognak, Pauls Bay, and Perenosa Bay sections opened on June 14 and June 21 for two 33-hour periods in order to test the strength of local Afognak sockeye salmon runs. Little to no harvest occurred (Appendix J3). For only the third season since 2004, the Pauls Bay weir was operated at the outlet of Pauls Lake (Fuerst *In prep*).

In July, the Northwest Afognak, Shuyak Island, Pauls Bay, Perenosa Bay, and Northeast Afognak sections opened during all Kodiak Area general pink salmon fishing periods due to adequate sockeye and pink salmon escapement.

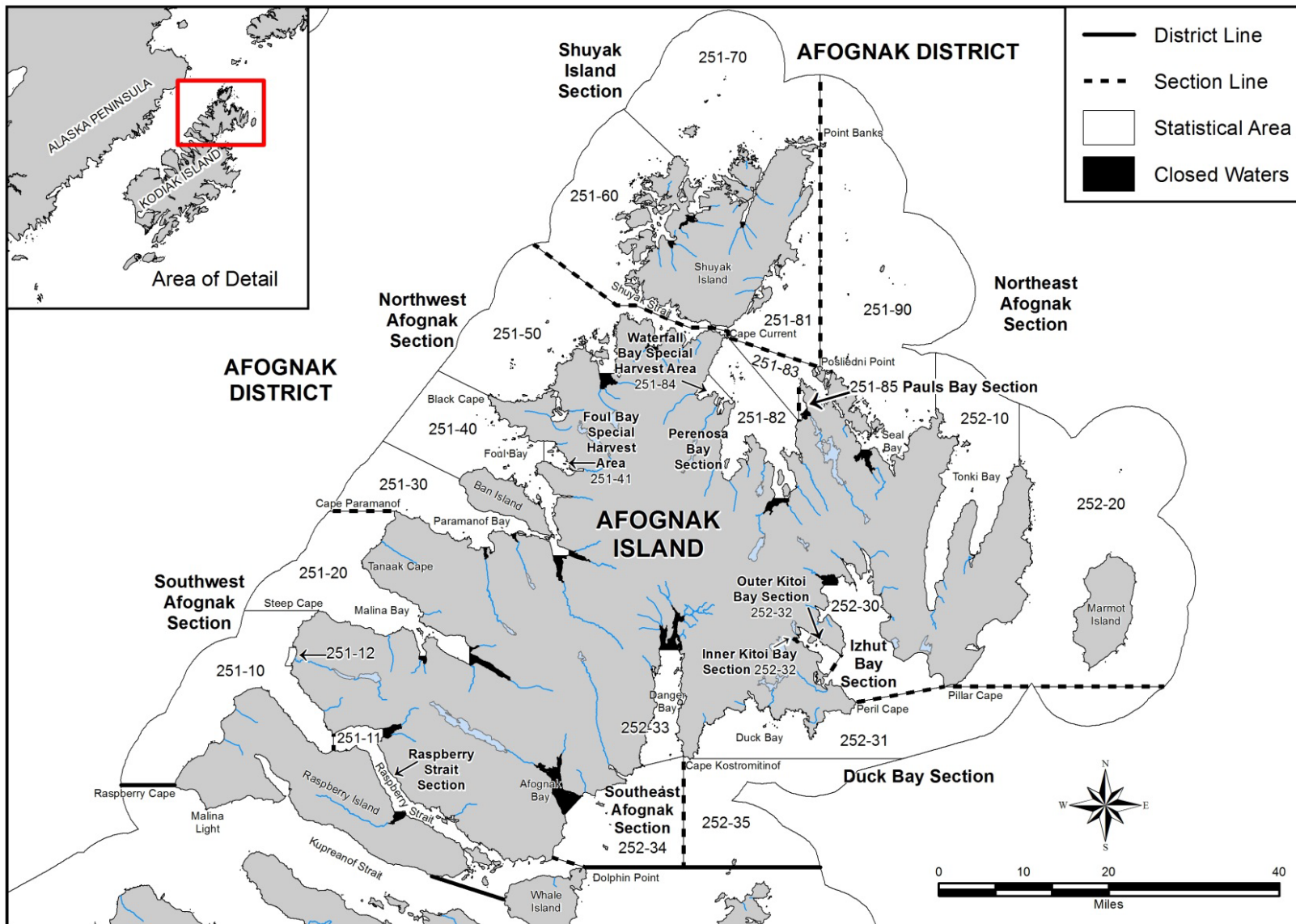
The last landing in the North Afognak/Shuyak Island management units occurred on August 24. In all the units of the North Afognak/Shuyak fishery combined, 38 permit holders made 97 landings and harvested 12 Chinook, 20,423 sockeye, 14,769 coho, 183,816 pink, and 3,300 chum salmon (Appendix J3).

Within the Pauls Bay Section a total of 8 permit holders harvested 226 sockeye, 4,686 coho, 15,452 pink, and 95 chum salmon (Appendix J3). The last day of commercial salmon harvest in the Pauls Bay Section was August 23.

REFERENCES CITED

Fuerst, B. A. *In prep*. Kodiak Management Area weir descriptions and salmon escapement report, 2016. Alaska Department of Fish and Game, Fisheries Management Report, Anchorage.

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Appendix J3.—Daily salmon harvest by species for the North Afognak/Shuyak Island management units, 2016.

Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Northeast Afognak Section	30-Jul ^a												
	31-Jul ^a												
	16-Aug ^a												
	18-Aug ^a												
	22-Aug ^a												
Total		6	7	2	46	297	1,412	1,601	8,787	12,904	56,950	141	815
Average weight					23.00		4.76		5.49		4.41		5.78
Northwest Afognak Section (excluding Foul Bay SHA)	14-Jun	4	4	2	23	1,852	8,005	0	0	2	9	76	495
	21-Jun ^a												
	7-Jul ^a												
	14-Jul ^a												
	17-Jul ^a												
	22-Jul	7	7	0	0	768	4,026	19	131	3,327	16,846	199	1,506
	23-Jul ^a												
	30-Jul ^a												
	1-Aug ^a												
	6-Aug	10	11	0	0	2,892	14,064	1,731	9,965	49,976	218,949	973	7,093
	7-Aug	5	5	3	45	1,908	8,443	431	4,045	16,999	76,189	656	4,732
	8-Aug	7	7	5	35	1,905	10,281	749	6,326	25,682	124,146	753	5,339
	17-Aug ^a												
	18-Aug ^a												
Total		28	44	10	103	10,980	53,486	3,138	21,993	102,993	471,490	2,939	21,425
Average weight					10.30		4.87		7.01		4.58		7.29
Foul Bay Special Harvest Area	2-Jun ^a												
	5-Jun ^a												
	6-Jun ^a												
	7-Jun ^a												
	8-Jun ^a												

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Appendix J3.—Page 2 of 3.

Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Foul Bay Special Harvest Area (cont.)	9-Jun ^a												
	11-Jun ^a												
	13-Jun ^a												
	14-Jun ^a												
	16-Jun ^a												
	21-Jun ^a												
	24-Jun ^a												
Total		3	16	1	8	8,794	38,331	0	0	1	3	35	206
Average weight					8.00		4.36		0.00		3.00		5.89
Pauls Bay Section	8-Aug ^a												
	16-Aug	7	7	0	0	168	812	2,126	14,751	9,273	39,334	66	450
	21-Aug	3	3	0	0	14	48	1,460	14,062	959	4,409	1	8
	22-Aug ^a												
	23-Aug ^a												
Total		8	14	0	0	226	1,082	4,686	37,143	15,452	64,737	95	626
Average weight					0.00		4.79		7.93		4.19		6.59
Perenos Bay Section (Excluding Waterfall Bay)	14-Jul ^a												
	6-Aug ^a												
	16-Aug ^a												
	18-Aug ^a												
	19-Aug ^a												
	20-Aug ^a												
Total		4	6	0	0	90	444	990	8,979	8,909	40,449	86	589
Average weight					0.00		4.93		9.07		4.54		6.85
Waterfall Bay Special Harvest Area													
Total		0	0	0	0	0	0	0	0	0	0	0	0
Average weight					0		0		0		0		0

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Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Shuyak Island Section	30-Jul ^a												
	31-Jul ^a												
	1-Aug ^a												
	16-Aug ^a												
	19-Aug ^a												
	20-Aug ^a												
	21-Aug ^a												
	23-Aug ^a												
Total		3	10	0	0	36	196	4,354	37,361	43,557	181,672	4	20
Average weight					0.00		5.44		0.00		4.17		5.00
Grand Total		38	97	12	157	20,423	94,951	14,769	114,263	183,816	815,302	3,300	23,681
Average weight					13.08		4.65		7.74		4.44		7.18

^a Confidential.

APPENDIX K. MAINLAND DISTRICT FISHERY SUMMARY

INTRODUCTION

The Mainland District in the Kodiak Management Area (KMA; Appendix K2) is covered under 3 separate regulatory management plans, 2 of which are strictly allocative plans allowing the harvest of sockeye salmon considered to be nonlocal. The *Cape Igvak Salmon Management Plan* (CISMP; 5 AAC 18.360) covers the southernmost sections of the Mainland District from June 5 to July 25 and limits the harvest of sockeye salmon considered by regulation to be Chignik-bound. The *North Shelikof Strait Sockeye Salmon Management Plan* (NSSSSMP; 5 AAC 18.363) covers the northernmost sections of the Mainland District from July 6 to 25 and limits the harvest of sockeye salmon due to concern for interception of Cook Inlet-bound fish. The *Mainland District Salmon Management Plan* (MDSMP), while recognizing these other plans, sets forth the key species and targeted stocks that are managed for in each section throughout the entire fishing season (5 AAC 18.369).

MDSMP stipulates that commercial salmon fisheries in the majority of the Mainland District remain closed until July 6, when the general pink salmon fishery begins for most of the Kodiak Management Area. The exceptions are the Cape Igvak Section (managed based on the strength of the Chignik sockeye salmon run through July 25) and two 33-hour fisheries in June targeting local sockeye salmon runs (Swikshak River sockeye salmon in the Big River Section, and Kafil Lake sockeye salmon in the Outer Kukak Bay Section; Appendix K2). From July 6 to July 25, weekly fishing periods could not exceed 57 hours and fishing opportunities are based on the abundance of local and mixed stocks of pink and chum salmon, except in the Wide Bay Section, which remains closed. From July 25 to the end of the season, fishing periods are based on the abundance of local pink, chum, and coho salmon.

2016 Mainland District Fisheries

On June 14 and June 21, there were two 33-hour fishing periods in the Big River and Outer Kukak Bay sections to allow harvest of Kafil and Swikshak systems sockeye salmon. During the pink salmon season through July 25, the entire Mainland District (with the exception of the Wide Bay Section which remained closed and Cape Igvak section which opened July 16) was opened for three 57-hour fishing periods between July 6 and July 22 (with some sections managed under the NSSSSMP).

Pink and chum salmon runs were weak throughout the Mainland District in 2016. After a fourth 57-hour pink salmon opener, which began on July 30, the entire Mainland District remained closed through the end of the fishing season. The estimated pink salmon escapement of 65,305 fish was well below the escapement goal range of 250,000 to 1,000,000 fish (Sagalkin et al. 2013).

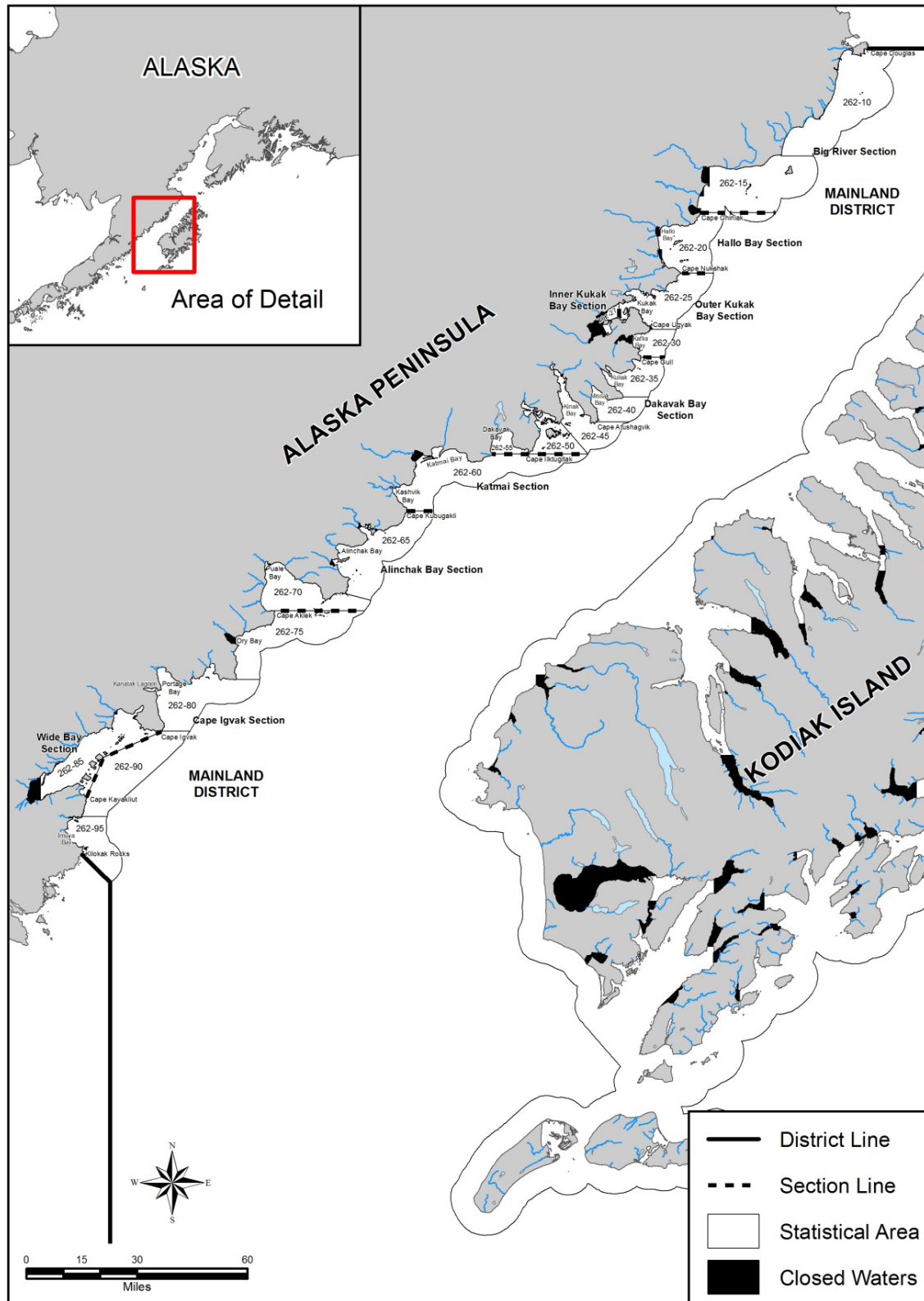
During 2016, the total commercial harvest by 78 permit holders in the Mainland District included 2,694 Chinook, 452,542 sockeye, 18,953 coho, 90,097 pink, and 67,890 chum salmon (Appendix K3). This includes all salmon harvested along the Mainland, including those harvested under the direction of CISMP and NSSSSMP.

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REFERENCES CITED

Sagalkin, N. H., B. Foster, M. B. Loewen, and J. W. Erickson. 2013. Review of salmon escapement goals in the Kodiak Management Area, 2013. Alaska Department of Fish and Game, Fishery Manuscript Series No. 13-11, Anchorage.

Appendix K2.—Map of the Mainland District commercial salmon fishing sections and statistical areas.



Appendix K3.–Daily commercial salmon harvest, by species, for the Mainland District Management Plan units, 2016.

Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Big River Section	30-Jul ^a												
Total ^a													
Average weight					0.00		6.03		12.04		4.00		9.07
Hallo Bay Section													
Total		0	0	0	0	0	0	0	0	0	0	0	0
Average weight					0.00		0.00		0.00		0.00		0.00
Outer Kukak Bay Section	14-Jul ^a 31-Jul ^a												
Total		3	3	18	168	2,167	13,252	43	226	1,281	4,885	336	1,828
Average weight													
Inner Kukak Bay Section													
Total		0	0	0	0	0	0	0	0	0	0	0	0
Dakavak Bay Section	6-Jul	12	12	172	1,393	4,606	25,812	36	240	408	1,610	1,358	10,139
	7-Jul	12	13	34	260	5,699	35,675	87	646	539	1,908	1,417	10,337
	8-Jul	8	8	24	250	4,027	22,228	29	215	790	2,464	826	6,136
	14-Jul	16	16	93	930	19,278	105,601	313	1,908	3,198	13,640	1,614	11,056
	15-Jul ^a												
	16-Jul ^a												
	22-Jul	6	6	8	78	13,513	70,207	485	3,249	4,100	19,529	1,296	8,437
	23-Jul	9	10	44	539	34,089	196,215	942	6,374	5,567	24,784	2,341	16,057
	24-Jul	6	6	9	92	13,542	78,431	430	2,625	4,343	18,737	2,146	14,110
	30-Jul	4	4	0	0	627	3,098	40	324	1,032	5,385	307	2,283
	31-Jul ^a												
Total		42	78	387	3,570	99,672	558,121	2,407	15,872	21,758	95,861	11,455	79,632
Average weight					9.22		5.60		6.59		4.41		6.95

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Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Alinchak Bay Section	7-Jul ^a												
	23-Jul ^a												
	24-Jul	3	3	12	142	6,441	38,222	145	981	1,378	5,768	634	4,556
Total		6	6	14	155	9,746	57,160	341	2,416	2,627	11,454	990	6,902
Average weight					11.08		5.86		7.08		4.36		6.97
Katmai Section													
Total		0	0	0	0	0	0	0	0	0	0	0	0
Average weight					0.00		0.00		0.00		0.00		0.00
Cape Igvak Section	8-Jun	36	36	33	315	22,739	112,999	3	14	361	1,053	3,768	26,053
	9-Jun	19	19	13	257	7,982	42,974	0	0	154	398	1,466	12,198
	18-Jun	41	48	92	680	28,246	146,643	16	78	2,668	8,134	7,633	50,791
	19-Jun	17	17	21	144	9,537	48,702	0	0	933	2,770	2,716	17,251
	20-Jun	46	47	479	2,640	21,870	121,313	2	7	3,196	8,809	7,029	46,888
	21-Jun	16	16	46	402	10,293	60,819	6	28	1,289	4,405	831	5,730
	22-Jun	30	30	325	2,036	19,527	116,793	7	38	2,916	8,591	1,672	12,720
	23-Jun	19	28	154	1,105	9,882	58,844	4	19	1,094	3,208	716	5,142
	24-Jun	22	24	92	581	16,697	92,988	2	18	3,833	13,174	1,912	13,228
	25-Jun	13	13	8	68	7,545	44,616	3	25	1,702	5,043	713	5,324
	12-Jul	7	7	354	2,855	9,627	54,974	733	5,794	2,883	9,303	2,160	17,184
	13-Jul	4	5	7	135	4,433	24,286	267	1,694	689	3,606	971	6,130
	15-Jul ^a												
	17-Jul ^a												
	18-Jul ^a												
	20-Jul	3	3	112	1,112	27,571	153,192	3,392	18,139	7,787	29,500	2,463	15,229
	21-Jul	5	10	146	1,272	67,359	380,425	3,111	18,072	12,491	54,126	6,867	49,596
	22-Jul	9	9	154	1,361	55,767	340,477	3,250	22,622	11,873	56,315	8,504	55,817

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Appendix K3.–Page 3 of 3.

Management Unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Cape Igvak Section	30-Jul	6	8	93	1,022	8,749	49,250	4,394	31,306	5,262	30,318	4,191	31,077
	1-Aug ^a	1	1	11	120	479	2,392	35	280	622	3,295	133	1,024
Total		64	327	2,275	17,136	340,861	1,911,901	16,140	104,467	63,649	258,202	55,027	380,966
Average weight					7.53		5.61		6.47		4.06		6.92
Wide Bay Section													
Total		0	0	0	0	0	0	0	0	0	0	0	0
					0.00		0.00		0.00		0.00		0.00
Mainland District													
Total		78	415	2,694	21,028	452,542	2,541,012	18,953	123,245	90,097	373,532	67,890	470,071
Average weight					7.81		5.61		6.50		4.15		6.92

^a Confidential.

APPENDIX L. AREAWIDE HARVEST TABLES

Appendix L1.–Commercial salmon harvest, by management unit and statistical week, all gear combined, in the Kodiak Management Area, 2016.

Section (Stat Area)	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
	Week	Ending	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.
S.W. Afognak	25	18-Jun	1	4	4.0	4,114	15,915	3.9	2	10	5.0	36	79	2.2	1,090	7,461	6.8
& Raspberry Straits (combined) (251-10, 11, 12, 20)	26	25-Jun	2	22	11.0	1,851	9,527	5.1	0	0	0.0	57	183	3.2	378	2,326	6.2
	28	9-Jul	32	275	8.6	11,233	58,743	5.2	175	1,092	6.2	6,154	21,010	3.4	4,785	32,327	6.8
	29	16-Jul	0	0	0.0	2,541	12,396	4.9	131	1,035	7.9	4,828	21,859	4.5	544	4,649	8.5
	30	23-Jul	12	128	10.7	3,340	16,762	5.0	302	2,208	7.3	19,387	97,849	5.0	1,020	7,576	7.4
	31	30-Jul	55	565	10.3	18,808	92,868	4.9	864	6,766	7.8	67,164	332,344	4.9	2,994	22,176	7.4
	32	6-Aug	49	800	16.3	15,405	81,695	5.3	2,111	16,508	7.8	88,938	432,722	4.9	4,027	29,197	7.3
	33	13-Aug	11	125	11.4	3,693	19,152	5.2	1,103	7,091	6.4	26,808	126,727	4.7	1,339	8,955	6.7
	34	20-Aug	33	301	9.1	6,863	35,322	5.1	6,508	46,150	7.1	26,601	119,300	4.5	1,392	9,264	6.7
	35	27-Aug	0	0	0.0	1,362	7,156	5.3	2,267	16,127	7.1	1,448	5,789	4.0	214	1,523	7.1
	36	3-Sep	6	61	10.2	5,046	25,631	5.1	6,194	39,979	6.5	803	3,659	4.6	221	1,274	5.8
	37	10-Sep	5	58	11.6	6,338	31,481	5.0	2,612	20,406	7.8	97	394	4.1	57	371	6.5
	38	17-Sep	0	0	0.0	1,475	7,610	5.2	561	4,259	7.6	7	24	3.4	19	105	5.5
Total			206	2,339	11.4	82,069	414,258	5.0	22,830	161,631	7.1	242,328	1,161,939	4.8	18,080	127,204	7.0
N.W. Afognak	23	4-Jun	0	0	0.0	2,287	10,185	4.5	0	0	0.0	0	0	0.0	0	0	0.0
(251-30, 40, 41, 50)	24	11-Jun	0	0	0.0	4,160	17,819	4.3	0	0	0.0	0	0	0.0	0	0	0.0
	25	18-Jun	3	31	10.3	3,369	14,500	4.3	0	0	0.0	2	9	4.5	96	624	6.5
	26	25-Jun	0	0	0.0	1,545	7,090	4.6	0	0	0.0	1	3	3.0	15	77	5.1
	28	9-Jul	0	0	0.0	259	1,218	4.7	5	32	6.4	228	886	3.9	0	0	0.0
	29	16-Jul	0	0	0.0	13	64	4.9	13	64	4.9	158	693	4.4	12	85	7.1
	30	23-Jul	0	0	0.0	889	4,596	5.2	19	131	6.9	3,832	18,872	4.9	234	1,756	7.5
	31	30-Jul	0	0	0.0	145	868	6.0	33	397	12.0	1,174	4,694	4.0	124	1,115	9.0
	32	6-Aug	0	0	0.0	3,118	15,872	5.1	1,794	10,412	5.8	53,767	241,715	4.5	1,049	7,627	7.3
	33	13-Aug	8	80	10.0	3,813	18,724	4.9	1,180	10,371	8.8	42,681	200,335	4.7	1,409	10,071	7.1
	34	20-Aug	0	0	0.0	176	882	5.0	94	586	6.2	1,151	4,286	3.7	35	276	7.9
Total			11	111	10.1	19,774	91,818	4.6	3,138	21,993	7.0	102,994	471,493	4.6	2,974	21,631	7.3

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Section (Stat Area)	Statistical Week	Week Ending	Chinook			Sockeye			Coho			Pink			Chum		
			No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.
Shuyak (251-60, 70, 81)	31	30-Jul	0	0	0.0	2	10	5.0	32	176	5.5	24,916	98,648	4.0	0	0	0.0
	32	6-Aug	0	0	0.0	6	33	5.5	123	746	6.1	16,574	75,492	4.6	4	20	5.0
	34	20-Aug	0	0	0.0	28	153	5.5	2,625	23,692	9.0	2,017	7,315	3.6	0	0	0.0
	35	27-Aug	0	0	0.0	0	0	0.0	1,574	12,747	8.1	50	217	4.3	0	0	0.0
	Total		0	0	0.0	36	196	5.4	4,354	37,361	8.6	43,557	181,672	4.2	4	20	5.0
Perenosa Bay (251-82, 83, 84, 85)	29	16-Jul	0	0	0.0	51	256	5.0	51	256	5.0	630	2,772	4.4	49	340	6.9
	32	6-Aug	0	0	0.0	22	88	4.0	369	3,324	9.0	5,815	23,262	4.0	15	122	8.1
	33	13-Aug	0	0	0.0	36	181	5.0	687	4,125	6.0	4,921	19,686	4.0	28	168	6.0
	34	20-Aug	0	0	0.0	185	912	4.9	2,696	20,150	7.5	11,737	53,749	4.6	88	577	6.6
	35	27-Aug	0	0	0.0	22	89	4.0	1,873	18,267	9.8	1,258	5,717	4.5	1	8	8.0
	Total		0	0	0.0	316	1,526	4.8	5,676	46,122	8.1	24,361	105,186	4.3	181	1,215	6.7
N.E. Afognak (251-90, 252-10 & 20)	31	30-Jul	0	0	0.0	37	184	5.0	40	241	6.0	2,772	14,416	5.2	30	148	4.9
	32	6-Aug	0	0	0.0	86	442	5.1	277	1,660	6.0	7,650	31,748	4.2	78	475	6.1
	34	20-Aug	2	46	23.0	64	292	4.6	1,134	5,813	5.1	2,348	10,234	4.4	17	78	4.6
	35	27-Aug	0	0	0.0	110	494	4.5	150	1,073	7.2	134	552	4.1	16	114	7.1
	Total		2	46	23.0	297	1,412	4.8	1,601	8,787	5.5	12,904	56,950	4.4	141	815	5.8
Izhut (252-30)	24	11-Jun	1	1	1.0	331	1,664	5.0	1	4	4.0	10	28	3	815	5,196	6.4
	25	18-Jun	0	0	0.0	58	234	4.0	0	0	0.0	18	56	3	774	4,992	6.4
	26	25-Jun	0	0	0.0	201	935	4.7	2	12	6.0	35	111	3	1,945	14,658	7.5
	27	2-Jul	0	0	0.0	30	137	4.6	0	0	0.0	4	12	3	137	1,026	7.5
	29	16-Jul	16	88	5.5	2,991	16,268	5.4	512	3,351	6.5	8,740	34,445	4	631	3,912	6.2
	30	23-Jul	7	42	6.0	2,841	14,036	4.9	315	2,246	7.1	15,325	65,900	4	1,097	7,319	6.7
	31	30-Jul	1	7	7.0	3,260	16,329	5.0	505	3,582	7.1	118,478	521,393	4	1,358	9,078	6.7
	34	20-Aug	2	39	19.5	813	4,131	5.1	816	5,414	6.6	19,158	98,063	5	84	574	6.8
	35	27-Aug	0	0	0.0	54	303	5.6	392	2,839	7.2	7,926	36,450	5	12	70	5.8
	Total		27	177	6.6	10,579	54,037	5.1	2,543	17,448	6.9	169,694	756,458	4.5	6,853	46,825	6.8

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Section (Stat Area)	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
	Week	Ending	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.
Kitoi Bay (252-32)	23	4-Jun	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	105	584	5.6
	24	11-Jun	0	0	0.0	109	438	4.0	0	0	0.0	2	6	3.0	1,258	6,307	5.0
	25	18-Jun	0	0	0.0	133	565	4.2	3	28	9.3	31	98	3.2	12,078	79,401	6.6
	26	25-Jun	0	0	0.0	479	2,193	4.6	10	50	5.0	211	551	2.6	18,699	118,713	6.3
	32	6-Aug	0	0	0.0	101	473	4.7	0	0	0.0	113,734	595,277	5.2	536	2,678	5.0
	33	13-Aug	0	0	0.0	348	1,416	4.1	8	53	6.6	455,692	2,399,351	5.3	359	1,885	5.3
	34	20-Aug	0	0	0.0	32	126	3.9	1	4	4.0	223,419	1,103,921	4.9	42	191	4.5
	Total		0	0	0.0	1,202	5,211	4.3	22	135	6.1	793,089	4,099,204	5.2	33,077	209,759	6.3
Duck Bay (252-31 & 35)	23	4-Jun	0	0	0.0	1,653	7,196	4.4	1	7	7.0	17	48	2.8	133	923	6.9
	24	11-Jun	3	9	3.0	1,402	6,612	4.7	2	15	7.5	119	353	3.0	1,580	10,625	6.7
	25	18-Jun	1	2	2.0	410	1,667	4.1	12	47	3.9	291	897	3.1	1,305	9,253	7.1
	26	25-Jun	0	0	0.0	2,081	8,917	4.3	130	568	4.4	1,152	3,248	2.8	5,310	39,767	7.5
	27	2-Jul	12	56	4.7	11,698	57,252	4.9	2,323	12,665	5.5	4,773	16,678	3.5	17,865	118,225	6.6
	29	16-Jul	41	431	10.5	5,719	28,959	5.1	1,842	12,293	6.7	11,842	42,768	3.6	2,746	19,977	7.3
	30	23-Jul	20	169	8.5	8,739	43,025	4.9	2,074	14,205	6.8	62,546	259,479	4.1	2,467	15,760	6.4
	31	30-Jul	8	123	15.4	2,536	12,593	5.0	827	5,146	6.2	39,595	159,253	4.0	916	5,212	5.7
	34	20-Aug	1	5	5.0	803	3,909	4.9	1,565	11,241	7.2	13,775	61,672	4.5	278	1,839	6.6
	35	27-Aug	0	0	0.0	50	202	4.0	447	2,686	6.0	2,440	9,512	3.9	24	134	5.6
	Total		86	795	9.2	35,091	170,332	4.9	9,223	58,873	6.4	136,550	553,908	4.1	32,624	221,715	6.8

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Section (Stat Area)	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
	Week	Ending	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.
S.E. Afognak (252-33 & 34)	23	4-Jun	0	0	0.0	1,357	6,422	4.7	0	0	0.0	0	0	0.0	4	21	5.3
	24	11-Jun	1	12	12.0	3,081	13,829	4.5	0	0	0.0	1	3	3.0	25	175	7.0
	25	18-Jun	0	0	0.0	2,818	11,163	4.0	0	0	0.0	9	23	2.5	50	335	6.7
	26	25-Jun	0	0	0.0	372	1,813	4.9	0	0	0.0	0	0	0.0	26	173	6.6
	31	30-Jul	0	0	0.0	191	867	4.5	31	223	7.2	6,311	33,071	5.2	17	125	7.4
	32	6-Aug	7	66	9.4	1,240	5,552	4.5	359	2,464	6.9	46,936	222,667	4.7	206	1,503	7.3
	33	13-Aug	0	0	0.0	716	3,771	5.3	304	2,344	7.7	44,228	166,897	3.8	180	1,112	6.2
	34	20-Aug	0	0	0.0	283	1,234	4.4	732	5,753	7.9	8,959	45,763	5.1	34	242	7.1
	Total		8	78	9.8	10,058	44,651	4.4	1,426	10,784	7.6	106,444	468,424	4.4	542	3,686	6.8
Central, Terror Bay, Inner Uganik, Spiridon, Zachar, & Uyak combined (253-11, 12, 13, 14, 31 32, 33, 34, 35, 254-10, 20, 21, 30, 31, 40, 41, 50)	23	4-Jun	36	476	13.2	9,488	50,829	5.4	1	5	5.0	1	2	2.0	471	3,318	7.0
	24	11-Jun	84	800	9.5	14,951	69,532	4.7	5	19	3.8	17	59	3.5	1,895	12,087	6.4
	25	18-Jun	222	1,871	8.4	30,461	147,640	4.8	10	61	6.1	143	505	3.5	6,961	45,304	6.5
	26	25-Jun	286	2,299	8.0	39,433	206,662	5.2	21	124	5.9	705	2,640	3.7	7,419	50,088	6.8
	27	2-Jul	107	907	8.5	10,542	55,950	5.3	59	340	5.8	378	1,529	4.0	3,099	20,792	6.7
	28	9-Jul	514	4,330	8.4	105,036	531,911	5.1	1,390	8,844	6.4	42,794	159,329	3.7	37,251	258,026	6.9
	29	16-Jul	249	2,044	8.2	60,769	309,698	5.1	1,296	8,653	6.7	64,778	273,819	4.2	18,422	133,825	7.3
	30	23-Jul	152	1,276	8.4	49,992	248,127	5.0	976	6,667	6.8	108,625	494,561	4.6	9,731	71,291	7.3
	31	30-Jul	207	2,519	12.2	60,582	287,926	4.8	1,391	9,344	6.7	198,530	864,838	4.4	12,179	87,767	7.2
	32	6-Aug	153	1,841	12.0	98,862	485,123	4.9	4,093	28,369	6.9	303,942	1,397,890	4.6	20,255	142,070	7.0
	33	13-Aug	76	843	11.1	39,821	195,618	4.9	2,516	16,825	6.7	119,201	532,766	4.5	8,836	61,584	7.0
	34	20-Aug	132	1,341	10.2	70,465	349,063	5.0	11,203	87,459	7.8	82,373	378,536	4.6	10,150	69,671	6.9
	35	27-Aug	82	921	11.2	55,048	277,231	5.0	15,692	121,602	7.7	26,237	114,425	4.4	7,349	49,405	6.7
	36	3-Sep	57	533	9.3	31,440	163,070	5.2	9,963	79,977	8.0	6,425	27,258	4.2	2,047	13,857	6.8
	37	10-Sep	20	211	10.6	14,518	74,842	5.2	3,634	31,215	8.6	550	2,370	4.3	488	3,436	7.0
	38	17-Sep	0	0	0.0	7,145	38,124	5.3	1,046	9,100	8.7	22	84	3.8	114	782	6.9
	39	24-Sep	0	0	0.0	683	3,377	4.9	47	401	8.5	0	0	0.0	10	60	6.0
	Total		2,377	22,212	9.3	699,236	3,494,723	5.0	53,343	409,005	7.7	954,721	4,250,611	4.5	146,677	1,023,363	7.0

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Section (Stat Area)	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
	Week	Ending	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.
North Cape, Anton	23	4-Jun	1	19	19.0	4,000	17,675	4.4	2	7	3.5	16	45	2.8	234	1,450	6.2
Larsen, Sheratin,	24	11-Jun	12	183	15.3	1,366	6,527	4.8	0	0	0.0	24	72	3.0	253	1,402	5.5
& Kizhuyak combined	25	18-Jun	12	161	13.4	3,428	16,499	4.8	6	32	5.3	316	1,001	3.2	1,549	10,372	6.7
(259-30, 31, 32, 33, 34, 35,	26	25-Jun	11	144	13.1	6,212	30,659	4.9	130	694	5.3	807	2,615	3.2	3,513	19,955	5.7
36, 37, 38, 39)	27	2-Jul	1	19	19.0	4,053	20,057	4.9	405	2,259	5.6	855	2,941	3.4	2,010	13,822	6.9
	28	9-Jul	5	80	16.0	15,828	81,255	5.1	1,711	10,430	6.1	6,945	23,208	3.3	3,261	22,396	6.9
	29	16-Jul	48	375	7.8	10,990	57,077	5.2	2,521	15,463	6.1	14,893	62,298	4.2	2,065	13,655	6.6
	30	23-Jul	1	2	2.0	9,786	48,890	5.0	1,255	7,174	5.7	9,975	42,986	4.3	1,255	8,379	6.7
	31	30-Jul	0	0	0.0	6,808	33,891	5.0	991	7,294	7.4	18,617	79,137	4.3	1,262	8,938	7.1
	32	6-Aug	8	119	14.9	6,979	33,085	4.7	1,458	9,209	6.3	30,196	134,852	4.5	2,719	17,516	6.4
	33	13-Aug	1	19	19.0	2,042	10,721	5.3	1,079	7,695	7.1	14,340	58,548	4.1	1,500	10,997	7.3
	34	20-Aug	2	23	11.5	2,871	14,165	4.9	2,543	18,650	7.3	13,181	61,705	4.7	2,217	15,186	6.8
	35	27-Aug	0	0	0.0	92	470	5.1	307	2,581	8.4	97	431	4.4	70	519	7.4
	36	3-Sep	0	0	0.0	24	100	4.2	167	1,603	9.6	22	116	5.3	62	439	7.1
	Total		102	1,144	11.2	74,479	371,071	5.0	12,575	83,091	6.6	110,284	469,955	4.3	21,970	145,026	6.6
Inner Karluk (255-10)	34	20-Aug	8	88	11.0	4,491	22,959	5.1	274	2,506	9.1	1,933	9,431	4.9	217	1,600	7.4
	35	27-Aug	14	143	10.2	18,830	102,811	5.5	3,865	31,757	8.2	3,276	13,646	4.2	660	5,020	7.6
	36	3-Sep	0	0	0.0	7,479	34,135	4.6	1,099	9,241	8.4	382	1,440	3.8	152	1,084	7.1
	37	10-Sep	0	0	0.0	5,776	27,772	4.8	679	4,795	7.1	19	76	4.0	177	1,049	5.9
	38	17-Sep	0	0	0.0	14,962	74,748	5.0	1,659	13,667	8.2	21	87	4.1	298	1,916	6.4
	39	24-Sep	0	0	0.0	626	3,130	5.0	42	452	10.8	0	0	0.0	4	19	4.8
	40	1-Oct	0	0	0.0	394	1,807	4.6	0	0	0.0	0	0	0.0	0	0	0.0
	Total		22	231	10.5	52,558	267,362	5.1	7,618	62,418	8.2	5,631	24,680	4.4	1,508	10,688	7.1

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Section (Stat Area)	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
	Week	Ending	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.
Outer Karluk (255-20)	25	18-Jun	45	242	5.4	8,232	33,034	4.0	10	66	6.6	16	64	4.0	2,229	15,474	6.9
	26	25-Jun	157	855	5.4	5,274	23,050	4.4	2	10	5.0	98	297	3.0	398	2,974	7.5
	27	2-Jul	0	0	0.0	310	1,086	3.5	1	6	6.0	6	19	3.2	32	232	7.3
	28	9-Jul	70	448	6.4	10,390	48,209	4.6	37	241	6.5	1,793	6,511	3.6	2,513	18,149	7.2
	34	20-Aug	21	209	10.0	22,773	113,457	5.0	4,878	39,073	8.0	6,399	30,616	4.8	1,492	10,783	7.2
	35	27-Aug	21	183	8.7	49,782	241,217	4.8	13,852	113,405	8.2	8,991	40,211	4.5	2,363	15,559	6.6
	36	3-Sep	7	82	11.7	8,337	41,025	4.9	1,465	12,191	8.3	534	2,510	4.7	247	1,786	7.2
	37	10-Sep	2	31	15.5	6,235	32,265	5.2	1,572	11,171	7.1	106	417	3.9	150	935	6.2
	38	17-Sep	3	30	10.0	16,029	87,532	5.5	2,548	20,684	8.1	28	107	3.8	292	2,141	7.3
	39	24-Sep	0	0	0.0	2,275	11,485	5.0	283	2,158	7.6	0	0	0.0	41	245	6.0
Total			326	2,080	6.4	129,637	632,360	4.9	24,648	199,005	8.1	17,971	80,752	4.5	9,757	68,278	7.0
Halibut Bay (256-25 & 30)	35	27-Aug	23	256	11.1	9,725	48,831	5.0	7,190	56,242	7.8	1,893	10,387	5.5	543	3,800	7.0
	36	3-Sep	18	197	10.9	1,890	9,168	4.9	869	8,065	9.3	193	846	4.4	66	555	8.4
	Total		41	453	11.0	11,615	57,999	5.0	8,059	64,307	8.0	2,086	11,233	5.4	609	4,355	7.2
Inner & Outer Ayakulik (256-10, 15, 20)	29	16-Jul	105	893	8.5	74,379	391,671	5.3	670	4,722	7.0	21,612	79,016	3.7	3,024	21,906	7.2
	30	23-Jul	23	174	7.6	13,665	74,663	5.5	226	1,487	6.6	9,505	36,163	3.8	932	6,751	7.2
	31	30-Jul	48	423	8.8	46,220	221,358	4.8	1,426	10,905	7.6	66,305	312,031	4.7	2,896	20,493	7.1
	32	6-Aug	1	13	13.0	5,894	32,959	5.6	304	1,816	6.0	12,362	68,171	5.5	320	2,311	7.2
	37	10-Sep	0	0	0.0	1,589	7,695	4.8	1,477	13,794	9.3	103	502	4.9	80	506	6.3
	Total		177	1,503	8.5	141,747	728,346	5.1	4,103	32,724	8.0	109,887	495,883	4.5	7,252	51,967	7.2
Sturgeon (256-40)	35	27-Aug	9	82	9.1	872	4,338	5.0	348	2,985	8.6	249	1,541	6.2	100	662	6.6
	36	3-Sep	0	0	0.0	881	4,408	5.0	167	1,173	7.0	36	109	3.0	14	98	7.0
	Total		9	82	9.1	1,753	8,746	5.0	515	4,158	8.1	285	1,650	5.8	114	760	6.7

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Section (Stat Area)	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
	Week	Ending	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.
Cape Alitak (257-10 & 20)	26	25-Jun	64	632	9.9	7,140	36,729	5.1	6	22	3.7	61	185	3.0	482	2,798	5.8
	27	2-Jul	24	231	9.6	3,978	20,945	5.3	0	0	0.0	20	69	3.5	144	1,107	7.7
	28	9-Jul	0	0	0.0	8,249	43,556	5.3	59	426	7.2	1,054	3,710	3.5	321	2,213	6.9
	29	16-Jul	93	940	10.1	19,210	106,197	5.5	68	464	6.8	5,412	22,372	4.1	355	2,495	7.0
	30	23-Jul	39	374	9.6	4,809	25,694	5.3	14	109	7.8	2,700	10,546	3.9	146	1,211	8.3
	32	6-Aug	48	623	13.0	11,994	58,430	4.9	2,169	15,660	7.2	52,772	259,111	4.9	1,924	13,124	6.8
	33	13-Aug	10	162	16.2	2,197	12,781	5.8	298	3,370	11.3	7,676	36,263	4.7	338	2,403	7.1
	35	27-Aug	8	107	13.4	5,180	29,096	5.6	1,920	17,168	8.9	2,270	10,386	4.6	798	5,170	6.5
	36	3-Sep	0	0	0.0	3,376	18,197	5.4	1,077	10,784	10.0	392	2,000	5.1	411	2,152	5.2
	Total		286	3,069	10.7	66,133	351,625	5.3	5,611	48,003	8.6	72,357	344,642	4.8	4,919	32,673	6.6
Moser/Olga Bay & Dog Salmon Flats (257-30, 31, 40, 41, 42, 43)	26	25-Jun	2	33	16.5	5,551	26,398	4.8	1	10	10.0	4	16	4.0	134	1,040	7.8
	27	2-Jul	7	129	18.4	7,572	33,612	4.4	0	0	0.0	5	15	3.0	290	2,339	8.1
	28	9-Jul	5	55	11.0	9,393	44,905	4.8	2	11	5.5	199	695	3.5	976	7,730	7.9
	29	16-Jul	12	157	13.1	15,398	72,110	4.7	9	62	6.9	1,504	6,807	4.5	1,624	12,184	7.5
	30	23-Jul	2	34	17.0	9,016	41,197	4.6	4	35	8.8	2,608	12,279	4.7	761	5,713	7.5
	31	30-Jul	1	23	23.0	8,847	41,104	4.6	11	64	5.8	5,931	31,099	5.2	301	2,062	6.9
	32	6-Aug	0	0	0.0	12,431	62,771	5.0	106	825	7.8	19,348	106,701	5.5	253	1,785	7.1
	33	13-Aug	0	0	0.0	7,566	39,394	5.2	189	1,386	7.3	6,691	37,650	5.6	265	1,866	7.0
	35	27-Aug	0	0	0.0	7,772	40,086	5.2	1,000	7,955	8.0	540	2,531	4.7	771	4,918	6.4
	36	3-Sep	0	0	0.0	2,082	11,038	5.3	409	3,461	8.5	50	230	4.6	172	1,089	6.3
	Total		29	431	14.9	85,628	412,615	4.8	1,731	13,809	8.0	36,880	198,023	5.4	5,547	40,726	7.3
Humpty/Deadman (257-50, 60, 70)	28	9-Jul	27	222	8.2	12,085	65,316	5.4	178	1,454	8.2	703	3,432	4.9	641	4,150	6.5
	29	16-Jul	21	248	11.8	8,821	42,660	4.8	5	37	7.4	3,645	15,472	4.2	213	1,508	7.1
	30	23-Jul	6	77	12.8	6,114	32,074	5.2	19	148	7.8	20,106	84,242	4.2	483	3,422	7.1
	31	30-Jul	8	92	11.5	3,063	13,553	4.4	29	244	8.4	24,119	132,114	5.5	223	1,658	7.4
	32	6-Aug	0	0	0.0	1,081	5,775	5.3	62	512	8.3	24,619	131,100	5.3	113	859	7.6
	34	20-Aug	0	0	0.0	370	1,781	4.8	51	487	9.5	186	1,035	5.6	58	456	7.9
	Total		62	639	10.3	31,534	161,159	5.1	344	2,882	8.4	73,378	367,395	5.0	1,731	12,053	7.0

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Section (Stat Area)	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
	Week	Ending	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.
Seven Rivers (258-70, 80, 85, 90)	25	18-Jun	0	0	0.0	264	1,053	4.0	0	0	0.0	68	205	3.0	815	4,075	5.0
	26	25-Jun	0	0	0.0	1,619	9,389	5.8	51	340	6.7	744	2,527	3.4	1,043	8,972	8.6
	28	9-Jul	0	0	0.0	3,358	17,213	5.1	952	6,460	6.8	1,720	6,745	3.9	372	2,499	6.7
	29	16-Jul	0	0	0.0	4,196	20,827	5.0	3,569	20,312	5.7	5,857	18,615	3.2	429	2,460	5.7
	30	23-Jul	4	20	5.0	488	2,432	5.0	180	1,081	6.0	86	481	5.6	27	191	7.1
	Total		4	20	5.0	9,925	50,914	5.1	4,752	28,193	5.9	8,475	28,573	3.4	2,686	18,197	6.8
Two-Headed (258-54, 55, 60)	26	25-Jun	2	28	14.0	512	2,975	5.8	0	0	0.0	10	51	5.1	458	3,684	8.0
	28	9-Jul	1	13	13.0	4,807	27,898	5.8	404	2,479	6.1	1,175	4,478	3.8	265	2,024	7.6
	29	16-Jul	8	79	9.9	2,697	17,626	6.5	682	4,520	6.6	975	4,421	4.5	140	952	6.8
	31	30-Jul	0	0	0.0	141	708	5.0	4	33	8.3	6,607	35,015	5.3	55	420	7.6
	32	6-Aug	0	0	0.0	517	2,840	5.5	100	702	7.0	3,354	16,083	4.8	177	1,237	7.0
	Total		11	120	10.9	8,674	52,047	6.0	1,190	7,734	6.5	12,121	60,048	5.0	1,095	8,317	7.6
Sitkalidak (258-10, 20, 30, 40, 51, 52, 53)	25	18-Jun	25	51	2.0	3,644	19,786	5.4	23	132	5.7	2,061	6,396	3.1	2,652	18,577	7.0
	26	25-Jun	317	806	2.5	5,809	30,819	5.3	295	1,703	5.8	2,623	7,613	2.9	15,483	105,976	6.8
	28	9-Jul	32	208	6.5	26,504	147,224	5.6	3,053	18,568	6.1	4,430	16,106	3.6	1,400	9,008	6.4
	29	16-Jul	32	222	6.9	23,421	121,513	5.2	3,666	22,954	6.3	8,929	33,761	3.8	1,539	10,249	6.7
	30	23-Jul	4	42	10.5	4,126	21,069	5.1	534	3,766	7.1	5,963	27,824	4.7	493	3,829	7.8
	31	30-Jul	54	520	9.6	9,236	46,166	5.0	1,205	7,708	6.4	26,051	138,751	5.3	2,739	12,635	4.6
	32	6-Aug	258	2,373	9.2	1,753	9,247	5.3	393	2,717	6.9	14,686	70,606	4.8	1,685	11,004	6.5
	37	10-Sep	0	0	0.0	52	262	5.0	742	6,008	8.1	28	85	3.0	309	2,153	7.0
	Total		722	4,222	5.8	74,545	396,086	5.3	9,911	63,556	6.4	64,771	301,142	4.6	26,300	173,431	6.6

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Section (Stat Area)	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
	Week	Ending	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.
Inner & Outer Ugak (259-40, 41, 42, 43, 44, 45, 46)	26	25-Jun	41	256	6.2	5,099	25,378	5.0	39	237	6.1	220	772	3.5	1,524	10,088	6.6
	27	2-Jul	0	0	0.0	985	4,843	4.9	8	63	7.9	18	54	3.0	178	1,244	7.0
	28	9-Jul	140	771	5.5	34,722	189,307	5.5	1,831	11,575	6.3	3,915	14,865	3.8	3,294	22,988	7.0
	29	16-Jul	71	813	11.5	18,618	96,936	5.2	296	1,947	6.6	2,697	10,305	3.8	1,235	10,362	8.4
	30	23-Jul	1	13	13.0	361	1,525	4.2	0	0	0.0	27	121	4.5	25	193	7.7
	31	30-Jul	17	158	9.3	3,505	16,669	4.8	0	0	0.0	713	3,275	4.6	4,091	20,943	5.1
	32	6-Aug	0	0	0.0	16	87	5.4	0	0	0.0	41	203	5.0	691	5,048	7.3
	37	10-Sep	0	0	0.0	2	8	4.0	15	90	6.0	1	4	4.0	23	117	5.1
Total			270	2,011	7.4	63,308	334,753	5.3	2,189	13,912	6.4	7,632	29,599	3.9	11,061	70,983	6.4
Outer Chiniak (259-21, 25)	28	9-Jul	6	58	9.7	760	4,560	6.0	170	1,142	6.7	746	3,283	4.4	272	1,932	7.1
	29	16-Jul	0	0	0.0	42	245	5.8	14	88	6.3	131	643	4.9	16	95	5.9
	Total		6	58	9.7	802	4,805	6.0	184	1,230	6.7	877	3,926	4.5	288	2,027	7.0
Inner Chiniak	31	30-Jul	0	0	0.0	0	0	0.0	0	0	0.0	42	211	5.0	1	6	6.0
	Total		0	0	0.0	0	0	0.0	0	0	0.0	42	211	5.0	1	6	6.0
Buskin River (259-22, 26)			0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
	Total		0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Monaska/Mill Bay	32	6-Aug	0	0	0.0	28	128	4.6	3	18	6.0	232	1,056	4.6	0	0	0.0
	Total		0	0	0.0	28	128	4.6	3	18	6.0	232	1,056	4.6	0	0	0.0
Big River (262-10,15)	31	30-Jul	0	0	0.0	96	578	6.0	22	265	12.0	782	3,130	4.0	82	744	9.1
	Total		0	0	0.0	96	578	6.0	22	265	12.0	782	3,130	4.0	82	744	9.1

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Section (Stat Area)	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
	Week	Ending	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.	No.	lb	avg.
Hallo Bay (262-20)			0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
	Total		0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Kukak Bay (262-25, 27, 30)	29	16-Jul	0	0	0.0	1,849	11,978	6.5	13	75	5.8	264	1,326	5.0	211	1,203	5.7
	32	6-Aug	18	168	9.3	318	1,274	4.0	30	151	5.0	1,017	3,559	3.5	125	625	5.0
	Total		18	168	9.3	2,167	13,252	6.1	43	226	5.3	1,281	4,885	3.8	336	1,828	5.4
Dakavak (262-35, 40, 45, 50, 55)	28	9-Jul	230	1,903	8.3	14,332	83,714	5.8	152	1,101	7.2	1,737	5,981	3.4	3,601	26,612	7.4
	29	16-Jul	96	958	10.0	23,370	125,261	5.4	347	2,120	6.1	4,350	17,998	4.1	1,725	11,857	6.9
	30	23-Jul	52	617	11.9	47,602	266,422	5.6	1,427	9,623	6.7	9,667	44,313	4.6	3,637	24,494	6.7
	31	30-Jul	9	92	10.2	14,169	81,529	5.8	470	2,948	6.3	5,375	24,122	4.5	2,453	16,392	6.7
	32	6-Aug	0	0	0.0	199	1,196	6.0	11	80	7.3	629	3,448	5.5	39	277	7.1
	Total		387	3,570	9.2	99,672	558,122	5.6	2,407	15,872	6.6	21,758	95,862	4.4	11,455	79,632	7.0
Katmai (262-60)			0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
	Total		0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Alinchak (262-65, 70)	28	9-Jul	1	9	9.0	39	237	6.1	0	0	0.0	56	169	3.0	26	185	7.1
	30	23-Jul	1	4	4.1	3,266	18,701	5.7	196	1,434	7.3	1,193	5,517	4.6	330	2,161	6.5
	31	30-Jul	12	142	11.8	6,441	38,222	5.9	145	981	6.8	1,378	5,768	4.2	634	4,556	7.2
	Total		14	155	11.1	9,746	57,160	5.9	341	2,415	7.1	2,627	11,454	4.4	990	6,902	7.0

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Section (Stat Area)	Stat Week	Week Ending	Chinook			Sockeye			Coho			Pink			Chum		
			No.	lb	avg.	No.	lb	avg	No.	lb	avg	No.	lb	avg	No.	lb	avg.
Cape Igvak (262-75, 80, 90, 95)	24	11-Jun	46	572	12.4	30,721	155,973	5.1	3	14	4.7	515	1,451	2.8	5,234	38,251	7.3
	25	18-Jun	92	680	7.4	28,246	146,643	5.2	16	78	4.9	2,668	8,134	3.0	7,633	50,791	6.7
	26	25-Jun	1,125	6,976	6.2	95,351	544,075	5.7	24	135	5.6	14,963	46,000	3.1	15,589	106,283	6.8
	29	16-Jul	377	3,149	8.4	14,978	83,734	5.6	1,206	8,782	7.3	4,072	15,288	3.8	3,319	24,719	7.4
	30	23-Jul	531	4,617	8.7	162,337	929,834	5.7	10,462	63,872	6.1	35,547	153,716	4.3	18,928	128,821	6.8
	31	30-Jul	93	1,022	11.0	8,749	49,250	5.6	4,394	31,306	7.1	5,262	30,318	5.8	4,191	31,077	7.4
	32	6-Aug	11	120	10.9	479	2,392	5.0	35	280	8.0	622	3,295	5.3	133	1,024	7.7
Total			2,275	17,136	7.5	340,861	1,911,901	5.6	16,140	104,467	6.5	63,649	258,202	4.1	55,027	380,966	6.9
Wide Bay (262-85)			0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Total			0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Grand Total			7,478	62,850	8.4	2,063,566	10,649,193	5.2	206,542	1,520,424	7.4	3,199,648	14,898,146	4.7	403,881	2,765,792	6.8

Note: Includes cost recovery, but not test fish or commercial catch set aside for personal use.

APPENDIX M. ESCAPEMENT DATA

Appendix M1.–Peak salmon escapements in the Kodiak Management Area, by district and species, 2016.

District	Number of Fish				
	Chinook	Sockeye	Coho	Pink	Chum
Afognak	0	58,014	15,614	379,500	327
Northwest	0	42,880	0	358,550	40,400
Southwest	8,028	743,776	14,003	436,269	1,753
Alitak	95	356,029	9,170	311,878	14,770
Eastside Kodiak	3	63,180	6,832	134,642	68,301
Northeast Kodiak	0	11,584	6,018	78,442	3,034
Mainland	0	9,900	14,200	65,305	68,700
Area Total	8,126	1,285,363	65,837	1,764,586	197,285