

Kodiak Management Area Commercial Salmon Fishery Annual Management Report, 2019

by

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December 2019

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			compass directions:	correlation coefficient
milliliter	mL	east	E	(multiple)	R
millimeter	mm	north	N	correlation coefficient (simple)	r
Weights and measures (English)		south	S	covariance	cov
cubic feet per second	ft ³ /s	west	W	degree (angular)	°
foot	ft	copyright	©	degrees of freedom	df
gallon	gal	corporate suffixes:		expected value	<i>E</i>
inch	in	Company	Co.	greater than	>
mile	mi	Corporation	Corp.	greater than or equal to	≥
nautical mile	nmi	Incorporated	Inc.	harvest per unit effort	HPUE
ounce	oz	Limited	Ltd.	less than	<
pound	lb	District of Columbia	D.C.	less than or equal to	≤
quart	qt	et alii (and others)	et al.	logarithm (natural)	ln
yard	yd	et cetera (and so forth)	etc.	logarithm (base 10)	log
Time and temperature		exempli gratia (for example)	e.g.	logarithm (specify base)	log ₂ , etc.
day	d	Federal Information Code	FIC	minute (angular)	'
degrees Celsius	°C	id est (that is)	i.e.	not significant	NS
degrees Fahrenheit	°F	latitude or longitude	lat or long	null hypothesis	H ₀
degrees kelvin	K	monetary symbols		percent	%
hour	h	(U.S.)	\$, ¢	probability	P
minute	min	months (tables and figures): first three letters	Jan,...,Dec	probability of a type I error (rejection of the null hypothesis when true)	α
second	s	registered trademark	®	probability of a type II error (acceptance of the null hypothesis when false)	β
Physics and chemistry		trademark	™	second (angular)	"
all atomic symbols		United States (adjective)	U.S.	standard deviation	SD
alternating current	AC	United States of America (noun)	USA	standard error	SE
ampere	A	U.S.C.	United States Code	variance	
calorie	cal	U.S. state	use two-letter abbreviations (e.g., AK, WA)	population	Var
direct current	DC			sample	var
hertz	Hz				
horsepower	hp				
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

FISHERY MANAGEMENT REPORT NO. 19-29

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ANNUAL MANAGEMENT REPORT, 2019**

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December 2019

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This document should be cited as follows:

Anderson, T. J., J. Jackson, B. A. Fuerst, and A. E. Dorner. 2019. Kodiak Management Area commercial salmon fishery annual management report, 2019. Alaska Department of Fish and Game, Fishery Management Report No. 19-29, Anchorage.

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ABSTRACT

This report provides an overview of the 2019 Kodiak Management Area (KMA) salmon resources and stock status, as well as commercial, personal use, and subsistence salmon fisheries.

Sockeye salmon *Oncorhynchus nerka* escapements met or exceeded the established goals for Afognak, Buskin, Pasagshak, Saltery, early-run Karluk, late-run Karluk, early-run Ayakulik, late-run Ayakulik, Frazer, early-run Upper Station, and late-run Upper Station, but was below the established goal for Malina River. The Mainland District and Kodiak Archipelago pink salmon *O. gorbuscha* and the Kodiak Archipelago chum salmon *O. keta* escapement goals were met in 2019. The Chinook salmon *O. tshawytscha* escapement goal was achieved in Karluk River but not in Ayakulik river system while coho salmon *O. kisutch* escapement goals were achieved in the Buskin and American but not in the Olds and Pasagshak river systems.

The 2019 KMA commercial salmon fishery began on June 7, with the last reported landing on October 5. A total of 327 permits were fished, consisting of 176 purse seine permits, 148 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 7,371 Chinook, 2,176,572 sockeye, 393,812 coho, 32,973,151 pink, and 547,178 chum salmon. The exvessel value for salmon harvested by all gear types totaled approximately \$45.8 million, which was above average for the KMA.

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* fisheries and harvest strategies in effect during the 2019 commercial salmon fishing season. A summary is also provided of the 2019 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 2019 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 1,200 streams within the KMA (Johnson and Blossom 2019), but only 493 streams have been documented by Alaska Department of Fish and Game (ADF&G) to support yearly spawning populations of salmon (Table 1). There are Chinook salmon *O. tshawytscha* in 6 streams, sockeye salmon *O. nerka* in 60

streams, coho salmon *O. kisutch* in 254 streams, pink salmon *O. gorbuscha* in approximately 441 streams, and chum salmon *O. keta* in 215 streams. The majority of pink salmon streams in the KMA are located in the Kodiak Archipelago (Afognak, Northwest Kodiak, Southwest Kodiak, Alitak, Eastside Kodiak, and Northeast Kodiak districts; Appendix A1), with 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 and coho salmon are also reared at the Pillar Creek Hatchery for outstocking.²

The Kodiak Regional Planning Team (KRPT), a group consisting of representatives from 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 ten-year (2009–2018) average supplemental production has included an undetermined number of Chinook salmon and an estimated 331,005 sockeye, 90,413 coho, 4,635,477 pink, and 143,020 chum salmon (Table 2).

In 2019, sockeye salmon were outstocked in saltwater at Telrod Cove and Ouzinkie Harbor as well as the freshwater systems of Big Waterfall, Little Waterfall, Spiridon, Crescent, Hidden, Ruth, and Jennifer lakes to produce harvest opportunities in terminal fisheries near the outlets of these systems. Sockeye salmon were also outstocked in 2019 in Little Kitoi Lake and Bay for broodstock development. Coho salmon were outstocked into Crescent Lake (near the community of Port

¹ 2019 Annual Management Plan Kitoi Bay Hatchery. Unpublished. Available from Kodiak Regional Aquaculture Association, Kodiak, Alaska.

² 2019 Annual Management Plan Pillar Creek Hatchery. Unpublished. Available from Kodiak Regional Aquaculture Association, Kodiak, Alaska.

Lions), Katmai Lake (on Spruce Island near the community of Ouzinkie), Jennifer Lake, Ruth Lake, and Kitoi Bay to provide subsistence and commercial harvest opportunities.

ESCAPEMENT GOALS AND MONITORING

ESCAPEMENT GOALS

In 2016, ADF&G staff reviewed previously established escapement goals within the KMA for each system and salmon species and recommended no change to 18 goals, modified 4 goals, and eliminated 2 goals (Schaberg et al. 2016). The directors of the Division of Commercial Fisheries and the Division of Sport Fish accepted these recommended changes to the escapement goals. In 2019, the KMA commercial salmon fisheries were managed to achieve escapement levels that were within the established ranges or, in some cases, that exceeded lower-bound escapement goals. Established goals in the KMA include 2 for Chinook salmon, 12 for sockeye salmon, 4 for coho salmon, 2 for pink salmon and 1 for chum salmon (Table 3).

ESCAPEMENT MONITORING

In 2019, weirs were operated on the major systems of the KMA (Table 4; Figure 2; Fuerst *In prep*). The 4 largest systems with weirs are the Karluk River, Ayakulik River, South Olga Lakes (Upper Station), and Dog Salmon Creek. There are 5 smaller systems with weirs: Afognak River (Litnik), SALTERY Lake, PASAGSHAK River, and BUSKIN River. On Dog Salmon Creek, a fish pass is operated upstream near the outlet of Frazer Lake. To avoid duplicates 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 spawn successfully; 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 timely nature 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

In recent years there has been concern regarding the low returns of Chinook salmon escapement in the Karluk and Ayakulik rivers. 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, 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 2019 Karluk River Chinook salmon season total weir count of 3,898 fish (Table 4; Fuerst *In prep*) was within the biological escapement goal (BEG) range of 3,000–6,000 fish (Table 3; Schaberg et al. 2016). The inriver Chinook salmon sport fishery was closed on the Karluk River for the entire 2019 season; therefore, the estimated total escapement is the same as the weir count.

In 2019, a total of 1,948 Chinook salmon were counted through the Ayakulik River weir (Table 4; Fuerst *In prep*). An inriver sport fishery targeting Chinook salmon was open to catch and release from the beginning of the season until June 26 when it closed to all Chinook salmon fishing. No harvest occurred during the 2019 Chinook salmon sport fishery upstream of the weir; this resulted in an estimated escapement of 1,948 fish, which was below the escapement goal range of 4,800–8,400 fish (Table 3; Schaberg et al. 2016).

Dog Salmon Creek has a run of Chinook salmon originally introduced in 1970. A total of 17 were counted through the Dog Salmon weir in 2019 (Table 4; Fuerst *In prep*). There is no escapement goal established for this system, but the average cumulative weir count during the previous decade (2009–2018) was 117 fish (Fuerst *In prep*). No sport fishery is allowed for Chinook salmon on Dog Salmon Creek, so the escapement is considered the total cumulative weir count.

Sockeye Salmon

Sockeye salmon counted through weirs accounted for about 96% (1,234,435 fish) of all documented sockeye salmon escapements in 2019 (Table 4). Additional escapements of 52,597 sockeye salmon were estimated by aerial and foot surveys in other systems such as Malina Creek, Ocean Beach, Kafila Lake, Uganik Lake, Little River Lake, Thorsheim Lake, Pauls Lake, and Swikshak Lagoon (Fuerst *In prep*). With the exception of Malina Creek, sockeye salmon escapements met or exceeded the escapement goals in river systems with established escapement goals within the KMA during the 2019 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. Coho salmon escapement goals were reevaluated in 2016 (Schaberg et al. 2016). 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 2019, coho salmon escapement goals were achieved in the Buskin and American River systems while the Olds and Pasagshak rivers did not meet their respective escapement goals (Table 3).

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 in 2019 approximately 17% (955,577 fish) of all KMA pink salmon escapement was counted through salmon weirs (Tables 4 and 5). The 2019 indexed pink salmon escapement of 4,688,688 fish in the Kodiak Island Archipelago was within the escapement goal range of 3,000,000–7,000,000 fish (Table 3; Schaberg et al. 2016). The Mainland District indexed pink salmon escapement of 904,400 fish was also within the escapement goal range of 250,000–1,000,000 fish (Table 3; Schaberg et al. 2016). Districtwide peak escapements are shown in Appendix M1.

Chum Salmon

In 2010, ADF&G 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. In 2016, the Mainland aggregated chum salmon escapement goal was removed due to inconsistencies in the data and the Kodiak Archipelago goal was changed to an aggregate of 17 index streams.

The majority of the 2019 chum salmon escapement was estimated from aerial surveys, with approximately 1% (1,123 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 chum salmon escapement for the Kodiak Archipelago of 96,700 did not meet the escapement goal of 101,000 fish (Table 3; Schaberg et al. 2016). In 2019, aerial surveys were not conducted during the peak of chum salmon escapement in the majority of the KMA.

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 2019, there were 593 commercial salmon fishing permits available in the KMA, of which 327 were fished (Table 7; CFEC 2019). This was above the recent 10-year average (2009–2018) of 318 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 et al. 2019).

GEAR TYPES

In the KMA, there are restrictions on the types of gear that can be used in specific areas 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)). At the January 2017 BOF meeting a proposal was adopted that now allows set gillnet gear to be fished in the Humpy-Deadman and Cape Alitak sections north of a line from Cape Trinity to Cape Alitak, after September 4. This proposal is scheduled to sunset after the 2019 fishing season.

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 2019 season. These plans are the *Alitak District Salmon Management Plan* (Appendix D), *Westside Kodiak Salmon Management Plan* (Appendix E), *Eastside Afognak Salmon 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 wild stocks.

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 et al. 2019). 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 et al. 2019).

The 2019 commercial Chinook salmon projected harvest was 8,000 fish (Table 9). The sockeye salmon harvest was forecasted to be 2,336,000 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), and the Cape Igvak Section. The 2019 projected KMA harvest also included 318,000 coho, 27,000,000 pink, and 935,000 chum salmon (Table 9). These projections included expected supplemental production of salmon from Kitoi Bay Hatchery and the Spiridon Bay enhancement projects.

2019 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 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 *Kodiak Management Area Harvest Strategy for the 2019 Commercial Salmon Fishery*, published in March 2019, outlined the approaching fishing season (Fuerst et al. 2019). This document contains a synopsis of the expected chronology of the 2019 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 2019 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 et al. 2019). 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 could occur as early as June 1 in the Cape Igvak Section if the Chignik River sockeye salmon early run is stronger than expected and run timing is 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 Inner and Outer Ayakulik sections of the Southwest Kodiak District were solely dependent on sockeye salmon escapement into Ayakulik River. The preseason forecast (Brenner et al. 2019) 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, Pauls Bay, and Perenosa Bay sections 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, Pauls, Portage, Swikshak, and Kafil 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 et al. 2019). 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 also set at 105 hours per week. Adjustments in fishing time during late July and August in most areas is to be determined by the run strength of local pink and chum salmon runs and the strength of coho salmon runs in September.

2019 COMMERCIAL SALMON FISHERY SUMMARY

The 2019 Kodiak commercial salmon fishery began on June 7 with a 57-hour fishing period in the majority of the Northwest Kodiak 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). There was only one 57-hour fishing period allowed in the Outer Ayakulik Section in June targeting early-run sockeye salmon. The two 33-hour openings scheduled for June 14 and 21 occurred as scheduled in the Eastside Kodiak District, the Northwest Afognak, Pauls Bay, and Perenosa Bay sections of the Afognak District and the Outer Kukak Bay and Big River sections of the Mainland District (Appendix B1 and B2). In June only one 57-hour fishing period was allowed in the Outer Karluk Section beginning on June 28 when the North Cape and Central districts re-opened. The Dog Salmon Flats section of the Alitak District opened on June 20 and remained open for the rest of June. The majority of the Alitak District opened for 57 hours beginning on June 28. There was no commercial fishing allowed in the Cape Igvak Section in June because the Chignik early sockeye salmon run was well below the forecast. In total, the Central and North Cape sections of the Northwest Kodiak District were open for 9 days in June.

The pink salmon fishery started as scheduled with a 105-hour weekly fishing period on July 6. The subsequent fishing period in July took place as scheduled, but the third weekly period was extended for the rest of July in Westside Kodiak as it became apparent the pink salmon run was at or above

the preseason forecast. The magnitude of the Chignik sockeye salmon run was not sufficient to warrant fishing periods within the Cape Igvak Section from July 11 to July 25.

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 2019, the KMA commercial salmon harvest occurred over a 121-day period, with the last reported landing occurring on October 5 (Figure 3). A total of 13 buyer/locations purchased salmon within the KMA in 2019 (Table 10).

PERMIT HOLDER PARTICIPATION

A total of 327 KMA commercial salmon fishing permit holders reported harvests in the common property fishery in 2019. This was 34 more permits than during the 2018 season and above the recent 10-year average (2009–2018) of 318 permits (Table 7). Purse seine participation during the 2019 season (176 permits) was 25 permits more than the 2018 season and above the previous 10-year average (2009–2018) of 167 permits. Three beach seine permit holders were active during the 2019 season which was equal to the 10-year average (2009–2018). Set gillnet participation in the 2019 KMA commercial salmon fishing season was made up of 148 permits, 8 more than the 2018 season and equal to the recent 10-year average (2009–2018) of 148 permits (Table 7).

Set gillnet permit participation statistics from 2008 to 2010 are not comparable to other years 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 36,098,084 salmon were harvested in the 2019 KMA commercial fisheries (common property and cost recovery combined), which was above the recent 10-year (2009–2018) average of 21,247,014 salmon (Table 6).

Not including cost recovery, purse seine permit holders caught 94% (32,435,408 fish) of the total number of salmon harvested, which included 6,528 Chinook, 1,648,925 sockeye, 334,113 coho, 30,041,316 pink, and 404,526 chum salmon in the common property fishery (Table 11). Set gillnet permit holders caught 6% (1,923,349 fish) of the salmon harvested, which included 843 Chinook, 491,201 sockeye, 59,672 coho, 1,229,850 pink, and 141,783 chum salmon in the common property fishery (Table 11). Beach seine permit holders harvested less than 1% (2,500 fish) of the salmon harvested which included 297 sockeye, 2,202 pink, and 1 chum salmon (Table 11).

CHINOOK SALMON

The Chinook salmon harvest of 7,371 fish was well below the 10-year average (2009–2018) of 12,398 fish (Table 6) and slightly below the projected harvest of 8,000 fish (Table 9). The average weight of Chinook salmon sold in the common property fishery was 8.92 lb (Table 11). The majority of the Chinook salmon were harvested in the Eastside and Northwest Kodiak districts in

June. Chinook salmon harvests ranged from a low of zero harvested in Northeast Kodiak District to a high of 4,115 fish harvested in the Northwest Kodiak District.

SOCKEYE SALMON

The sockeye salmon harvest of 2,176,572 fish (Table 6) was below both the forecast of 2,336,000 fish (Table 9) and 10-year average (2009–2018) catch of 2,295,323 fish (Table 6). The average weight of sockeye salmon sold in the common property fishery was 4.98 lb (Table 11). Approximately 49% of the sockeye salmon harvest (1,062,084 fish) came from the Westside Kodiak fisheries³ (Table 9). Approximately 15% of the sockeye salmon harvest (330,117 fish) came from the Alitak District (Table 9). Approximately 4% of the sockeye salmon harvest (86,668 fish) came from the Spiridon Bay sockeye salmon project fishery (Table 9). Approximately 17% of the sockeye salmon harvest (366,158 fish) came from the Ayakulik fishery (Table 9). There was no sockeye salmon harvest from the Cape Igvak fishery in 2019 (Table 9). The area near the Kitoi Bay Hatchery accounted for a sockeye salmon harvest of 12,306 fish, although an unknown portion of these fish were probably not of hatchery origin.

COHO SALMON

The coho salmon harvest of 393,812 fish (Table 6) was above the forecast of 318,000 fish (Table 9) and above the 10-year average (2009–2018) of 310,014 fish (Table 6). The average weight of coho salmon sold in the common property fishery was 7.17 lb (Table 11). Westside Kodiak fisheries (excluding the Southwest Afognak Section) harvested approximately 138,384 coho salmon, below the forecast of 158,000 fish (Table 9). The Eastside/Northend Kodiak coho salmon harvest⁴ of 81,907 fish was above the forecast of 58,000 fish (Table 9). The Afognak nonhatchery harvest of 46,392 coho salmon was above the forecast of 35,000 fish (Table 9). The coho salmon harvest attributed to the Kitoi Bay Hatchery was 34,938 fish, which was similar to the hatchery forecast of 33,000 fish (Table 9).

PINK SALMON

The pink salmon harvest of 32,973,151 fish (Table 6) was above the harvest forecast of 27,000,000 fish (Table 9) and above the recent 5 odd-year average (2009–2017) of 26,522,355 fish (Table 6). The average pink salmon weight of 3.20 lb (Table 11) was below the 2018 average weight of 3.85 lb. The Afognak nonhatchery (wild stock) pink salmon harvest of 4,328,275 fish was well above the harvest projection of 1,600,000 fish. The Westside Kodiak fisheries harvest of 13,232,953 fish accounted for approximately 47% of the total wild KMA pink salmon harvest and was well above the Westside Kodiak forecast of 8,500,000 fish (Table 9). Pink salmon harvests in the Mainland District were also well above forecast with 2,624,547 fish harvested (forecast 700,000; Table 9). The fishery associated with the Kitoi Bay Hatchery accounted for 4,898,281 pink salmon, which was below the forecast of 6,600,000 fish (Table 9). Kitoi Bay Hatchery cost-recovery fishery accounted for 34%, or 1,674,530, of those fish. Additional hatchery-bound pink salmon were probably harvested along the west side and east side of Kodiak and Afognak islands however,

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.

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).

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 547,178 fish (Table 6) was well below the forecast of 935,000 fish (Table 9) and well below the 10-year average (2009–2018) of 804,038 fish (Table 6). The average weight of the chum salmon harvested in the common property fishery was 7.05 lb (Table 11). Westside Kodiak fisheries harvested 270,179 chum salmon, which was above the forecast of 245,000 fish (Table 9). The Eastside/Northend Kodiak fishery total harvest of 86,368 chum salmon was well below the forecast of 255,000 fish. The Mainland District total harvest of 117,796 chum salmon was above the forecast of 101,000 fish (Table 9). The chum salmon harvest attributed to the Kitoi Bay Hatchery of 17,329 fish well below the forecast of 261,000 fish (Table 9).

EXVESSEL VALUE

The estimated total exvessel value of the 2019 KMA commercial salmon fishery (not including cost recovery) was \$45,823,478 (Table 11), which was above the 10-year (2009–2018) average exvessel value of \$38,030,667 (Table 12). This exvessel value was based on inseason 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.

Purse seine permit holders' gross earnings averaged \$227,552 in 2019 (2009–2018 average \$189,258; Table 12). Gillnet permit holders' gross earnings averaged \$38,725 (2009–2018 average \$42,806; Table 12), Beach seine permit holders' gross earnings averaged \$1,461 (2009–2018 average \$17,887) in 2019 (Table 12).

TEST FISHERY AND COST RECOVERY

The ADF&G test fishery program harvested salmon in 2019 to help cover the cost of managing the commercial salmon fishery. A total of one Chinook, 7,699 sockeye, 711 coho, 80,066 pink, and 1,715 chum salmon were harvested under the ADF&G test fishery program with the department collecting \$86,988.

KRAA has conducted a cost-recovery program to pay for operational costs at the Kitoi Bay Hatchery from 1987 to 1989 and 2003 to 2019. In 2019, KRAA conducted 2 cost-recovery programs in the KMA.⁵ A cost-recovery harvest occurred August 8 to September 5 within the Inner Kitoi Bay Section and included 245 sockeye, 4 coho, 1,605,098 pink, and 96 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 27 to July 30, 35,901 sockeye, 25,253 pink, and 772 chum salmon were harvested in this program. The entire cost-recovery harvest supporting KRAA programs in the KMA in 2019 included 36,146 sockeye, 4 coho, 1,630,351 pink, and 868 chum salmon.

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.

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).

Historically, the most utilized subsistence fishery areas are on the north end of Kodiak Island, the saltwater areas in proximity to the Buskin and Pasagshak rivers, and the southeast side of Afognak Island in Afognak Bay targeting Afognak River fish, although all three systems required restrictions to subsistence fishing in 2019 due to low returns of sockeye salmon. The 2019 subsistence harvest data were not summarized at the time this report was written. In 2018, 1,319 permit holders returned subsistence permits and reported a harvest of 17,697 salmon, including 97 Chinook, 13,787 sockeye, 3,174 coho, 449 pink, and 190 chum salmon (Table 13). Reported subsistence salmon harvests averaged 28,197 fish annually for the 10-year period 2008–2017 (Table 13). Sockeye salmon have accounted for 84% of the recent 10-year average harvest (23,591 fish), followed by coho salmon at 11% (3,203 fish), pink salmon at 4% (1,046 fish), and both Chinook salmon (137 fish) and chum salmon (220 fish) at about 1% (Table 13).

RETENTION OF SALMON TAKEN IN COMMERCIAL FISHERIES

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)). Additionally, under *General Provisions* (5 AAC 39.010), “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 2019, 77 permit holders reported retaining 13,975 salmon from their commercial harvest for “home pack” or personal use. This included 369 Chinook, 2,500 sockeye, 2,916 coho, 7,910 pink, and 280 chum salmon (Table 14).

REFERENCES CITED

- ADF&G (Alaska Department of Fish and Game). 2017. Regulations of the Alaska Board of Fisheries for commercial salmon fishing in the Kodiak Area, 2017-2020. Alaska Department of Fish and Game, Division of Commercial Fisheries, Juneau.
- Brenner, R. E., A. R. Munro, and S. J. Larsen, editors. 2019. Run forecasts and harvest projections for 2019 Alaska salmon fisheries and review of the 2018 season. Alaska Department of Fish and Game, Special Publication No. 19-07, Anchorage.
- CFEC (Commercial Fisheries Entry Commission). 2019. 2019 permit status, all fisheries. <https://www.cfec.state.ak.us/pstatus/14052017.htm> (Accessed March 1, 2019).
- Fuerst, B. A. *In prep.* Kodiak Management Area weir descriptions and salmon escapement report, 2019. Alaska Department of Fish and Game, Fisheries Management Report, Anchorage.
- Fuerst, B. A., J. Jackson, and A. E. Dorner. 2019. Kodiak management area harvest strategy for the 2019 commercial salmon fishery. Alaska Department of Fish and Game, Regional Information Report No. 4K19-06, Kodiak.
- Honnold, S. G., and S. T. Schrof. 2001. A summary of salmon enhancement and restoration in the Kodiak Management Area through 2001, a report to the Alaska Board of Fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K01-65, Kodiak.
- Johnson, J., and B. Blossom. 2019. Catalog of waters important for spawning, rearing, or migration of anadromous fishes – Southwestern Region, effective June 1, 2019. Alaska Department of Fish and Game, Special Publication No. 19-05, Anchorage.
- KRPT (Kodiak Regional Planning Team). 1992. Kodiak regional comprehensive salmon plan, 1982-2002; Phase II, 2010-2030. Kodiak Regional Aquaculture association, Kodiak, Alaska.
- KRPT (Kodiak Regional Planning Team). 2011. Kodiak regional comprehensive salmon plan, Phase III Revision. Alaska Department of Fish and Game, Office of the Commissioner, Juneau.
- Rickey, R. A., C. J. Stovall, and H. Z. Hansen. 1975. Annual report Commercial Fisheries Entry Commission. Alaska Commercial Entry Commission, Juneau.
- Roppel, P. 1986. Salmon from Kodiak: a history of the salmon fishery of Kodiak Island, Alaska. Alaska Historic Commission, Studies in History No. 216, Anchorage.
- Schaberg, K. L., M. B. Foster, M. Wattum, and T. R. McKinley. 2016. Review of salmon escapement goals in the Kodiak Management Area, 2016. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-09, Anchorage.

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	125	0	25	96	104	16
Northwest Kodiak	70	0	5	33	69	29
Southwest Kodiak	11	2	4	6	11	6
Alitak	34	1	8	16	31	22
Eastside Kodiak	107	1	9	48	93	58
Northeast Kodiak	43	2	5	34	33	15
Mainland	103	0	7	21	101	70
Total	493	6	60	254	441	215

^a The State of Alaska's Division of Sport Fish identifies over 1,200 streams in the Kodiak Management Area that have documented use by anadromous fish (Johnson and Blossom 2019). 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, 1994–2019.

Year	Number of salmon				Total
	Sockeye	Coho	Pink	Chum	
1994	277,884	46,984	2,051,375	10,799	2,387,042
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
2017	378,897	34,456	2,003,651	166,915	2,583,919
2018	180,339	131,068	3,199,981	166,324	3,677,712
2019	100,080	35,338	4,922,233	17,335	5,074,986
<u>Average</u>					
2009–2018	331,005	90,413	4,635,477	143,020	5,199,915

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]). Special harvest area (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 set aside for personal use and cost-recovery harvests.

Table 3.—Comparison of 2019 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	3,898
	Ayakulik ^b	256-201	4,800	8,400	1,948
Sockeye					
	Malina	251-105	1,000	10,000	100
	Afognak	252-342	20,000	50,000	26,267
	Karluk	255-101			
	Early run		150,000	250,000	186,510
	Late run		200,000	450,000	321,039
	Ayakulik	256-201			
	Early run		140,000	280,000	162,430
	Late run		60,000	120,000	117,209
	Upper Station	257-304			
	Early run		43,000	93,000	49,517
	Late run		120,000	265,000	165,146
	Frazer	257-403	75,000	170,000	169,627
	Buskin	259-211	5,000	8,000	12,297
	Pasagshak	259-411	3,000		4,537
	Saltery	259-415	15,000	35,000	20,783
	Coho				
Buskin		259-211	4,700	9,600	5,537
American		259-231	400		400
Olds (Sid Olds)		259-242	1,000		200
Pasagshak		259-411	1,200		441
Pink					
	Mainland District		250,000	1,000,000	904,400
	Kodiak Archipelago		3,000,000	7,000,000	4,688,688
Chum					
	Kodiak Archipelago		101,000		96,700

^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), 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, if any, above the weir.

Table 4.—Fish weir installation and removal dates and cumulative salmon weir counts for systems with weirs in the Kodiak Management Area, 2019.

Weir location	2019 dates		Salmon species enumerated				
	Installed	Removed	Chinook	Sockeye	Coho	Pink	Chum
Karluk River ^a	21-May	16-Sep	3,898	507,549	17,884	433,673	416
Ayakulik River	21-May	27-Aug	1,948	279,639	5,206	27,172	486
Dog Salmon Creek ^b	28-May	5-Aug	17	162,697	4	372,414	181
Frazer Lake Fish Pass ^b	2-Jun	15-Aug	24	169,627	0	4,336	0
Upper Station (Olga Creek) ^c	18-May	17-Sep	0	213,663	12,648	50,833	17
Litnik (Afognak River) ^d	11-May	11-Aug	0	26,267	18	460	9
Buskin River ^e	16-May	8-Sep	0	12,297	5,037	70,376	10
Lake Louise ^f	4-Jun	2-Sep	0	73	0	2	0
Saltery River ^g	16-Jun	15-Aug	0	20,783	0	579	0
Pasagshak River	13-Jun	16-Aug	0	4,537	1	70	4
Totals			5,863	1,234,435	40,798	955,577	1,123

^a Count includes post-weir estimate of 60,000 sockeye, 8,000 coho, and 15,000 pink.

^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 and 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. Dog Salmon total included a post-weir estimate of 90,000 pink salmon.

^c Upper Station total includes a post-weir estimate of 20,000 sockeye salmon.

^d Litnik sockeye salmon total reflects 550 fish removed for KRAA hatchery broodstock.

^e Buskin total includes a post-weir estimate of 500 coho salmon.

^f 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.

^g Saltery system sockeye salmon total reflects 1,400 fish removed for KRAA hatchery broodstock and a post -weir estimate of 4,500 fish.

Table 5.—Indexed salmon escapements by species in the Kodiak Management Area, 1979–2019.

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
2017	6,387	1,522,210	83,708	6,089,116	764,323	8,465,744
2018	5,378	1,501,385	186,696	5,154,742	345,745	7,193,946
2019	5,863	1,287,032	68,838	5,593,088	413,473	7,368,294
<u>Average of previous 10 years:</u>						
2009–2018	6,012	1,332,458	95,766	4,452,431	375,444	6,262,112
Odd Years 2009–2017				5,089,708		
Even Years 2010–2018				3,815,153		
<u>Average of 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>						
1979–2018	16,716	1,642,723	134,217	4,840,974	550,911	7,185,542

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, 1882–2019.

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					
	Chinook	Sockeye	Coho	Pink	Chum	Total
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	3,280,808	403,881	5,962,275
2017	7,101	2,476,502	366,395	27,103,276	1,891,299	31,844,573
2018	3,895	1,820,350	438,065	5,946,894	463,834	8,673,038
2019	7,371	2,176,572	393,812	32,973,151	547,178	36,098,084
Averages ^b						
2009–2018	12,398	2,295,323	310,014	17,825,242	804,038	21,247,014
Even years, 2010–2018				9,128,128		
Odd years, 2009–2017				26,522,355		
1882–2018	5,855	1,865,135	149,153	8,886,537	634,364	11,027,761
1949–2018	8,714	1,749,116	190,198	11,699,758	810,425	14,458,212
Even years, 1950–2018				10,356,019		
Odd years, 1949–2017				13,083,018		

Source: 1882–1947 data are from processors' case pack information. 1948–2019 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, 1980–2019.

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

-continued-

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	180	31	1	188	154	591	335	57
2016	374	165	30	3	188	137	592	305	52
2017	375	163	30	3	188	143	593	309	52
2018	375	151	30	2	188	140	593	293	49
2019	375	176	30	3	188	148	593	327	55
<u>Recent 10-year average:</u>									
2009–2018	375	167	31	3	188	148	593	318	54
<u>Average of 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>									
1980–2018	381	232	33	9	188	162	602	403	67

Source: Commercial Fisheries Entry Commission Summary Information and Reports (CFEC 2019) 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, 2019.

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 2019 commercial salmon harvest, by species and fishery, for the Kodiak Management Area.

	Number of salmon					
	Chinook	Sockeye	Coho	Pink	Chum	Total
Projected Harvest 2019 ^a	8,000	2,336,000	318,000	27,000,000	935,000	30,597,000
Actual Harvest 2019	7,371	2,176,572	393,812	32,973,151	547,178	36,098,084

Fishery	2019 Harvest	
	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	13,000	3,291
Cape Igvak ^e	65,000	0
Karluk ^f	73,000	281,888
Ayakulik ^g	60,600	74,928
Alitak District ^h	175,400	226,165
Minor Enhancement ⁱ	10,600	1,091
Spiridon ^j	103,000	50,600
Other ^k	297,200	73,966
Subtotal	797,800	711,929
Late sockeye salmon fisheries (7/16–10/31 except Cape Igvak which is 7/8–7/25)		
Kitoi Bay Hatchery ^d	13,000	9,015
Cape Igvak ^e	53,000	0
Karluk ^f	725,000	780,196
Ayakulik ^g	40,400	291,230
Alitak District ^h	150,500	103,952
Spiridon ^j	103,000	36,068
Other ^k	445,800	244,182
Subtotal	1,538,200	1,464,643
Total Sockeye	2,336,000	2,176,572
Coho salmon fisheries		
Kitoi Bay Hatchery ^d	33,000	34,938
Afognak (non-hatchery) ^l	35,000	46,392
Westside Kodiak ^m	158,000	138,384
Alitak District ^h	15,000	17,866
Eastside/Northend Kodiak ⁿ	58,000	81,907
Mainland District	19,000	74,325
Subtotal	318,000	393,812

-continued-

Table 9.—Page 2 of 2.

Fishery	2019 Harvest	
	Projection ^b	Actual ^c
Pink salmon fisheries		
Kitoi Bay Hatchery ^d	6,600,000	4,898,281
Afognak (non-hatchery) ^l	1,600,000	4,328,275
Westside Kodiak ^m	8,500,000	13,232,953
Alitak District ^h	3,500,000	2,082,621
Eastside/Northend Kodiak ⁿ	6,100,000	5,806,474
Mainland District	700,000	2,624,547
Subtotal/Wild stock pinks	20,400,000	28,074,870
Subtotal/all pinks	27,000,000	32,973,151
Chum salmon fisheries		
Kitoi Bay Hatchery ^d	261,000	17,329
Afognak (non-hatchery) ^l	28,000	21,935
Westside Kodiak ^m	245,000	270,179
Alitak District ^h	45,000	33,571
Eastside/Northend Kodiak ⁿ	255,000	86,368
Mainland District	101,000	117,796
Subtotal	935,000	547,178
Grand total ^o	30,597,000	36,098,084

^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 salmon systems are based on formal forecasts for those individual stocks (total run minus escapement); the projected harvest from minor sockeye salmon systems and other salmon species are based on less formal escapement-to-return relationships, environmental factors, and interspecies competition (Brenner et al. 2019).

^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 salmon 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 (Kafila 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 2019 harvest of 8,000 Chinook salmon and the actual harvest of 7,371 Chinook salmon.

Table 10.—Commercial salmon buyers and processing plants active in the Kodiak Management Area, by geographic area and type, 2019.

Buyers/Processors	Shore-based processors		
	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	
Fish Tale—Leonard Carpenter		X	
Pacific Seafoods Kodiak	X		
Trident Star of Kodiak	X		
Trident Cordova North		X	X
Half Moon Bay Fisheries		X	
Silver Bay Seafoods—Valdez			X
Tollef Monson		X	
Adelia Myrick		X	
Totals	5	7	2

Table 11.—Commercial salmon harvest and value, by gear and species, in the Kodiak Management Area, 2019.

	Number of salmon						
	Chinook	Sockeye	Coho	Pink	Chum	Total	
Purse seine							
Total # ^a	6,528	1,648,925	334,113	30,041,316	404,526	32,435,408	94.4
<u>Avg. wt.</u>	<u>8.74</u>	<u>4.99</u>	<u>7.16</u>	<u>3.19</u>	<u>6.92</u>		
Total lb. ^a	57,041	8,230,832	2,392,737	95,909,392	2,799,012	109,389,014	93.1
<u>Avg. \$/lb.</u> ^b	<u>\$0.60</u>	<u>\$1.46</u>	<u>\$0.51</u>	<u>\$0.27</u>	<u>\$0.25</u>		
Exvessel value (\$)	\$34,305.39	\$12,002,701.26	\$1,221,577.09	\$26,089,588.40	\$700,954.09	\$40,049,126.23	87.4
# of permits = 176							
Average value (\$)	\$194.92	\$68,197.17	\$6,940.78	\$148,236.30	\$3,982.69	\$227,551.85	
Percent (%)	0.1	30.0	3.1	65.1	1.8	100.0	
Beach seine							
Total # ^a	0	297	0	2,202	1	2,500	0.0
<u>Avg. wt.</u>	<u>0</u>	<u>5.26</u>	<u>0</u>	<u>3.51</u>	<u>8.00</u>		
Total lb. ^a	0	1,563	0	7,731	8	9,302	0.0
<u>Avg. \$/lb.</u> ^b	<u>\$0.00</u>	<u>\$1.46</u>	<u>\$0.00</u>	<u>\$0.27</u>	<u>\$0.25</u>		
Exvessel value (\$)	\$0.00	\$2,279.26	\$0.00	\$2,103.01	\$2.00	\$4,384.28	0.0
# of permits = 3							
Average value (\$)	\$0.00	\$759.75	\$0.00	\$701.00	\$0.67	\$1,461.43	
Percent (%)	0.0	52.0	0.0	48.0	0.0	100.0	
Set gillnet							
Total # ^a	843	491,201	59,672	1,229,850	141,783	1,923,349	5.6
<u>Avg. wt.</u>	<u>10.30</u>	<u>4.93</u>	<u>7.22</u>	<u>3.39</u>	<u>7.41</u>		
Total lb. ^a	8,686	2,421,616	430,907	4,170,606	1,050,226	8,082,041	6.9
<u>Avg. \$/lb.</u> ^b	<u>\$0.62</u>	<u>\$1.62</u>	<u>\$0.65</u>	<u>\$0.30</u>	<u>\$0.32</u>		
Exvessel value (\$)	\$5,419.45	\$3,915,409.23	\$282,239.86	\$1,234,041.67	\$332,857.21	\$5,769,967.41	12.6
# of permits = 149							
Average value (\$)	\$36.37	\$26,277.91	\$1,894.23	\$8,282.16	\$2,233.94	\$38,724.61	
Percent (%)	0.1	67.9	4.9	21.4	5.8	100.0	
Total all gear							
Total # ^a	7,371	2,140,423	393,785	31,273,368	546,310	34,361,257	100.0
<u>Avg. wt.</u>	<u>8.92</u>	<u>4.98</u>	<u>7.17</u>	<u>3.20</u>	<u>7.05</u>		
Total Lb. ^a	65,727	10,654,011	2,823,644	100,087,729	3,849,246	117,480,357	100.0
<u>Avg. \$/lb.</u> ^b	<u>\$0.60</u>	<u>\$1.49</u>	<u>\$0.53</u>	<u>\$0.27</u>	<u>\$0.27</u>		
Exvessel value (\$)	\$39,724.84	\$15,920,389.75	\$1,503,816.94	\$27,325,733.08	\$1,033,813.31	\$45,823,477.92	100.0
% of total value	0.1	34.7	3.3	59.6	2.3	100.0	

^a Numbers and pounds of fish are derived from ADF&G fish ticket summaries. There were 10,486 fish tickets generated in 2019; each ticket represents a landing. Each gear type had the following landings: purse seine – 5,617; beach seine – 12; set gillnet – 4,857. 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, 2006–2019.

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
2017	29,978,602	\$54,750,472	\$277,675	\$65,957	\$19,216
2018	8,618,297	\$27,263,475	\$147,748	\$35,118	^d
2019	34,361,257	\$45,823,478	\$227,552	\$38,725	\$1,461
Recent 10-year average^e					
2009–2018	19,801,507	\$38,030,667	\$189,258	\$42,806	\$17,887

^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 adjustments 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 do 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, 1991–2019.

Year	Permits issued	Permits returned	Percent returned	Number of salmon					
				Chinook	Sockeye	Coho	Pink	Chum	Total
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 ^b	2,550	1,518	60	205	17,962	7,491	1,758	440	27,856
1995 ^b	1,950	1,218	62	175	19,416	5,603	1,548	293	27,035
1996 ^b	1,567	1,413	90	253	28,287	5,117	1,125	381	35,163
1997 ^b	2,098	1,596	76	383	33,293	6,369	1,458	234	41,737
1998 ^b	1,845	1,048	57	350	20,459	5,348	1,412	214	27,783
1999 ^b	1,422	1,239	87	397	26,534	4,974	1,229	388	33,522
2000 ^b	1,710	1,442	84	351	31,667	6,383	977	375	39,753
2001 ^b	2,376	1,975	83	273	33,878	5,920	1,158	427	41,656
2002 ^b	2,276	2,051	90	588	33,844	6,175	1,665	350	42,622
2003 ^b	2,268	2,042	90	510	32,193	6,098	1,509	388	40,698
2004 ^b	2,239	2,050	92	379	30,503	5,857	1,403	261	38,403
2005 ^b	2,290	1,949	85	434	27,664	7,703	2,350	592	38,743
2006 ^b	2,096	1,911	91	280	22,985	6,640	1,827	441	32,173
2007 ^b	2,096	1,927	92	207	25,656	4,715	1,585	266	32,429
2008 ^b	2,037	1,738	85	159	21,852	4,570	1,180	186	27,947
2009 ^b	1,926	1,777	92	176	23,018	4,125	1,919	342	29,580
2010 ^b	2,022	1,890	93	158	22,037	4,188	1,263	273	27,919
2011 ^b	2,211	1,999	90	112	33,958	2,344	1,154	166	37,734
2012 ^b	2,121	1,871	88	54	24,074	2,920	1,154	166	28,368
2013 ^b	2,080	1,701	82	119	27,950	2,528	826	175	31,598
2014 ^b	1,996	1,686	84	184	22,845	3,916	572	185	27,702
2015 ^b	1,798	1,594	89	195	16,259	3,249	1,218	271	21,192
2016 ^b	1,782	1,579	89	135	21,257	2,267	727	160	24,546
2017 ^b	1,729	1,511	87	80	22,660	1,919	446	278	25,383
2018 ^b	1,573	1,319	84	97	13,787	3,174	449	190	17,697
<u>Recent 10-year average</u>									
2008–2017	1,970	1,735	88	137	23,591	3,203	1,046	220	28,197
species composition by percent				0%	84%	11%	4%	1%	100%
<u>Averages in previous decades:</u>									
2000–2009	2,131	1,886	88	336	28,326	5,819	1,557	363	36,400
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 overall</u>									
1978–2017	1,779	1,565	81	212	21,747	5,409	1,724	445	29,538

Source: 1991 to 2019 data is from the ADF&G Kodiak Office subsistence permit database.

^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 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, 1997–2019.

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
2017	71	180	313	3,928	4,125	4,902	100	13,368
2018	75	165	92	3,802	2,630	214	36	6,774
2019	77	165	369	2,500	2,916	7,910	280	13,975
10-year average								
2009–2018	60	131	228	2,979	2,077	3,352	225	8,861

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).

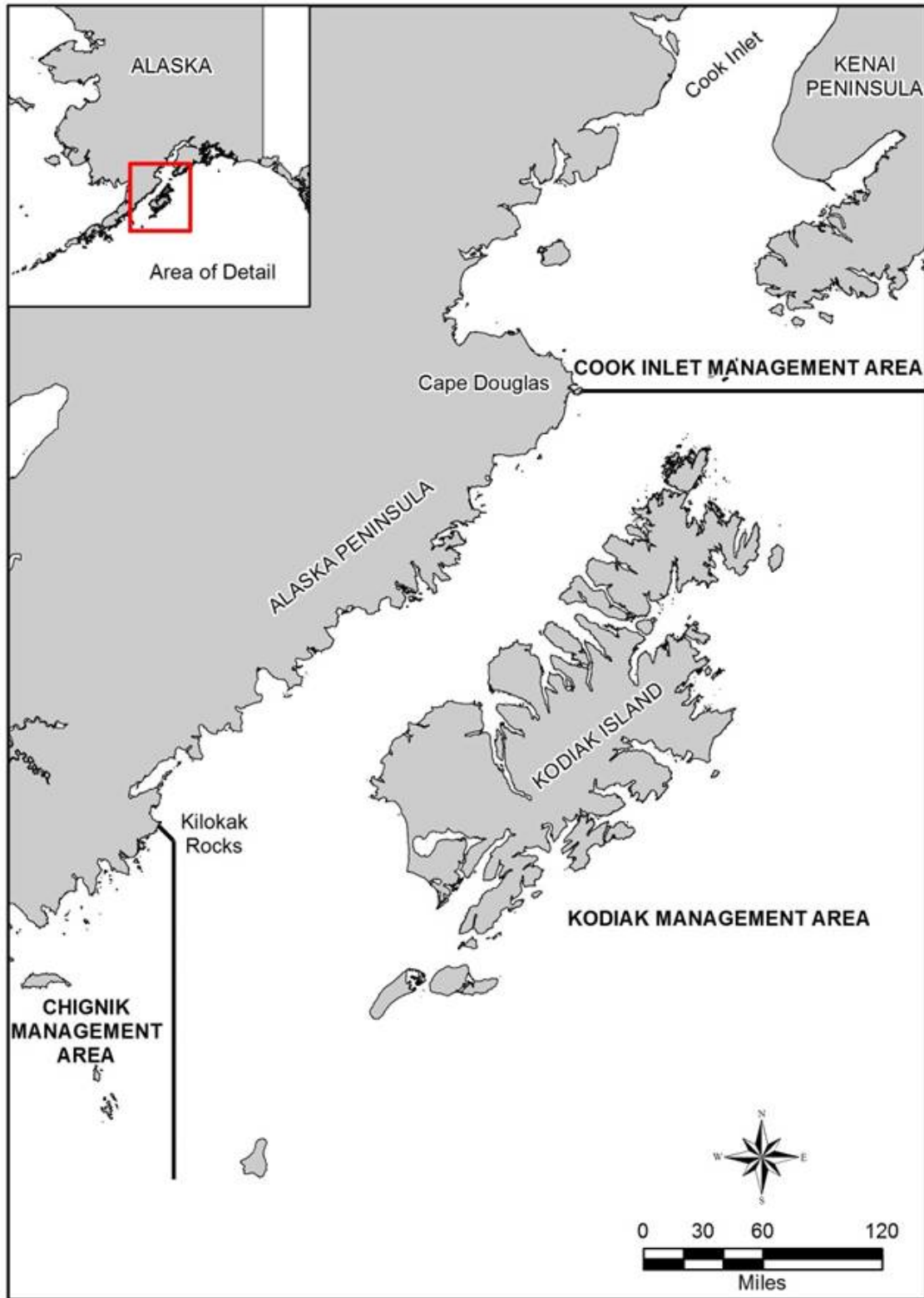


Figure 1.—Map of the Kodiak Management Area and neighboring management areas, 2019.

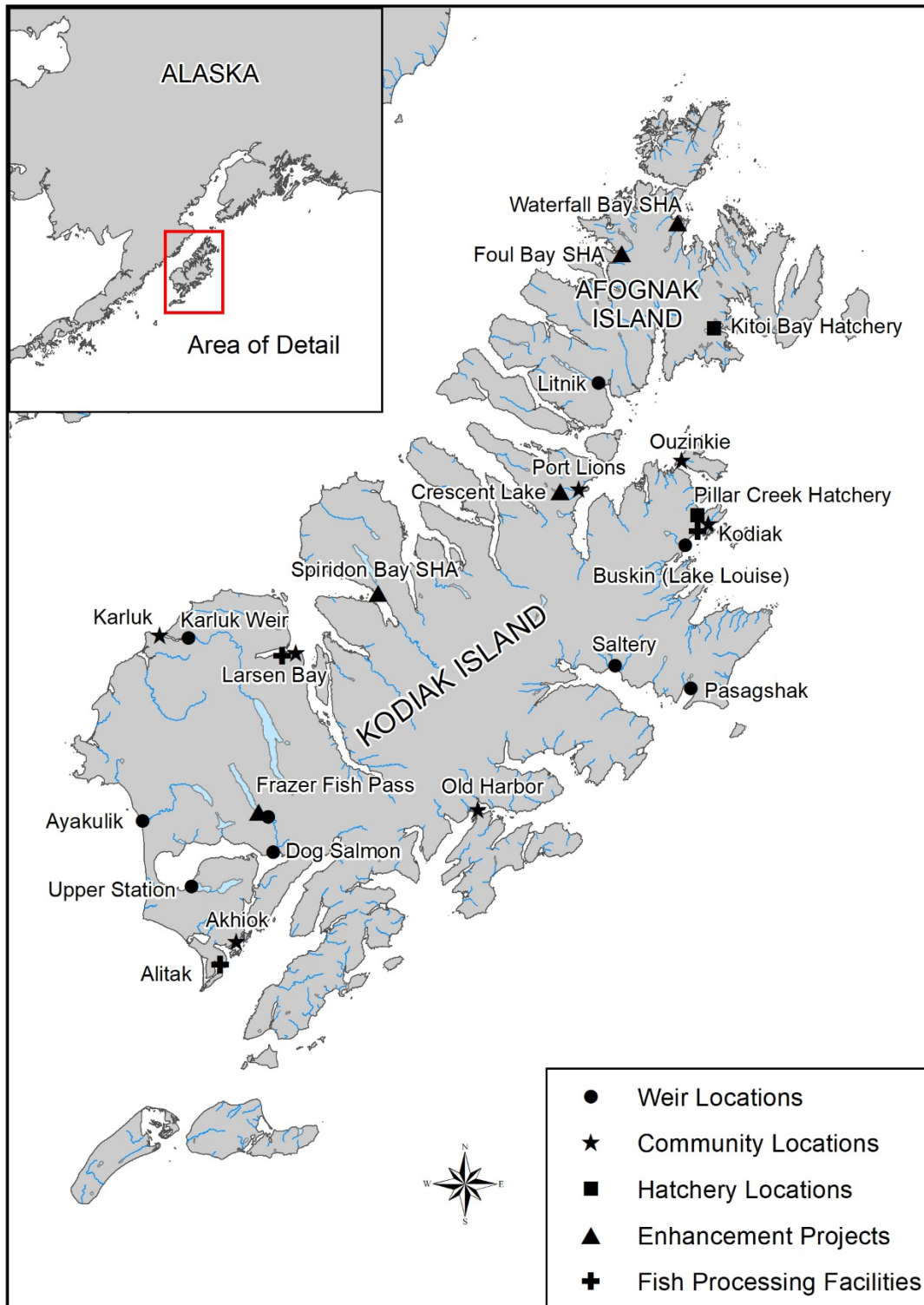


Figure 2.—Map of the Kodiak Archipelago showing communities, fish processing facilities, sockeye salmon enhancement projects, and weir and hatchery locations in the Kodiak Management Area, 2019.

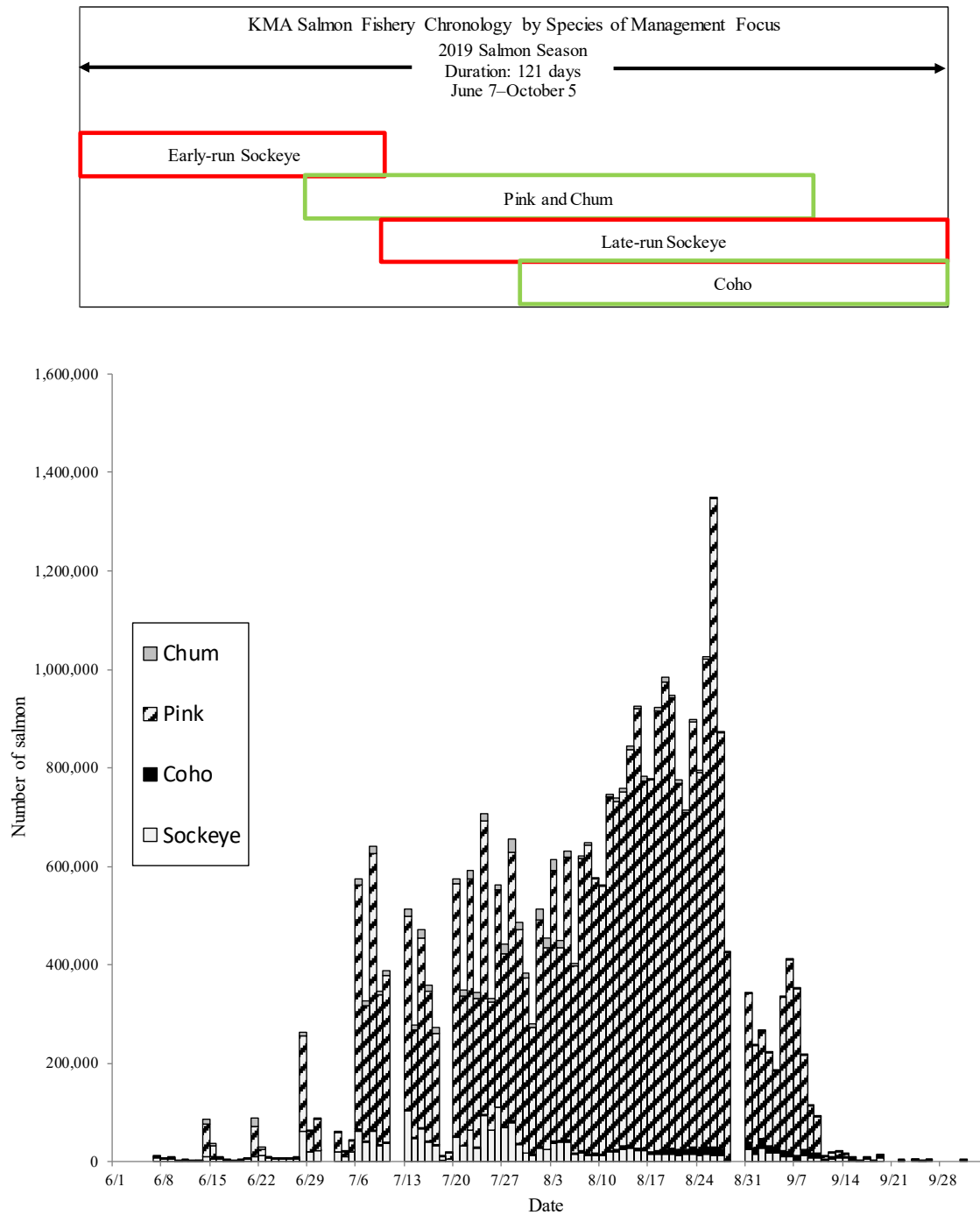
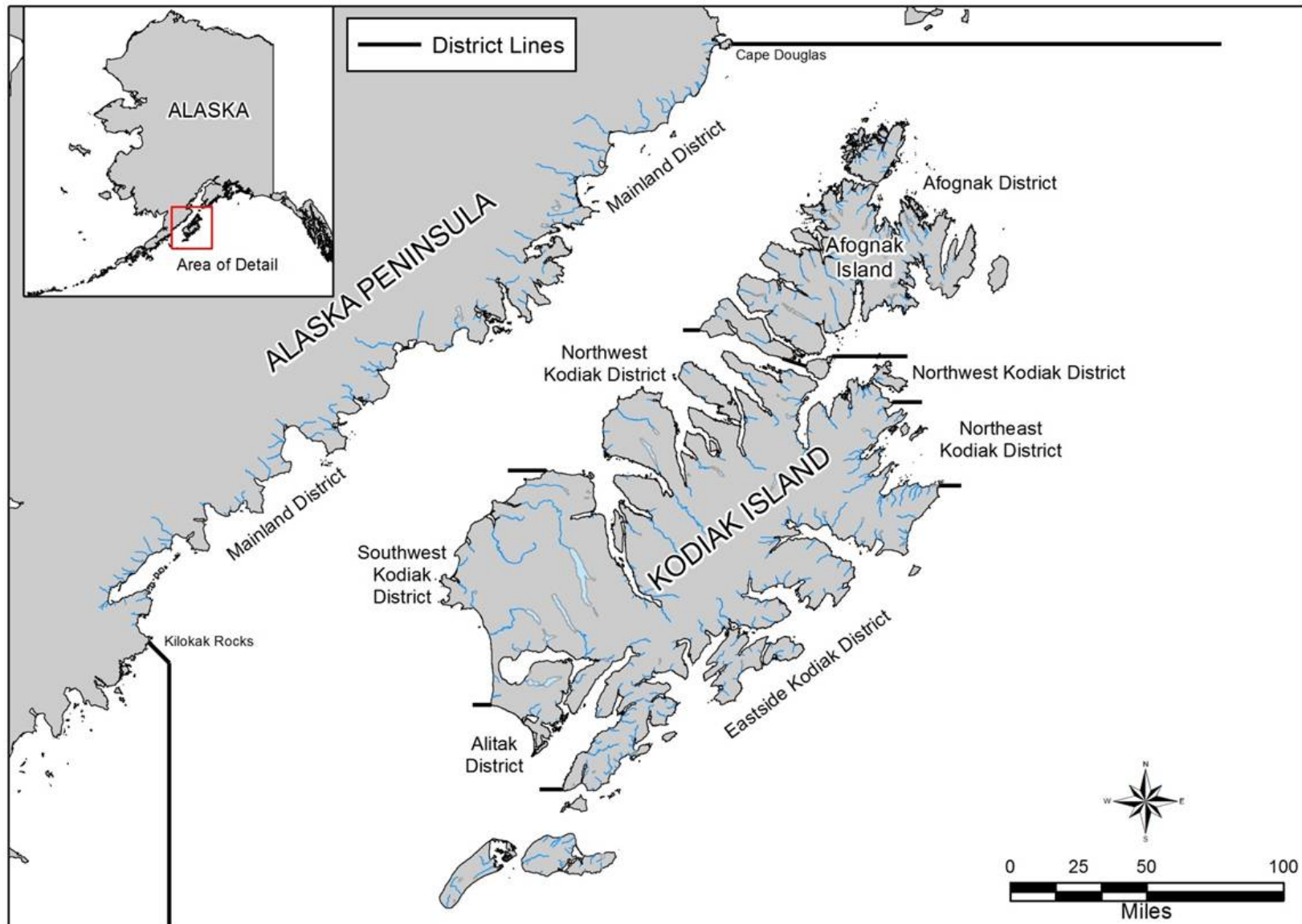


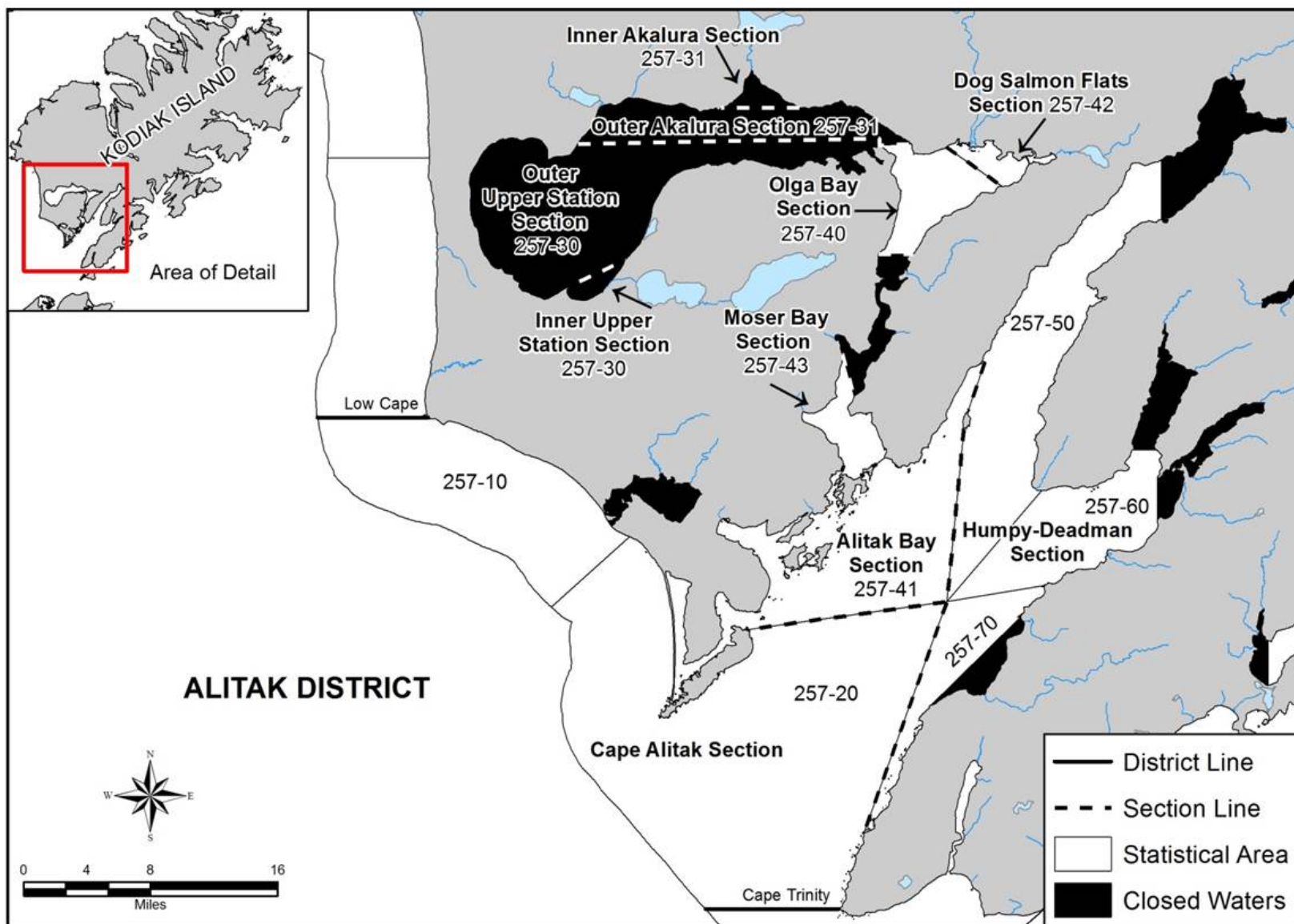
Figure 3.—Commercial salmon fishery chronology and daily harvest by date and species of management focus, Kodiak Management Area, 2019.

APPENDIX A. MAPS OF FISHING DISTRICTS

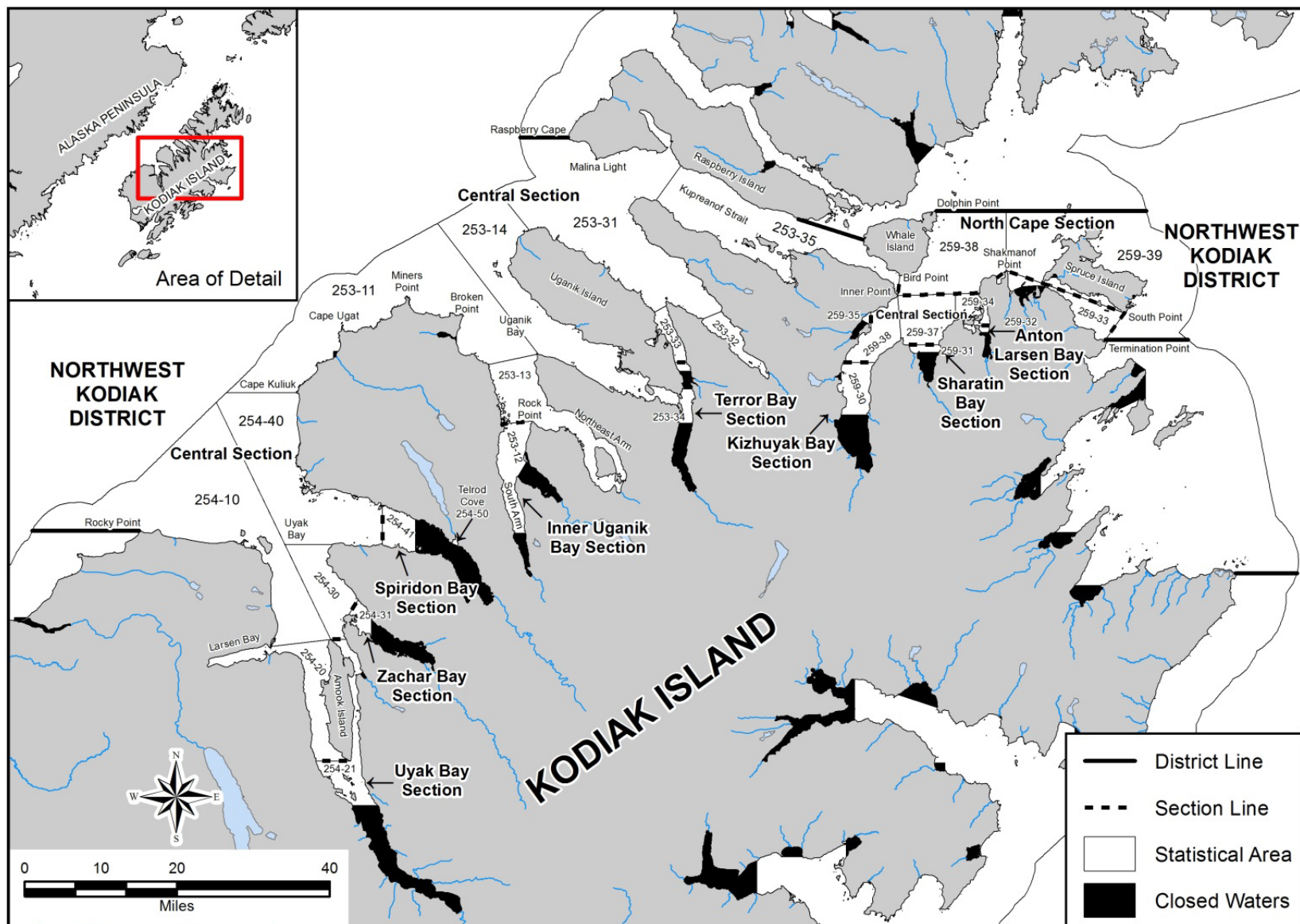
Appendix A1.—Map of the Kodiak Management Area commercial salmon fishing districts.



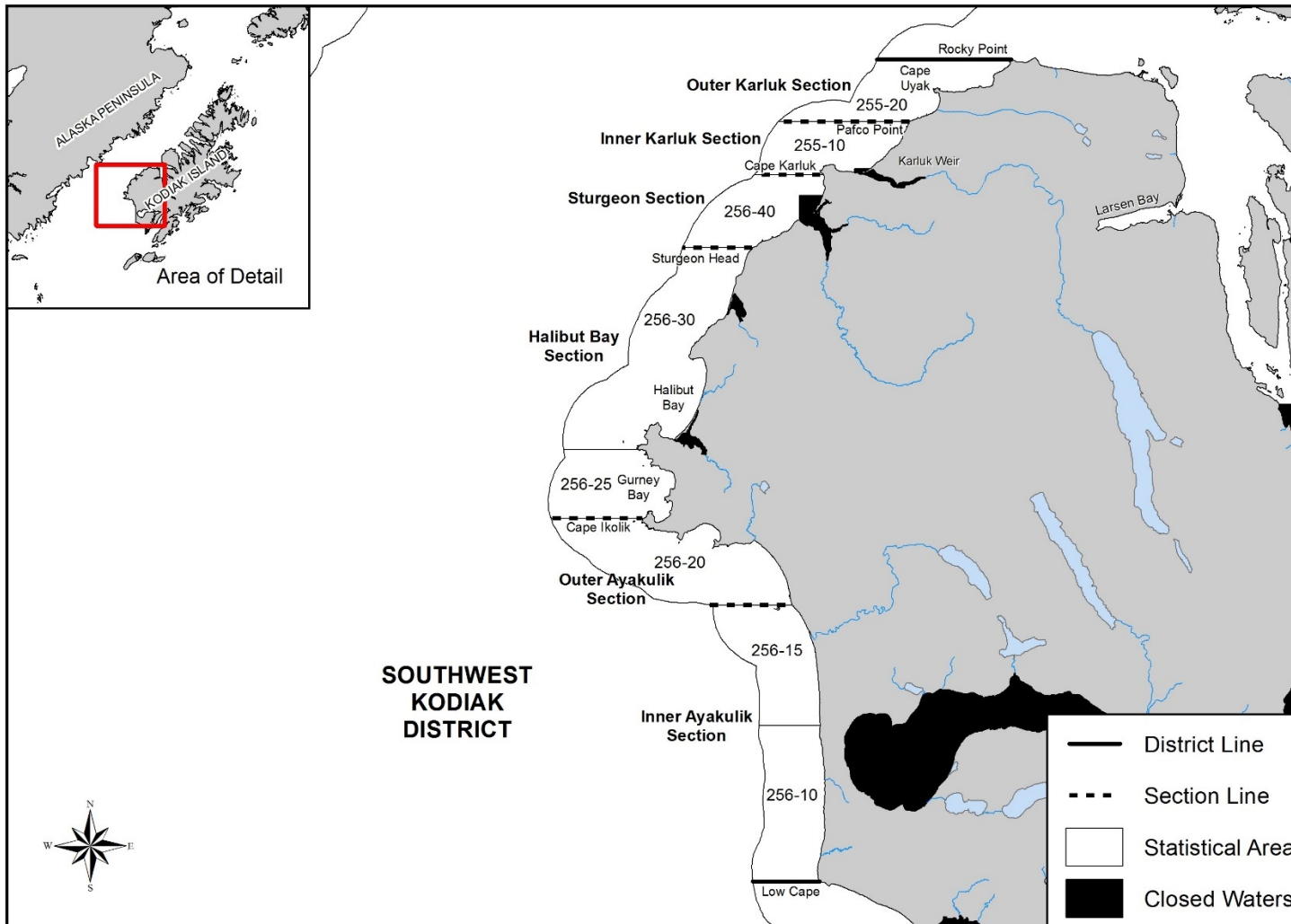
Appendix A2.—Map of the Alitak District commercial salmon fishing sections and statistical areas.



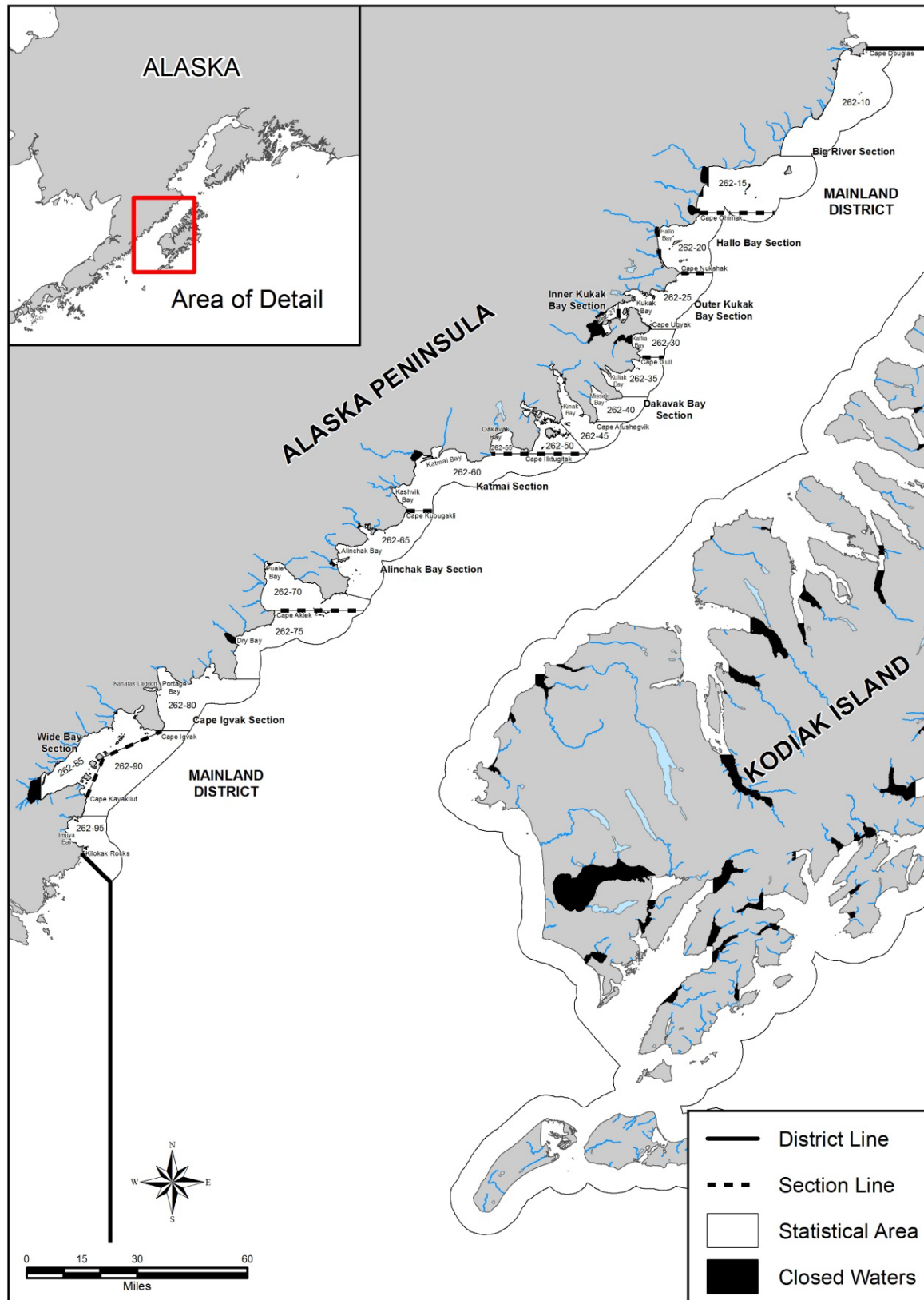
42



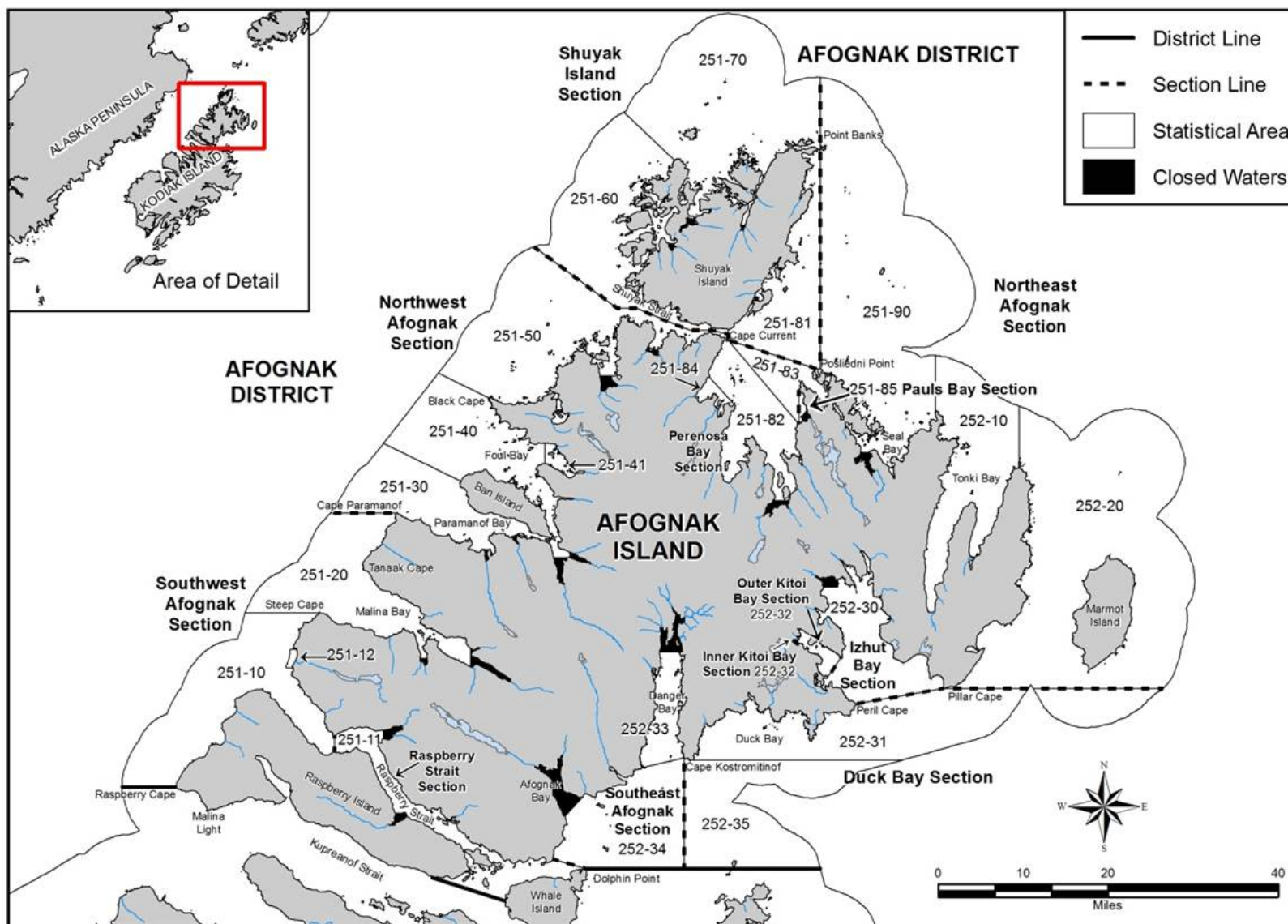
Appendix A4.—Map of the Southwest Kodiak District commercial salmon fishing sections and statistical areas.



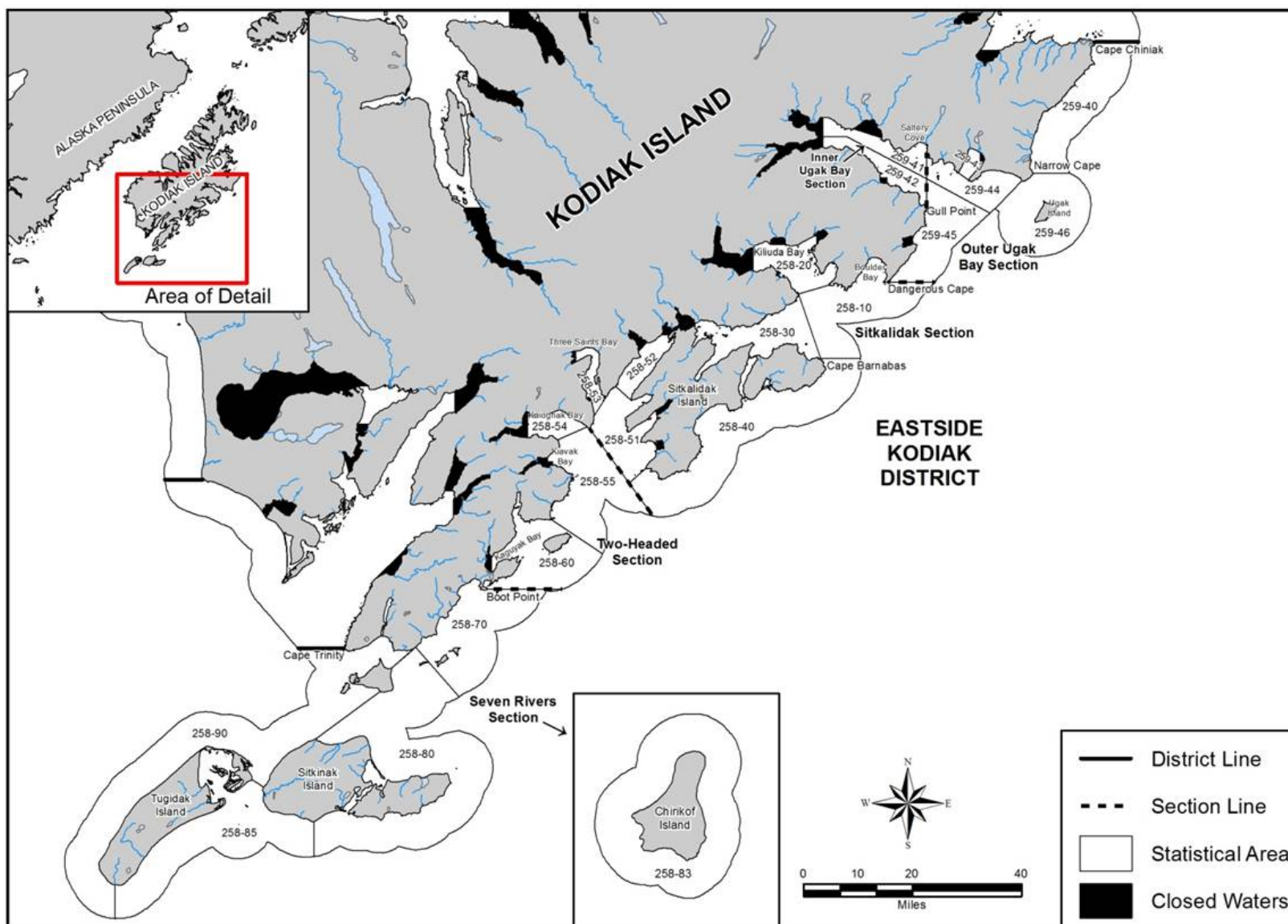
Appendix A5.—Map of the Mainland District commercial salmon fishing sections and statistical areas.



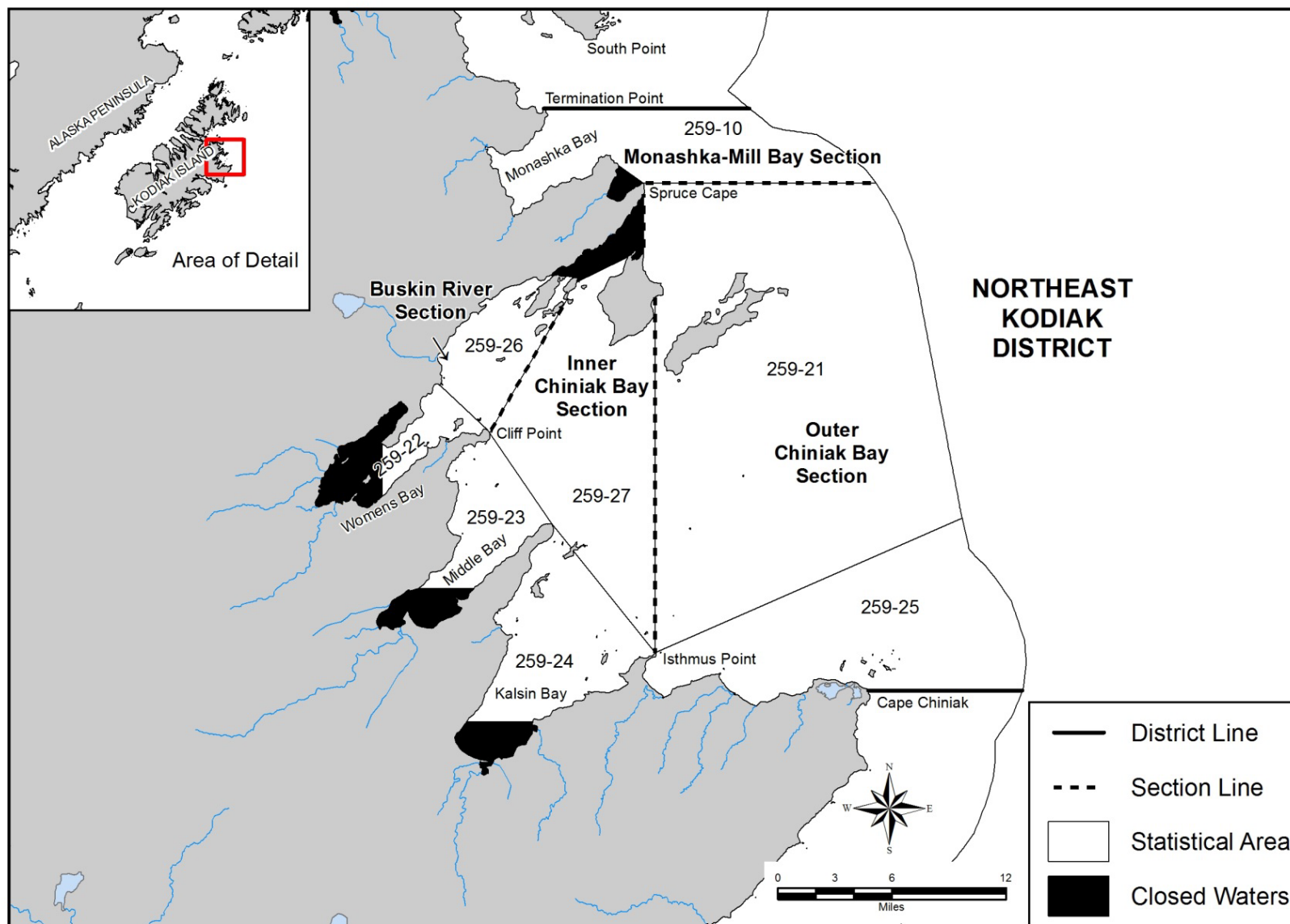
Appendix A6.—Map of the Afognak District commercial salmon fishing sections and statistical areas.



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, 2019.

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 Larson																														
	Sharatin																														
	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 2 of 8.

<i>Districts/Sections</i>		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																														
	Inner Chiniak																														
	Buskin River																														
	Monashka-Mill Bay																														
		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
Afognak	Southeast Afognak																														
	Duck Bay																														
	Izhut Bay																														
	Inner Kitoi Bay																														
	Outer Kitoi Bay																														
	Northeast Afognak																														
	Pauls Bay																														
	Perenosa																														
	Waterfall Bay SHA																														
	Shuyak Island																														
	Northwest Afognak																														
	Foul Bay SHA																														
	Southwest Afognak																														
	Malina THA																														
	Raspberry Strait																														
		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
Mainland	Big River																														
	Hallo Bay																														
	Outer Kukak Bay																														
	Inner Kukak Bay																														
	Dakavak Bay																														
	Katmai																														
	Alinchak																														
	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 Larson																															
	Sharatin																															
	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 4 of 8.

<i>Districts/Sections</i>		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																															
	Inner Chiniak																															
	Buskin River																															
	Monashka-Mill Bay																															
Afognak	Southeast Afognak																															
	Duck Bay																															
	Izhut Bay																															
	Inner Kitoi Bay																															
	Outer Kitoi Bay																															
	Northeast Afognak																															
	Pauls Bay																															
	Perenosa																															
	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																															
	Cape Igvak																															
	Wide Bay																															

fishing time in entire section

fishing time in partial section

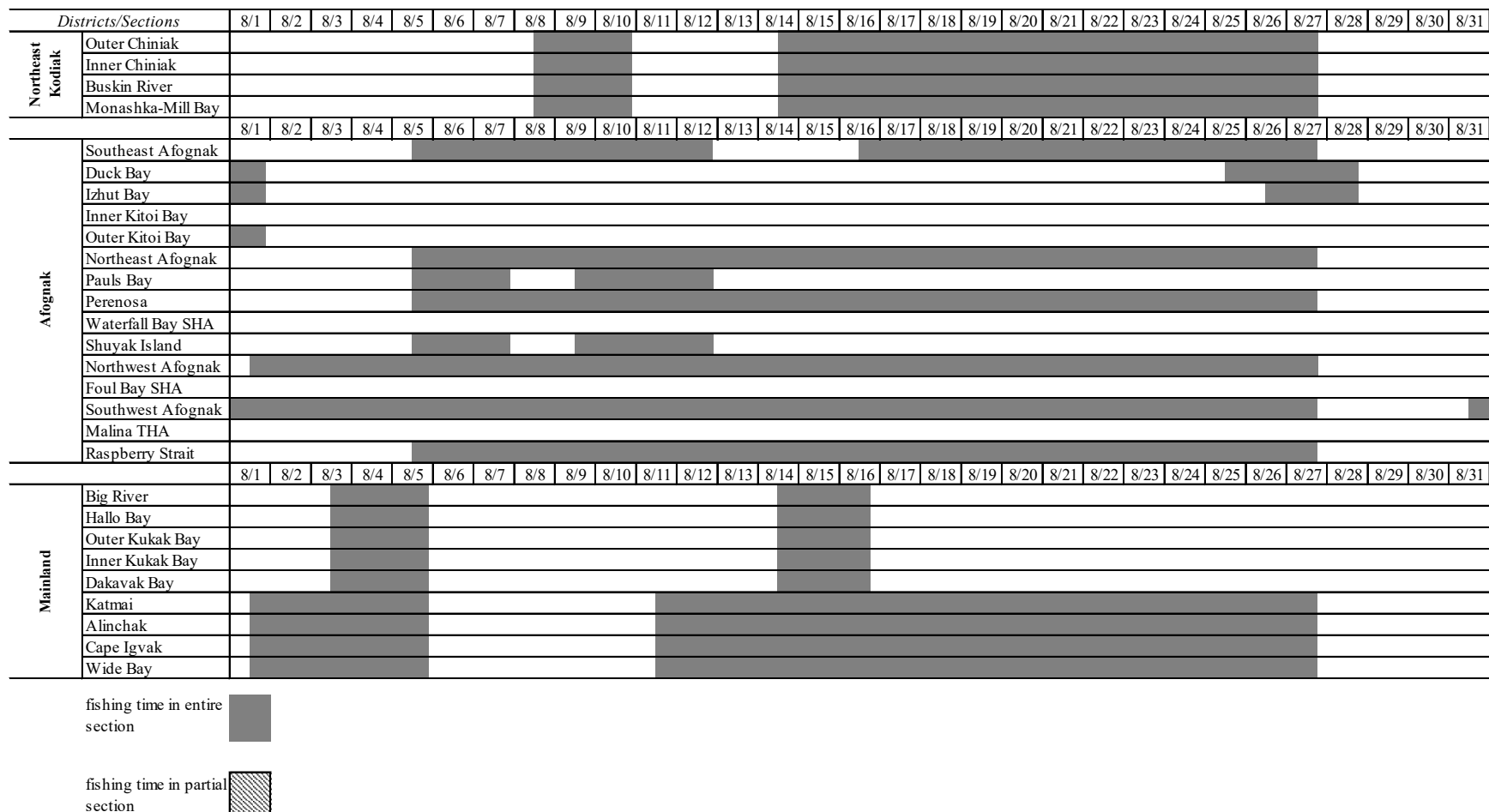
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Appendix B1.-Page 5 of 8.

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																															
	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.



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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 Larson																														
	Sharatin																														
	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																														
	Inner Chiniak																														
	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																														
	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																														
	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, 2019.

E.O. #	Issued	Effective	Action in effect
1	9:00 AM 6/5/19	Noon 6/7/19	<p><u>Opening</u> for 57 hours, until 9:00 PM 6/9:</p> <ul style="list-style-type: none"> Northwest Kodiak District <p><u>Opening</u> until further notice:</p> <ul style="list-style-type: none"> Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay and Izhut Bay sections Foul Bay Special Harvest Area (FBSHA) Waterfall Bay Special Harvest Area (WBSHA) <p><u>Closed water adjustments:</u></p> <ul style="list-style-type: none"> Reduced until further notice in Foul Bay, Waterfall Bay, and Kitoi Bay <p><u>Non-retention</u> of Chinook salmon 28 inches or greater in length until further notice</p>
2	10:00 AM 6/12/19	Noon 6/14/19	<p><u>Opening</u> for 57 hours, until 9:00 PM 6/16:</p> <ul style="list-style-type: none"> Central and North Cape sections Southwest Afognak Section <p><u>Opening</u> for 33 hours, until 9:00 PM 6/15:</p> <ul style="list-style-type: none"> Eastside Kodiak District Northwest Afognak, Pauls Bay, and Perenos Bay sections Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, Terror Bay, Kizhuyak Bay, Sharatin Bay, and Anton Larsen Bay sections Big River and Outer Kukak Bay sections <p><u>Closed water adjustments:</u></p> <ul style="list-style-type: none"> Reduced until 9:00 PM 6/15 at Kafia Creek and Sallery Creek
3	10:00 AM 6/19/19	Noon 6/20/19 9:00 PM 6/20/19	<p><u>Opening</u> for 81 hours, until 9:00 PM 6/23:</p> <ul style="list-style-type: none"> Dog Salmon Flats Section <p><u>Closure</u> in the following area:</p> <ul style="list-style-type: none"> Inner Kitoi Bay, Outer Kitoi Bay, and Izhut Bay sections <p><u>Closed water adjustments:</u></p> <ul style="list-style-type: none"> Reduced until 9:00 PM 6/20 in Kitoi Bay Reduced from noon 6/20 until 9:00 PM 6/23 at Dog Salmon Creek Expanded from noon 6/20 until 9:00 PM 6/23 at Horse Marine Lagoon
4	10:00 AM 6/20/19	Noon 6/21/19	<p><u>Opening</u> for 33 hours, until 9:00 PM 6/22:</p> <ul style="list-style-type: none"> Eastside Kodiak District Northwest Afognak, Pauls Bay, and Perenos Bay sections Big River and Outer Kukak Bay sections <p><u>Closed water adjustments:</u></p> <ul style="list-style-type: none"> Reduced until 9:00 PM 6/15 at Kafia Creek and Sallery Creek
5	10:00 AM 6/21/19	9:00 PM 6/22/19 9:00 PM 6/23/19	<p><u>Closure</u> in the following area:</p> <ul style="list-style-type: none"> Duck Bay Section <p><u>Extension</u> for 48 hours, until 9:00 PM 6/25:</p> <ul style="list-style-type: none"> Dog Salmon Flats Section

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Appendix B2.–Page 2 of 10.

E.O. #	Issued	Effective	Action in effect
5 (cont.)			<u>Closed water adjustments:</u> <ul style="list-style-type: none"> Reduced from noon 6/23 until 9:00 PM 6/25 at Dog Salmon Creek Expanded from noon 6/23 until 9:00 PM 6/25 at Horse Marine Lagoon
6	10:00 AM 6/25/19	9:00 PM 6/25/19 12:01 AM 6/26/19	<u>Extension</u> for 72 hours, until 9:00 PM 6/28: <ul style="list-style-type: none"> Dog Salmon Flats Section <u>Opening</u> of Cost Recovery Fishery: <ul style="list-style-type: none"> Telrod Cove Special Harvest Area <u>Closed water adjustments:</u> <ul style="list-style-type: none"> Reduced from noon 6/26 until 9:00 PM 6/25 at Dog Salmon Creek Expanded from noon 6/26 until 9:00 PM 6/25 at Horse Marine Lagoon
7	10:00 AM 6/26/19	Noon 6/28/19 9:00 PM 6/28/19	<u>Opening</u> for 57 hours, until 9:00 PM 6/30: <ul style="list-style-type: none"> Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, and Olga Bay sections Outer Karluk Section Central, North Cape, and Inner Uganik Bay sections Southwest Afognak Section <u>Extension</u> for 48 hours, until 9:00 PM 6/30: <ul style="list-style-type: none"> Dog Salmon Flats Section <u>Closed water adjustments:</u> <ul style="list-style-type: none"> Reduced from noon 6/28 until 9:00 PM 6/30 at Dog Salmon Creek Expanded from noon 6/28 until 9:00 PM 6/30 at Horse Marine Lagoon
8	10:00 AM 7/2/19	Noon 7/3/19	<u>Opening</u> for 57 hours, until 9:00 PM 7/5: <ul style="list-style-type: none"> Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections <u>Closed water adjustments:</u> <ul style="list-style-type: none"> Reduced from noon 7/3 until 9:00 PM 7/5 at Dog Salmon Creek Expanded from noon 7/3 until 9:00 PM 7/5 at Horse Marine Lagoon
9	10:00 AM 7/3/19	Noon 7/6/19 9:00 PM 7/10/19	<u>Opening</u> for 105 hours, until 9:00 PM 7/10: <ul style="list-style-type: none"> Outer Karluk Section Northwest Kodiak District (except the Kizhuyak Bay Section remains closed) Afognak District (except the Duck Bay, Izhut Bay, Inner Kitoi Bay, and Outer Kitoi Bay sections remain closed) Northeast Kodiak District Eastside Kodiak District (except the Inner Ugak Bay Section and Pasagshak Bay remain closed) <u>Opening</u> for 57 hours, until 9:00 PM 7/8: <ul style="list-style-type: none"> Mainland District (except the Wide Bay and Cape Igvak sections remain closed) <u>Closure</u> in the following areas: <ul style="list-style-type: none"> Foul Bay Special Harvest Area Waterfall Bay Special Harvest Area

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Appendix B2.–Page 3 of 10.

E.O. #	Issued	Effective	Action in effect
9 (cont.)			<u>Closed water adjustments:</u> <ul style="list-style-type: none"> Reduced until further notice in Foul Bay and Waterfall Bay
10	10:00 PM 7/5/19	9:00 PM 7/5/19	<u>Extension</u> for 72 hours, until 9:00 PM 7/8: <ul style="list-style-type: none"> Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats section <u>Closed water adjustments:</u> <ul style="list-style-type: none"> Reduced from noon 7/5 until 9:00 PM 7/8 at Dog Salmon Creek Expanded from noon 7/5 until 9:00 PM 7/8 at Horse Marine Lagoon
11	10:00 AM 7/12/19	Noon 7/13/19	<u>Opening</u> for 105 hours, until 9:00 PM 7/17: <ul style="list-style-type: none"> Outer Karluk Section Northwest Kodiak District (except the Kizhuyak Bay Section remains closed) Afognak District (except the Duck Bay, Izhut Bay, Inner Kitoi Bay, and Outer Kitoi Bay sections remain closed) Northeast Kodiak District Eastside Kodiak District (except the Inner Ugak Bay Section and Pasagshak Bay remain closed) Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections <u>Opening</u> for 57 hours, until 9:00 PM 7/15: <ul style="list-style-type: none"> Outer Ayakulik and Halibut Bay sections Mainland District (except Wide Bay and Cape Igvak sections remain closed) <u>Closed water adjustments:</u> <ul style="list-style-type: none"> Reduced from noon 7/13 until 9:00 PM 7/17 at Dog Salmon Creek Expanded from noon 7/13 until 9:00 PM 7/17 at Horse Marine Lagoon
12	10:30 AM 7/17/19	9:00 PM 7/17/19	<u>Extension</u> for 72 hours, until 9:00 PM 7/20: <ul style="list-style-type: none"> Cape Alitak, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections
		Noon 7/18/19	<u>Opening</u> until further notice: <ul style="list-style-type: none"> Duck Bay and Izhut Bay sections
13	10:30 AM 7/18/19	Noon 7/20/19	<u>Opening</u> for 105 hours, until 9:00 PM 7/24: <ul style="list-style-type: none"> Outer Karluk Section Northwest Kodiak District (except the Kizhuyak Bay Section remains closed) Afognak District (except Inner Kitoi Bay and Outer Kitoi Bay sections remain closed) Northeast Kodiak District Eastside Kodiak District (except Inner Ugak Bay section and Pasagshak Bay remain closed) Humpy-Deadman Section

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E.O. #	Issued	Effective	Action in effect
13 (cont.)		Noon 7/20/19	<u>Opening</u> for 57 hours, until 9:00 PM 7/22: <ul style="list-style-type: none"> Outer Ayakulik and Halibut Bay sections Mainland District (except Wide Bay and Cape Igvak sections remain closed)
		9:00 PM 7/20/10	<u>Extension</u> for 96 hours, until 9:00 PM 7/24: <ul style="list-style-type: none"> Cape Alitak, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections <u>Closed water adjustments:</u> <ul style="list-style-type: none"> Reduced from 9:00 PM 7/20 until 9:00 PM 7/24 at Dog Salmon Creek Expanded from 9:00 PM 7/20 until 9:00 PM 7/24 at Horse Marine Lagoon
14	10:00 AM 7/19/19	Noon 7/20/19	<u>Opening</u> until further notice: <ul style="list-style-type: none"> Outer Kitoi Bay Section
15	5:00 PM 7/20/19	8:00 PM 7/20/19	<u>Closure</u> in the following areas: <ul style="list-style-type: none"> 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
16	10:00 AM 7/24/19	9:00 PM 7/24/19	<u>Extension</u> for 72 hours, until 9:00 PM 7/27: <ul style="list-style-type: none"> Outer Karluk Section Northwest Kodiak District (except the Kizhuyak Bay Section remains closed) Southwest Afognak and Northwest Afognak sections Cape Alitak, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections
		Noon 7/25/19	<u>Opening</u> for 57 hours, until 9:00 PM 7/27: <ul style="list-style-type: none"> Outer Ayakulik and Halibut Bay sections <u>Closed water adjustments:</u> <ul style="list-style-type: none"> Reduced from 9:00 PM 7/24 until 9:00 PM 7/27 at Dog Salmon Creek Expanded from 9:00 PM 7/24 until 9:00 PM 7/27 at Horse Marine Lagoon
17	10:00 AM 7/26/19	Noon 7/27/19	<u>Opening</u> for 57 hours, until 9:00 PM 7/27: <ul style="list-style-type: none"> Raspberry Strait, Southeast Afognak, Northeast Afognak, Shuyak Island, Pauls Bay, and Perenosa Bay sections Kizhuyak Bay Section Northeast Kodiak District Eastside Kodiak District (except the Inner Ugak Bay Section will remain closed) Humpy-Deadman Section Mainland District

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E.O. #	Issued	Effective	Action in effect
17 (cont.)		9:00 PM 7/27/19	<p><u>Extension</u> for 48 hours, until 9:00 PM 7/29:</p> <ul style="list-style-type: none"> Outer Ayakulik, Halibut Bay, and Outer Karluk sections Northwest Kodiak District (except the Kizhuyak Bay Section will open at noon 7/27) Southwest Afognak and Northwest Afognak sections Cape Alitak, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections <p><u>Closed water adjustments:</u></p> <ul style="list-style-type: none"> Reduced from 9:00 PM 7/27 until 9:00 PM 7/29 at Dog Salmon Creek Expanded from 9:00 PM 7/27 until 9:00 PM 7/29 at Horse Marine Lagoon
18	10:00 AM 7/29/19	9:00 PM 7/29/19	<p><u>Extension</u> for 24 hours, until 9:00 PM 7/30:</p> <ul style="list-style-type: none"> Northwest Kodiak District Southwest Afognak Section Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections <p>Noon 8/1/19</p> <p><u>Opening</u> until further notice:</p> <ul style="list-style-type: none"> Spiridon Bay Special Harvest Area <p><u>Closed water adjustments:</u></p> <ul style="list-style-type: none"> Reduced from 9:00 PM 7/27 until 9:00 PM 7/29 at Dog Salmon Creek Expanded from 9:00 PM 7/27 until 9:00 PM 7/29 at Horse Marine Lagoon
19	10:00 AM 7/30/19	9:00 PM 7/30/19	<p><u>Extension</u> for 48 hours, until 9:00 PM 8/1:</p> <ul style="list-style-type: none"> Northwest Kodiak District Southwest Afognak Section Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections <p><u>Closed water adjustments:</u></p> <ul style="list-style-type: none"> Expanded until further notice at Malina Creek Reduced from 9:00 PM 7/30 until 9:00 PM 8/1 at Dog Salmon Creek Expanded from 9:00 PM 7/30 until 9:00 PM 8/1 at Horse Marine Lagoon
20	10:00 PM 7/31/19	Noon 8/1/19	<p><u>Opening</u> for 105 hours, until 9:00 PM 8/5:</p> <ul style="list-style-type: none"> Northwest Afognak Section Wide Bay, Cape Igvak, Alinchak Bay, and Katmai sections Seven Rivers and Two-Headed sections <p>9:00 PM 8/1/19</p> <p><u>Extension</u> for 96 hours, until 9:00 PM 8/5:</p> <ul style="list-style-type: none"> Northwest Kodiak District Southwest Afognak Section Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, Olga Bay, and Dog Salmon Flats sections <p>9:00 PM 8/1/19</p> <p><u>Closure</u> in the following areas:</p> <ul style="list-style-type: none"> Duck Bay, Izhut Bay, and Outer Kitoi Bay sections

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E.O. #	Issued	Effective	Action in effect
20 (cont.)		Noon 8/3/19	<u>Opening</u> for 57 hours, until 9:00 PM 8/5: <ul style="list-style-type: none"> Outer Ayakulik Section Dakavak Bay, Inner Kukak Bay, Outer Kukak Bay, Hallo Bay, and Big River sections Sitkalidak, Inner Ugak Bay, and Outer Ugak Bay sections <u>Closed water adjustments:</u> <ul style="list-style-type: none"> Expanded until further notice at Malina Creek Reduced from 9:00 PM 8/1 until 9:00 PM 8/5 at Dog Salmon Creek Expanded from 9:00 PM 8/1 until 9:00 PM 8/5 at Horse Marine Lagoon
21	5:00 PM 8/5/19	12:01 AM 8/5/19	<u>Opening</u> of Cost Recovery Fishery: <ul style="list-style-type: none"> Kitoi Bay Special Harvest Area
		Noon 8/5/19	<u>Opening</u> for 57 hours, until 9:00 PM 8/7: <ul style="list-style-type: none"> Southeast Afognak, Raspberry Strait, Shuyak Island, Pauls Bay, Perenosa Bay, and Northeast Afognak sections
		9:00 PM 8/5/19	<u>Extension</u> for 48 hours, until 9:00 PM 8/7: <ul style="list-style-type: none"> Northwest Kodiak District Southwest Afognak and Northwest Afognak sections Eastside Kodiak District Humpy-Deadman Section
22	10:00 AM 8/7/19	9:00 PM 8/7/19	<u>Extension</u> for 72 hours, until 9:00 PM 8/10: <ul style="list-style-type: none"> Northwest Kodiak District Southwest Afognak, Northwest Afognak, Northeast Afognak, Southeast Afognak, Raspberry Strait, and Perenosa Bay sections Eastside Kodiak District Humpy-Deadman Section
		Noon 8/8/19	<u>Opening</u> for 57 hours, until 9:00 PM 8/10: <ul style="list-style-type: none"> Northeast Kodiak District
23	10:00 AM 8/8/19	Noon 8/9/19	<u>Opening</u> for 81 hours, until 9:00 PM 8/12: <ul style="list-style-type: none"> Outer Ayakulik Section Shuyak Island and Pauls Bay sections
		9:00 PM 8/9/19	<u>Closure</u> in the following area: <ul style="list-style-type: none"> Spiridon Bay Special Harvest Area
		9:00 PM 8/10/19	<u>Extension</u> for 48 hours, until 9:00 PM 8/12: <ul style="list-style-type: none"> Northwest Kodiak District Southwest Afognak, Northwest Afognak, Northeast Afognak, Southeast Afognak, Raspberry Strait, and Perenosa Bay sections Eastside Kodiak District Humpy-Deadman Section
24	10:00 AM 8/10/19	Noon 8/11/19	<u>Opening</u> for 33 hours, until 9:00 PM 8/12: <ul style="list-style-type: none"> Inner Ayakulik Section

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E.O. #	Issued	Effective	Action in effect
24 (cont.)		Noon 8/11/19	<u>Opening</u> for 57 hours, until 9:00 PM 8/13: <ul style="list-style-type: none"> • Katmai, Alinchak, Cape Igvak, and Wide Bay sections
		9:00 PM 8/12/19	<u>Extension</u> for 24 hours, until 9:00 PM 8/13: <ul style="list-style-type: none"> • Northwest Kodiak District • Southwest Afognak, Northwest Afognak, Northeast Afognak, Raspberry Strait, and Perenosa Bay sections • Seven Rivers, Two-Headed, and Sitkalidak sections • Humpy-Deadman Sections • Outer Ayakulik Section
25	10:00 AM 8/13/19	9:00 PM 8/13/19	<u>Extension</u> for 69 hours, until 9:00 PM 8/16: <ul style="list-style-type: none"> • Northwest Kodiak District • Southwest Afognak, Northwest Afognak, Northeast Afognak, Raspberry Strait, and Perenosa Bay sections • Seven Rivers, Two-Headed, and Sitkalidak sections • Katmai, Alinchak Bay, Cape Igvak, and Wide Bay sections • Humpy-Deadman Section • Outer Ayakulik Section
		Noon 8/14/19	<u>Opening</u> for 54 hours, until 6:00 PM 8/16: <ul style="list-style-type: none"> • Dakavak, Outer Kukak, Inner Kukak, Hallo Bay, and Big River sections • Northeast Kodiak District
26	10:00 AM 8/15/19	Noon 8/16/19	<u>Opening</u> for 78 hours, until 6:00 PM 8/19: <ul style="list-style-type: none"> • Southeast Afognak Section
		9:00 PM 8/16/19	<u>Extension</u> for 72 hours, until 6:00 PM 8/19: <ul style="list-style-type: none"> • Northwest Kodiak District • Southwest Afognak, Northwest Afognak, Northeast Afognak, Raspberry Strait, and Perenosa Bay sections • Seven Rivers, Two-Headed, and Sitkalidak sections • Katmai, Alinchak Bay, Cape Igvak, and Wide Bay sections • Humpy-Deadman Section • Outer Ayakulik Sections • Northeast Kodiak District
27	10:00 PM 8/22/19	6:00 PM 8/22/19	<u>Extension</u> for 48 hours, until 6:00 PM 8/24: <ul style="list-style-type: none"> • Northwest Kodiak District • Southwest Afognak, Northwest Afognak, Northeast Afognak, Southeast Afognak, Raspberry Strait, and Perenosa Bay sections • Seven Rivers, Two-Headed, and Sitkalidak sections • Northeast Kodiak District • Katmai, Alinchak Bay, Cape Igvak, and Wide Bay sections • Humpy-Deadman Bay Section • Outer Ayakulik Section

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E.O. #	Issued	Effective	Action in effect
28	10:00 AM 8/22/19	6:00 PM 8/22/19	<u>Extension</u> for 48 hours, until 6:00 PM 8/24: <ul style="list-style-type: none"> • Northwest Kodiak District • Southwest Afognak, Northwest Afognak, Northeast Afognak, Southeast Afognak, Raspberry Strait, and Perenosa Bay sections • Seven Rivers, Two-Headed, and Sitkalidak sections • Northeast Kodiak District • Katmai, Alinchak Bay, Cape Igvak, and Wide Bay sections • Humpy-Deadman Section • Outer Ayakulik Section
29	9:00 AM 8/24/19	6:00 PM 8/24/19	<u>Extension</u> for 72 hours, until 6:00 PM 8/27: <ul style="list-style-type: none"> • Northwest Kodiak District • Southwest Afognak, Northwest Afognak, Northeast Afognak, Southeast Afognak, Raspberry Strait, and Perenosa Bay sections • Seven Rivers, Two-Headed, and Sitkalidak sections • Northeast Kodiak District • Katmai, Alinchak Bay, Cape Igvak, and Wide Bay sections • Humpy-Deadman Section • Outer Ayakulik Section
		Noon 8/25/19	<u>Opening</u> for 54 hours, until 6:00 PM 8/27: <ul style="list-style-type: none"> • Duck Bay Section
30	10:00 AM 8/25/19	Noon 8/26/19	<u>Opening</u> for 54 hours, until 6:00 PM 8/28: <ul style="list-style-type: none"> • Izhut Bay Section
		6:00 PM 8/27/19	<u>Extension</u> for 24 hours, until 6:00 PM 8/28 <ul style="list-style-type: none"> • Duck Bay Section
31	10:30 AM 8/30/19	Noon 8/31/19	<u>Opening</u> for 78 hours until 6:00PM 9/3: <ul style="list-style-type: none"> • Outer Karluk Section • Northwest Kodiak District • Southwest Afognak Section • Seven Rivers, Two-Headed, and Sitkalidak sections • Humpy-Deadman Section • Outer Ayakulik Section
32	10:00 AM 9/3/19	6:00 PM 9/3/19	<u>Extension</u> for 72 hours, until 6:00 PM 9/6: <ul style="list-style-type: none"> • Outer Ayakulik Section • Northwest Kodiak District • Southwest Afognak Section <u>Closure</u> in the following areas: <ul style="list-style-type: none"> • Seven Rivers, Two-Headed, and Sitkalidak sections • Humpy-Deadman Section • Outer Ayakulik Section

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E.O. #	Issued	Effective	Action in effect
33	10:00 AM 9/4/19	Noon 9/5/19	<u>Opening</u> for 54 hours, until 6:00 PM 9/7: <ul style="list-style-type: none"> Izhut Bay Section
34	10:00 AM 9/5/19	Noon 9/6/19	<u>Opening</u> for 30 hours, until 6:00 PM 9/7/ <ul style="list-style-type: none"> Inner Kitoi Bay and Outer Kitoi Bay sections
		6:00 PM 9/6/19	<u>Extension</u> for 96 hours, until 6:00 PM, 9/10: <ul style="list-style-type: none"> Outer Karluk Section Northwest Kodiak District Southwest Afognak Section
		Noon 9/7/19	<u>Opening</u> for 78 hours, until 6:00 PM, 9/10: <ul style="list-style-type: none"> Duck Bay, Southeast Afognak, Raspberry Strait, Northwest Afognak, Shuyak Island, Perenos Bay, Pauls Bay, and Northeast Afognak sections Seven Rivers, Two-Headed, and Sitkalidak sections Humpy-Deadman Section Outer Ayakulik Section
		6:00 PM 9/7/19	<u>Extension</u> until further notice: <ul style="list-style-type: none"> Izhut Bay Section
			<u>Closed water adjustments:</u> <ul style="list-style-type: none"> Reduced from noon 9/6 until 6:00 PM 9/7 at Little Kitoi Creek Expanded from noon 9/6 until 6:00 PM 8/1 at Big Kitoi Creek
35	10:00 AM 9/10/19	6:00 PM 9/10/19	<u>Extension</u> for 72 hours until 6:00 PM 10/13: <ul style="list-style-type: none"> Central and North Cape sections Southwest Afognak Section
		6:00 PM 9/10/19	<u>Closure</u> in the following areas: <ul style="list-style-type: none"> Izhut Bay Section Outer Karluk Section Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, Terror Bay, Kizhuyak Bay, Sharatin Bay, and Anton Larsen Bay sections Duck Bay, Southeast Afognak, Raspberry Strait, Northwest Afognak, Shuyak Island, Perenos Bay, Pauls Bay, and Northeast Afognak sections Seven Rivers, Two-Headed, and Sitkalidak sections Humpy-Deadman Section Outer Ayakulik Section
36	11:45 AM 9/10/19	6:00 PM 9/10/19	<u>Extension</u> for 72 hours, until 6:00 PM 9/13: <ul style="list-style-type: none"> Outer Karluk Section
37	10:00 AM 9/12/19	6:00 PM 9/13/19	<u>Extension</u> until further notice: <ul style="list-style-type: none"> Outer Karluk Section Central and North Cape sections Southwest Afognak Section

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E.O. #	Issued	Effective	Action in effect
37 (cont.)		Noon 9/14/19	<u>Opening</u> for 78 hours, until 6:00 PM 9/17: <ul style="list-style-type: none"> • Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, Terror Bay, Kizhuyak Bay, Sharatin Bay, and Anton Larsen Bay sections • The Duck Bay, Southeast Afognak, Raspberry Strait, Northwest Afognak, Shuyak Island, Perenosa Bay, Pauls Bay, and Northeast Afognak sections • The Seven Rivers, Two-Headed, and Sitkalidak sections • The Cape Alitak, Alitak Bay, Moser Bay, Olga Bay, and Humpy-Deadman sections • The Outer Ayakulik, Halibut Bay, and Sturgeon sections
38	11:00 AM 9/19/19	Noon 9/21/19	<u>Opening</u> for 78 hours, until 6:00 PM 9/24: <ul style="list-style-type: none"> • The Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, Terror Bay, Kizhuyak Bay, Sharatin Bay, and Anton Larsen Bay sections • The Duck Bay, Southeast Afognak, Raspberry Strait, Northwest Afognak, Shuyak Island, Perenosa Bay, Pauls Bay, and Northeast Afognak sections • The Seven Rivers, Two-Headed, and Sitkalidak sections • The Cape Alitak, Alitak Bay, Moser Bay, Olga Bay, and Humpy-Deadman sections • The Outer Ayakulik, Halibut Bay, and Sturgeon sections
39	11:00 AM 9/26/19	Noon 9/28/19	<u>Opening</u> for 78 hours, until 6:00 PM 10/1: <ul style="list-style-type: none"> • The Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, Terror Bay, Kizhuyak Bay, Sharatin Bay, and Anton Larsen Bay sections • The Duck Bay, Southeast Afognak, Raspberry Strait, Northwest Afognak, Shuyak Island, Perenosa Bay, Pauls Bay, and Northeast Afognak sections • The Eastside Kodiak District • The Cape Alitak, Alitak Bay, Moser Bay, Olga Bay, and Humpy-Deadman sections • The Outer Ayakulik, Halibut Bay, and Sturgeon sections
40	10:00 AM 9/2/19	Noon 9/5/19	<u>Opening</u> for 78 hours until 6:00 PM 9/8: <ul style="list-style-type: none"> • Uyak Bay, Zachar Bay, Spiridon Bay, Inner Uganik Bay, Terror Bay, Kizhuyak Bay, Sharatin Bay, and Anton Larsen Bay sections • Duck Bay, Southeast Afognak, Raspberry Strait, Northwest Afognak, Shuyak Island, Perenosa Bay, Pauls Bay, and Northeast Afognak sections • Eastside Kodiak District • Cape Alitak, Alitak Bay, Moser Bay, Olga Bay, and Humpy-Deadman sections • Outer Ayakulik, Halibut Bay, and Sturgeon 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). Between 1968 and 1969, ADF&G conducted a tagging study at Cape Igvak (ADF&G 1970). In 1968, ADF&G tagged 325 sockeye salmon on June 22. Only 5 recoveries were documented (4 in Chignik and 1 in Cook Inlet). In 1969 ADF&G tagged 791 sockeye salmon in the Cape Igvak area between June 14 and July 6. Tag recoveries ($n = 161$) were primarily made in the Chignik Management Area (83.9%), KMA (9.3%), Cook Inlet (4.3%), and West of Chignik (2.5%). 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 KMA 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 et al. 2019).

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 40 years the plan has been in place (Appendices C3 and C4).

2019 Cape Igvak Fishery

Early Run

The 2019 preseason forecast for the Chignik system predicted a return of approximately 829,000 early-run (Black Lake) sockeye salmon. The early-run escapement goal is 350,000 to 450,000 sockeye salmon through late July (Schaberg et al. 2019). This left a forecasted harvestable surplus of 429,000 early-run sockeye salmon (Brenner et al. 2019).

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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 early Chignik sockeye salmon return was well below average and the allocative requirements were not met, therefore the allocation fishery with Cape Igvak was not open to commercial fishing during the early run in 2019. 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.

Late Run

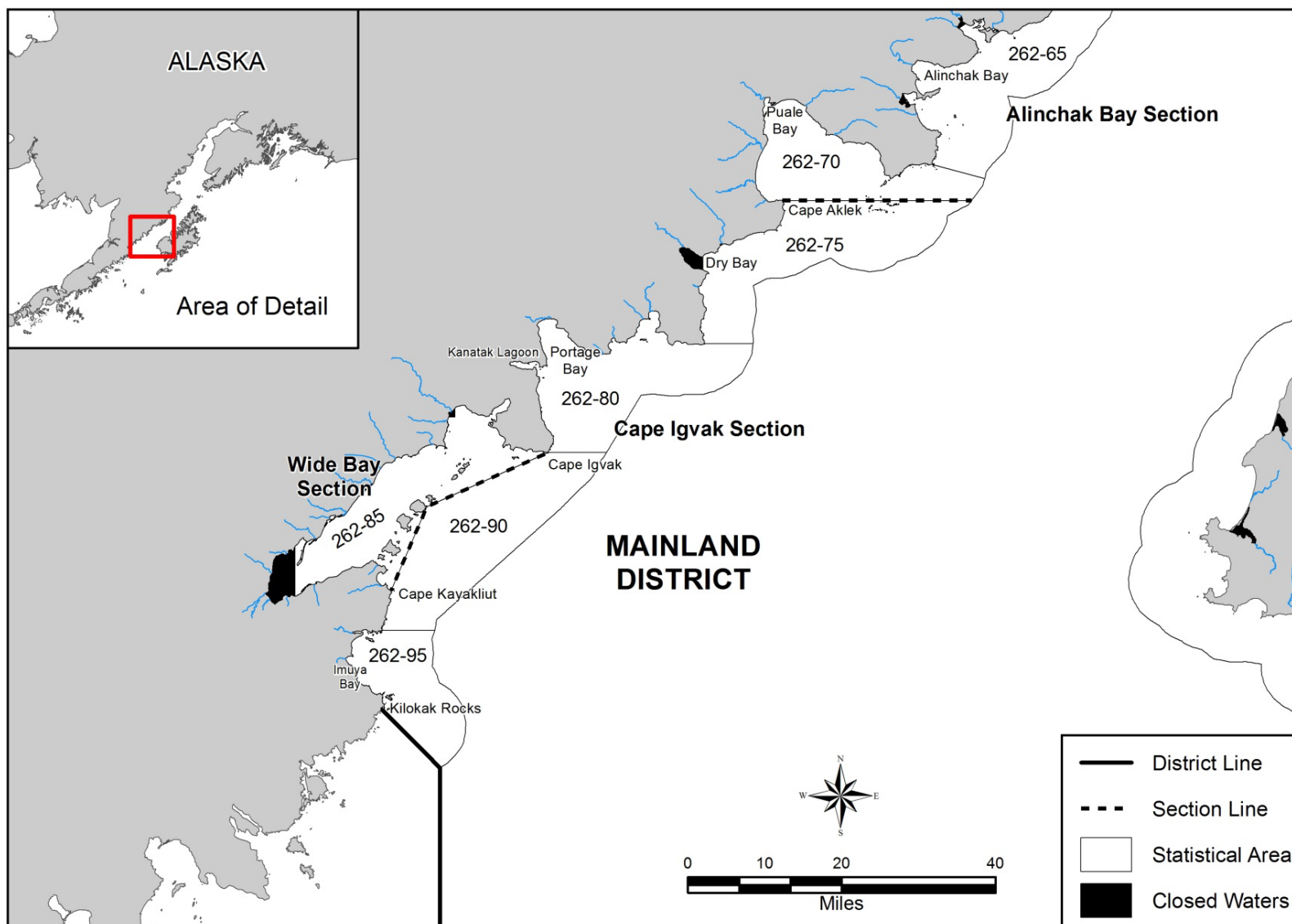
The preseason forecast for late-run (Chignik Lake) sockeye salmon was approximately 909,000 fish in 2019. The late-run escapement objective was 275,000 to 400,000 sockeye salmon (Schaberg et al. 2019) resulting in a harvestable surplus forecast of 571,000 sockeye salmon (Brenner et al. 2019).

The actual late run was weaker than forecast during the allocation period and did not meet the biological and allocative criteria to allow for the Cape Igvak fishery to open during the late run.

REFERENCES CITED

- ADF&G. 1970. Stock identification of commercially-caught red salmon in the vicinity of Cape Igvak, 1968, 1969, 1970. Alaska Department of Fish and Game, Division of Commercial Fisheries Unpublished Region 2 Report, Anchorage.
- Brenner, R. E., A. R. Munro, and S. J. Larson, editors. 2019. Run forecasts and harvest projections for 2019 Alaska salmon fisheries and review of the 2018 season. Alaska Department of Fish and Game, Special Publication No. 19-07, Anchorage.
- Fuerst, B. A., J. Jackson and A. E. Dorner. 2019. Kodiak management area harvest strategy for the 2019 commercial salmon fishery. Alaska Department of Fish and Game, Regional Information Report No. 4K19-06, Kodiak.
- Schaberg, K. L., M. B. Foster, and A. St. Saviour. 2019. Review of salmon escapement goals in the Chignik Management Area, 2018. Alaska Department of Fish and Game, Fishery Manuscript Series No. 19-02, Anchorage.

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



Appendix C3.—Harvest of sockeye salmon considered to be Chignik bound in the Chignik, Cape Igvak, and Southeastern District Mainland commercial salmon fisheries through July 25, 1978 to 2019.

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	2,253,424	81.16	354,179	12.76	169,029	7.50	2,776,632

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Year	Chignik		Cape Igvak ^a		Southeastern District Mainland ^a		Total
	Catch ^b	Percent	Catch ^b	Percent	Catch ^b	Percent	
2014	330,302	100.00	^f	0.00	^f	0.00	330,302
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	19.13	94,790	8.12	1,560,586
2017	679,410	80.76	118,101	14.04	43,730	6.44	841,241
2018	128	100.00	^f	0.00	^f	0.00	128
2019	185,567	100.00	^f	0.00	^f	0.00	185,567

^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 over-escapement 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%.

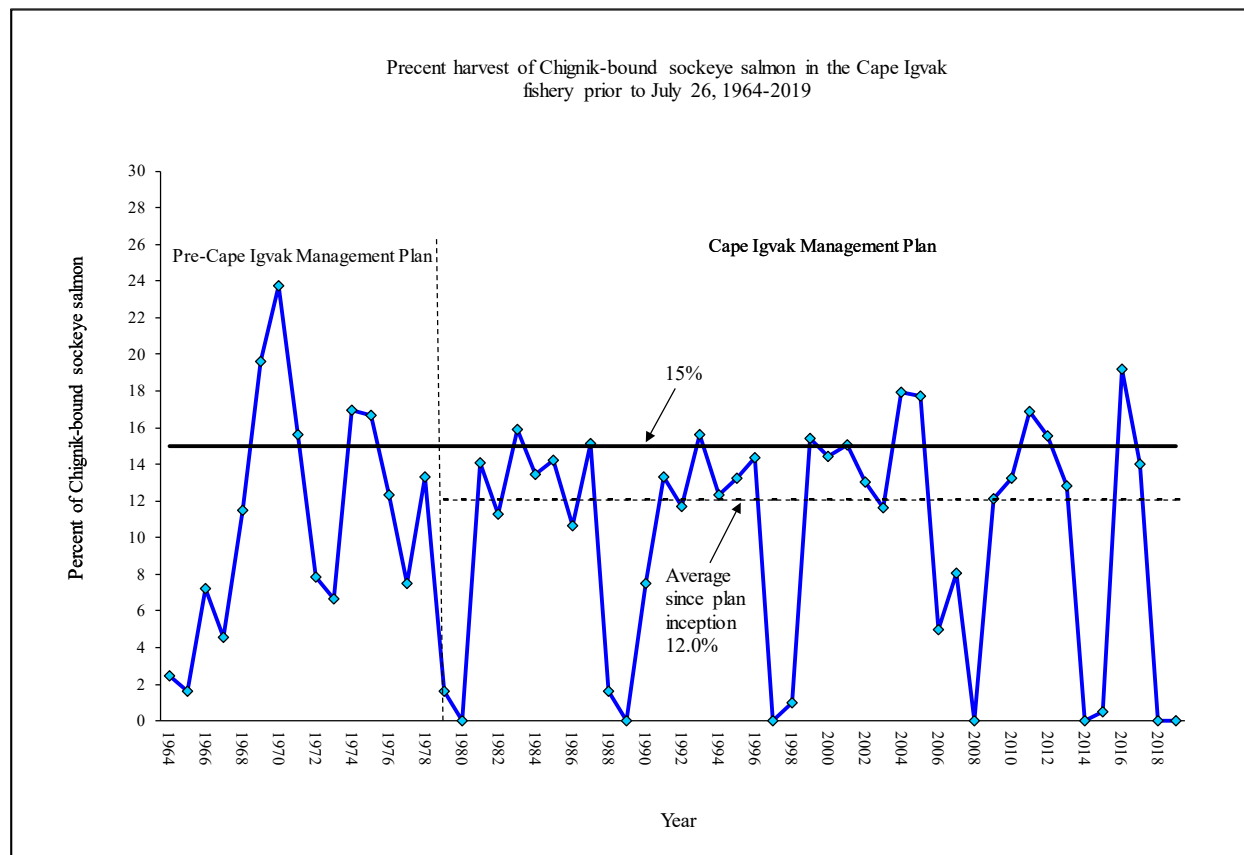
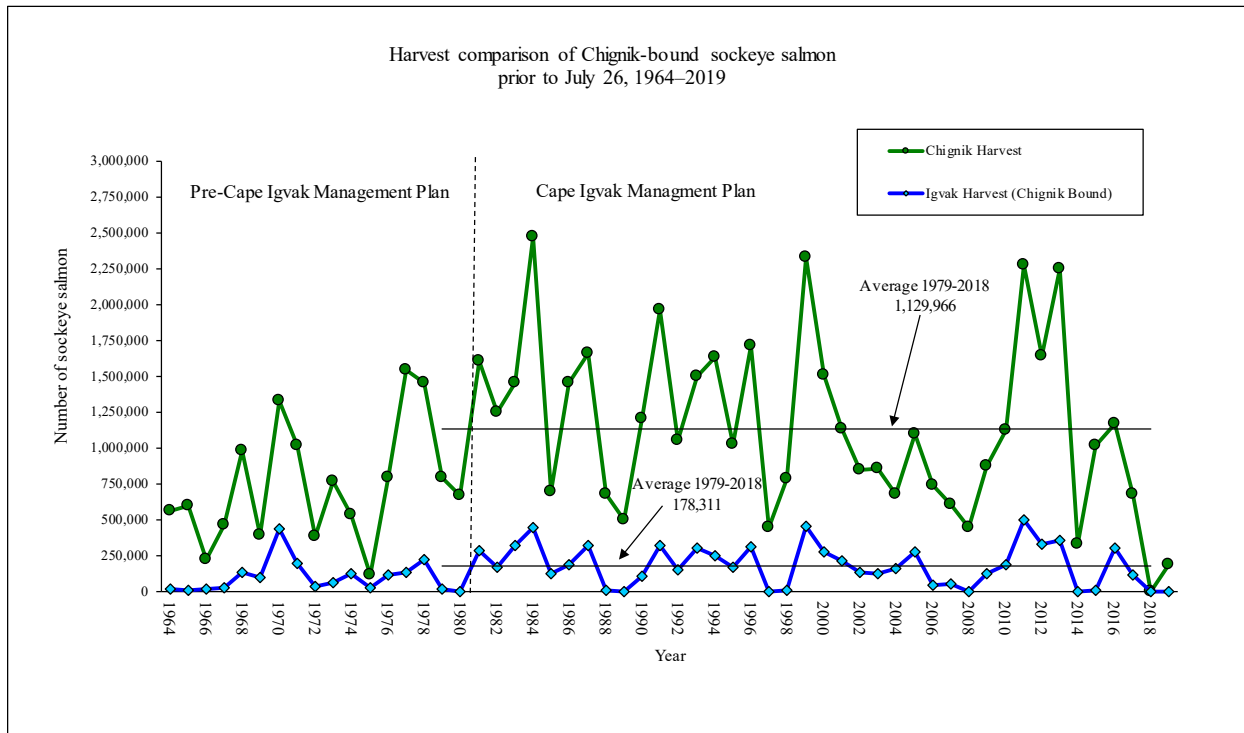
^k Includes 7,714 sockeye salmon caught on June 18 by the Chignik Seiners Association, and an over-escapement of 52,131 sockeye salmon counted through the weir during the Chignik Seiners Association boycott (June 16 to June 29).

^l Includes 176,605 sockeye salmon caught June 16–29 by the Chignik Seiners Association, and foregone harvest due to over-escapement 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 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 minor system sockeye, 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 (Fuerst et al. 2019). This management plan has been in effect since 1988 and was most recently revised by the BOF in 2017.

Recent Board of Fisheries Actions:

Most of the changes to the *Alitak District Salmon Management Plan* are directed at early run sockeye salmon management between June 1 and July 15. The changes are aimed at achieving the Frazer sockeye salmon BEG of 75,000 to 170,000 fish while meeting the smaller Upper Station early-run sockeye salmon BEG of 43,000 to 93,000 fish. These two salmon runs have overlapping run timing and Upper Station is located further into Olga Bay than the Frazer system (Appendix D2).

Previous BOF actions directed the department to focus management on the larger Frazer sockeye salmon run by establishing an Upper Station early-run sockeye salmon optimal escapement goal (OEG) of 25,000 fish (Prokopowich 1999). Since the Upper Station early-run OEG was lower than the Upper Station early-run SEG, management was focused on the larger Frazer sockeye salmon run. As a result, Upper Station early-run often achieved the OEG but failed to meet the SEG.

Beginning in 2014, the BOF eliminated the staggered opening and closing times for the Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay sections. Deleting this allocative language better enabled the department to pulse fish into Olga Bay. The BOF also liberalized the criteria for opening the terminal Dog Salmon Flats Section. Beginning in 2014, the Dog Salmon Flats Section could open prior to exceeding the Frazer sockeye salmon escapement goal.

In 2017, the BOF mandated the department to manage the Upper Station sockeye salmon early-run for the BEG instead of the OEG (5 AAC 18.361(c); Fuerst *In prep*). The BOF also deleted language directing the department to manage the commercial fishery to the extent possible in the traditional fisheries located in the Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, and Olga Bay sections. Removing this language enables the department to restrict the commercial fishery to the nontraditional terminal Dog Salmon Flats Section. The BOF further removed language directing the department to manage the Frazer sockeye salmon run for maximum sustained yield. All of these changes allow the department more flexibility to manage for the Frazer BEG and the Upper Station BEG.

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2019 Alitak Fishery

The total run forecast for the Upper Station early run was 70,000 sockeye salmon, with an estimated harvestable surplus of approximately 5,000 fish. The 2019 total run forecast for the Frazer Lake system was 421,000 sockeye salmon (Brenner et al. 2019), with an estimated harvestable surplus of approximately 284,000 sockeye salmon. The total run forecast for Upper Station late run was 223,000 sockeye salmon, with an estimated harvestable surplus of approximately 37,000 sockeye salmon (Brenner et al. 2019).

The early-run Upper Station sockeye salmon run has a biological escapement goal (BEG) of 43,000 to 93,000 fish. The 2019 target sockeye salmon escapement for Upper Station early run was based on a maximum sustained yield calculation of 65,000 fish (Schaberg et al. 2016). The Frazer Lake sockeye salmon BEG range is 75,000 to 170,000 fish. The 2019 targeted sockeye salmon escapement for Frazer Lake was based on a maximum sustained yield calculation of 117,000 fish (Schaberg et al. 2016). Frazer 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. 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 21,164 fish. The 2019 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 2019 target sockeye salmon escapement for the Upper Station late run was based on a maximum sustained yield calculation of 186,000 fish (Schaberg et al. 2016).

Frazer Jack Salmon and Alitak Salmon Management

In some years, the Frazer Lake sockeye salmon run has included a large number of jacks. In order to increase the absolute number of large adult spawners, 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.

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

With the exception of the nontraditional gillnet only terminal harvest areas (including the Dog Salmon Flats Section; Appendix D2), the Alitak District is managed from June 1 through June 30 based on sockeye salmon returning to both the Frazer and Upper Station systems. Early-run sockeye salmon escapement through Upper Station weir was weak and not on target to meet the minimum sockeye salmon escapement goal value of 43,000 fish (Fuerst *In prep*).

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Due to no commercial salmon openings in the Alitak District for most of June, Dog Salmon creek weir sockeye salmon escapement (i.e. Frazer Lake sockeye salmon) was above average and on track to exceed the upper value of the escapement goal of 170,000 fish (Fuerst *In prep*). On June 19, the department announced an 81-hour commercial salmon fishing period in the nontraditional (gillnet only) Dog Salmon Flats Section beginning on June 20 (Appendix D2). This harvest strategy has been used in the past to concentrate commercial salmon harvest on Frazer Lake sockeye salmon while allowing Upper Station early-run sockeye salmon to continue further in Olga Bay to the South Olga Lakes system (Appendix D2).

In late June, Dog Salmon Creek weir sockeye salmon escapement continued to be strong (Fuerst *In prep*) while Upper Station early-run sockeye salmon escapement began to build, and the commercial salmon fishery in Dog Salmon Flats Section of the Alitak District was extended for an additional five days (Appendix B1). On June 27, Upper Station early-run sockeye salmon escapement increased, and the department anticipated the minimum escapement goal value of 43,000 fish would be met (Fuerst *In prep*). On June 27, the department announced a 57-hour commercial salmon fishing period in the traditional fishing areas of the Alitak District (both seine and gillnet) and nontraditional Dog Salmon Flats Section beginning on June 28. Sockeye salmon harvest was below average, and the Alitak District closed on June 30 (Appendix B1).

By regulation, the Alitak District is managed from July 1 through July 15 based on sockeye salmon returning to either the Frazer system or the Upper Station system. By July 2, escapement of both Dog Salmon Creek sockeye salmon and Upper Station early-run escapement began to increase (Fuerst *In prep*), and the department opened the Alitak District (including the Dog Salmon Flats Section) for 57 hours beginning Wednesday, July 3. Dog Salmon Creek sockeye salmon escapement continued to track above the target escapement goal of 140,000 fish, and the fishery was extended for an additional 72 hours. Sockeye salmon harvest continued to be below average, and the fishery closed on July 8 (Appendix B1).

In early July, Dog Salmon Creek sockeye salmon escapement counts indicated that there would be a large amount of jack salmon in 2019 (Fuerst *In prep*). Because jack salmon are almost always male, to attain a more appropriate sex ratio on large jack sockeye salmon years, the department targets the upper end of the Frazer sockeye salmon escapement goal. Early pink salmon escapement also indicated that the pink salmon run to Dog Salmon creek would be strong. After a 4-day closure, both the Dog Salmon Creek sockeye and pink salmon escapement was above average, and the lower escapement goal value of the Upper Station early-run sockeye salmon was achieved. The department opened the Alitak District to commercial salmon fishing for 105 hours on July 13. The final 2019 early-run sockeye salmon escapement at Upper Station weir (through July 15) was 49,517 sockeye salmon within the established BEG of 43,000 to 93,000 fish.

By regulation, the traditional sockeye salmon fishing areas of the Alitak District are managed from July 16 through August 9 based on sockeye or pink salmon returning to the Frazer system. By July 16, escapement of Dog Salmon creek large adult sockeye salmon began to increase, and Dog Salmon creek pink salmon escapement was at a record level. The department extended the traditional sockeye salmon fishing areas and the nontraditional Dog Salmon Flats Section for an

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additional 72 hours. Sockeye salmon harvest continued to be below average. Between July 17 and when the weir was pulled on August 5, the number of jack sockeye salmon passing the Dog Salmon Creek weir was high but the total number of large adult sockeye that had passed the weir was adequate. The Dog Salmon creek pink salmon escapement was the largest on record, and the fishery was extended until August 5 (Appendix B1).

The final 2019 sockeye salmon escapement at Dog Salmon weir was 162,697 fish (Fuerst *In prep*). The Dog Salmon creek weir was removed on August 5. The final 2019 Frazer fish pass escapement was 169,627 sockeye salmon, within the established BEG of 75,000 to 170,000 fish (Schaberg et al. 2016; Fuerst *In prep*). The Frazer fish pass was closed after counts were completed on August 15. A total of 44,978 jacks (27.6% of the Dog Salmon escapement) passed Dog Salmon weir. A total of 53,798 jacks (31.7% of the Frazer escapement) passed the Frazer fish pass, bringing the nonjack adult total sockeye salmon escaped into Frazer Lake to 115,829 fish. A total of 372,414 pink salmon also escaped into Dog Salmon Creek (Table 4).

By regulation, the traditional sockeye salmon fishing areas of the Alitak District are managed from August 10 through August 25 based on late-run sockeye returning to the Upper Station system. Upper Station late-run sockeye escapement was well below average for all of August and early September and did not achieve the minimum escapement goal value of 120,000 fish until September 11 (Fuerst *In prep*). Several short commercial salmon openings were allowed in traditional sockeye salmon fishing areas of the Alitak District in late September, but no commercial salmon fishing took place. The final 2019 Upper Station late-run sockeye salmon escapement of 165,146 fish was within the BEG of 120,000 to 265,000 (Schaberg et al. 2016; Fuerst *In prep*). The 2019 Upper Station coho salmon escapement was above average at 12,648 fish (Table 4).

Humpy-Deadman Section Salmon Management

The Humpy-Deadman Section (HDS) is managed from June 1 to July 15 with equal fishing time with the Cape Alitak Section. After July 15, HDS is managed based on the strength of the local salmon returns. The entire Alitak District, including the Humpy-Deadman Section, was open for 105 hours with the second general pink salmon opening. On July 20, the Humpy-Deadman Section reopened with the third general pink salmon commercial fishing period. Early pink salmon escapement to the Deadman system was above average, but pink salmon harvest was below average, and the Humpy-Deadman Section closed as scheduled. After a short closure, on July 27 the Humpy-Deadman Section reopened, although harvest was below average. An aerial survey indicated that all the major systems of the Alitak District had above average escapement, and the Humpy-Deadman Section remained open for the majority of the rest of the season. In total, 1,700,357 pink salmon were harvested in the HDS, and the Alitak District pink salmon escapement was 1,001,847 fish.

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Season Totals

In 2019, set gillnet harvest in the Olga Bay Section (statistical area 257-40) by 13 permit holders included 13,248 sockeye, 16 coho, 13,334 pink, and 655 chum salmon (Appendix D3). Set gillnet harvest in the Moser Bay Section (statistical area 257-43) by 18 permit holders included 20,921 sockeye, 102 coho, 22,341 pink, and 1,180 chum salmon (Appendix D3). Set gillnet harvest in the Alitak Bay Section (statistical area 257-41) by 26 permit holders included 2 Chinook, 36,511 sockeye, 428 coho, 39,144 pink, and 5,478 chum salmon (Appendix D3). Set gillnet harvest in the Dog Salmon Flats Section (statistical area 257-42) by 32 permit holders included 89,027 sockeye, 42 coho, 52,608 pink, and 1,961 chum salmon (Appendix D3).

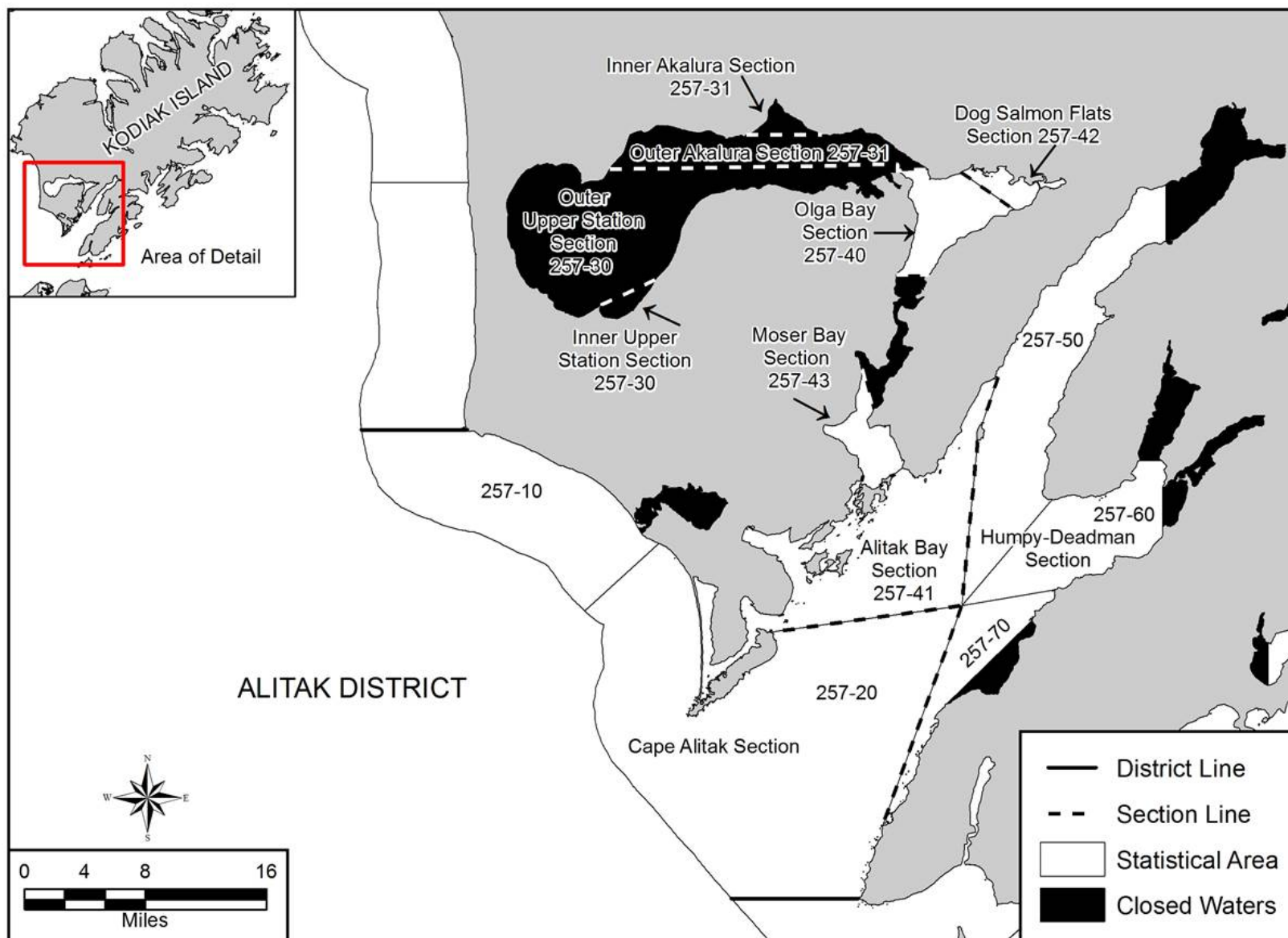
In 2019, purse seine harvest in the Cape Alitak Section (statistical areas 257-10 and -20) by 38 permit holders included 272 Chinook, 106,235 sockeye, 1,164 coho, 254,667 pink, and 7,782 chum salmon (Appendix D4). Seine harvest in the HDS (statistical areas 257-50, -60, and -70) by 33 permit holders included 34 Chinook, 64,166 sockeye, 16,063 coho, 1,700,357 pink and 16,474 chum salmon (Appendix D4).

A total of 50 purse seine permit holders fished in the Alitak District in 2019 with a total harvest of 306 Chinook (98% of the total Alitak District Chinook harvest), 170,410 sockeye (52%), 17,278 coho (97%), 1,955,194 pink (94%), and 24,297 chum salmon (72%; Appendices D4, D5, and D6). A total of 51 gillnet permit holders fished in Alitak District and harvested 5 Chinook (2%), 159,707 sockeye (48%), 588 coho (3%), 127,427 pink (6%), and 9,274 chum salmon (28%; Appendices D3, D5, and D6).

REFERENCES CITED

- Brenner, R. E., A. R. Munro, and S. J. Larsen, editors. 2019. Run forecasts and harvest projections for 2019 Alaska salmon fisheries and review of the 2018 season. Alaska Department of Fish and Game, Special Publication No. 19-07, Anchorage.
- Fuerst, B. A. *In prep.* Kodiak Management Area weir descriptions and salmon escapement report, 2019. Alaska Department of Fish and Game, Fisheries Management Report, Anchorage.
- Fuerst, B. A., J. Jackson, and A. E. Dorner. 2019. Kodiak management area harvest strategy for the 2019 commercial salmon fishery. Alaska Department of Fish and Game, Regional Information Report No. 4K19-06, Kodiak.
- Prokopowich, D. 1999. Kodiak area commercial salmon fishery harvest strategy, 1999. Alaska Department of Fish and Game, Regional Information Report No. 4K99-38, Anchorage
- Schaberg, K. L., M. B. Foster, M. Wattum, and T. R. McKinley. 2016. Review of salmon escapement goals in the Kodiak Management Area, 2016. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-09, Anchorage.

Appendix D2.—Map of the Alitak District showing sections, statistical areas, and closed waters, 2019.



Appendix D3.—Set gillnet daily salmon harvest, by species and section, for the Alitak District, 2019.

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	28-Jun	8	12	0	0	1,540	7,269	0	0	62	241	9	78
	29-Jun	6	6	0	0	821	3,905	0	0	48	182	4	34
	30-Jun	5	6	0	0	570	3,015	0	0	58	214	17	122
	3-Jul	4	5	0	0	610	3,072	0	0	125	410	16	110
	4-Jul	4	6	0	0	381	1,620	0	0	103	322	2	17
	5-Jul	4	5	0	0	411	1,765	0	0	71	236	18	130
	6-Jul	4	5	0	0	321	1,639	0	0	99	317	0	0
	7-Jul	5	6	0	0	104	501	0	0	120	406	6	35
	8-Jul	6	6	0	0	212	1,133	0	0	250	934	7	55
	13-Jul	8	9	0	0	1,473	6,775	1	3	1,402	4,753	136	937
	14-Jul	7	8	0	0	589	2,633	3	13	969	3,347	129	927
	15-Jul	6	8	0	0	273	1,420	0	0	640	2,209	93	603
	16-Jul	6	8	0	0	295	1,342	0	0	597	2,097	48	324
	17-Jul	7	8	0	0	271	1,228	0	0	713	2,530	27	195
	18-Jul	6	7	0	0	313	1,418	0	0	771	2,873	14	96
	19-Jul	5	7	0	0	607	2,790	0	0	497	1,774	18	128
	20-Jul	7	8	0	0	695	3,458	0	0	879	3,110	23	171
	21-Jul	7	8	0	0	533	2,494	0	0	477	1,799	3	19
	22-Jul	6	7	0	0	405	1,911	0	0	315	1,190	6	35
	23-Jul	8	9	0	0	585	2,621	0	0	856	3,098	13	74
	24-Jul	5	7	0	0	257	1,133	0	0	346	1,258	12	82
	25-Jul	5	5	0	0	113	516	0	0	223	776	4	24
	26-Jul ^a												
	27-Jul	5	5	0	0	161	721	0	0	179	621	6	46
	28-Jul	6	7	0	0	463	2,055	1	4	603	2,083	9	61
	29-Jul	5	5	0	0	206	917	0	0	199	729	2	15
	30-Jul	5	6	0	0	365	1,583	0	0	397	1,426	10	79
	31-Jul ^a												
	1-Aug	4	4	0	0	116	476	1	5	344	1,257	6	42

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Appendix D3.–Page 2 of 6.

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 (cont.)	2-Aug ^a												
	3-Aug	3	3	0	0	84	394	3	12	386	1,494	0	0
	4-Aug	4	4	0	0	110	494	3	20	385	1,339	0	0
	5-Aug ^a												
Total		13	200	0	0	13,248	61,880	16	83	13,334	47,155	655	4,568
Average weight					0.0		4.67		5.19		3.54		6.97
Moser Bay Section (257-43)	28-Jun	8	9	1	15	1,011	4,553	2	10	67	213	7	49
	29-Jun	8	12	0	0	1,452	6,247	1	4	135	408	17	96
	30-Jun	8	12	0	0	1,361	6,201	0	0	145	462	24	163
	3-Jul	5	6	0	0	358	1,646	1	5	95	279	34	161
	4-Jul	7	12	0	0	771	3,516	0	0	166	500	19	128
	5-Jul	8	12	0	0	1,127	5,144	7	33	350	1,054	22	152
	6-Jul	5	6	0	0	821	3,982	0	0	397	1,187	19	132
	7-Jul	6	11	0	0	683	3,226	1	6	581	1,743	22	145
	8-Jul	6	7	0	0	438	2,279	1	7	329	1,039	24	139
	13-Jul	6	7	0	0	819	4,313	1	4	1,017	3,051	65	493
	14-Jul	8	12	0	0	956	4,758	1	5	1,363	4,092	101	688
	15-Jul	9	13	0	0	946	4,647	0	0	1,296	4,197	86	582
	16-Jul	7	9	0	0	439	2,203	1	5	802	2,405	32	197
	17-Jul	7	9	1	19	503	1,939	0	0	1,025	3,070	58	392
	18-Jul	7	9	0	0	640	3,173	1	7	578	1,829	40	255
	19-Jul	5	8	0	0	1,141	5,696	0	0	731	2,189	33	214
	20-Jul	9	10	0	0	958	4,680	1	5	1,071	3,453	29	204
	21-Jul	9	12	0	0	902	4,531	1	5	965	2,889	32	219
	22-Jul	6	9	0	0	572	2,844	1	4	649	2,052	37	255
	23-Jul	7	11	0	0	591	2,977	5	21	1,135	3,771	48	306
	24-Jul	6	10	0	0	428	2,144	1	5	1,308	3,989	41	244
	25-Jul	9	9	0	0	250	1,265	4	25	507	1,520	23	156
	26-Jul	7	9	0	0	389	1,892	1	4	1,051	3,102	32	204

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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.)	29-Jul	7	10	0	0	335	1,672	1	6	635	1,905	28	176
	30-Jul	9	12	0	0	291	1,470	3	18	436	1,380	25	167
	31-Jul	7	8	0	0	206	1,013	6	30	707	2,124	49	343
	1-Aug	6	9	0	0	214	1,094	8	39	816	2,439	28	189
	2-Aug	6	6	0	0	111	553	10	48	283	906	15	114
	3-Aug	7	10	0	0	253	1,324	11	55	545	1,922	47	344
	4-Aug	5	8	0	0	325	1,665	15	92	596	2,087	26	195
	5-Aug	6	11	0	0	459	2,301	11	69	903	3,146	44	328
	Total	18	316	2	34	20,921	100,472	102	545	22,341	69,386	1,180	7,895
Average weight					0.0		5.2		8.7		4.8		8.2
Alitak Bay Section (257-41)	28-Jun	6	7	0	0	963	4,319	0	0	30	90	6	44
	29-Jun	8	12	1	25	1,334	5,918	0	0	82	248	20	140
	30-Jun	8	13	0	0	1,188	5,309	0	0	88	269	39	259
	3-Jul	7	7	0	0	529	2,462	0	0	119	362	21	150
	4-Jul	10	12	0	0	793	3,717	5	21	174	531	27	184
	5-Jul	11	19	0	0	1,274	6,165	10	44	344	1,096	23	159
	6-Jul	8	8	0	0	1,178	5,878	0	0	450	1,353	71	501
	7-Jul	11	16	1	21	2,584	13,135	23	113	840	2,699	103	710
	8-Jul	10	14	0	0	2,593	13,041	24	105	1,344	4,144	132	927
	13-Jul	8	8	0	0	638	3,561	23	122	847	2,549	100	710
	14-Jul	11	22	0	0	2,807	13,889	31	178	2,545	8,076	311	2,150
	15-Jul	10	12	0	0	788	3,842	3	17	944	3,036	78	530
	16-Jul	11	14	0	0	1,632	8,152	5	35	1,989	5,964	260	1,823
	17-Jul	10	16	0	0	1,345	6,695	7	39	1,253	3,806	112	762
	18-Jul	11	11	0	0	1,080	5,282	11	65	1,568	4,706	178	1,228
	19-Jul	11	18	0	0	1,812	9,092	9	55	2,313	6,922	223	1,567
	20-Jul	13	17	0	0	1,423	7,181	7	29	2,185	6,643	162	1,117
	21-Jul	15	19	0	0	1,290	6,489	9	49	1,847	5,554	132	927
	22-Jul	13	17	0	0	1,000	4,933	15	76	1,745	5,418	156	1,020
	23-Jul	11	17	0	0	818	4,129	4	19	2,016	6,059	270	1,349
	24-Jul	10	15	0	0	641	3,229	5	25	1,669	4,981	202	1,260

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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)	25-Jul	11	12	0	0	641	3,224	16	93	978	2,929	160	1,126
	26-Jul	13	18	0	0	1,514	7,566	24	128	1,731	5,210	359	2,511
	27-Jul	12	12	0	0	1,093	5,456	17	94	1,661	5,016	267	1,849
	28-Jul	12	16	0	0	1,191	5,953	28	149	1,338	4,062	319	2,237
	29-Jul	15	17	0	0	652	3,268	21	129	1,042	3,187	319	1,882
	30-Jul	10	13	0	0	455	2,317	13	76	987	2,982	199	1,324
	31-Jul	12	13	0	0	409	2,058	6	36	681	2,130	137	959
	1-Aug	10	14	0	0	468	2,377	7	45	1,630	4,963	262	1,828
	2-Aug	11	12	0	0	246	1,245	5	26	526	1,608	81	569
	3-Aug	11	15	0	0	717	3,463	37	194	1,532	5,349	303	2,411
	4-Aug	11	14	0	0	563	2,823	26	166	726	2,579	153	1,197
	5-Aug	11	17	0	0	852	4,285	37	256	1,920	6,706	293	2,246
Total		26	467	2	46	36,511	180,453	428	2,384	39,144	121,227	5,478	37,656
Average weight					0.0		5.20		8.67		4.80		8.18
Dog Salmon Flats Section (257-42)	20-Jun	23	39	0	0	4,152	17,553	0	0	0	0	1	11
	21-Jun	20	28	0	0	3,033	12,414	0	0	0	0	0	0
	22-Jun	19	45	0	0	8,869	37,468	0	0	0	0	7	64
	23-Jun	24	45	0	0	8,149	30,776	0	0	1	3	3	20
	24-Jun	21	41	0	0	5,237	21,363	0	0	2	8	4	38
	25-Jun	22	36	0	0	5,933	23,101	0	0	10	28	7	51
	26-Jun	20	35	0	0	5,785	22,252	0	0	22	71	4	33
	27-Jun	18	35	0	0	6,122	23,703	0	0	41	126	10	77
	28-Jun	12	26	0	0	5,002	19,976	0	0	55	186	2	12
	29-Jun	8	13	1	22	3,031	11,757	0	0	71	237	3	27
	30-Jun	6	10	0	0	2,322	8,161	0	0	329	1,111	9	80
	3-Jul	12	22	0	0	3,464	15,094	0	0	494	1,515	13	112
	4-Jul	10	16	0	0	2,096	8,969	0	0	326	1,020	7	54
	5-Jul	9	11	0	0	1,870	7,912	0	0	1,129	3,404	14	120
	6-Jul	7	13	0	0	1,638	6,546	0	0	804	2,575	30	242
	7-Jul	6	9	0	0	752	3,490	0	0	602	1,995	8	70

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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	8-Jul	5	9	0	0	872	3,794	0	0	981	3,407	7	56
Flats Section	13-Jul	5	10	0	0	1,728	7,489	0	0	1,567	5,276	90	717
(257-42)	14-Jul	5	10	0	0	1,672	6,843	0	0	2,235	7,289	69	578
(cont.)	15-Jul	4	7	0	0	999	3,996	0	0	1,500	5,085	58	427
	16-Jul	6	8	0	0	1,256	4,903	0	0	2,241	7,799	155	947
	17-Jul	6	13	0	0	718	2,935	0	0	2,213	7,749	152	1,213
	18-Jul	5	8	0	0	642	2,599	0	0	2,544	8,997	131	1,077
	19-Jul	3	10	0	0	629	2,492	0	0	2,261	7,832	77	637
	20-Jul	3	5	0	0	720	2,567	0	0	1,386	4,788	49	391
	21-Jul ^a												
	22-Jul	3	7	0	0	805	3,286	0	0	1,126	4,056	135	1,081
	23-Jul	5	11	0	0	1,280	4,953	0	0	1,682	5,917	108	951
	24-Jul	5	8	0	0	1,122	3,960	0	0	2,519	8,647	159	1,330
	25-Jul	5	13	0	0	1,456	5,393	0	0	3,374	11,749	93	773
	26-Jul	6	9	0	0	883	3,368	2	16	2,789	9,643	95	771
	27-Jul	6	15	0	0	1,083	4,156	0	0	3,875	13,060	116	1,021
	28-Jul	5	8	0	0	841	3,277	0	0	1,944	6,474	68	569
	29-Jul	6	13	0	0	1,021	4,390	5	25	2,879	10,008	59	508
	30-Jul	4	5	0	0	816	3,148	1	5	2,091	6,983	31	251
	31-Jul	4	8	0	0	584	2,157	2	10	1,691	5,880	21	169
	1-Aug	4	5	0	0	392	1,420	2	10	1,276	4,383	14	101
	2-Aug	3	6	0	0	426	1,567	8	46	1,663	5,679	26	216

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Statistical Area	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
	3-Aug	3	4	0	0	340	1,225	4	18	1,368	4,768	25	200
	4-Aug	4	8	0	0	516	1,677	12	70	1,729	5,985	25	207
	5-Aug ^a												
Total		32	634	1	22	89,027	354,973	42	242	52,608	180,167	1,961	15,879
Average weight					22.00		3.99		5.76		3.42		8.10
Humpty-Deadman (257-50,60,70)													
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
Grand total		51	1,617	5	102	159,707	697,778	588	3,254	127,427	417,935	9,274	65,998
Average weight					20.40		4.37		5.53		3.28		7.12

^a Confidential.

Appendix D4.—Purse seine daily salmon harvest, by species and section, for the Alitak District, 2019.

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)	28-Jun	18	18	16	240	18,657	93,844	20	116	8,287	28,302	365	2,564
	29-Jun ^a												
	30-Jun	12	12	1	17	5,086	24,439	2	12	2,937	9,594	109	681
	3-Jul	17	17	32	387	11,997	56,193	262	1,560	33,349	111,146	614	4,089
	4-Jul	6	6	8	39	3,373	14,226	51	282	8,503	30,097	148	935
	5-Jul	8	9	18	270	11,389	51,683	22	124	17,604	58,803	384	2,590
	6-Jul	6	6	39	460	10,812	56,694	146	1,289	34,071	108,043	1,443	12,504
	7-Jul	3	3	8	155	4,082	19,438	117	581	8,694	25,800	355	3,263
	8-Jul ^a												
	13-Jul	8	8	51	887	13,047	64,003	113	798	28,037	83,748	1,376	9,776
	14-Jul ^a												
	15-Jul	5	5	5	104	5,439	24,472	10	56	10,812	35,140	633	4,433
	16-Jul	3	3	4	65	6,705	34,942	67	479	9,775	30,865	302	2,029
	17-Jul	4	4	0	0	364	1,875	6	37	4,287	12,772	53	348
	19-Jul ^a												
	23-Jul ^a												
	25-Jul	3	3	0	0	4,841	21,349	88	638	13,013	42,426	258	1,597
	26-Jul ^a												
	29-Jul ^a												
	30-Jul ^a												
	31-Jul ^a												
	1-Aug	3	3	7	132	869	4,671	29	230	12,883	41,008	218	1,611
	5-Aug ^a												
Total		38	111	272	4,264	106,235	515,196	1,164	7,811	254,667	807,558	7,782	56,959
Average weight					15.68		4.85		6.71		3.17		7.32
Humpty-Deadman Section (257-50, 60 & 70)	28-Jun	4	4	1	10	3,017	14,416	0	0	989	3,173	89	530
	30-Jun	5	5	0	0	1,232	6,136	1	6	339	1,388	21	175
	3-Jul	7	7	1	7	2,451	12,706	15	92	3,956	16,949	170	1,032
	4-Jul ^a												

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Statistical Area	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Humpty-Deadman Section (257-50, 60 & 70) (cont.)	5-Jul	4	4	0	0	2,932	15,016	6	31	3,838	14,776	49	341
	6-Jul	4	4	0	0	1,725	9,152	132	773	4,228	18,707	75	459
	7-Jul	4	5	0	0	7,236	37,230	7	40	21,438	74,158	209	1,403
	8-Jul	7	7	0	0	3,998	19,989	21	101	10,503	33,633	77	708
	13-Jul	4	4	0	0	2,819	12,894	15	76	6,720	20,822	94	747
	15-Jul	6	6	1	8	2,455	11,381	62	291	8,310	25,370	86	705
	16-Jul ^a												
	17-Jul	6	6	0	0	1,679	8,026	14	83	13,962	46,343	163	1,037
	20-Jul	7	7	1	10	1,387	6,998	37	219	22,919	75,208	338	2,179
	21-Jul ^a												
	22-Jul	7	7	6	84	937	4,791	11	61	21,357	72,377	398	2,543
	23-Jul	8	8	4	84	1,065	5,322	16	100	24,143	81,122	301	1,957
	24-Jul	8	8	2	23	837	4,183	8	41	13,301	45,001	225	1,473
	27-Jul	3	3	0	0	484	2,327	0	0	14,204	49,539	215	1,820
	28-Jul	5	6	1	13	1,634	7,966	10	67	37,860	124,863	480	3,188
	29-Jul	5	5	0	0	644	3,181	12	84	29,213	96,403	272	1,837
	30-Jul	7	7	1	9	490	2,433	12	76	34,274	110,123	365	2,284
	31-Jul	3	3	4	68	150	751	3	16	13,321	43,868	149	906
	1-Aug ^a												
	2-Aug	7	7	5	71	1,194	6,710	9	53	39,262	128,340	450	3,451
	3-Aug	6	7	0	0	755	3,770	7	41	33,048	111,893	346	2,231
	4-Aug	5	5	0	0	594	3,208	17	86	41,075	130,499	301	2,932
	5-Aug	8	9	1	10	981	4,908	7	51	58,864	190,251	430	2,795
	6-Aug	11	11	1	20	619	3,323	48	365	46,362	159,215	261	2,130
	7-Aug	9	9	0	0	722	4,049	49	382	91,158	292,482	357	2,748
	8-Aug	9	9	4	71	465	2,312	21	148	38,981	135,869	427	3,535
	9-Aug	7	7	0	0	309	1,611	55	409	38,062	130,641	331	2,603
	10-Aug	7	7	0	0	576	3,250	41	278	42,744	147,717	343	2,272
	11-Aug	3	4	0	0	404	2,377	14	118	23,378	81,176	56	459

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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 Section (257-50, 60 & 70) (cont.)	12-Aug	4	4	0	0	167	840	30	180	21,861	78,617	123	980
	13-Aug	3	5	0	0	430	2,124	34	194	34,219	123,254	287	2,476
	14-Aug	4	6	0	0	445	2,153	39	229	40,792	146,015	211	1,783
	15-Aug	6	8	0	0	819	3,891	118	681	60,985	212,970	321	2,439
	16-Aug	8	8	0	0	603	3,175	116	714	56,815	190,865	411	2,942
	17-Aug	10	11	0	0	836	4,361	264	1,903	83,342	279,997	553	4,127
	18-Aug	9	9	0	0	572	3,123	367	2,579	55,728	188,536	402	2,925
	19-Aug	10	10	0	0	623	3,583	654	4,937	58,825	208,310	662	5,303
	20-Aug	10	10	0	0	792	4,162	1,251	10,024	60,595	212,084	807	6,497
	21-Aug	8	8	0	0	1,011	5,819	1,048	9,100	63,895	223,616	718	5,942
	22-Aug	5	5	0	0	387	2,162	312	2,677	23,894	83,624	226	1,848
	23-Aug	10	10	1	15	3,186	17,151	2,455	17,843	86,786	291,082	1,062	7,595
	24-Aug	13	13	0	0	2,173	11,334	1,992	18,455	83,706	259,422	970	8,293
	25-Aug	9	10	0	0	1,543	7,638	1,198	10,554	51,039	167,934	524	4,430
	26-Aug	8	8	0	0	1,062	5,770	852	7,215	38,163	132,708	396	3,233
	27-Aug	12	13	0	0	1,935	9,993	1,509	10,145	62,896	211,656	685	4,820
	31-Aug	9	9	0	0	712	3,287	1,694	13,685	42,888	152,605	486	3,376
	1-Sep ^a												
	2-Sep	3	3	0	0	147	871	398	3,295	8,311	28,513	99	759
	3-Sep	3	3	0	0	441	2,157	660	5,774	13,639	50,356	231	1,837
	7-Sep ^a												
Total		33	341	34	503	64,166	325,836	16,063	127,223	1,700,357	5,749,112	16,474	123,338
Average weight					14.81		5.08		7.92		3.38		7.49
Olga Bay													
Section	14-Sep ^a												
257-40													
Total ^a													
Average weight ^a													
Grand total		50	452	306	4,767	170,410	841,065	17,278	135,518	1,955,194	6,557,113	24,297	180,663
Average weight					15.58		4.94		7.84		3.35		7.44

^a Confidential.

Appendix D5.—Salmon harvest by gear type and species for the Alitak District, 2019.

	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum		Total	
			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
<u>Seine</u>														
Total	50	451	306	4,767	170,410	841,065	17,278	135,518	1,955,194	6,557,113	24,297	180,663	2,167,485	7,719,127
Average weight				15.58		4.94		7.84		3.35		7.44		
<u>Set Gillnet</u>														
Total	51	1,550	5	102	159,707	697,778	588	3,254	127,427	417,935	9,274	65,998	297,001	1,185,067
Average weight				20.40		4.37		5.53		3.28		7.12		
Year total	101	1,534	311	4,869	330,117	1,538,843	17,866	138,772	2,082,621	6,975,048	33,571	246,661	2,464,486	8,904,194
Average weight				15.66		4.66		7.77		3.35		7.35		

Appendix D6.—Commercial salmon harvest, by species with percent harvest by gear type, in the Alitak District, 1993–2019.

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%
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	35%	65%	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	28%	72%	661,789	9%	91%	13,601	34%	66%	934,361	22%	78%
2015	1,554	1%	99%	364,946	37%	63%	19,847	17%	83%	5,812,572	1%	99%	52,682	17%	83%	6,251,601	4%	96%
2016	377	8%	92%	183,295	47%	53%	7,686	23%	77%	182,615	20%	80%	12,197	45%	55%	386,170	29%	71%
2017	223	0%	100%	214,898	54%	46%	17,284	33%	67%	3,415,116	8%	92%	117,849	12%	88%	3,765,370	21%	79%
2018	226	0%	100%	277,528	62%	38%	21,403	41%	59%	780,486	13%	87%	29,303	16%	84%	1,108,946	26%	74%
2019	311	2%	98%	330,117	48%	52%	17,866	3%	97%	2,082,621	6%	94%	33,571	28%	72%	2,464,486	17%	83%
Averages ^b																		
1993–2018	414	18%	81%	485,520	63%	37%	12,979	45%	55%	1,542,526	19%	82%	56,816	24%	76%	2,098,250	30%	70%
2009–2018	644	3%	97%	294,518	57%	43%	10,614	30%	70%	2,411,960	11%	89%	42,289	19%	81%	2,760,025	20%	80%

Note: GN = gillnet; PS = purse seine

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

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 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 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 through June 15, ADF&G is directed to open 2 mandatory 33-hour fishing periods. The Southwest Afognak Section can only open for one 33-hour fishing period from June 1 through June 15. From June 15 through 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 through 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. 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 through June 15, ADF&G is directed to open 2 mandatory 33-hour fishing periods, which occur 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 through 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 through August 24 are based on pink and late-run chum salmon returning to each individual section. From August 25 through 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 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 through 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 midpoint of the early-run Karluk sockeye salmon escapement goal will be achieved.

In odd years, from July 16 through 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 through 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 through 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 through 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 through 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 through 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.

2019 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 (73,000 fish), Frazer Lake (284,000 fish), Ayakulik River (101,000 fish), and early-run Upper Station (5,000 fish; Brenner et al. 2019).

The Karluk early-run sockeye salmon biological escapement goal (BEG) is 150,000 to 250,000 fish. The 2019 targeted sockeye salmon escapement for Karluk Lake early-run was 200,000 fish. The Ayakulik early-run sockeye salmon sustainable escapement goal (SEG) is 140,000 to 280,000 fish. The 2019 targeted sockeye salmon escapement for the Ayakulik early run was 210,000 fish.

The Karluk late-run sockeye salmon BEG is 200,000 to 450,000 fish. The 2019 targeted sockeye salmon escapement of 325,000 fish for Karluk Lake late run was based on a maximum sustained yield calculation (Schaberg et al. 2016). The Ayakulik late-run sockeye salmon SEG is 60,000 to 120,000 fish. The 2019 targeted sockeye salmon escapement of 90,000 fish for the Ayakulik late run was based on a maximum sustained yield calculation (Schaberg et al. 2016).

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Karluk Early Run

The Karluk River weir was fish tight on May 21 (Fuerst *In prep*). Due to weak early sockeye salmon escapement, the initial 57-hour commercial test fishing period in the Northwest Kodiak District was delayed until June 7. The resulting harvest indicated a below average amount of sockeye salmon traveling along the Westside fishery, and the fishery closed for several days. Through June 13, 94,628 sockeye salmon had passed the Karluk River weir, which was below average but within the escapement goal range (Fuerst *In prep*). The Central and North Cape sections of the Northwest Kodiak District and the Southwest Afognak Section of the Afognak District opened on June 14 for the second commercial salmon test fishing period for 57 hours. The resulting harvest indicated a below average number of sockeye salmon present in the area.

After an extended closure of 11 days, the department opened the Outer Karluk Section of the Southwest Kodiak District, the Central and North Cape sections of the Northwest Kodiak District, as well as the Southwest Afognak Section of the Afognak District for 57 hours on June 28. Westside Kodiak sockeye salmon harvest remained below average, and the fishery closed on June 30.

The 2019 Karluk Lake early-run sockeye salmon escapement of 186,505 fish (Fuerst *In prep*) was within the escapement goal range of 150,000 to 250,000 fish (Schaberg et al. 2016). From June 1 to July 15, approximately 281,888 sockeye salmon were harvested in the Westside fishery managed for Karluk early-run sockeye (Table 9). Of this harvest, approximately 52,581 fish were estimated to be of Karluk Lake origin (Wattum *In prep*).

Pink Salmon 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 harvest estimate of 20.4 million fish. The Sturgeon Section of the Southwest Kodiak District remained closed due to weak early chum salmon escapement. Pink salmon harvests for the first pink salmon fishing period were well above average.

After a two-and-a-half-day closure, the majority of the Westside reopened for 105 hours on July 13. Pink salmon harvests for the second pink salmon fishing period were well above average. An aerial survey on July 13 also indicated a very early pink salmon escapement and a buildup of pink salmon in several of the inner bays on the Westside.

After a two-and-a-half-day closure, the majority of the Westside reopened for 105 hours on July 20. Pink salmon harvests for the third pink salmon fishing period were well above average. An aerial survey on July 22 indicated that most all major Westside pink salmon systems had achieved their respective escapement objectives, and the majority of the Westside remained open for the remainder of the pink salmon fishery. The 2019 Kodiak Area pink salmon run was the fourth strongest run ever, and the Westside fishery harvested a total of 13,232,953 pink salmon (Table 9).

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Karluk Late Run

From August 16 through August 24, the majority of the Westside is managed based on pink salmon returning to the Northwest Kodiak District and on late-run sockeye salmon returning to the Karluk system. By mid-August, late-run Karluk sockeye salmon escapement was below average but due to drought conditions there was a large buildup of sockeye and pink salmon in Karluk lagoon. Northwest Kodiak District pink salmon escapement continued to be above average and the majority of the Westside remained open during the August 16 through August 24 timeframe.

From August 25 through September 5, the majority of the Northwest Kodiak District is managed based on late-run sockeye salmon returning to the Karluk system. By the end of August, Karluk late-run sockeye salmon escapement was well below average and not on track to meet the minimum escapement goal value of 200,000 fish, and the Westside shut down on August 27. An aerial survey on August 29 indicated a very large buildup of salmon in Karluk lagoon in excess of 400,000 fish. The Central and North Cape sections of the Northwest Kodiak District and Outer Karluk Section of the Southwest Kodiak District opened on August 31.

Although the Westside sockeye salmon harvest continued to be below average, with sufficient sockeye salmon escapement, the majority of the Westside was extended through the end of the salmon season. The Karluk late-run sockeye salmon escapement of 321,039 fish was within the desired escapement goal range of 200,000 to 450,000 fish (Schaberg et al. 2016), and the Westside post-July 15 sockeye salmon harvest was approximately 780,196 sockeye salmon, which included an estimated 418,489 Karluk late-run sockeye salmon (Wattum *In prep*).

Ayakulik

The Ayakulik River weir was fish tight on May 21 (Fuerst *In prep*). The 2019 Ayakulik early-run sockeye salmon run was weak, and prior to July 15, only 1 short fishing period was allowed in the Outer Ayakulik and Halibut Bay sections of the Southwest Kodiak District. Through July 15, the cumulative Ayakulik early-run sockeye salmon escapement of 162,430 fish (Fuerst *In prep*) was within the escapement goal range of 140,000 to 280,000 fish (Schaberg et al. 2016).

The 2019 Ayakulik late-run sockeye salmon run was strong, and the Outer Ayakulik and Halibut Bay sections of the Southwest Kodiak district opened several times. The weir removed on August 27, and the cumulative late-run Ayakulik sockeye salmon escapement of 117,209 fish was within the escapement goal range of 60,000 to 120,000 fish (Schaberg et al. 2016).

The total sockeye salmon escapement through the Ayakulik weir was 279,639 fish (Fuerst *In prep*) and was within the combined early- and late-run escapement goals (200,000 to 400,000 fish; Schaberg et al. 2016). For the season, 366,158 sockeye salmon were harvested in areas managed based on Ayakulik sockeye salmon (Table 9).

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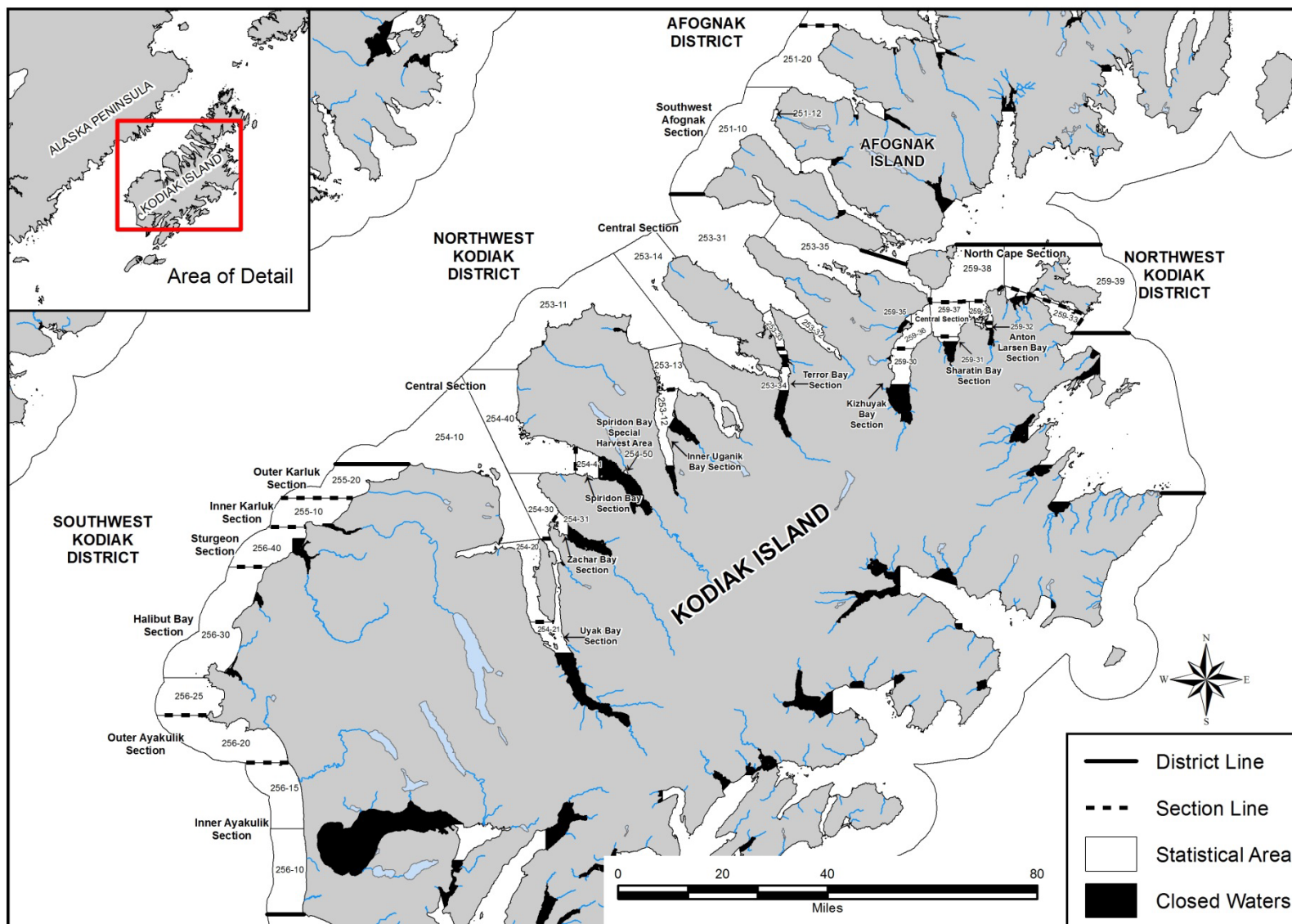
In 2019, there were a total of 6,703 landings made in Westside Kodiak management units (Southwest Afognak to Ayakulik¹) consisting of a total commercial harvest of 19,482,464 salmon, including 4,662 Chinook, 1,485,738 sockeye, 196,875 coho, 17,494,381 pink, and 300,808 chum salmon (Appendix E3). There were 167 seine permit holders that made 3,396 landings with a harvest of 3,824 Chinook, 1,154,244 sockeye, 137,791 coho, 16,391,958 pink, and 168,299 chum salmon (Appendix E4). There were 98 set gillnet permit holders that made 3,307 landings for 838 Chinook, 331,494 sockeye, 59,084 coho, 1,102,423 pink, and 132,509 chum salmon. Commercial salmon harvests, by gear type, for individual Westside Kodiak management units can be found in Appendices E5 and E6.

REFERENCES CITED

- Brenner, R. E., A. R. Munro, and S. J. Larsen, editors. 2019. Run forecasts and harvest projections for 2019 Alaska salmon fisheries and review of the 2018 season. Alaska Department of Fish and Game, Special Publication No. 19-07, Anchorage.
- Donnelly, R. F. 1983. Factors affecting the abundance of Kodiak Archipelago Pink salmon (*Oncorhynchus gorbuscha*, Walbaum). PhD Thesis. School of Fisheries. Seattle, University of Washington.
- Eggers, D. M., L. R. Peltz, B. G. Bue, and T. M. Willette. 1991. Trends in abundance of hatchery and wild stocks of pink salmon in Kodiak Island, Cook Inlet, and Prince William Sound, Alaska. Professional Paper 35. Alaska Department of Fish and Game, Division of Commercial Fisheries, Juneau.
- Fuerst, B. A. *In prep.* Kodiak Management Area weir descriptions and salmon escapement report, 2019. Alaska Department of Fish and Game, Fisheries Management Report, Anchorage.
- Prokopowich, D., K. Brennan, and D. Gretsich. 1991. 1991 harvest strategy, Kodiak area commercial salmon fishery. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K91-15, Kodiak.
- Schaberg, K. L., M. B. Foster, M. Wattum, and T. R. McKinley. 2016. Review of salmon escapement goals in the Kodiak Management Area, 2016. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-09, Anchorage.
- Wattum, M. L. *In prep.* Kodiak Management Area salmon escapement and catch sampling results, 2019. Alaska Department of Fish and Game, Fishery Data Series, Anchorage.

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.

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, 1990–2019.

Year	Permits	Landings	Number of salmon					
			Chinook	Sockeye	Coho	Pink	Chum	Total
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
2017	244	7,910	4,612	1,760,513	232,102	16,482,110	519,676	18,999,013
2018	235	4,056	1,911	1,398,751	191,060	1,868,851	182,950	3,643,523
2019	265	6,703	4,662	1,485,738	196,875	17,494,381	300,808	19,482,464
Average								
2009–2018	239	4,873	5,017	1,294,308	141,317	5,925,366	284,358	7,650,366
1990–2018	282	7,333	11,210	1,748,141	147,708	7,155,630	314,510	9,377,198

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, 2019.

Gear	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum		Total	
			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Seine	167	3,396	3,824	37,753	1,154,244	5,678,035	137,791	1,015,798	16,391,958	52,127,360	168,299	1,174,305	17,856,116	60,033,250
Avg. weight				9.87		4.92		7.37		3.18		6.98		
Set Gillnet	98	3,307	838	8,584	331,494	1,723,838	59,084	427,653	1,102,423	3,752,671	132,509	984,228	1,626,348	6,896,974
Avg. weight				10.24		5.20		7.24		3.40		7.43		
Grand total	265	6,703	4,662	46,337	1,485,738	7,401,873	196,875	1,443,451	17,494,381	55,880,031	300,808	2,158,533	19,482,464	66,930,224
Avg. weight				9.94		4.98		7.33		3.19		7.18		

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, 2019.

Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Southwest Afognak Section	28-Jun	9	10	18	117	4,098	15,917	13	85	34,837	110,887	756	4,977
	29-Jun ^a												
	30-Jun	7	7	4	18	790	3,582	37	187	12,806	33,660	465	2,680
	6-Jul	11	11	8	59	2,675	14,653	46	314	26,432	110,351	536	3,467
	8-Jul	4	4	0	0	2,798	14,438	90	718	23,021	84,979	351	2,489
	9-Jul	4	4	1	21	1,275	6,525	25	181	17,053	55,240	131	864
	10-Jul	9	9	2	16	3,387	16,970	230	1,539	24,100	75,838	302	1,926
	13-Jul ^a												
	14-Jul	4	4	1	15	1,471	6,718	62	474	13,961	48,219	162	1,207
	15-Jul	6	6	92	1,188	2,620	13,159	242	1,547	28,408	85,231	428	3,220
	16-Jul	6	7	15	134	1,612	6,996	188	1,153	17,692	57,704	412	2,882
	17-Jul ^a												
	20-Jul	7	7	12	169	1,637	9,395	83	555	26,714	97,462	279	1,995
	21-Jul	3	3	1	6	848	4,452	31	230	13,260	44,282	81	647
	22-Jul	4	4	6	101	3,314	17,446	93	618	25,708	76,869	431	3,074
	23-Jul	9	9	25	244	4,445	22,886	95	721	65,231	195,535	699	6,014
	24-Jul	20	23	40	498	18,097	97,847	511	3,539	165,764	557,809	1,858	12,531
	25-Jul	13	15	16	178	7,068	33,708	150	1,030	65,931	194,223	357	2,618
	26-Jul	19	19	43	386	7,782	38,724	265	1,742	71,135	204,671	778	4,982
	27-Jul	6	6	0	0	2,698	13,348	72	492	14,060	40,372	237	1,955
	28-Jul	9	9	4	48	1,373	7,113	148	907	26,199	86,469	359	2,564
	29-Jul	10	10	1	13	2,164	11,013	97	602	33,249	107,590	341	2,159
	30-Jul	7	7	0	0	1,363	6,397	132	1,019	27,564	97,364	266	1,786
	31-Jul	9	9	0	0	1,056	5,867	122	714	23,041	86,948	268	1,529
	1-Aug	6	6	3	35	1,504	8,313	67	500	37,414	126,811	118	872
	2-Aug	6	6	0	0	1,666	8,527	89	578	33,000	106,651	115	742
	3-Aug	7	7	2	10	2,217	12,193	457	4,453	45,754	152,914	268	2,092
	4-Aug	8	8	0	0	2,442	12,745	263	1,530	46,014	144,174	262	1,661
	5-Aug	8	8	8	97	2,040	10,820	301	2,409	48,197	164,068	280	2,340
	6-Aug	6	6	31	363	3,622	17,399	307	2,275	81,649	264,949	346	2,261
	7-Aug	8	8	14	225	2,864	14,503	339	2,260	69,586	222,714	342	2,045

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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	8-Aug	11	11	9	119	3,306	16,261	389	2,652	111,247	385,674	291	1,793
Afognak	9-Aug	13	13	2	13	812	4,172	427	2,817	75,895	253,180	147	1,000
Section (cont.)	10-Aug	10	10	5	55	514	2,536	283	1,906	66,635	212,998	124	898
	11-Aug	9	9	8	102	601	3,007	560	3,810	78,808	223,236	329	2,224
	12-Aug	6	6	3	18	484	2,533	411	3,141	34,256	109,994	149	1,048
	13-Aug	6	6	5	62	1,282	6,268	878	7,280	47,411	170,502	477	3,367
	14-Aug ^a												
	15-Aug	5	5	0	0	845	4,802	825	5,077	36,254	121,914	223	1,463
	16-Aug	3	4	0	0	533	2,662	656	3,931	24,926	103,041	207	1,263
	17-Aug	3	3	0	0	448	2,061	595	3,784	24,982	77,880	73	437
	18-Aug	4	4	0	0	156	769	238	1,719	76,997	238,690	62	388
	19-Aug	7	7	0	0	451	2,199	246	1,666	103,414	294,522	76	555
	20-Aug	7	7	0	0	540	2,431	517	3,289	58,989	175,138	106	630
	21-Aug	9	10	0	0	388	1,947	654	3,992	56,253	195,719	55	353
	22-Aug	6	7	0	0	411	1,791	1,083	5,867	61,686	187,807	121	775
	23-Aug	14	15	0	0	1,430	6,170	2,268	12,444	109,676	392,406	260	1,370
	24-Aug	13	15	1	12	1,469	6,623	1,546	11,114	165,948	484,336	114	701
	25-Aug	8	12	0	0	1,170	5,633	1,248	8,685	117,795	361,145	134	849
	26-Aug	8	10	0	0	1,274	5,668	1,030	7,836	95,502	317,990	102	688
	27-Aug	4	4	0	0	406	1,792	415	3,778	19,047	62,080	52	331
	31-Aug	8	8	0	0	895	3,782	1,083	9,826	42,627	132,641	93	588
	1-Sep ^a												
	2-Sep	6	6	0	0	1,199	5,134	3,095	18,903	33,800	103,880	81	436
	3-Sep	6	6	0	0	1,058	5,017	1,634	15,083	27,622	83,269	86	538
	4-Sep	9	9	7	44	2,417	10,535	2,963	22,281	41,702	124,319	102	704
	5-Sep	6	6	2	8	643	2,579	955	8,757	20,754	65,104	32	175
	6-Sep	6	6	0	0	175	1,042	604	5,505	9,105	25,381	11	72
	7-Sep ^a												
	8-Sep	4	4	0	0	515	1,694	396	3,606	43,619	97,387	35	213
	9-Sep ^a												
	10-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
Southwest	12-Sep ^a												
Afognak	15-Sep ^a												
Section (cont.)													
Total		76	452	425	4,582	114,768	572,432	32,360	235,161	2,740,272	8,754,882	15,184	103,440
Average weight					10.78		4.99		7.27		3.19		6.81
Northwest	7-Jun	31	31	626	3,470	4,746	21,314	0	0	1,825	5,759	332	2,125
Kodiak	8-Jun	8	8	158	1,098	1,376	5,963	0	0	254	878	115	744
District ^b	9-Jun	12	12	7	31	2,480	10,964	0	0	559	2,247	179	1,050
	14-Jun	22	22	99	543	2,537	12,209	1	4	5,087	14,616	1,168	6,760
	15-Jun	12	13	15	68	735	3,493	3	16	3,193	9,467	712	4,567
	16-Jun	13	13	41	273	1,980	10,111	1	6	965	3,753	423	2,781
	28-Jun	49	54	391	3,521	15,127	64,195	61	340	128,075	405,018	3,452	21,698
	29-Jun	20	20	157	1,104	4,329	15,355	14	90	30,697	82,011	671	4,571
	30-Jun	29	30	39	270	3,386	15,036	25	190	38,066	118,211	980	7,127
	6-Jul	65	66	147	1,484	20,239	91,171	151	926	347,233	1,177,048	4,079	26,814
	7-Jul	37	38	19	169	9,286	43,447	134	749	167,013	553,617	2,264	16,526
	8-Jul	63	67	66	781	24,550	114,159	254	1,526	412,159	1,361,176	5,072	32,337
	9-Jul	40	43	19	295	13,166	62,228	306	1,934	217,783	681,187	2,771	18,092
	10-Jul	51	51	19	206	13,548	64,468	478	2,661	212,509	687,249	3,970	22,918
	13-Jul	75	75	61	787	16,084	80,390	948	5,586	262,850	847,255	8,327	58,425
	14-Jul	34	34	4	58	8,326	43,718	247	1,769	118,672	373,602	2,747	20,504
	15-Jul	55	59	137	1,660	16,172	78,525	648	4,632	250,301	792,783	8,230	57,781
	16-Jul	54	55	110	1,409	9,554	47,521	528	3,407	223,060	695,575	4,789	34,513
	17-Jul	61	62	52	516	8,056	40,053	347	2,223	163,478	523,157	5,467	39,235
	20-Jul	67	69	80	1,537	16,915	84,475	537	3,281	369,627	1,122,423	5,802	41,676
	21-Jul	38	38	9	111	7,080	33,787	87	560	188,658	553,066	3,605	24,016
	22-Jul	66	69	127	1,979	16,754	89,353	287	2,014	319,793	1,026,940	6,198	45,372
	23-Jul	36	40	87	1,589	6,111	30,770	158	1,274	154,476	519,397	3,073	25,246
	24-Jul	57	60	63	845	22,649	115,663	285	1,829	311,537	950,368	6,245	44,136
	25-Jul	23	23	10	68	3,636	18,628	121	883	82,440	254,200	1,225	9,497
	26-Jul	38	43	37	628	13,134	66,997	244	1,511	228,528	670,172	2,304	16,704
	27-Jul	28	29	5	78	3,837	18,053	146	955	129,727	381,968	3,376	25,627

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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	28-Jul	31	31	18	281	4,644	23,545	134	798	179,311	537,287	2,466	17,705
Kodiak	29-Jul	42	42	82	1,169	5,812	29,089	319	2,294	232,166	694,894	2,780	20,742
District ^b	30-Jul	44	44	21	310	8,129	40,671	347	2,313	246,079	757,244	3,495	25,895
(cont.)	31-Jul	31	31	41	526	5,402	27,775	196	1,365	181,305	579,216	2,317	17,587
	1-Aug	46	46	31	251	11,078	55,926	528	2,979	243,458	802,603	2,778	18,681
	2-Aug	32	34	9	113	7,834	39,536	361	2,324	181,265	574,902	2,807	20,203
	3-Aug	49	49	46	332	9,229	47,376	483	2,918	251,721	773,729	3,415	23,079
	4-Aug	29	30	5	56	2,903	15,181	260	1,941	127,266	408,381	1,534	10,566
	5-Aug	41	44	30	450	8,810	42,928	529	3,646	255,311	767,399	2,005	14,295
	6-Aug	36	37	4	63	4,465	22,794	324	2,174	167,397	528,339	1,334	9,824
	7-Aug	47	47	24	249	8,557	39,801	552	3,828	230,542	711,434	1,648	12,006
	8-Aug	38	38	7	92	4,925	23,832	703	4,952	189,797	604,387	1,019	7,107
	9-Aug	25	28	9	115	4,106	19,956	322	2,106	158,269	513,993	611	4,187
	10-Aug	32	33	5	66	5,411	27,121	839	6,013	157,250	504,725	946	5,388
	11-Aug	38	40	35	310	5,992	24,395	572	3,795	216,926	660,468	1,184	7,807
	12-Aug	33	34	24	226	7,718	33,790	725	4,956	235,992	741,884	1,434	9,006
	13-Aug	37	39	9	102	6,294	26,904	667	4,807	247,175	772,770	1,052	7,324
	14-Aug	40	43	11	121	6,675	30,979	847	5,932	335,679	1,044,564	1,824	11,492
	15-Aug	55	56	2	38	8,016	37,612	1,146	7,840	483,565	1,534,302	1,190	7,979
	16-Aug	60	64	7	78	7,782	38,288	1,091	7,558	381,741	1,220,734	1,306	10,950
	17-Aug	43	49	2	50	4,855	23,972	1,324	9,331	344,320	1,069,936	1,035	7,088
	18-Aug	54	57	3	29	5,600	21,638	1,610	10,939	378,778	1,079,117	990	7,343
	19-Aug	51	56	4	47	6,073	25,914	1,509	10,578	383,487	1,195,398	1,629	11,886
	20-Aug	44	46	3	41	5,271	26,260	1,625	11,917	252,701	770,412	1,244	8,086
	21-Aug	26	26	1	9	779	4,006	1,297	9,374	106,153	354,809	484	3,296
	22-Aug	28	28	1	10	1,708	7,329	1,669	11,933	128,370	386,642	717	4,847
	23-Aug	21	22	0	0	1,861	9,503	1,232	9,009	113,837	351,201	434	2,948
	24-Aug	27	27	2	26	2,953	14,037	1,915	14,676	195,926	592,010	408	2,817
	25-Aug	19	20	0	0	5,534	31,237	1,729	12,565	175,205	577,981	491	3,285
	26-Aug	21	22	0	0	4,177	17,248	1,835	12,339	160,396	533,029	502	3,319
	27-Aug	18	19	3	35	3,759	17,419	1,101	8,156	88,079	281,198	275	1,820

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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	31-Aug	42	42	1	13	5,436	25,801	3,330	26,464	91,037	293,019	447	3,095
Kodiak	1-Sep	26	26	4	27	3,931	18,177	3,124	24,496	80,281	268,406	346	2,171
District ^b	2-Sep	34	35	1	10	8,545	45,564	7,261	53,429	102,978	346,927	503	3,539
(cont.)	3-Sep	23	23	0	0	3,510	18,434	2,860	21,105	83,358	260,406	227	1,533
	4-Sep	28	28	2	18	7,259	34,861	4,467	35,260	86,825	283,454	364	2,513
	5-Sep	14	14	0	0	3,424	16,440	2,176	18,557	42,455	137,784	114	778
	6-Sep	12	12	0	0	4,563	25,277	2,175	17,085	38,816	120,464	107	758
	7-Sep	7	8	0	0	626	3,111	685	5,856	16,855	55,794	53	412
	8-Sep	16	16	0	0	3,939	19,353	2,498	21,465	38,166	128,089	153	1,039
	9-Sep	9	9	0	0	2,089	8,380	1,505	11,204	11,526	35,009	57	381
	10-Sep	14	14	0	0	3,028	13,431	1,500	12,041	12,443	37,062	74	421
	11-Sep	6	6	0	0	731	3,183	400	2,884	2,300	6,003	5	37
	12-Sep	3	3	0	0	821	3,941	987	8,184	1,200	3,655	17	112
	13-Sep	13	13	0	0	4,319	19,629	2,176	14,378	3,940	10,924	46	275
	14-Sep	6	6	0	0	3,186	11,087	470	3,691	1,081	2,799	4	15
	15-Sep	7	7	0	0	1,779	9,758	826	7,061	834	3,034	7	63
	17-Sep	4	4	0	0	3,103	13,975	719	5,031	517	1,746	18	129
	18-Sep ^a												
	19-Sep ^a												
	25-Sep ^a												
	5-Oct ^a												
Total		162	2,577	3,033	29,848	506,494	2,438,090	71,544	526,277	12,013,065	37,733,965	135,481	946,717
Average weight					9.84		4.81		7.36		3.14		6.99
Inner and	28-Jun	8	8	81	544	5,573	22,208	12	84	15,813	49,621	1,186	7,772
Outer	6-Jul	6	6	16	114	7,486	34,383	142	894	30,407	112,761	1,171	7,636
Karluk	8-Jul	6	7	8	146	6,756	37,737	93	615	43,483	144,779	584	4,270
Section	9-Jul ^a												
	10-Jul	9	9	0	0	6,127	28,977	167	966	58,100	180,514	919	5,047
	13-Jul	12	12	12	119	10,519	51,065	276	1,712	34,854	127,897	858	6,224
	14-Jul	5	5	4	37	3,274	19,432	334	2,334	33,909	139,988	605	4,775
	15-Jul	6	6	1	21	4,445	26,695	241	1,563	42,900	151,482	352	2,821

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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	16-Jul	4	4	10	140	799	4,744	50	319	6,924	28,191	197	1,447
	17-Jul	3	3	2	16	433	2,077	81	567	7,829	22,261	306	2,542
	20-Jul ^a												
	21-Jul ^a												
	22-Jul	7	7	36	363	3,197	18,719	137	880	19,098	74,390	271	2,117
	23-Jul	5	5	2	19	2,542	17,050	87	566	16,815	74,571	659	5,437
	24-Jul	3	3	3	31	3,536	19,352	23	142	12,669	44,346	83	588
	25-Jul	4	4	1	8	4,415	23,193	21	132	34,520	128,269	236	1,882
	26-Jul	3	3	0	0	2,262	12,980	7	43	8,962	27,048	50	403
	28-Jul	3	3	0	0	1,357	7,661	23	186	20,993	78,207	130	1,003
	29-Jul	3	4	5	27	642	3,686	30	321	10,579	43,364	97	850
	31-Aug	19	19	0	0	15,347	63,981	2,461	18,257	32,059	102,893	235	1,461
	1-Sep	7	7	0	0	9,328	38,007	1,996	14,139	8,226	29,391	66	418
	2-Sep	14	14	0	0	13,732	63,789	3,393	25,707	20,679	72,870	57	423
	3-Sep	8	8	0	0	5,736	25,740	1,664	13,937	9,577	34,787	26	182
	4-Sep	10	10	1	7	4,390	19,450	1,742	13,966	15,694	46,480	57	467
	5-Sep	6	6	0	0	3,595	15,710	1,069	10,260	5,286	15,982	42	312
	6-Sep	7	7	0	0	2,948	16,635	1,421	11,075	4,383	14,887	71	509
	8-Sep	12	12	0	0	6,612	29,223	3,464	28,016	26,681	81,428	143	893
	9-Sep	7	7	0	0	3,414	14,547	787	6,335	12,143	37,350	57	296
	10-Sep	14	14	0	0	3,498	16,315	1,674	12,202	8,917	26,299	68	389
	11-Sep ^a												
	12-Sep	7	7	0	0	4,458	22,871	1,163	9,177	6,889	21,459	56	351
	13-Sep	6	6	1	6	3,229	12,367	854	6,820	2,304	5,986	17	127
	14-Sep	7	7	0	0	2,266	9,337	874	7,051	1,527	4,843	12	85
	15-Sep	3	3	0	0	905	4,220	190	1,461	445	1,397	10	71
	17-Sep	4	4	0	0	1,477	6,452	371	3,031	397	1,128	11	69
	19-Sep	3	3	0	0	5,842	26,269	1,696	10,541	636	2,022	22	161
	22-Sep ^a												
	24-Sep ^a												
	26-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/Outer Karluk Section	1-Oct ^a												
Total		61	237	220	1,895	162,055	772,935	27,948	212,468	592,837	2,079,296	9,069	63,918
Average weight					8.62		4.77		7.60		3.51		7.05
Remainder of Southwest Kodiak District (256-10-40)	13-Jul	13	13	10	116	39,548	191,922	97	596	15,230	50,835	111	781
	14-Jul	4	5	6	43	15,407	84,940	20	111	12,266	41,243	96	646
	15-Jul	11	11	7	62	23,689	121,394	62	356	16,907	58,676	177	1,224
	20-Jul	6	6	35	361	6,803	29,055	53	290	25,832	94,954	229	1,593
	21-Jul	7	8	0	0	9,346	46,305	142	1,255	46,849	129,725	795	5,772
	22-Jul	9	9	10	84	6,500	36,247	73	518	31,462	125,860	497	3,648
	24-Jul	4	4	8	67	26,279	124,807	30	150	35,281	125,663	292	1,972
	25-Jul	9	9	9	79	31,642	151,740	67	462	40,376	146,504	121	865
	26-Jul	14	14	5	100	58,380	283,754	109	708	71,113	235,161	217	1,501
	27-Jul	6	6	4	33	27,930	155,176	105	541	66,195	206,884	221	1,562
	28-Jul	11	12	20	202	22,801	129,649	161	943	81,544	274,973	364	2,340
	29-Jul	10	11	2	34	9,521	52,599	52	358	17,236	67,266	252	1,416
	3-Aug	4	4	2	14	9,056	45,618	162	1,120	19,742	65,302	387	2,966
	4-Aug	5	5	0	0	17,413	96,762	202	1,354	65,193	211,279	548	3,828
	5-Aug	5	5	5	40	10,945	64,424	123	820	43,293	150,104	316	2,629
	9-Aug	12	12	7	50	4,626	25,951	268	1,832	62,218	218,591	588	4,419
	10-Aug	6	6	8	95	1,445	7,336	216	1,336	19,789	64,251	399	2,598
	11-Aug	9	9	5	30	6,070	31,734	122	861	24,164	87,978	325	2,387
	12-Aug ^a												
	13-Aug	5	5	0	0	4,763	26,437	217	1,600	34,978	136,676	395	2,955
	14-Aug	5	6	0	0	7,853	37,401	433	2,813	67,373	233,832	609	4,241
	15-Aug ^a												
	16-Aug	4	4	0	0	4,610	20,256	219	2,002	38,510	126,973	284	2,196
	17-Aug	4	4	0	0	2,004	10,123	184	1,510	30,957	96,307	220	1,447
	18-Aug	3	3	0	0	1,149	5,664	144	1,156	15,329	61,818	119	987

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Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Remainder of Southwest Kodiak District (256-10-40)	19-Aug	3	3	0	0	1,101	5,319	109	892	14,744	41,544	90	515
	20-Aug ^a												
	21-Aug ^a												
	22-Aug	4	4	0	0	4,602	22,970	431	3,173	26,940	96,186	179	1,070
	23-Aug	3	3	0	0	2,104	10,364	249	1,893	13,340	45,683	65	404
	24-Aug ^a												
	25-Aug ^a												
	26-Aug ^a												
	27-Aug ^a												
	31-Aug ^a												
	14-Sep ^a												
Total		43	197	146	1,429	370,927	1,894,577	5,939	41,892	1,045,784	3,559,217	8,565	60,229
Average weight					9.78		5.11		7.05		3.40		7.03
Grand total		167	3,396	3,824	37,753	1,154,244	5,678,035	137,791	1,015,798	16,391,958	52,127,360	168,299	1,174,305

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, 2019.

Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Northwest Kodiak District ^b	7-Jun	26	27	24	225	2,058	11,314	0	0	51	171	83	530
	8-Jun	36	36	19	168	2,151	11,137	0	0	91	317	118	831
	9-Jun	40	45	47	389	2,569	13,672	0	0	66	227	158	1,103
	14-Jun	25	25	23	223	1,221	6,731	1	6	72	246	190	1,427
	15-Jun	38	40	61	563	1,471	7,517	0	0	100	394	435	3,046
	16-Jun	24	25	39	394	1,581	8,069	1	7	164	566	279	1,975
	28-Jun	29	29	14	147	5,556	28,203	14	80	6,119	21,105	1,228	8,971
	29-Jun	50	52	74	620	8,075	41,014	26	154	9,870	33,108	2,251	16,301
	30-Jun	43	54	53	479	6,396	32,333	48	267	7,499	24,955	1,977	14,554
	6-Jul	38	43	18	144	5,660	29,564	119	684	18,787	66,697	2,140	15,375
	7-Jul	56	70	20	189	8,409	43,744	246	1,445	32,177	113,348	3,846	28,599
	8-Jul	49	54	16	161	5,519	28,609	232	1,388	21,568	74,051	3,419	24,460
	9-Jul	56	62	19	203	8,493	43,321	352	2,155	20,920	75,122	2,997	21,369
	10-Jul	44	57	15	153	7,662	38,517	309	1,756	15,512	57,547	2,462	17,737
	13-Jul	34	36	7	107	5,387	28,243	371	2,046	11,752	42,961	1,955	14,161
	14-Jul	53	60	17	200	8,759	44,530	778	4,767	19,410	67,074	5,006	37,270
	15-Jul	50	58	25	352	6,841	35,571	588	3,917	17,249	60,389	4,525	34,102
	16-Jul	50	59	15	156	12,482	64,686	884	5,246	17,726	61,700	6,002	45,090
	17-Jul	48	66	24	264	17,544	93,551	786	4,849	17,170	59,884	4,901	35,724
	20-Jul	33	42	4	57	4,528	24,261	166	1,023	12,530	43,942	2,182	15,992
	21-Jul	55	60	28	328	7,586	40,181	294	1,831	22,840	78,392	4,161	31,005
	22-Jul	50	54	15	189	5,395	28,019	407	2,416	14,792	50,044	3,385	25,510
	23-Jul	51	53	29	330	4,791	25,408	284	1,722	15,577	54,863	4,418	32,225
	24-Jul	53	57	14	142	5,604	29,259	300	1,769	17,027	58,252	4,449	32,921
	25-Jul	48	51	11	96	6,943	36,209	228	1,432	12,105	41,702	3,985	30,413
	26-Jul	53	55	9	100	7,841	40,933	320	1,962	15,181	51,864	3,758	27,729
	27-Jul	52	63	16	156	9,732	50,940	333	2,244	14,062	46,736	4,929	37,037
	28-Jul	53	60	11	124	6,791	35,783	417	2,779	18,281	60,056	5,124	38,037
	29-Jul	48	50	15	187	4,117	21,383	276	1,805	15,651	50,844	4,084	30,315
	30-Jul	52	62	14	168	4,261	22,334	489	3,151	17,812	60,225	3,045	22,786
	31-Jul	48	55	10	136	4,337	22,916	440	2,869	19,340	64,837	4,429	33,106

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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 Kodiak District ^b (cont.)	1-Aug	47	49	3	34	4,708	24,616	457	2,885	16,644	57,006	3,375	24,337
	2-Aug	45	58	14	153	8,359	42,673	735	4,676	23,952	80,964	4,241	31,403
	3-Aug	40	45	7	87	6,810	35,423	787	4,897	16,107	54,397	3,134	23,769
	4-Aug	47	55	14	143	10,693	54,504	668	4,441	26,101	84,162	3,709	28,556
	5-Aug	50	60	3	43	9,331	47,862	838	5,425	20,600	68,905	2,513	18,952
	6-Aug	50	57	8	110	5,057	26,603	634	4,278	17,622	59,148	1,713	13,378
	7-Aug	44	49	5	46	3,605	18,707	845	5,532	19,044	63,470	1,635	12,357
	8-Aug	45	52	3	33	2,160	11,303	476	3,125	17,542	59,305	1,142	8,847
	9-Aug	51	57	6	83	1,669	8,675	642	4,087	18,294	60,385	1,003	7,682
	10-Aug	35	37	5	57	1,693	9,161	470	3,200	13,129	44,299	856	6,665
	11-Aug	49	53	3	42	3,499	18,540	652	4,376	21,118	71,739	1,170	8,926
	12-Aug	44	52	2	17	4,289	22,957	728	5,113	21,258	72,976	1,520	11,572
	13-Aug	48	60	7	61	7,679	41,192	1,293	9,003	37,208	129,062	1,760	13,168
	14-Aug	44	51	3	40	7,835	41,420	954	6,663	40,104	136,511	1,370	10,278
	15-Aug	43	50	2	29	5,958	30,962	1,085	7,436	34,735	121,146	1,044	7,593
	16-Aug	48	60	1	10	4,623	24,285	1,236	8,755	49,277	166,897	991	7,344
	17-Aug	43	47	1	17	2,574	13,517	951	6,586	27,901	94,364	673	5,045
	18-Aug	42	49	4	35	2,454	13,214	772	5,630	28,158	97,563	605	4,587
	19-Aug	40	43	2	17	1,878	9,874	747	5,068	22,056	78,908	664	4,907
	20-Aug	41	44	3	32	1,007	5,215	598	4,748	18,917	63,505	613	4,667
	21-Aug	35	39	1	12	1,080	5,675	620	4,513	7,861	26,675	471	3,595
	22-Aug	41	44	2	16	3,205	17,143	1,025	7,808	14,687	50,557	1,045	8,225
	23-Aug	40	45	5	37	2,340	12,526	1,060	7,721	13,315	47,399	558	4,258
	24-Aug	40	45	3	39	3,846	20,376	1,585	11,620	22,031	73,685	597	4,657
	25-Aug	41	45	2	12	3,061	15,390	1,674	12,417	19,920	65,095	522	4,017
	26-Aug	41	46	1	7	3,365	17,422	1,700	12,026	20,930	68,318	466	3,574
	27-Aug	38	47	2	18	3,080	16,139	1,566	11,538	18,591	64,590	452	3,196
	31-Aug	29	31	2	15	1,633	8,600	1,266	9,358	7,240	23,265	226	1,665
	1-Sep	35	36	0	0	1,714	8,870	1,958	14,290	9,907	32,001	272	1,951
	2-Sep	35	38	1	5	3,183	16,027	2,532	19,549	11,309	35,995	366	2,597
	3-Sep	37	41	0	0	6,294	31,144	3,585	29,144	15,348	49,039	430	2,950

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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 Kodiak District ^b (cont.)	4-Sep	34	38	4	59	2,703	14,058	2,693	21,826	10,113	32,878	240	1,596
	5-Sep	30	30	0	0	1,772	9,152	2,265	18,260	8,353	26,283	259	1,814
	6-Sep	35	35	4	43	1,645	8,286	2,008	16,472	7,378	23,573	252	1,697
	7-Sep	27	30	2	18	1,062	5,340	1,795	13,916	4,945	16,110	202	1,437
	8-Sep	26	27	0	0	522	2,707	882	6,791	1,520	5,491	49	335
	9-Sep	23	23	3	32	1,292	6,454	1,849	13,758	2,812	9,439	129	847
	10-Sep	15	15	1	10	1,147	5,686	1,309	10,093	1,544	5,152	76	468
	11-Sep	16	17	2	10	647	3,217	896	6,848	1,514	4,926	77	530
	12-Sep	14	15	0	0	481	2,417	662	5,356	869	2,776	79	482
	13-Sep	11	12	0	0	795	3,885	780	5,910	414	1,421	46	303
	14-Sep	9	9	1	12	684	3,259	566	4,565	302	902	22	157
	15-Sep	4	5	0	0	170	802	305	2,353	109	333	8	58
	16-Sep	4	5	0	0	128	594	217	1,727	139	426	13	85
	17-Sep ^a												
Total		98	3,307	838	8,584	331,494	1,723,838	59,084	427,653	1,102,423	3,752,671	132,509	984,228
Average weight					10.24		5.20		7.24		3.40		7.43

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 SHELKOF 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). Subsequently the Board of Fisheries determined that an expanded, nontraditional harvest pattern had developed in the Kodiak Management Area. 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 reduce the harvest of 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 2019).

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 below average fishing effort and low harvest rates. A total of 4 permit holders harvested zero Chinook, 1,862 sockeye, 162 coho, 14,770 pink, and

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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.

305 chum salmon during the first fishing period in the North Shelikof management unit (Appendix F5). Fishing effort was well above average in the Southwest Afognak management unit with 19 permits harvesting 11 Chinook, 10,135 sockeye, 391 coho, 90,606 pink, and 1,320 chum salmon (Appendix F6).

Second Fishing Period (July 13 to 17)

During the second fishing period, the number of the vessels fishing in the North Shelikof management unit increased although harvests rates remained low. During the second fishing period, 8 permit holders harvested of 60 Chinook, 6,970 sockeye, 510 coho, 30,778 pink, and 2,304 chum salmon (Appendix F5).

There was a decrease in fishing effort within the Southwest Afognak management unit during the second fishing period with 14 permit holders harvesting 143 Chinook, 6,199 sockeye, 571 coho, 66,699 pink, and 1,214 chum salmon (Appendix F6).

Third Fishing Period (July 20 to 25)

Effort increased during the third period within the North Shelikof management unit. By late afternoon of July 20, ADF&G determined that the 15,000 fish harvest cap for the North Shelikof management units would be reached, and at 5:00 P.M it was announced that the seaward zones would close at 8:00 p.m.

During the third period 14 permit holders harvested 16 Chinook, 47,094 sockeye, 841 coho, 137,733 pink, and 5,477 chum salmon (Appendix F5).

Fishing effort in the Southwest Afognak Section increased substantially throughout the third fishing period. From July 20 to July 25, permit holders harvested 100 Chinook, 35,409 sockeye, 963 coho, 362,608 pink, and 3,705 chum salmon in the Southwest Afognak management unit (Appendix F6).

Season Totals

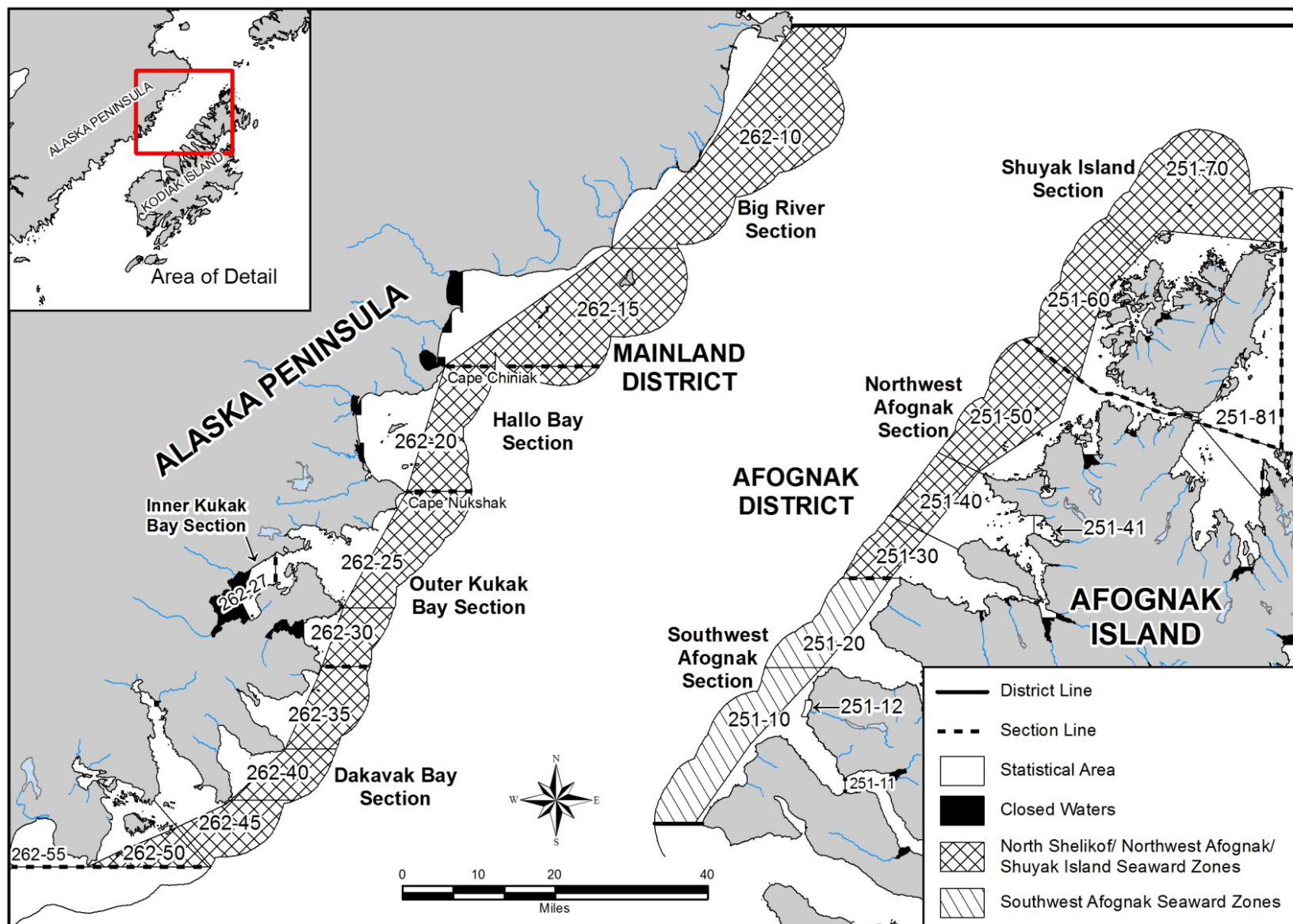
The 2019 North Shelikof management unit harvest for the time period from July 6 to July 25 totaled 76 Chinook, 55,926 sockeye, 1,513 coho, 183,281 pink, and 8,086 chum salmon, taken by 21 permit holders (Appendix F3 and F5). The average weight of the sockeye salmon harvested in the North Shelikof Unit was 5.39 lb (Appendix F5).

The 2019 Southwest Afognak Unit harvest for the time period from July 6 to July 25 totaled 254 Chinook, 51,743 sockeye, 1,925 coho, 519,913 pink, and 6,239 chum salmon, taken by 44 permit holders (Appendices F4 and F6). The average weight of the sockeye salmon harvested in the Southwest Afognak management unit was 5.17 lb (Appendix F6).

REFERENCES CITED

- Fuerst, B. A., J. Jackson, and A. E. Dorner. 2019. Kodiak management area harvest strategy for the 2019 commercial salmon fishery. Alaska Department of Fish and Game, Regional Information Report No. 4K19-06, Kodiak.
- 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.

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, 1995–2019.

Year	Mainland		N. Afognak		Zone Closure		Estimated sockeye harvest at time of zone closure	Number of vessels	Total salmon harvest by species: July 6 through 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
2017	7.1	3.4	13.1	5.4	14-Jul	1:00 PM	17,401	35	457	67,843	2,258	74,592	33,248	1.8
2018	7.1	0.0	7.1	0.0	25-Jul	8:00 PM	15,999	16	307	16,066	1,097	20,479	6,073	0.8
2019	7.1	2.0	13.1	4.0	20-Jul	8:00 PM	14,164	21	76	55,926	1,513	183,281	8,086	1.7

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 July 6 through July 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, 1995–2019.

Year	# of days open to fishing	# of days Seaward Zone closed	Zone Closure		Estimated sockeye harvest at time of zone closure	Number of vessels	Total salmon harvest by species: July 6 through 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
2017	13.1	0.0	none	none	no closure	27	303	20,694	1,665	190,294	14,136	1.8
2018	8.6	0.0	none	none	no closure	5	10	936	406	2,672	747	0.8
2019	14.3	0.0	none	none	no closure	44	254	51,743	1,925	519,913	6,239	1.7

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 July 6 through July 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, 2019.

Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
First Period (July 6–July 10)												
07/06	3	3	0	0	959	5,745	108	962	3,509	10,589	246	1,726
07/09 ^a												
07/10 ^a												
Total	4	6	0	0	1,862	11,159	162	1,407	14,770	44,658	305	2,132
Average weight				0.0		5.99		8.69		3.02		6.99
Second Period (July 13–July 17)												
07/13 ^a												
07/14 ^a												
07/16	5	5	7	89	3,417	18,184	191	1,214	19,218	56,555	790	5,100
Total	8	8	60	772	6,970	38,098	510	3,052	30,778	92,685	2,304	15,367
Average weight				12.86		5.47		5.98		3.01		6.67
Third Period (July 20–July 25)												
07/20	11	11	11	145	7,998	43,647	198	1,400	33,884	121,729	723	5,296
07/21 ^a												
07/22	9	9	5	101	20,373	101,625	468	2,702	63,296	210,583	4,441	34,637
07/23 ^a												
07/24	6	6	0	0	13,500	79,167	127	909	30,586	109,569	219	1,622
07/25 ^a												
Total	14	30	16	246	47,094	252,083	841	5,350	137,733	472,430	5,477	42,208
Average weight				15.38		5.35		6.36		3.43		7.71
North Shelikof Management Harvest July 6–July 25												
Total	21	44	76	1,018	55,926	301,340	1,513	9,810	183,281	609,773	8,086	59,707
Average weight				13.39		5.39		6.48		3.33		7.38

^a Confidential.

Appendix F6.—Daily salmon harvest by species in the Southwest Afognak management units of the North Shelikof Strait Sockeye Salmon Management Plan, 2019.

Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum		
			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	
First Period (July 6–July 10)													
07/06	11	11	8	59	2,675	14,653	46	314	26,432	110,351	536	3,467	
07/08	4	4	0	0	2,798	14,438	90	718	23,021	84,979	351	2,489	
07/09	4	4	1	21	1,275	6,525	25	181	17,053	55,240	131	864	
07/10	9	9	2	16	3,387	16,970	230	1,539	24,100	75,838	302	1,926	
Total	19	28	11	96	10,135	52,587	391	2,753	90,606	326,408	1,320	8,746	
Avg. weight				8.69		5.19		7.04		3.60		6.63	
Second Period (July 13–July 17)													
07/13 ^a													
07/14	4	4	1	15	1,471	6,718	62	474	13,961	48,219	162	1,207	
07/15	6	6	92	1,188	2,620	13,159	242	1,547	28,408	85,231	428	3,220	
07/16	6	7	15	134	1,612	6,996	188	1,153	17,692	57,704	412	2,882	
07/17 ^a													
Total	14	21	143	1,540	6,199	29,037	571	3,624	66,699	210,031	1,214	8,898	
Avg. weight				10.77		4.68		6.35		3.15		7.33	
Third Period (July 20–July 25)													
07/20	7	7	12	169	1,637	9,395	83	555	26,714	97,462	279	1,995	
07/21	3	3	1	6	848	4,452	31	230	13,260	44,282	81	647	
07/22	4	4	6	101	3,314	17,446	93	618	25,708	76,869	431	3,074	
07/23	9	9	25	244	4,445	22,886	95	721	65,231	195,535	699	6,014	
07/24	20	23	40	498	18,097	97,847	511	3,539	165,764	557,809	1,858	12,531	
07/25	13	15	16	178	7,068	33,708	150	1,030	65,931	194,223	357	2,618	
Total	33	61	100	1,196	35,409	185,734	963	6,694	362,608	1,166,180	3,705	26,879	
Avg. weight				11.96		5.25		6.95		3.22		7.25	
SW Afognak Management Harvest July 6–July 25													
Total	44	110	254	2,832	51,743	267,357	1,925	13,070	519,913	1,702,620	6,239	44,523	
Avg. weight				11.15		5.17		6.79		3.27		7.14	

^a Confidential.

APPENDIX G. EASTSIDE AFOGNAK FISHERY SUMMARY

INTRODUCTION

In 1990, the Board of Fisheries adopted the *Eastside Afognak Salmon 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.

2019 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 very low Afognak Lake sockeye salmon escapement, the Southeast Afognak Section remained closed during the initial opening for KMA sockeye salmon on June 7. Afognak Lake sockeye salmon escapement continued to be low and the Southeast Afognak Section remained closed until July 6 when the area transitioned to pink salmon management. A total of 43 permit holders harvested 13 Chinook, 1,368 sockeye, 8,230 coho, 1,062,691 pink, and 641 chum salmon (Appendix G3). The 2019 sockeye salmon escapement into Afognak Lake was 26,267 fish (Fuerst *In prep*), which was within the escapement goal range of 20,000 to 50,000 fish (Schaberg et al. 2016).

The salmon fishery targeting Kitoi Bay Hatchery fish began on June 7 with the last delivery occurring on September 14. In fisheries targeting the Kitoi Bay Hatchery return—which include the Duck Bay, Izhut Bay, Inner Kitoi Bay, and Outer Kitoi Bay sections—124 permit holders harvested 89 Chinook, 12,318 sockeye, 35,065 coho, 4,922,199 pink, and 17,330 chum salmon (Appendix G3). The hatchery pink salmon, early-run sockeye, and late-run sockeye harvests were all below the preseason forecast, coho salmon harvest slightly above, and chum salmon harvest was well below preseason harvest forecasts (Brenner et al. 2019).

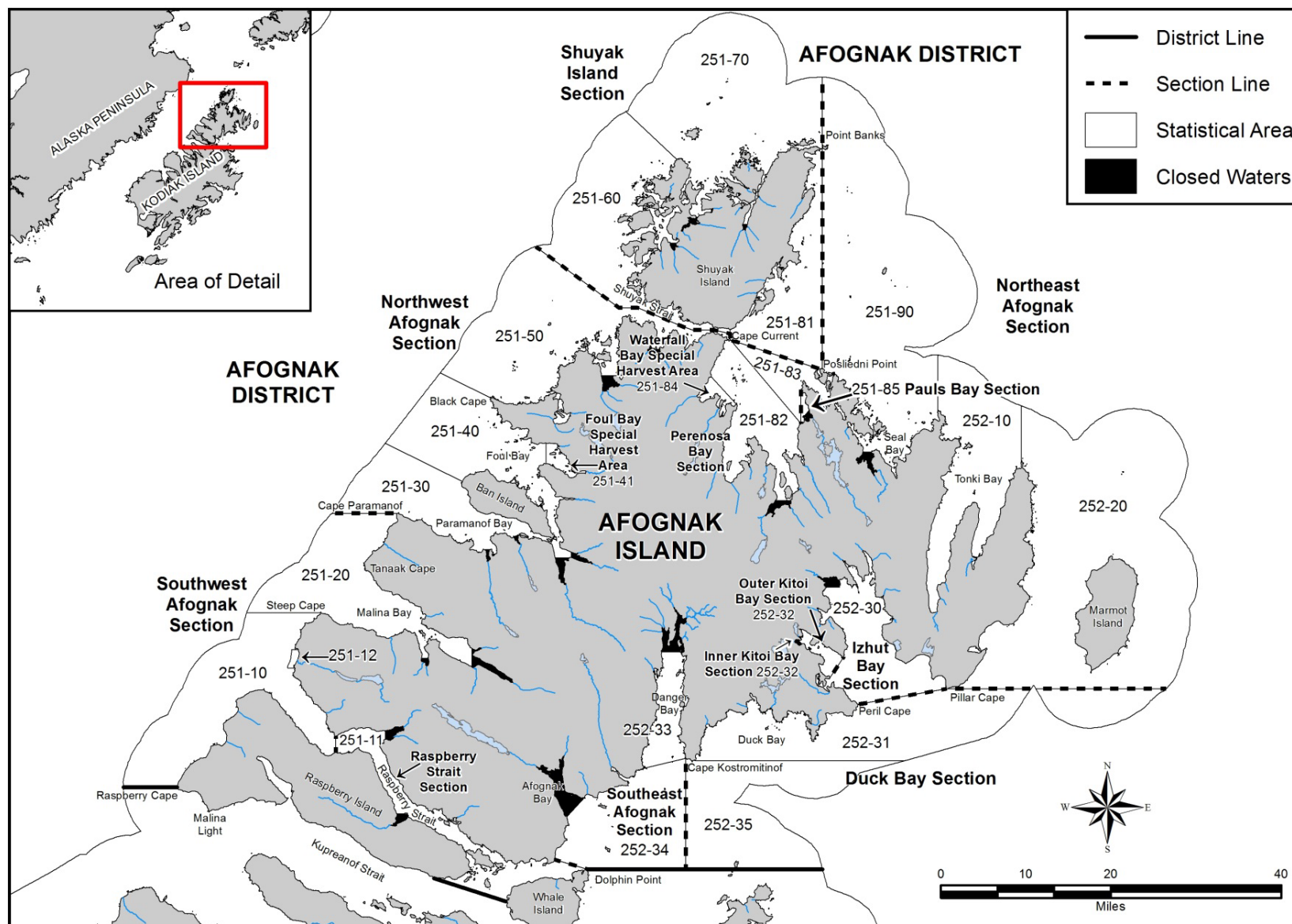
In 2019 there was a cost recovery in the vicinity of the Kitoi Bay Hatchery, with the harvest sold by the Kodiak Regional Aquaculture Association. The cost-recovery fishery harvested 792,845 pink salmon (4.1 million pounds), about 39% of the 2019 Kitoi Bay Hatchery pink salmon harvest. In 2019, 248 sockeye, 27 coho, and 96 chum salmon were also harvested in the cost recovery fishery.

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REFERENCES CITED

- Brenner, R. E., A. R. Munro, and S. J. Larsen, editors. 2019. Run forecasts and harvest projections for 2019 Alaska salmon fisheries and review of the 2018 season. Alaska Department of Fish and Game, Special Publication No. 19-07, Anchorage.
- Fuerst, B. A. *In prep.* Kodiak Management Area weir descriptions and salmon escapement report, 2019. Alaska Department of Fish and Game, Fisheries Management Report, Anchorage.
- Schaberg, K. L., M. B. Foster, M. Wattum, and T. R. McKinley. 2016. Review of salmon escapement goals in the Kodiak Management Area, 2016. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-09, Anchorage.

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, 2019.

Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Raspberry Strait Section 251-11	16-Jul ^a												
	23-Jul ^a												
	24-Jul ^a												
	9-Aug ^a												
	11-Aug ^a												
	23-Aug ^a												
	24-Aug ^a												
	8-Sep ^a												
	9-Sep ^a												
Total		8	9	21	260	1,166	6,140	473	3,324	45,295	130,725	364	2,531
Average weight					12.39		0.00		7.03		2.89		6.95
S.E. Afognak Section 252-33 & 34	10-Jul ^a												
	5-Aug	3	3	0	0	20	98	23	184	5,998	18,243	15	64
	6-Aug	9	9	6	64	61	284	1,024	7,274	27,486	84,928	26	170
	7-Aug	3	4	0	0	60	267	127	963	20,490	61,137	10	64
	8-Aug	6	9	4	36	104	483	322	2,460	63,015	199,078	46	317
	9-Aug	3	3	0	0	50	238	113	764	27,817	83,131	37	236
	10-Aug	7	7	3	16	76	363	134	934	30,631	95,249	24	184
	11-Aug	8	8	0	0	54	258	262	1,680	38,144	114,360	31	208
	12-Aug	6	6	0	0	26	100	89	786	25,870	74,262	19	115
	16-Aug	11	11	0	0	26	109	188	1,281	50,792	151,271	15	101
	17-Aug	4	4	0	0	19	94	75	624	18,563	61,320	32	196
	18-Aug	5	6	0	0	60	281	513	2,924	89,698	262,877	38	253
	19-Aug	8	13	0	0	107	395	341	2,655	86,567	276,242	25	177
	20-Aug	15	19	0	0	166	877	742	5,650	118,410	337,052	88	651
	21-Aug	17	17	0	0	83	365	689	5,041	95,779	277,657	61	413
	22-Aug	11	13	0	0	46	188	507	2,858	70,214	238,415	26	162
	23-Aug	23	23	0	0	79	316	1,111	8,007	139,705	424,690	58	352
	24-Aug	10	10	0	0	33	136	276	2,156	58,871	161,137	20	123

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Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
S.E. Afognak	25-Aug	7	7	0	0	21	103	272	2,026	43,933	148,443	15	110
Section	26-Aug	3	4	0	0	271	1,347	1,165	7,210	32,425	106,608	50	296
252-33 & 34	27-Aug ^a												
	9-Sep ^a												
Total		43	180	13	116	1,368	6,331	8,230	57,623	1,062,691	3,233,400	641	4,230
Average weight					8.92		4.63		7.00		3.04		6.60
Izhut Bay Section	8-Jun ^a												
252-30	9-Jun ^a												
	11-Jun ^a												
	16-Jun	3	3	0	0	53	260	0	0	449	1,709	73	486
	17-Jun ^a												
	18-Jun ^a												
	19-Jun ^a												
	20-Jun ^a												
	17-Jul ^a												
	18-Jul ^a												
	20-Jul ^a												
	22-Jul ^a												
	25-Jul ^a												
	26-Aug	53	69	0	0	368	1,900	2,024	14,660	594,713	1,837,881	140	935
	27-Aug	39	50	0	0	91	357	993	7,139	364,459	1,092,657	46	251
	28-Aug	48	53	0	0	51	214	1,326	8,484	245,628	788,043	33	183
	3-Sep ^a												
	5-Sep	54	55	0	0	1,355	6,277	4,641	36,633	238,874	748,865	197	1,450
	6-Sep	17	19	0	0	46	230	3,426	31,284	110,600	312,445	24	174
	7-Sep	11	11	0	0	29	150	3,935	31,476	98,381	319,634	12	79
	8-Sep	11	11	0	0	25	120	3,072	21,947	66,659	228,393	13	89
	9-Sep	5	5	0	0	10	45	2,978	20,074	31,333	100,269	4	16
	10-Sep	4	4	0	0	12	64	1,521	11,434	16,484	54,659	2	7
Total		104	298	4	36	2,746	13,041	23,956	183,405	1,785,977	5,550,906	4,193	28,619
Average weight					9.00		4.75		7.66		3.11		6.83

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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 Section 252-31 & 35	7-Jun ^a												
	8-Jun ^a												
	9-Jun	3	3	6	17	258	1,511	1	4	576	2,306	42	326
	10-Jun ^a												
	11-Jun ^a												
	12-Jun	3	3	7	40	196	953	0	0	420	1,322	86	747
	13-Jun ^a												
	14-Jun	3	3	1	14	253	1,011	2	12	754	1,739	257	1,509
	15-Jun ^a												
	16-Jun ^a												
	17-Jun	4	5	10	40	540	2,253	0	0	1,830	6,011	551	3,560
	18-Jun ^a												
	19-Jun	3	3	10	18	322	1,301	37	227	848	2,900	489	2,582
	20-Jun ^a												
	21-Jun	7	7	3	19	91	367	2	9	942	2,420	377	2,334
	22-Jun	3	3	12	43	202	722	2	5	1,067	2,633	665	3,431
	17-Jul	3	3	3	31	217	1,189	16	92	6,990	19,869	269	2,057
	18-Jul ^a												
	19-Jul ^a												
	21-Jul ^a												
	22-Jul ^a												
	23-Jul ^a												
	24-Jul ^a												
	25-Jul	3	3	1	9	446	2,281	106	780	5,995	28,131	955	6,572
	26-Jul	3	3	0	0	915	4,150	321	1,686	14,544	41,530	847	5,266
	27-Jul ^a												
	28-Jul	3	3	1	22	460	2,588	103	866	12,715	45,781	405	3,133
	29-Jul ^a												
	30-Jul	5	5	0	0	540	2,686	106	801	25,661	85,179	337	2,579

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Management				Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Duck Bay	31-Jul	5	5	0	0	94	404	16	89	5,794	17,805	32	231
Section	1-Aug	5	5	0	0	270	1,264	104	609	24,383	70,487	131	825
252-31 & 35	20-Aug ^a												
(cont.)	25-Aug	39	44	0	0	649	3,517	2,337	17,657	298,978	955,295	183	1,235
	26-Aug	18	24	0	0	592	2,751	1,616	11,770	224,326	659,470	171	1,027
	27-Aug	17	23	0	0	170	707	2,112	16,493	187,417	571,816	153	1,205
	28-Aug	23	23	0	0	100	432	1,157	8,529	176,288	536,130	59	381
	7-Sep	3	5	0	0	6	18	304	2,558	83,773	189,319	7	32
	8-Sep ^a												
	14-Sep ^a												
Total		78	202	85	408	9,176	43,226	9,757	73,765	1,123,116	3,391,227	11,631	82,647
Average weight					4.79		4.71		7.56		3.02		7.11
Inner & Outer	16-Jun ^a												
Kitoi Bay	18-Jun ^a												
Sections	23-Jul ^a												
252-32	8-Aug ^a												
	14-Aug ^a												
	15-Aug ^a												
	25-Aug ^a												
	29-Aug ^a												
	30-Aug ^a												
	31-Aug ^a												
	2-Sep ^a												
	3-Sep ^a												
	4-Sep ^a												
	5-Sep ^a												
	6-Sep	36	40	0	0	47	188	975	6,863	219,390	680,503	5	26
	7-Sep	10	15	0	0	8	28	345	2,552	118,747	386,017	2	6
Total		43	79	0	0	396	1,663	1,352	9,633	2,013,106	5,547,340	1,506	9,093
Average weight					5.10		4.76		7.54		2.89		7.12

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Management				Chinook		Sockeye		Coho		Pink		Chum	
Unit	Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Management Units Targeting Kitoi Hatchery (Inner & Outer Kitoi, Izhut and Duck Bay Sections)													
Subtotal		124	579	89	444	12,318	57,929	35,065	266,803	4,922,199	14,489,474	17,330	120,358
Average weight					4.98		4.70		7.61		2.94		6.95
East Afognak Management Units													
Grand Total		129	768	123	820	14,852	70,401	43,768	327,749	6,030,185	17,853,600	18,335	127,120
Average weight					6.66		4.74		7.49		2.96		6.93

^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 and net pen production in Telrod Cove conducted by Kodiak Regional Aquaculture Association (KRAA; Appendix H2). Some of these fish were harvested in Westside Kodiak commercial fisheries, and the remainder were harvested in a terminal fishery in the Spiridon Bay Special Harvest Area (SBSHA) in Telrod Cove. A total return of approximately 209,000 Spiridon Lake sockeye salmon (including Telrod Cove net pen production) were expected in 2019 (Brenner et al. 2019). 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 which coincides with Saltery Lake sockeye salmon run timing.

2019 Spiridon Bay Sockeye Salmon Fishery

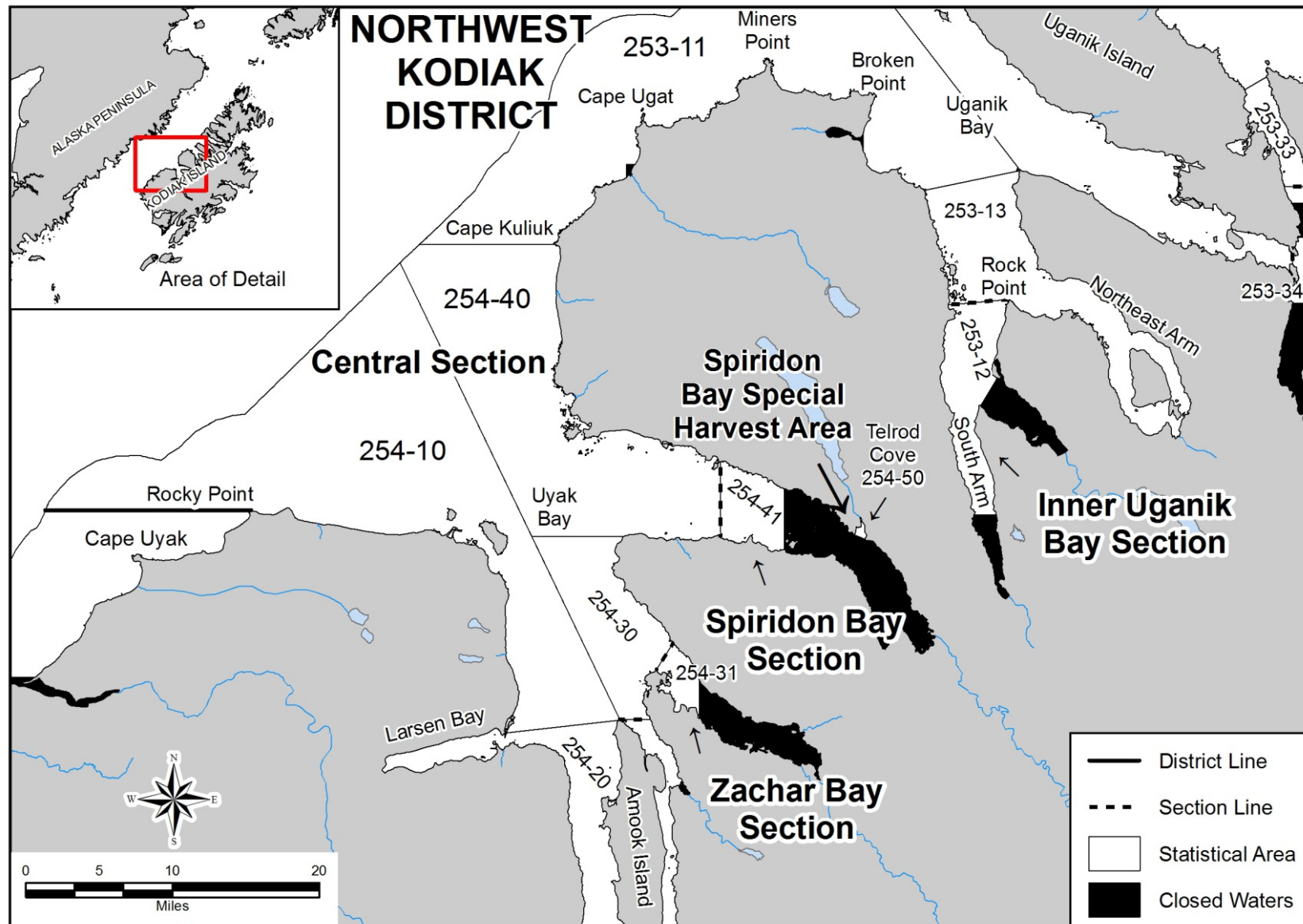
KRAA conducted a cost-recovery harvest to help fund the stocking program. The cost-recovery harvest began on June 27, continued until July 30, and harvested 35,901 sockeye, 25,253 pink, and 772 chum salmon. With the conclusion of the cost-recovery harvest, the common property fishery was opened on August 1 and remained open until the sockeye salmon run began to subside (August 10). Five seine permit holders harvested a total of zero Chinook, 796 sockeye, 1 coho, 36,269 pink, and 816 chum salmon in the common property fishery in SBSHA (Appendix H3). The total number of sockeye salmon harvested in Telrod Cove was 41,010 fish, 88% (35,901 fish) of which were harvested for cost recovery (Appendix H4).

In 2019, liberal fishing time along the west side of Kodiak Island for salmon in early July continued throughout the rest of the month and into August as it became known that the pink salmon run was coming in as forecasted. As a result of the increased fishing time in July, the percentage of Spiridon-bound sockeye salmon harvested in areas outside of SBSHA was likely higher than some previous years. The total number of sockeye salmon returning to the Spiridon enhancement project that were sold in 2019 was estimated at 86,668 fish, with approximately 47% (41,010 fish) harvested within SBSHA/Spiridon Bay Section and an estimated 53% (45,658 fish) harvested in the Southwest Afognak Section of the Afognak District and the Central, North Cape sections of the Northwest Kodiak District (Appendix H4). This estimate was based on the correlation between the number of days of commercial fishing 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).

REFERENCES CITED

- Brenner, R. E., A. R. Munro, and S. J. Larsen, editors. 2019. Run forecasts and harvest projections for 2019 Alaska salmon fisheries and review of the 2018 season. Alaska Department of Fish and Game, Special Publication No. 19-07, Anchorage.
- 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, 2019.

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 ^a												
	2-Aug ^a												
	3-Aug	3	3	0	0	212	1,172	0	0	10,395	34,306	275	2,699
	4-Aug ^a												
	5-Aug	3	3	0	0	83	331	0	0	3,769	9,129	46	317
	6-Aug ^a												
	7-Aug ^a												
Total		5	13	0	0	796	3,578	1	9	36,269	91,552	816	6,750
Average weight					0.0		4.49		9.00		2.52		8.27

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, 2019.

	Actual	Estimated	
	Telrod Cove and Spiridon Bay Section	Southwest Afognak Section and NW Kodiak District	Westside total
Cost recovery	35,901	0	35,901
Common property	5,109	45,658	50,767
Total harvest	41,010	45,658	86,668
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 et al. 2019). 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 2019 (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 operates a weir on the Pasagshak River 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.

2019 Eastside Kodiak Fisheries

The Saltery River sockeye salmon run was low to moderate with a cumulative escapement past Saltery weir of 20,783 fish (Fuerst *In prep*) which is within the desired escapement goal range of 15,000 to 35,000 fish (Fuerst et al. 2019). There were only two 33-hour fishing periods (June 14 and June 21) in the Inner Ugak Bay Section in June due to low escapements of Saltery sockeye salmon. Additionally, no commercial salmon fishing periods were allowed from early July until September due to low pink salmon escapements (Appendix B1).

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The Buskin River sockeye salmon run was strong during the 2019 season resulting in reduced closed waters for the subsistence fishery and four commercial salmon fishing periods during July in the Buskin River Section, although no fishing effort was present during that timeframe. A total of 12,297 sockeye salmon passed above the Buskin River weir (Fuerst *In prep*), which was well above the escapement goal range of 5,000 to 8,000 fish (Schaberg et al. 2016).

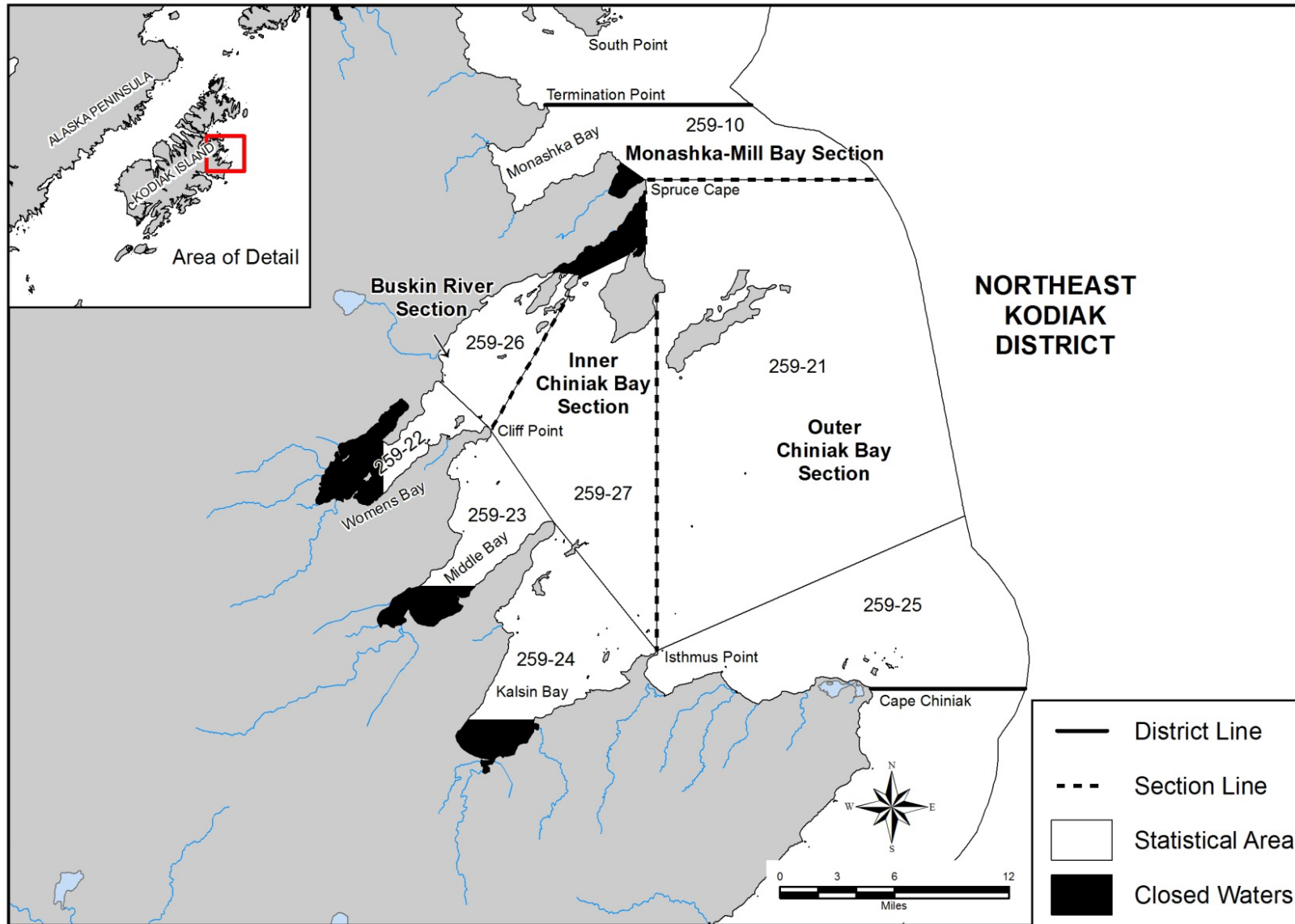
For the Pasagshak River, peak aerial surveys were used to establish the escapement goal. No aerial surveys were conducted on the Pasagshak system in 2019 although the Pasagshak weir counted 4,537 sockeye which met the lower-bound SEG of 3,000 fish (Schaberg et al. 2016).

The total commercial harvest for the Eastside Kodiak management units by 102 permit holders included 1,869 Chinook, 80,337 sockeye, 55,775 coho, 4,223,796 pink, and 69,335 chum salmon (Appendix I4). The last day of commercial salmon harvest in the Eastside Kodiak District was September 10.

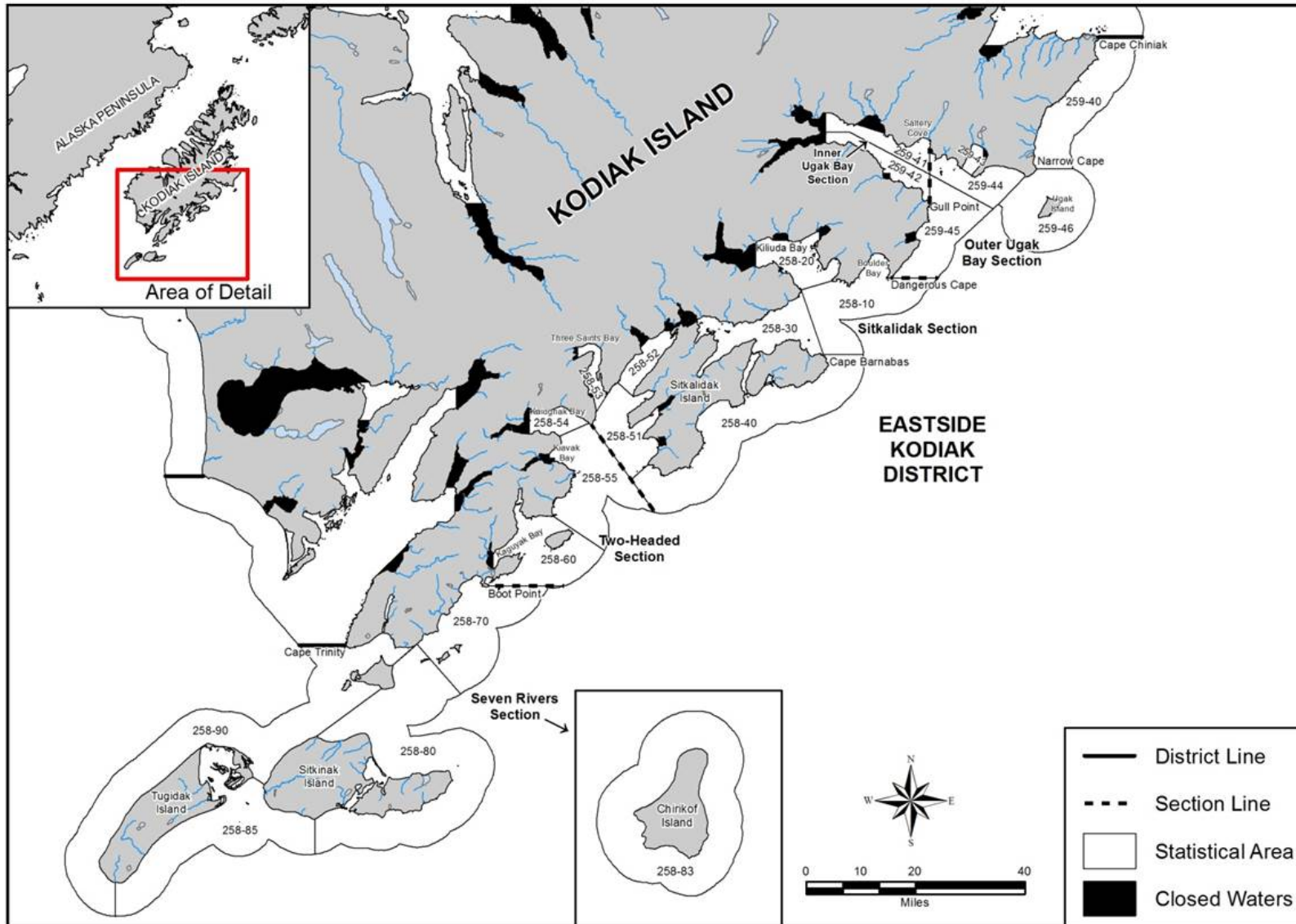
REFERENCES CITED

- Fuerst, B. A. *In prep*. Kodiak Management Area weir descriptions and salmon escapement report, 2019. Alaska Department of Fish and Game, Fisheries Management Report, Anchorage.
- Fuerst, B. A., J. Jackson, and A. E. Dorner. 2019. Kodiak management area harvest strategy for the 2019 commercial salmon fishery. Alaska Department of Fish and Game, Regional Information Report No. 4K19-06, Kodiak.
- Schaberg, K. L., M. B. Foster, M. Wattum, and T. R. McKinley. 2016. Review of salmon escapement goals in the Kodiak Management Area, 2016. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-09, 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, 2019.

Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Eastside Kodiak District	14-Jun	9	9	17	69	4,143	18,289	12	60	60,559	179,960	8,162	47,257
	15-Jun	11	11	54	230	2,849	13,922	12	46	21,966	73,256	3,452	21,326
	21-Jun	30	30	749	2,292	6,282	30,947	121	617	55,436	173,177	14,802	84,393
	22-Jun	15	15	186	609	1,681	8,175	32	143	12,810	37,674	4,433	21,698
	6-Jul	12	12	137	532	7,358	37,599	2,707	13,780	28,521	85,379	2,754	16,937
	7-Jul	7	8	20	72	6,497	41,820	1,225	8,213	44,119	111,978	1,666	13,195
	8-Jul	9	9	367	1,626	8,223	42,543	3,124	15,864	31,716	103,799	3,003	16,995
	9-Jul	11	11	25	159	9,063	44,442	1,591	9,676	35,976	111,901	1,933	13,473
	10-Jul	8	8	59	315	5,399	26,524	1,525	9,398	25,390	80,763	1,350	8,341
	13-Jul	8	8	55	527	7,797	41,544	560	3,550	19,151	61,252	1,049	7,644
	15-Jul	6	6	10	163	2,167	12,693	576	4,121	6,515	20,999	112	805
	16-Jul ^a												
	17-Jul ^a												
	20-Jul ^a												
	21-Jul ^a												
	27-Jul ^a												
	28-Jul ^a												
	29-Jul	4	4	27	491	339	2,086	49	365	4,873	18,540	107	773
	1-Aug	3	3	2	22	105	497	64	362	1,842	8,143	73	405
	2-Aug	3	3	1	8	452	2,264	124	1,244	7,611	26,640	138	1,159
	3-Aug	5	5	10	132	420	1,997	161	1,321	13,826	39,186	260	2,054
	4-Aug	6	6	24	122	1,608	8,483	497	3,246	24,138	86,830	1,287	7,638
	5-Aug	8	9	14	150	1,313	7,635	547	4,682	37,481	124,494	779	6,165
	6-Aug	3	3	17	187	672	3,603	307	2,377	30,601	91,807	785	5,946
	7-Aug	19	21	3	31	2,169	11,429	1,398	10,321	163,148	545,188	1,383	9,549
	8-Aug	18	18	9	118	1,345	6,727	598	4,231	160,918	526,054	783	5,350
	9-Aug	20	20	2	33	1,080	5,531	871	5,430	133,005	447,597	844	5,577
	10-Aug	19	22	5	42	1,266	6,106	955	7,585	168,481	544,858	1,009	7,903
	11-Aug	21	21	6	52	873	4,559	589	3,987	179,830	675,097	809	5,035

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Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Eastside Kodiak	12-Aug	32	36	1	22	961	4,976	840	5758	259,272	818,968	1,026	7,204
District (cont.)	13-Aug	29	30	0	0	667	3,355	818	5777.5	202,347	682,141	904	6,136
	14-Aug	26	29	0	0	595	2,829	940	7002	175,441	518,737	718	4,893
	15-Aug	23	24	1	20	454	2,249	1,000	6,966	151,282	498,668	543	4,131
	16-Aug	18	20	0	0	270	1,204	975	6472.5	86,113	277,362	491	3,590
	17-Aug	17	19	0	0	280	1,398	757	5,465	139,351	448,551	437	3,076
	18-Aug	17	17	0	0	272	1,407	834	5,983	118,638	398,030	671	4,558
	19-Aug	15	16	0	0	299	1,457	1,042	7,619	122,025	405,710	815	5,451
	20-Aug	15	15	10	124	361	1,809	1,019	7,877	196,791	588,781	941	7,283
	21-Aug	17	19	1	11	224	1,091	1,177	8,471	177,380	578,195	1,137	8,246
	22-Aug	14	15	0	0	211	996	1,298	8,741	147,727	506,509	992	7,144
	23-Aug	17	17	0	0	143	744	1,753	13,022	170,600	535,793	1,128	8,171
	24-Aug	15	18	0	0	160	807	1,505	10,692	151,210	490,112	1,024	7,024
	25-Aug	16	18	0	0	168	877	1,896	13,552	192,326	592,063	1,101	8,071
	26-Aug	15	17	0	0	226	923	1,761	11,711	108,006	333,673	847	6,090
	27-Aug	14	14	0	0	91	437	1,785	9,486	54,339	177,657	730	4,661
	31-Aug	11	11	0	0	58	294	3,144	19,725	85,677	268,490	986	6,545
	1-Sep	7	8	0	0	85	421	1,767	11,999	84,874	306,734	644	3,871
	2-Sep	6	6	0	0	36	193	3905	23,936	41,296	126,858	546	3,833
	3-Sep	10	10	0	0	51	249	3,731	25,847	39,283	119,415	628	4,599
	7-Sep	7	7	0	0	81	340	2326	19,987	15,355	50,552	769	5,081
	8-Sep	3	3	0	0	44	172	937	9,461	6,793	23,090	215	1,741
	9-Sep	3	3	0	0	89	474	1749	13,763	21,476	66,258	250	1,834
	10-Sep ^a												
Total		94	645	1,869	9,336	80,187	414,918	55,121	374,371	4,032,717	13,044,037	68,792	434,788
Average weight					5.00		5.17		6.79		3.23		6.32

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Appendix I4.–Page 3 of 3.

Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Northeast Kodiak District	10-Jul ^a												
	8-Aug	7	7	0	0	44	222	46	315	33,699	88,022	179	1,132
	9-Aug ^a												
	10-Aug	7	7	0	0	24	117	72	540	16,326	51,141	43	299
	14-Aug	7	7	0	0	7	32	30	205	9,512	30,536	13	81
	15-Aug	4	5	0	0	7	25	15	112	12,425	37,081	9	62
	16-Aug	4	4	0	0	2	8	8	58	14,514	45,414	1	7
	17-Aug ^a												
	18-Aug ^a												
	19-Aug ^a												
	20-Aug ^a												
	21-Aug	4	5	0	0	12	56	92	714	21,047	62,605	44	368
	22-Aug ^a												
	23-Aug	3	4	0	0	6	26	176	1,102	17,119	49,283	9	60
	24-Aug	3	3	0	0	2	10	81	595	7,211	23,395	4	24
Total		14	56	0	0	150	681	654	4,525	191,079	567,863	543	4,007
Average weight					0.00		4.54		6.92		2.97		7.38
Eastside Management Plan													
Total		102	701	1,869	9,336	80,337	415,598	55,775	378,897	4,223,796	13,611,901	69,335	438,795
Average weight					5.00		5.17		6.79		3.22		6.33

^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 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 Shelikof Strait*

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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.

2019 North Afognak/Shuyak Island Fisheries

In 2019, the first commercial salmon fishing period for the North Afognak/Shuyak Island management units began June 7 and was limited initially to the FBSHA and WBSHA. Within the FBSHA, 6 permit holders harvested a total of 1,081 sockeye, zero coho, 34 pink, and 5 chum salmon (Appendix J3). WBSHA harvest during the 2019 season was confidential (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. Sockeye salmon harvests were low during this time period (Appendix J3). The Pauls Bay weir at the outlet of Pauls Lake was not in operation during the 2019 season (Fuerst *In prep*).

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

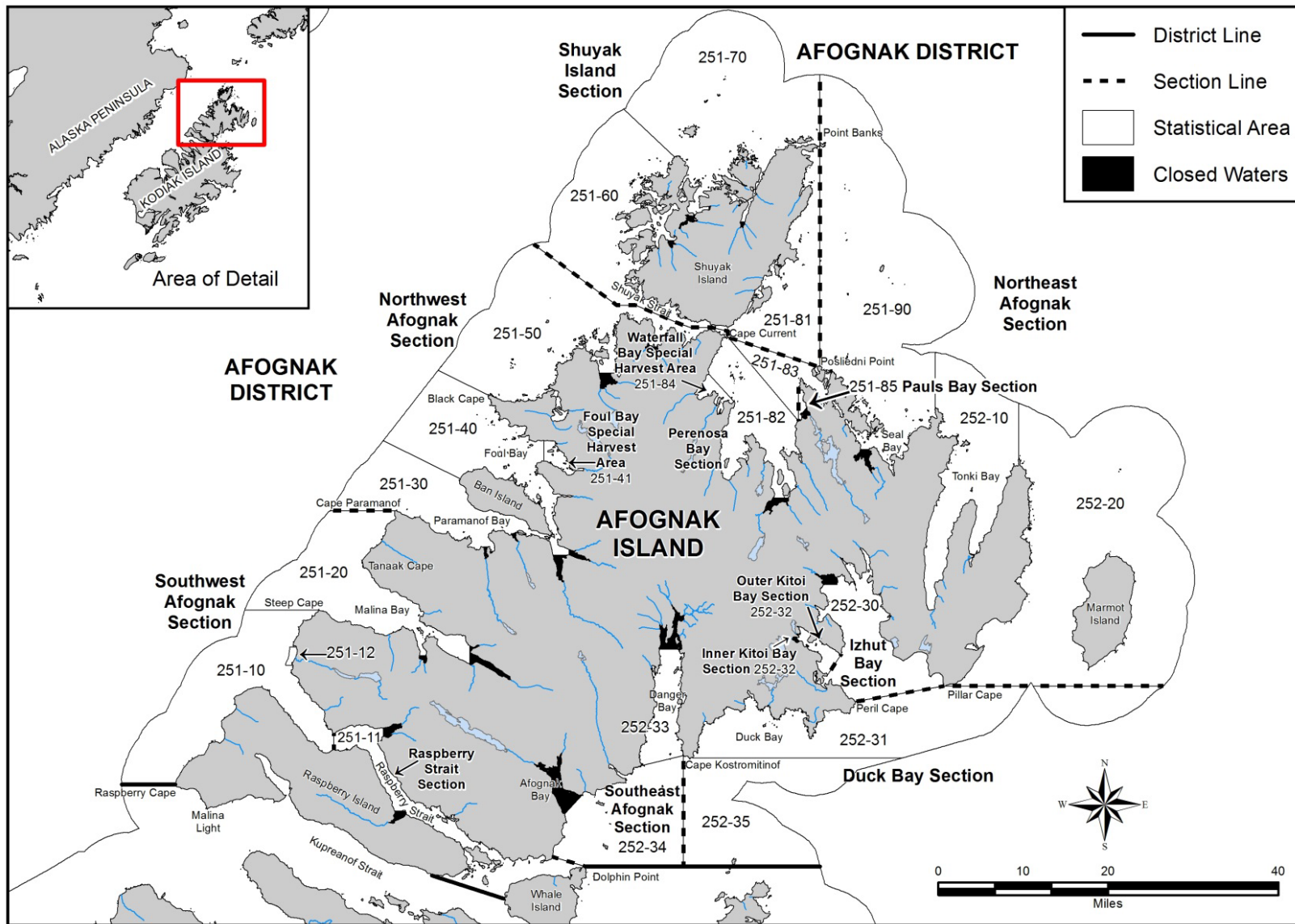
The last landing in the North Afognak/Shuyak Island management units occurred on September 9. In all the units of the North Afognak/Shuyak fishery combined, 40 permit holders made 114 landings and harvested 59 Chinook, 70,251 sockeye, 5,329 coho, 480,017 pink, and 5,746 chum salmon (Appendix J3).

Within the Pauls Bay Section a total of 6 permit holders harvested 1,458 sockeye, 601 coho, 187 pink, and 5 chum salmon (Appendix J3). The last day of commercial salmon harvest in the Pauls Bay Section was September 9.

REFERENCES CITED

Fuerst, B. A. *In prep*. Kodiak Management Area weir descriptions and salmon escapement report, 2019. Alaska Department of Fish and Game, Fisheries Management Report, Anchorage.

Appendix J2.—Map of the Afognak District within the Kodiak Management Area.



Appendix J3.—Daily salmon harvest by species for the North Afognak/Shuyak Island management units, 2019.

Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Northeast Afognak Section	16-Jul ^a												
	17-Jul ^a												
	22-Jul ^a												
	28-Jul ^a												
	5-Aug	3	3	0	0	313	1,582	144	976	13,580	36,336	124	860
	6-Aug ^a												
	9-Aug	3	3	0	0	65	397	171	1,721	10,477	31,434	12	147
	14-Aug ^a												
	20-Aug ^a												
	25-Aug ^a												
	10-Sep ^a												
Total		12	16	6	60	1,257	5,891	894	6,854	93,566	307,439	919	5,802
Average weight					10.00		4.69		7.67		3.29		6.31
Northwest Afognak Section (excluding Foul Bay SHA)	14-Jun ^a												
	21-Jun	8	8	35	234	1,195	5,432	5	16	2,774	8,515	1,547	9,390
	22-Jun ^a												
	6-Jul ^a												
	9-Jul ^a												
	10-Jul ^a												
	16-Jul	5	5	7	89	3,417	18,184	191	1,214	19,218	56,555	790	5,100
	20-Jul	7	7	5	76	3,326	16,315	82	590	31,818	113,989	417	2,946
	21-Jul ^a												
	22-Jul	6	6	0	0	18,220	89,806	388	2,152	50,624	164,819	377	2,304
	23-Jul ^a												
	24-Jul	6	6	0	0	13,500	79,167	127	909	30,586	109,569	219	1,622
	25-Jul ^a												
	26-Jul	8	8	1	10	15,945	86,660	139	776	22,730	78,155	284	1,813
	27-Jul ^a												
	28-Jul	3	3	0	0	887	4,535	55	357	3,571	15,000	65	441

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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
Northwest Afognak Section (excluding Foul Bay SHA) (cont.)	29-Jul ^a												
	5-Aug ^a												
	8-Aug ^a												
	9-Aug	3	3	1	8	131	856	182	1,135	15,100	57,602	33	248
	10-Aug	3	3	0	0	227	1,414	141	971	24,747	80,074	65	401
	11-Aug ^a												
	12-Aug ^a												
	14-Aug ^a												
	15-Aug ^a												
	19-Aug ^a												
	20-Aug ^a												
	21-Aug ^a												
Total		22	73	50	428	66,388	352,150	2,281	14,741	378,445	1,234,490	4,374	28,049
Average weight					8.56		5.30		6.46		3.26		6.41
Foul Bay Special Harvest Area	7-Jun	5	5	2	10	426	1,916	0	0	34	117	5	31
	8-Jun ^a												
	11-Jun ^a												
	14-Jun ^a												
Total		6	9	3	22	1,081	5,091	0	0	34	117	5	31
Average weight					7.20		4.71		0.00		3.45		6.13
Pauls Bay Section	14-Jun	5	5	0	0	1,423	6,512	0	0	0	0	0	0
	21-Jun ^a												
	7-Sep ^a												
Total		6	7	0	0	1,458	6,683	601	4,815	187	563	5	33
Average weight					0.00		4.58		8.01		3.01		6.60

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Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Perenosa Bay Section (Excluding Waterfall Bay)	21-Jun 12-Aug ^a 9-Sep ^a	3	3	0	0	51	241	0	0	44	133	440	2,723
Total		5	5	0	0	51	241	1,208	8,465	2,607	7,914	442	2,736
Average weight					0.00		4.72		7.01		3.04		6.19
Waterfall Bay Special Harvest Area	11-Jun ^a												
Total ^a													
Average weight ^a													
Shuyak Island Section	9-Aug ^a 10-Aug ^a												
Total ^a													
Average weight					0.00		6.07		10.00		3.00		12.30
Grand total		40	114	59	510	70,251	370,125	5,329	38,325	480,017	1,566,067	5,746	36,662
Average weight					8.64		5.27		7.19		3.26		6.38

^a Confidential.

APPENDIX K. MAINLAND DISTRICT FISHERY SUMMARY

INTRODUCTION

The Mainland District of 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 KMA. 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.

2019 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 and Cape Igvak sections which remained closed) was opened for three 57-hour fishing periods between July 6 and July 23 (with some sections managed under the NSSSSMP).

Pink and chum salmon runs were moderate to strong throughout the Mainland District in 2019. After the 4th 57-hour pink salmon opener, which began on July 27, the Mainland District from the Dakavak Bay Section northward only opened for two more 57-hour fishing periods in the 2019 season. A high abundance of pink salmon harvest and escapement allowed the Katmai, Alinchak Bay, Wide Bay, and Cape Igvak sections to remain open to commercial fishing for the majority of August. The estimated pink salmon escapement of 904,400 fish was within the escapement goal range of 250,000 to 1,000,000 fish (Schaberg et al. 2016).

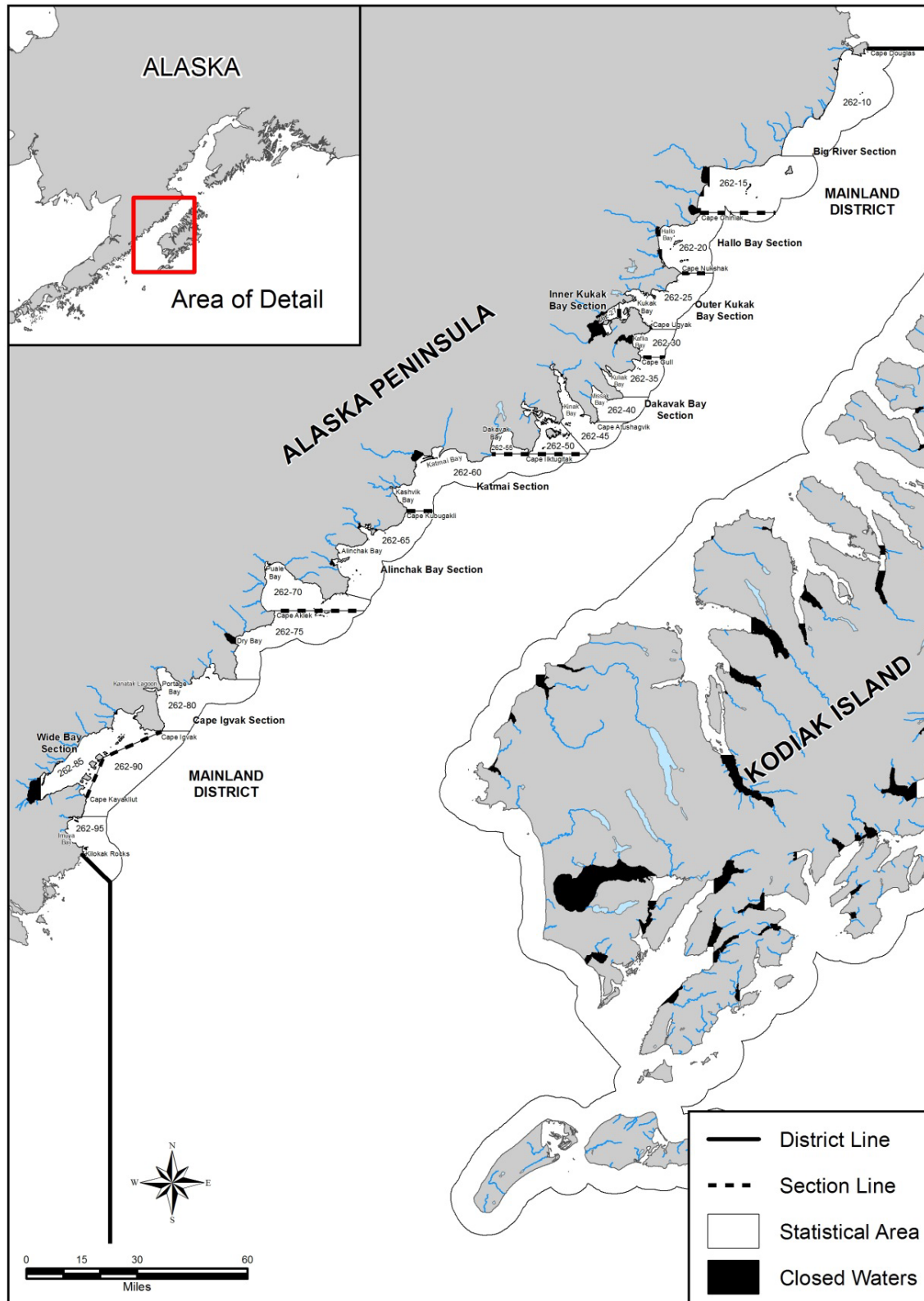
During 2019, the total commercial harvest by 51 permit holders in the Mainland District included 289 Chinook, 161,760 sockeye, 74,789 coho, 2,647,618 pink, and 119,345 chum salmon (Appendix K3). This includes all salmon harvested along the Mainland, including those harvested under the direction of CISMP and NSSSSMP.

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REFERENCES CITED

Schaberg, K. L., M. B. Foster, M. Wattum, and T. R. McKinley. 2016. Review of salmon escapement goals in the Kodiak Management Area, 2016. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-09, 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, 2019.

Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Big River Section	20-Jul ^a												
Total ^a													
Average weight													
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	21-Jun ^a												
	22-Jul ^a												
	3-Aug ^a												
	4-Aug ^a												
	16-Aug ^a												
Total		6	6	0	0	288	1,584	34	234	7,846	27,346	9,095	78,092
Average weight					0.00		5.50		6.88		3.49		8.59
Inner Kukak Bay Section	16-Aug ^a												
Total ^a													
Average weight													
Dakavak Bay Section	6-Jul ^a												
	9-Jul ^a												
	13-Jul ^a												
	14-Jul ^a												
	20-Jul	3	3	6	69	3,726	22,033	94	658	1,795	6,524	279	2,155
	21-Jul ^a												
	22-Jul ^a												
	27-Jul	4	4	2	33	9,723	49,589	651	4,367	10,746	34,387	703	6,334
	28-Jul	6	6	2	56	27,811	152,771	1,593	9,678	17,806	63,405	2,729	17,881

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Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Dakavak Bay Section (cont.)	29-Jul	4	4	0	0	2,360	14,807	118	870	4,323	16,529	215	1,792
	4-Aug ^a												
	5-Aug	3	3	29	265	1,259	6,167	367	2,676	4,671	17,749	602	4,869
	12-Aug ^a												
	15-Aug ^a												
	16-Aug ^a												
Total		16	34	97	1,207	56,516	302,856	4,544	30,418	99,312	329,835	7,455	52,307
Average weight					12.44		5.36		6.69		3.32		7.02
Katmai Section	6-Jul ^a												
	20-Jul ^a												
	22-Jul	3	3	34	487	2,926	19,585	73	438	3,035	10,981	421	3,035
	27-Jul ^a												
	29-Jul ^a												
	1-Aug ^a												
	2-Aug ^a												
	3-Aug	3	3	1	10	1,730	9,613	840	4,722	8,244	32,958	1,727	13,243
	21-Aug ^a												
Total		5	17	132	1,542	18,229	106,125	1,860	11,809	75,003	222,183	9,695	74,639
Average weight					11.68		5.82		6.35		2.96		7.70
Alinchak Bay Section	6-Jul ^a												
	27-Jul ^a												
	28-Jul ^a												
	29-Jul ^a												
	1-Aug	3	3	7	69	946	5,668	143	998	21,200	67,848	4,025	28,707
	3-Aug ^a												
	4-Aug ^a												
	5-Aug ^a												
	11-Aug ^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
Alinchak Bay Section (cont.)	12-Aug ^a												
	18-Aug ^a												
	19-Aug ^a												
	20-Aug	3	3	0	0	1,261	6,067	608	4,790	46,130	202,226	337	2,759
	21-Aug ^a												
	22-Aug ^a												
	23-Aug ^a												
	24-Aug ^a												
	25-Aug ^a												
	26-Aug ^a												
	27-Aug ^a												
Total		11	38	13	158	3,747	20,301	3,077	20,567	361,421	1,312,756	23,636	159,429
Average weight					12.15		5.42		6.68		3.63		6.75
Cape Igvak Section	27-Jul	8	8	15	150	4,263	22,100	1,152	5,900	37,902	109,161	3,227	20,493
	28-Jul	7	8	17	118	6,757	40,145	1,190	7,396	57,082	170,242	6,687	46,000
	29-Jul	4	4	6	46	2,368	12,239	302	1,843	22,853	64,746	3,364	24,108
	30-Jul ^a												
	1-Aug	11	11	5	78	5,267	26,064	1,077	7,225	51,982	181,666	4,268	32,802
	2-Aug	8	9	4	30	3,034	15,588	582	3,558	62,457	209,305	3,950	26,816
	3-Aug	8	8	0	0	4,844	27,902	1,263	7,399	76,952	249,811	3,996	27,804
	4-Aug	5	5	1	13	2,051	10,597	962	5,878	24,469	74,448	1,323	8,544
	5-Aug	6	6	0	0	2,866	16,517	1,911	12,291	30,689	96,431	1,581	10,653
	11-Aug	3	3	0	0	1,244	6,270	613	3,789	52,377	169,065	933	6,685
	12-Aug	5	7	0	0	3,375	18,259	2,429	17,376	69,203	235,669	1,307	8,903
	13-Aug	8	10	9	110	3,442	16,837	3,859	26,872	91,985	315,818	1,780	12,095
	14-Aug	6	7	3	23	2,540	12,781	2,289	15,890	100,322	311,116	1,417	8,911
	15-Aug	5	5	2	16	1,007	5,498	977	6,974	49,428	158,565	1,170	7,411
	16-Aug	4	4	0	0	745	3,718	460	2,965	25,303	84,722	218	1,586
	17-Aug	5	5	0	0	2,961	16,136	2,459	16,696	73,437	252,810	1,027	7,212

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Management unit	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Cape Igvak	18-Aug	6	6	2	24	4,709	24,581	3,645	25,319	91,505	305,587	1,115	8,301
Section (cont.)	19-Aug	8	9	7	50	4,433	21,903	5,481	34,806	107,529	376,208	1,401	9,676
	20-Aug	7	7	0	0	3,787	19,395	5,435	37,502	110,878	356,902	807	6,251
	21-Aug	10	11	12	63	6,016	30,195	5,833	39,054	162,300	516,827	1,342	8,689
	22-Aug	14	15	0	0	3,528	20,329	3,097	23,580	187,891	631,802	934	6,905
	23-Aug	16	19	9	75	2,711	14,900	5,331	38,322	166,932	549,309	841	6,257
	24-Aug	5	5	0	0	830	4,352	2,235	13,813	47,970	155,109	221	1,564
	25-Aug	6	6	5	56	910	5,144	2,498	17,179	30,650	115,168	186	1,299
	26-Aug	6	6	5	66	1,301	5,534	4,165	28,408	29,422	96,537	261	1,792
	27-Aug	4	4	2	22	1,410	6,860	4,770	29,308	11,508	32,462	192	1,232
Total		40	190	105	948	79,567	419,684	64,479	432,584	1,796,097	5,887,648	45,097	311,281
Average weight					9.03		5.27		6.71		3.28		6.90
Wide Bay	27-Jul ^a												
Section	28-Jul	3	3	0	0	1,525	9,910	311	1,929	67,067	201,200	3,092	19,699
	29-Jul ^a												
	1-Aug	4	4	1	8	12	62	2	12	24,579	79,069	5,116	32,287
	2-Aug ^a												
	3-Aug	4	4	0	0	5	20	0	0	35,297	103,883	4,039	26,722
	4-Aug	3	3	0	0	8	32	2	15	12,878	36,558	1,694	12,155
	5-Aug ^a												
	11-Aug ^a												
	12-Aug ^a												
	13-Aug ^a												
	24-Aug ^a												
Total		7	2	1	8	2,460	14,613	773	5,142	306,842	959,862	22,918	152,899
Average weight					8.00		5.94		6.65		3.13		6.67
Mainland District													
Total		51	289	348	3,863	161,760	870,500	74,789	500,906	2,647,618	8,742,912	119,345	844,485
Average weight					11.10		5.38		6.70		3.30		7.08

^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, 2019.

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.
S.W. Afognak & Raspberry Straits (combined) (251-10, 11, 12, 20)	26	29-Jun	19	123	6.4	4,135	16,117	3.9	13	85	6.5	35,064	111,728	3.2	792	5,221	6.6
	27	6-Jul	12	77	6.4	3,465	18,235	5.3	83	501	6.0	39,238	144,011	3.7	1,001	6,147	6.1
	28	13-Jul	3	37	12.3	7,681	39,080	5.1	354	2,498	7.1	65,877	221,775	3.4	818	5,511	6.7
	29	20-Jul	155	1,709	11.0	7,824	38,543	4.9	691	4,418	6.4	93,932	308,887	3.3	1,568	11,486	7.3
	30	27-Jul	131	1,413	10.8	44,703	230,844	5.2	1,253	8,618	6.9	428,739	1,336,726	3.1	4,630	33,100	7.1
	31	3-Aug	10	106	10.6	11,343	59,422	5.2	1,112	8,773	7.9	226,221	764,748	3.4	1,735	11,744	6.8
	32	10-Aug	72	911	12.6	15,652	78,676	5.0	2,402	16,466	6.9	506,370	1,664,907	3.3	1,815	12,117	6.7
	33	17-Aug	34	403	11.9	4,744	24,054	5.1	4,230	29,556	7.0	257,983	847,347	3.3	1,573	10,614	6.7
	34	24-Aug	1	12	12.0	4,950	22,401	4.5	6,620	40,723	6.2	646,234	2,009,238	3.1	805	4,846	6.0
	35	31-Aug	0	0	0.0	3,745	16,875	4.5	3,776	30,125	8.0	274,971	873,856	3.2	381	2,456	6.4
	36	7-Sep	9	52	5.8	6,050	26,963	4.5	10,505	82,974	7.9	153,482	464,552	3.0	347	2,200	6.3
	37	14-Sep	0	0	0.0	1,419	6,469	4.6	1,447	11,659	8.1	56,783	136,056	2.4	72	438	6.1
	38	21-Sep	0	0	0.0	223	895	4.0	347	2,087	6.0	673	1,777	2.6	11	91	8.3
Total			446	4,842	10.9	115,934	578,572	5.0	32,833	238,485	7.3	2,785,567	8,885,607	3.2	15,548	105,971	6.8
N.W. Afognak (251-30, 40, 41, 50)	23	8-Jun	3	22	7.2	599	2,920	4.9	0	0	0.0	34	117	3.5	5	31	6.1
	24	15-Jun	0	0	0.0	536	2,441	4.6	0	0	0.0	52	208	4.0	12	82	6.8
	25	22-Jun	35	234	6.7	1,807	7,641	4.2	5	16	3.2	2,847	8,668	3.0	1,547	9,390	6.1
	27	6-Jul	0	0	0.0	3	16	5.2	1	4	3.8	29	151	5.2	1	10	9.7
	28	13-Jul	0	0	0.0	903	5,414	6.0	41	372	9.1	10,301	30,902	3.0	39	279	7.2
	29	20-Jul	12	165	13.8	6,743	34,499	5.1	273	1,804	6.6	51,036	170,544	3.3	1,207	8,046	6.7
	30	27-Jul	1	10	10.0	53,895	288,447	5.4	706	4,182	5.9	115,998	390,373	3.4	966	6,329	6.6
	31	3-Aug	0	0	0.0	961	4,977	5.2	59	385	6.5	4,656	19,340	4.2	69	467	6.8
	32	10-Aug	1	8	8.0	632	4,041	6.4	367	2,370	6.5	59,580	209,303	3.5	156	1,053	6.8
	33	17-Aug	1	11	11.0	1,118	5,810	5.2	494	3,413	6.9	96,171	286,320	3.0	285	1,825	6.4
	34	24-Aug	0	0	0.0	272	1,035	3.8	335	2,195	6.6	37,775	118,681	3.1	92	569	6.2
Total			53	450	8.5	67,469	357,242	5.3	2,281	14,741	6.5	378,479	1,234,607	3.3	4,379	28,079	6.4

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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)	32	10-Aug	0	0	0.0	6	36	6.1	345	3,450	10.0	5,178	15,544	3.0	1	12	12.3
	Total		0	0	0.0	6	36	6.1	345	3,450	10.0	5,178	15,544	3.0	1	12	12.3
Perenosa Bay (251-82, 83, 84, 85)	24	15-Jun	0	0	0.0	1,433	6,545	4.6	0	0	0.0	0	0	0.0	0	0	0.0
	25	22-Jun	0	0	0.0	86	412	4.8	0	0	0.0	44	133	3.0	440	2,723	6.2
	33	17-Aug	0	0	0.0	0	0	0.0	2	18	9.0	2,500	7,527	3.0	0	0	0.0
	36	7-Sep	0	0	0.0	0	0	0.0	601	4,815	8.0	187	563	3.0	5	33	6.6
	37	14-Sep	0	0	0.0	0	0	0.0	1,206	8,447	7.0	63	254	4.0	2	13	6.5
	Total		0	0	0.0	1,519	6,957	4.6	1,809	13,280	7.3	2,794	8,477	3.0	447	2,769	6.2
N.E. Afognak (251-90, 252-10 & 20)	29	20-Jul	4	24	6.0	150	613	4.1	148	1,186	8.0	1,860	8,137	4.4	338	2,050	6.1
	30	27-Jul	2	36	18.0	175	1,042	6.0	140	949	6.8	2,790	9,315	3.3	350	2,151	6.1
	31	3-Aug	0	0	0.0	270	1,079	4.0	42	252	6.0	1,193	4,771	4.0	37	233	6.3
	32	10-Aug	0	0	0.0	633	3,062	4.8	422	3,411	8.1	32,507	94,439	2.9	189	1,338	7.1
	33	17-Aug	0	0	0.0	12	48	4.0	19	98	5.2	2,059	8,243	4.0	0	0	0.0
	34	24-Aug	0	0	0.0	17	47	2.7	15	103	6.9	1,192	3,581	3.0	4	24	6.0
	35	31-Aug	0	0	0.0	0	0	0.0	105	836	8.0	25,734	102,878	4.0	0	0	0.0
	37	14-Sep	0	0	0.0	0	0	0.0	3	20	6.7	26,231	76,076	2.9	1	6	6.0
	Total		6	60	10.0	1,257	5,891	4.7	894	6,854	7.7	93,566	307,439	3.3	919	5,802	6.3
Izhut (252-30)	23	8-Jun	0	0	0.0	11	55	5.0	0	0	0.0	45	136	3	5	33	6.6
	24	15-Jun	0	0	0.0	102	479	4.7	0	0	0.0	724	1,941	3	159	846	5.3
	25	22-Jun	0	0	0.0	140	617	4.4	0	0	0.0	647	2,463	4	1,238	8,572	6.9
	29	20-Jul	4	36	9.0	323	1,479	4.6	26	173	6.7	4,327	13,490	3	1,046	7,497	7.2
	30	27-Jul	0	0	0.0	183	1,054	5.8	14	101	7.2	2,626	8,121	3	1,274	8,487	6.7
	35	31-Aug	0	0	0.0	510	2,471	4.8	4,343	30,283	7.0	1,204,800	3,718,581	3	219	1,369	6.3
	36	7-Sep	0	0	0.0	1,430	6,657	4.7	11,969	99,161	8.3	443,054	1,361,739	3	232	1,697	7.3
	37	14-Sep	0	0	0.0	47	229	4.9	7,571	53,455	7.1	114,476	383,321	3	19	112	5.9
	Total		4	36	9.0	2,746	13,041	4.7	23,923	183,173	7.7	1,770,699	5,489,791	3.1	4,192	28,613	6.8

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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.
Kitoi Bay (252-32)	25	22-Jun	0	0	0.0	58	245	4.2	0	0	0.0	38	117	3.1	1,041	6,064	5.8
	30	27-Jul	0	0	0.0	35	193	5.5	5	30	6.0	401	1,408	3.5	362	2,536	7.0
	32	10-Aug	0	0	0.0	190	797	4.2	0	0	0.0	65,913	208,944	3.2	96	461	4.8
	33	17-Aug	0	0	0.0	55	197	3.6	0	0	0.0	168,206	506,015	3.0	0	0	0.0
	35	31-Aug	0	0	0.0	0	0	0.0	0	0	0.0	694,295	1,885,228	2.7	0	0	0.0
	36	7-Sep	0	0	0.0	58	231	4.0	1,347	9,603	7.1	1,084,253	2,945,628	2.7	7	32	4.6
Total			0	0	0.0	396	1,663	4.2	1,352	9,633	7.1	2,013,106	5,547,340	2.8	1,506	9,093	6.0
Duck Bay (252-31 & 35)	23	8-Jun	0	0	0.0	190	944	5.0	0	0	0.0	848	2,617	3.1	38	260	6.8
	24	15-Jun	19	107	5.6	1,393	6,297	4.5	9	58	6.5	3,832	11,983	3.1	905	5,167	5.7
	25	22-Jun	56	187	3.3	1,397	5,712	4.1	44	252	5.7	5,950	17,688	3.0	2,354	13,270	5.6
	29	20-Jul	3	31	10.4	651	3,368	5.2	152	1,225	8.1	12,396	36,192	2.9	1,672	13,585	8.1
	30	27-Jul	6	60	10.0	2,533	11,873	4.7	715	4,681	6.5	41,194	132,627	3.2	5,019	38,746	7.7
	31	3-Aug	1	22	22.0	1,465	7,462	5.1	365	2,559	7.0	73,539	235,468	3.2	1,070	7,739	7.2
	35	31-Aug	0	0	0.0	1,511	7,407	4.9	7,222	54,449	7.5	887,009	2,722,711	3.1	566	3,848	6.8
	36	7-Sep	0	0	0.0	6	18	3.0	304	2,558	8.4	83,773	189,319	2.3	7	32	4.6
	37	14-Sep	0	0	0.0	18	87	4.8	852	7,180	8.4	5,935	17,814	3.0	0	0	0.0
Total			85	408	4.8	9,164	43,169	4.7	9,663	72,961	7.6	1,114,476	3,366,417	3.0	11,631	82,647	7.1

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Section	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
(Stat area)	week	ending	No.	lb.	avg.	No.	lb.	avg.	No.	lb.	avg.	No.	lb.	avg.	No.	lb.	avg.
S.E. Afognak (252-33 & 34)	28	13-Jul	0	0	0.0	0	0	0.0	0	0	0.0	13	55	4.2	0	0	0.0
	32	10-Aug	13	116	8.9	371	1,733	4.7	1,743	12,579	7.2	175,437	541,766	3.1	158	1,034	6.5
	33	17-Aug	0	0	0.0	125	561	4.5	614	4,371	7.1	133,369	401,212	3.0	97	619	6.4
	34	24-Aug	0	0	0.0	574	2,557	4.5	4,179	29,292	7.0	659,244	1,978,071	3.0	316	2,130	6.7
	35	31-Aug	0	0	0.0	297	1,472	5.0	1,512	9,739	6.4	88,509	293,938	3.3	69	442	6.4
	37	14-Sep	0	0	0.0	1	8	8.0	182	1,643	9.0	6,119	18,358	3.0	1	5	5.0
	Total			13	116	8.9	1,368	6,331	4.6	8,230	57,623	7.0	1,062,691	3,233,400	3.0	641	4,230
Central, Terror Bay,	23	8-Jun	815	4,910	6.0	9,866	47,469	4.8	0	0	0.0	1,395	4,533	3.2	416	2,656	6.4
Inner Uganik, Spiridon,	24	15-Jun	203	1,615	8.0	8,790	45,158	5.1	2	11	5.5	1,195	4,648	3.9	1,115	7,823	7.0
Zachar, & Uyak combined	25	22-Jun	80	667	8.3	2,936	15,161	5.2	2	13	6.5	783	2,550	3.3	540	3,800	7.0
(253-11, 12, 13, 14, 31	26	29-Jun	633	5,378	8.5	37,536	166,959	4.4	113	653	5.8	174,073	538,432	3.1	7,507	50,925	6.8
32, 33, 34, 35, 254-10, 20,	27	6-Jul	257	2,377	9.3	41,282	191,800	4.6	259	1,646	6.4	417,600	1,402,804	3.4	9,077	63,317	7.0
21, 30, 31, 40, 41, 50)	28	13-Jul	258	3,002	11.6	117,034	565,527	4.8	3,111	18,219	5.9	1,366,542	4,463,548	3.3	36,179	248,279	6.9
	29	20-Jul	466	6,189	13.3	116,040	579,173	5.0	4,812	30,824	6.4	1,187,809	3,723,378	3.1	48,596	354,420	7.3
	30	27-Jul	457	6,616	14.5	123,243	623,730	5.1	2,644	17,300	6.5	1,500,528	4,652,640	3.1	53,746	397,894	7.4
	31	3-Aug	319	3,843	12.0	89,233	456,190	5.1	4,032	26,292	6.5	1,575,718	4,887,812	3.1	45,866	336,970	7.3
	32	10-Aug	121	1,534	12.7	69,617	349,736	5.0	4,582	31,563	6.9	1,184,307	3,724,647	3.1	19,375	143,608	7.4
	33	17-Aug	100	1,024	10.2	82,679	403,582	4.9	10,550	73,784	7.0	2,127,351	6,748,664	3.2	15,679	109,939	7.0
	34	24-Aug	33	337	10.2	38,897	187,251	4.8	10,620	77,048	7.3	1,132,384	3,506,587	3.1	7,683	55,782	7.3
	35	31-Aug	11	100	9.1	29,551	146,974	5.0	10,482	76,890	7.3	435,579	1,442,879	3.3	2,838	20,281	7.1
	36	7-Sep	18	180	10.0	49,701	252,443	5.1	34,243	266,495	7.8	407,659	1,338,090	3.3	3,039	20,964	6.9
	37	14-Sep	7	64	9.1	23,681	106,628	4.5	16,480	127,168	7.7	79,385	252,968	3.2	834	5,402	6.5
	38	21-Sep	0	0	0.0	7,468	35,753	4.8	2,387	18,785	7.9	2,003	6,750	3.4	49	349	7.1
	39	28-Sep	0	0	0.0	943	4,717	5.0	148	1,035	7.0	21	64	3.0	6	33	5.5
	40	5-Oct	1	9	9.0	833	4,257	5.1	30	250	8.3	0	0	0.0	0	0	0.0
Total			3,779	37,845	10.0	849,330	4,182,509	4.9	104,497	767,975	7.3	11,594,332	36,700,996	3.2	252,545	1,822,442	7.2

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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.
North Cape, Anton	23	8-Jun	12	51	4.3	465	2,258	4.9	0	0	0.0	826	2,591	3.1	232	1,575 6.8
Larsen, Sharatin,	24	15-Jun	49	202	4.1	2,223	9,429	4.2	3	15	4.9	7,882	22,549	2.9	1,727	10,130 5.9
& Kizhuyak combined	25	22-Jun	0	0	0.0	625	3,019	4.8	0	0	0.0	346	1,769	5.1	162	956 5.9
(259-30, 31, 32, 33, 34, 35,	26	29-Jun	3	14	4.5	474	2,172	4.6	2	11	5.5	1,463	4,920	3.4	95	616 6.5
36, 37, 38, 39)	27	6-Jul	0	0	0.0	538	2,410	4.5	84	421	5.0	952	3,347	3.5	118	675 5.7
	28	13-Jul	3	49	16.3	1,848	9,211	5.0	519	3,027	5.8	12,564	43,156	3.4	914	6,446 7.1
	29	20-Jul	2	19	9.5	4,122	20,135	4.9	697	4,291	6.2	27,154	95,242	3.5	1,561	11,501 7.4
	30	27-Jul	3	22	7.3	3,595	18,180	5.1	850	5,101	6.0	28,075	89,651	3.2	1,398	9,748 7.0
	31	3-Aug	3	28	9.3	4,184	20,523	4.9	1,938	11,770	6.1	99,969	337,798	3.4	2,481	17,492 7.1
	32	10-Aug	7	72	10.3	3,989	19,689	4.9	3,520	23,185	6.6	242,579	776,826	3.2	2,456	17,462 7.1
	33	17-Aug	9	117	13.0	1,110	5,231	4.7	2,721	18,366	6.7	349,648	1,088,689	3.1	1,874	15,633 8.3
	34	24-Aug	1	13	13.0	1,158	5,459	4.7	6,644	48,486	7.3	553,893	1,661,294	3.0	2,776	20,338 7.3
	35	31-Aug	0	0	0.0	494	2,283	4.6	3,719	27,974	7.5	145,819	463,616	3.2	543	3,690 6.8
	36	7-Sep	0	0	0.0	530	2,297	4.3	5,341	42,750	8.0	111,262	351,023	3.2	696	4,782 6.9
	37	14-Sep	0	0	0.0	0	0	0.0	0	0	0.0	246	678	2.8	0	0 0.0
	38	21-Sep	0	0	0.0	0	0	0.0	94	568	6.0	0	0	0.0	0	0 0.0
Total			92	586	6.4	25,355	122,295	4.8	26,132	185,964	7.1	1,582,678	4,943,148	3.1	17,033	121,043 7.1

Inner Karluk (255-10)

Total	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
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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.
Outer Karluk (255-20)	26	29-Jun	81	544	6.7	5,573	22,208	4.0	12	84	7.0	15,813	49,621	3.1	1,186	7,772	6.6
	27	6-Jul	16	114	7.1	7,486	34,383	4.6	142	894	6.3	30,407	112,761	3.7	1,171	7,636	6.5
	28	13-Jul	40	415	10.4	25,233	126,931	5.0	547	3,380	6.2	149,784	507,206	3.4	2,514	16,505	6.6
	29	20-Jul	19	236	12.4	9,692	56,438	5.8	712	4,816	6.8	100,335	369,393	3.7	1,521	12,011	7.9
	30	27-Jul	56	537	9.6	17,269	100,248	5.8	325	2,101	6.5	106,651	409,901	3.8	1,473	11,772	8.0
	31	3-Aug	5	27	5.4	1,999	11,347	5.7	53	507	9.6	31,572	121,571	3.9	227	1,853	8.2
	35	31-Aug	0	0	0.0	15,347	63,981	4.2	2,461	18,257	7.4	32,059	102,893	3.2	235	1,461	6.2
	36	7-Sep	1	7	7.0	39,729	179,330	4.5	11,285	89,084	7.9	63,845	214,397	3.4	319	2,311	7.2
	37	14-Sep	1	6	6.0	24,493	109,635	4.5	9,232	73,359	7.9	60,810	186,758	3.1	365	2,205	6.0
	38	21-Sep	0	0	0.0	8,224	36,941	4.5	2,257	15,033	6.7	1,478	4,547	3.1	43	301	7.0
	39	28-Sep	1	10	10.0	5,520	25,087	4.5	585	3,704	6.3	83	248	3.0	15	90	6.0
	40	5-Oct	0	0	0.0	1,490	6,407	4.3	337	1,248	3.7	0	0	0.0	0	0	0.0
	Total		220	1,895	8.6	162,055	772,935	4.8	27,948	212,468	7.6	592,837	2,079,296	3.5	9,069	63,918	7.0
Halibut Bay (256-25 & 30)	28	13-Jul	9	95	10.5	2,680	12,682	4.7	81	511	6.3	4,705	17,653	3.8	59	419	7.1
	29	20-Jul	31	306	9.9	8,260	40,018	4.8	87	461	5.3	22,555	81,980	3.6	157	1,053	6.7
	30	27-Jul	34	350	10.3	81,003	392,402	4.8	414	2,903	7.0	214,649	718,514	3.3	1,349	9,482	7.0
	31	3-Aug	1	8	8.0	7,671	38,572	5.0	113	579	5.1	61,560	211,878	3.4	198	1,243	6.3
	37	14-Sep	0	0	0.0	1,053	6,322	6.0	277	3,321	12.0	803	3,935	4.9	20	202	10.1
	Total		75	758	10.1	100,667	489,997	4.9	972	7,775	8.0	304,272	1,033,961	3.4	1,783	12,399	7.0

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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.
Inner & Outer	28	13-Jul	1	21	21.0	36,868	179,240	4.9	16	85	5.3	10,525	33,182	3.2	52	361	6.9
Ayakulik (256-10, 15, 20)	29	20-Jul	17	160	9.4	37,639	195,370	5.2	48	296	6.2	32,450	112,893	3.5	345	2,410	7.0
	30	27-Jul	2	13	6.3	79,074	405,626	5.1	112	731	6.5	76,627	251,283	3.3	794	5,839	7.4
	31	3-Aug	23	242	10.5	33,707	189,294	5.6	262	1,841	7.0	56,962	195,663	3.4	805	5,479	6.8
	32	10-Aug	20	185	9.3	34,429	194,473	5.6	809	5,342	6.6	190,493	644,225	3.4	1,851	13,474	7.3
	33	17-Aug	8	50	6.3	29,166	145,634	5.0	1,279	9,405	7.4	219,809	782,859	3.6	2,143	15,205	7.1
	34	24-Aug	0	0	0.0	15,425	76,106	4.9	1,328	9,912	7.5	120,887	397,117	3.3	676	4,286	6.3
	35	31-Aug	0	0	0.0	3,952	18,837	4.8	1,113	6,506	5.8	33,759	108,035	3.2	116	777	6.7
Total			71	670	9.4	270,260	1,404,580	5.2	4,967	34,117	6.9	741,512	2,525,256	3.4	6,782	47,830	7.1

Sturgeon (256-40)

Total			0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Cape Alitak (257-10 & 20)	26	29-Jun	16	240	15.0	19,075	95,932	5.0	20	116	5.8	8,415	28,853	3.4	373	2,640	7.1
	27	6-Jul	98	1,173	12.0	42,657	203,235	4.8	483	3,267	6.8	96,464	317,683	3.3	2,698	20,799	7.7
	28	13-Jul	76	1,302	17.1	19,847	96,574	4.9	230	1,379	6.0	44,228	129,402	2.9	2,239	16,617	7.4
	29	20-Jul	26	544	20.9	15,191	74,430	4.9	125	880	7.0	37,093	109,817	3.0	1,198	8,228	6.9
	30	27-Jul	17	311	18.3	6,545	29,872	4.6	196	1,462	7.5	22,445	71,349	3.2	594	3,821	6.4
	31	3-Aug	39	694	17.8	2,819	14,599	5.2	106	665	6.3	33,864	113,975	3.4	639	4,366	6.8
	32	10-Aug	0	0	0.0	101	555	5.5	4	42	10.5	12,158	36,479	3.0	41	487	11.9
Total			272	4,264	15.7	106,235	515,196	4.8	1,164	7,811	6.7	254,667	807,558	3.2	7,782	56,959	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.
Moser/Olga Bay & Dog Salmon Flats (257-30, 31, 40, 41, 42, 43)	25	22-Jun	0	0	0.0	16,054	67,435	4.2	0	0	0.0	0	0	0.0	8	75 9.4
	26	29-Jun	3	62	20.7	46,380	185,139	4.0	3	14	4.7	626	2,041	3.3	96	699 7.3
	27	6-Jul	0	0	0.0	23,083	101,813	4.4	23	103	4.5	5,866	18,217	3.1	425	2,976 7.0
	28	13-Jul	1	21	21.0	12,896	62,737	4.9	74	360	4.9	9,880	31,996	3.2	700	4,994 7.1
	29	20-Jul	1	19	19.0	26,149	121,853	4.7	80	453	5.7	39,109	127,867	3.3	2,746	19,423 7.1
	30	27-Jul	0	0	0.0	20,060	90,581	4.5	111	597	5.4	37,581	122,601	3.3	2,634	18,630 7.1
	31	3-Aug	0	0	0.0	11,894	53,497	4.5	184	991	5.4	27,062	89,593	3.3	2,108	14,908 7.1
	32	10-Aug	0	0	0.0	3,191	14,723	4.6	113	736	6.5	7,303	25,620	3.5	557	4,293 7.7
	37	14-Sep	0	0	0.0	9	33	3.7	51	485	9.5	170	444	2.6	41	366 8.9
	Total		5	102	20.4	159,716	697,811	4.4	639	3,739	5.9	127,597	418,379	3.3	9,315	66,364 7.1
Humpy/Deadman (257-50, 60, 70)	26	29-Jun	1	10	10.0	3,017	14,416	4.8	0	0	0.0	989	3,173	3.2	89	530 6.0
	27	6-Jul	1	7	7.0	10,196	51,736	5.1	165	964	5.8	13,698	56,232	4.1	315	2,007 6.4
	28	13-Jul	0	0	0.0	14,053	70,113	5.0	43	217	5.0	38,661	128,613	3.3	380	2,858 7.5
	29	20-Jul	2	18	9.0	5,898	28,102	4.8	122	645	5.3	45,956	149,409	3.3	597	3,990 6.7
	30	27-Jul	12	191	16.0	3,387	16,943	5.0	35	202	5.8	75,761	256,997	3.4	1,173	8,033 6.8
	31	3-Aug	11	161	14.6	4,951	25,233	5.1	54	345	6.4	189,329	623,719	3.3	2,090	14,091 6.7
	32	10-Aug	6	101	16.8	4,266	22,661	5.3	238	1,718	7.2	357,246	1,186,674	3.3	2,450	19,015 7.8
	33	17-Aug	0	0	0.0	3,704	18,921	5.1	615	4,019	6.5	321,392	1,112,893	3.5	1,962	15,206 7.8
	34	24-Aug	1	15	15.0	8,744	47,334	5.4	8,079	65,615	8.1	433,429	1,466,674	3.4	4,847	38,403 7.9
	35	31-Aug	0	0	0.0	5,252	26,688	5.1	5,253	41,599	7.9	194,986	664,903	3.4	2,091	15,859 7.6
	36	7-Sep	0	0	0.0	698	3,689	5.3	1,459	11,899	8.2	28,910	99,825	3.5	480	3,347 7.0
	Total		34	503	14.8	64,166	325,836	5.1	16,063	127,223	7.9	1,700,357	5,749,112	3.4	16,474	123,338 7.5

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Section	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
(Stat area)	week	ending	No.	lb.	avg.	No.	lb.	avg.	No.	lb.	avg.	No.	lb.	avg.	No.	lb.	avg.
Seven Rivers (258-70, 80, 85, 90)	24	15-Jun	0	0	0.0	2,144	7,364	3.4	10	45	4.5	20,800	61,866	3.0	5,169	23,232	4.5
	25	22-Jun	208	861	4.1	3,182	15,776	5.0	37	222	6.0	25,830	77,795	3.0	10,780	57,333	5.3
	27	6-Jul	0	0	0.0	265	1,386	5.2	11	112	10.2	1,600	4,799	3.0	92	902	9.8
	28	13-Jul	15	98	6.5	3,297	16,722	5.1	527	3,471	6.6	14,550	43,526	3.0	721	4,780	6.6
	31	3-Aug	2	22	11.0	6	30	5.0	0	0	0.0	150	468	3.1	2	13	6.5
	32	10-Aug	0	0	0.0	703	3,390	4.8	166	1,030	6.2	228,770	810,961	3.5	345	2,412	7.0
	33	17-Aug	0	0	0.0	298	1,760	5.9	615	4,222	6.9	323,830	1,108,490	3.4	477	3,658	7.7
	34	24-Aug	0	0	0.0	139	724	5.2	237	1,672	7.1	267,644	787,437	2.9	174	1,092	6.3
	35	31-Aug	0	0	0.0	137	519	3.8	185	580	3.1	57,231	157,942	2.8	63	433	6.9
	Total		225	981	4.4	10,171	47,671	4.7	1,788	11,354	6.4	940,405	3,053,284	3.2	17,823	93,854	5.3
Two-Headed (258-54, 55, 60)	24	15-Jun	0	0	0.0	1,990	9,086	4.6	5	22	4.4	6,491	19,573	3.0	1,610	8,426	5.2
	25	22-Jun	376	1,102	2.9	1,659	8,685	5.2	24	153	6.4	11,444	35,039	3.1	4,044	24,661	6.1
	27	6-Jul	54	244	4.5	4,065	20,381	5.0	627	3,797	6.1	11,310	33,078	2.9	680	4,674	6.9
	28	13-Jul	6	41	6.9	10,500	62,374	5.9	1,527	10,448	6.8	59,342	160,995	2.7	2,011	16,856	8.4
	29	20-Jul	0	0	0.0	903	5,411	6.0	408	2,856	7.0	2,105	6,739	3.2	0	0	0.0
	30	27-Jul	0	0	0.0	156	855	5.5	16	124	7.8	510	1,682	3.3	43	303	7.0
	31	3-Aug	1	8	8.0	551	2,731	5.0	188	1,606	8.5	9,303	34,315	3.7	209	1,551	7.4
	32	10-Aug	0	0	0.0	545	2,883	5.3	619	4,284	6.9	54,599	187,082	3.4	613	4,769	7.8
	33	17-Aug	0	0	0.0	815	4,093	5.0	854	6,594	7.7	148,535	496,750	3.3	1,309	8,410	6.4
	34	24-Aug	6	87	14.5	227	1,126	5.0	662	4,660	7.0	47,254	148,309	3.1	422	2,604	6.2
	36	7-Sep	0	0	0.0	9	43	4.8	101	889	8.8	4,932	14,598	3.0	47	334	7.1
	Total		443	1,482	3.3	21,420	117,668	5.5	5,031	35,433	7.0	355,825	1,138,160	3.2	10,988	72,588	6.6

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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.
Sitkalidak (258-10, 20, 30, 40, 51, 52, 53)	24	15-Jun	71	299	4.2	2,858	15,761	5.5	9	39	4.3	55,234	171,777	3.1	4,835	36,925	7.6
	25	22-Jun	223	692	3.1	2,572	11,980	4.7	65	264	4.1	26,744	84,567	3.2	4,070	22,267	5.5
	27	6-Jul	83	288	3.5	3,023	15,811	5.2	2,068	9,866	4.8	15,336	46,677	3.0	1,981	11,354	5.7
	28	13-Jul	411	1,724	4.2	21,553	110,392	5.1	5,593	30,669	5.5	78,792	253,497	3.2	6,054	36,529	6.0
	29	20-Jul	13	237	18.2	1,658	9,425	5.7	198	1,483	7.5	7,598	24,743	3.3	199	1,399	7.0
	30	27-Jul	47	1,008	21.4	465	2,522	5.4	52	342	6.6	4,458	14,932	3.3	48	348	7.3
	31	3-Aug	1	9	9.0	626	3,296	5.3	110	932	8.5	18,170	54,324	3.0	145	1,221	8.4
	32	10-Aug	53	494	9.3	5,755	28,985	5.0	3,659	27,779	7.6	379,468	1,180,859	3.1	4,182	29,424	7.0
	33	17-Aug	8	94	11.8	2,987	14,717	4.9	4,450	30,612	6.9	721,271	2,314,283	3.2	3,142	21,997	7.0
	34	24-Aug	5	48	9.6	1,304	6,461	5.0	7,729	56,073	7.3	769,473	2,567,384	3.3	6,112	44,181	7.2
	35	31-Aug	0	0	0.0	406	2,012	5.0	8,401	53,894	6.4	383,117	1,213,941	3.2	3,601	24,934	6.9
	36	7-Sep	0	0	0.0	244	1,160	4.8	11,628	80,880	7.0	175,876	588,961	3.3	2,540	17,050	6.7
	37	14-Sep	0	0	0.0	153	753	4.9	3,076	26,839	8.7	31,944	101,497	3.2	503	3,853	7.7
	Total		915	4,892	5.3	43,604	223,275	5.1	47,038	319,672	6.8	2,667,481	8,617,441	3.2	37,412	251,481	6.7
Inner & Outer Ugak (259-40, 41, 42, 43, 44 45, 46)	25	22-Jun	128	246	1.9	550	2,682	4.9	27	121	4.5	4,228	13,450	3.2	341	1,831	5.4
	27	6-Jul	0	0	0.0	5	21	4.2	1	4	4.3	275	824	3.0	1	7	6.6
	28	13-Jul	94	836	8.9	1,629	7,385	4.5	378	2,113	5.6	3,668	11,675	3.2	215	1,483	6.9
	29	20-Jul	6	86	14.3	21	97	4.6	9	39	4.3	681	2,069	3.0	22	141	6.4
	31	3-Aug	37	623	16.8	337	1,864	5.5	120	857	7.1	5,219	19,207	3.7	260	1,880	7.2
	32	10-Aug	21	189	9.0	2,450	14,256	5.8	729	4,779	6.6	54,935	187,927	3.4	1,730	11,524	6.7
	Total		286	1,980	6.9	4,992	26,305	5.3	1,264	7,912	6.3	69,006	235,152	3.4	2,569	16,865	6.6

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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.
Outer Chiniak (259-21, 25)	28	13-Jul	0	0	0.0	0	0	0.0	0	0	0.0	93	280	3.0	29	257	8.9
	32	10-Aug	0	0	0.0	2	12	6.0	3	22	7.3	10,328	20,657	2.0	153	923	6.0
	Total		0	0	0.0	2	12	6.0	3	22	7.3	10,421	20,937	2.0	182	1,180	6.5
Inner Chiniak (259-21, 24, 27)	32	10-Aug	0	0	0.0	18	105	5.8	14	110	7.9	7,465	23,946	3.2	54	402	7.4
	33	17-Aug	0	0	0.0	30	120	4.0	61	373	6.1	6,105	17,083	2.8	69	480	7.0
	Total		0	0	0.0	48	225	4.7	75	483	6.4	13,570	41,029	3.0	123	882	7.2
Buskin River (259-22, 26)	33	17-Aug	0	0	0.0	0	0	0.0	0	0	0.0	3,926	12,172	3.1	0	0	0.0
	34	24-Aug	0	0	0.0	0	0	0.0	67	443	6.6	10,605	37,084	3.5	182	1,570	8.6
	Total		0	0	0.0	0	0	0.0	67	443	6.6	14,531	49,256	3.4	182	1,570	8.6
Monaska/Mill Bay (259-10)	32	10-Aug	0	0	0.0	53	238	4.5	105	754	7.2	42,423	126,255	3.0	20	136	6.8
	33	17-Aug	0	0	0.0	12	50	4.2	54	383	7.1	37,773	114,075	3.0	9	57	6.3
	34	24-Aug	0	0	0.0	35	156	4.5	350	2,440	7.0	72,361	216,311	3.0	27	182	6.8
	Total		0	0	0.0	100	444	4.4	509	3,577	7.0	152,557	456,641	3.0	56	375	6.7
Big River (262-10,15)	29	20-Jul	0	0	0.0	946	5,300	5.6	22	153	7.0	271	1,216	4.5	27	195	7.2
	Total		0	0	0.0	946	5,300	5.6	22	153	7.0	271	1,216	4.5	27	195	7.2

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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.
Hallo Bay (262-20)																	
	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)	25	22-Jun	0	0	0.0	166	991	6.0	0	0	0.0	162	649	4.0	16	113	7.1
	30	27-Jul	0	0	0.0	14	57	4.1	0	0	0.0	4,696	17,845	3.8	3,779	30,213	8.0
	31	3-Aug	0	0	0.0	34	165	4.9	16	98	6.1	665	1,997	3.0	1,350	9,588	7.1
	32	10-Aug	0	0	0.0	63	314	5.0	17	122	7.2	1,048	3,668	3.5	1,756	14,045	8.0
	33	17-Aug	0	0	0.0	18	93	5.2	1	14	14.0	2,101	5,253	2.5	3,616	39,775	11.0
	Total		0	0	0.0	295	1,620	5.5	34	234	6.9	8,672	29,412	3.4	10,517	93,734	8.9
Dakavak (262-35, 40, 45, 50, 55)	27	6-Jul	0	0	0.0	956	5,729	6.0	107	958	9.0	3,480	10,438	3.0	245	1,716	7.0
	28	13-Jul	53	683	12.9	2,506	14,677	5.9	168	1,091	6.5	8,826	30,061	3.4	770	5,812	7.5
	29	20-Jul	6	69	11.5	4,773	27,270	5.7	258	1,478	5.7	5,489	15,760	2.9	1,043	6,738	6.5
	30	27-Jul	7	134	19.1	12,224	63,376	5.2	751	5,055	6.7	18,808	62,691	3.3	1,024	8,708	8.5
	31	3-Aug	2	56	28.0	30,171	167,578	5.6	1,711	10,548	6.2	22,129	79,934	3.6	2,944	19,673	6.7
	32	10-Aug	29	265	9.1	1,363	6,677	4.9	427	3,114	7.3	5,905	22,435	3.8	668	5,401	8.1
	33	17-Aug	0	0	0.0	4,523	17,549	3.9	1,122	8,174	7.3	34,675	108,517	3.1	761	4,259	5.6
	Total		97	1,207	12.4	56,516	302,856	5.4	4,544	30,418	6.7	99,312	329,835	3.3	7,455	52,307	7.0
Katmai (262-60)	27	6-Jul	0	0	0.0	669	2,344	3.5	20	141	7.0	1,736	5,206	3.0	33	196	5.9
	29	20-Jul	85	872	10.3	5,026	31,326	6.2	159	1,114	7.0	2,584	9,046	3.5	547	4,377	8.0
	30	27-Jul	46	660	14.4	7,572	44,683	5.9	487	3,001	6.2	8,957	28,968	3.2	1,818	13,123	7.2
	31	3-Aug	1	10	10.0	4,792	26,750	5.6	1,003	5,640	5.6	49,547	142,424	2.9	7,260	56,491	7.8
	34	24-Aug	0	0	0.0	170	1,022	6.0	191	1,913	10.0	12,179	36,539	3.0	37	452	12.2
	Total		132	1,542	11.7	18,229	106,125	5.8	1,860	11,809	6.3	75,003	222,183	3.0	9,695	74,639	7.7

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Section	Statistical	Week	Chinook			Sockeye			Coho			Pink			Chum		
(Stat area)	week	ending	No.	lb.	avg.	No.	lb.	avg.	No.	lb.	avg.	No.	lb.	avg.	No.	lb.	avg.
Alinchak (262-65, 70)	27	6-Jul	0	0	0.0	6	31	5.2	0	0	0.0	58	301	5.2	3	19	6.5
	30	27-Jul	0	0	0.0	6	27	4.5	4	38	9.5	18,642	50,642	2.7	2,524	16,001	6.3
	31	3-Aug	11	136	12.4	947	5,672	6.0	144	1,004	7.0	69,110	215,216	3.1	10,702	69,399	6.5
	32	10-Aug	0	0	0.0	317	2,216	7.0	105	728	6.9	34,500	136,685	4.0	1,679	14,345	8.5
	33	17-Aug	2	22	11.0	549	3,112	5.7	576	3,897	6.8	34,095	128,220	3.8	1,118	7,968	7.1
	34	24-Aug	0	0	0.0	1,853	8,791	4.7	2,056	13,699	6.7	162,030	627,209	3.9	6,797	46,771	6.9
	35	31-Aug	0	0	0.0	69	452	6.6	192	1,201	6.3	42,986	154,483	3.6	813	4,926	6.1
Total			13	158	12.2	3,747	20,301	5.4	3,077	20,567	6.7	361,421	1,312,756	3.6	23,636	159,429	6.7
Cape Igvak (262-75, 80, 90, 95)	30	27-Jul	15	150	10.0	4,263	22,100	5.2	1,152	5,900	5.1	37,902	109,161	2.9	3,227	20,493	6.4
	31	3-Aug	32	272	8.5	22,270	121,938	5.5	4,414	27,422	6.2	271,326	875,769	3.2	22,265	157,530	7.1
	32	10-Aug	1	13	13.0	4,917	27,114	5.5	2,873	18,169	6.3	55,158	170,879	3.1	2,904	19,197	6.6
	33	17-Aug	14	149	10.6	15,314	79,499	5.2	13,086	90,562	6.9	462,055	1,527,766	3.3	7,852	52,803	6.7
	34	24-Aug	30	212	7.1	26,014	135,655	5.2	31,057	212,395	6.8	875,005	2,891,744	3.3	6,661	47,643	7.2
	35	31-Aug	12	144	12.0	3,621	17,538	4.8	11,433	74,895	6.6	71,580	244,167	3.4	639	4,323	6.8
	Total			104	940	9.0	76,399	403,843	5.3	64,015	429,343	6.7	1,773,026	5,819,486	3.3	43,548	301,989
Wide Bay (262-85)	30	27-Jul	0	0	0.0	47	248	5.3	94	659	7.0	23,065	75,846	3.3	2,663	17,630	6.6
	31	3-Aug	1	8	8.0	1,552	10,044	6.5	313	1,941	6.2	194,888	601,713	3.1	16,019	105,572	6.6
	32	10-Aug	0	0	0.0	13	69	5.3	5	38	7.6	21,442	66,539	3.1	2,264	17,020	7.5
	33	17-Aug	0	0	0.0	848	4,252	5.0	361	2,504	6.9	52,274	164,173	3.1	1,954	12,562	6.4
	34	24-Aug	0	0	0.0	0	0	0.0	0	0	0.0	15,173	51,591	3.4	18	115	6.4
	Total			1	8	8.0	2,460	14,613	5.9	773	5,142	6.7	306,842	959,862	3.1	22,918	152,899
Grand Total			7,371	65,727	8.9	2,176,572	10,794,317	5.0	393,812	2,823,832	7.2	32,973,151	104,632,980	3.2	547,178	3,855,496	7.0

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, 2019.

District	Number of fish				
	Chinook	Sockeye	Coho	Pink	Chum
Afognak	0	32,267	23,550	606,550	9
Northwest	0	40,200	300	1,332,500	54,500
Southwest	5,846	787,988	23,590	482,845	12,702
Alitak	17	378,760	12,652	1,001,847	9,398
Eastside Kodiak	0	26,220	2,041	756,170	75,254
Northeast Kodiak	0	12,297	6,705	508,776	2,310
Mainland	0	9,300	0	904,400	259,300
Area Total	5,863	1,287,032	68,838	5,593,088	413,473