

Fishery Management Report No. 06-26

**Kodiak Management Area Harvest Strategy for the
2006 Commercial Salmon Fishery**

by

Jeff Wadle

April 2006

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



Symbols and Abbreviations

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

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

Weights and measures (English)					
cubic feet per second	ft ³ /s				
foot	ft				
gallon	gal				
inch	in				
mile	mi				
nautical mile	nmi				
ounce	oz				
pound	lb				
quart	qt				
yard	yd				

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

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

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COMMERCIAL SALMON FISHERY**

by

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Since 2004, the Division of Commercial Fisheries has used the Fishery Management Report series. The Division of Sport Fish established the Fishery Management Reports series in 1989 for the publication of an overview of Division of Sport Fish management activities and goals in a specific geographic area. Fishery Management Reports are intended for fishery and other technical professionals, as well as lay persons. Fishery Management Reports are available through the Alaska State Library and on the Internet: <http://www.sf.adfg.state.ak.us/statewide/divreports/html/intersearch.cfm>. This publication has undergone regional peer review.

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ABSTRACT

The commercial salmon fisheries in the Kodiak Management Area (KMA) will be managed to promote maximum production opportunities for future KMA salmon returns by achieving salmon escapement goals. In addition, managers will attempt to provide for orderly fisheries while maximizing harvest opportunities on the highest quality salmon, and will adhere to the biological and allocative requirements of the Management Plans adopted by the Alaska Board of Fisheries for the KMA. Management follows a general chronology based on the run timing of four commercially targeted salmon species: sockeye *Oncorhynchus nerka*, coho *O. kisutch* pink, *O. gorbuscha*, and chum *O. keta* salmon.

Preseason forecasts for 2006 project a harvest of approximately 2,099,200 sockeye, 422,700 coho, 18,734,000 pink, and 878,630 chum salmon. Additionally, about 20,000 Chinook salmon *O. tshawytscha* could be harvested incidentally in fisheries targeting other species. All fishing periods are established by emergency order. The initial sockeye salmon commercial test fishery for the westside of Kodiak is scheduled for June 1. A June 1 fishery opening is also planned for the Foul Bay and Waterfall Bay Special Harvest Areas. The initial commercial test fishery in the Alitak District may occur on June 5, which would be announced no later than June 3. The actual opening date for the Alitak District will be determined based on inseason indicators of run strength. Beginning July 6, weekly fishing periods targeting pink salmon will be 105 hours (4½ days) per week for Kodiak Archipelago sections and 57 hours (2½ days) per week for Mainland District sections north of Cape Aklek.

Key Words: Alaska Department of Fish and Game, Kodiak, Afognak, Alaska Peninsula, Karluk, Ayakulik, Frazer, Upper Station, Alitak, Cape Igvak, North Shelikof, commercial fishery, salmon, management plan, purse seine, gillnet

INTRODUCTION

The Kodiak Management Area (KMA; Appendices A1–A8) 2006 commercial salmon fishery harvest strategy emphasizes three criteria:

- 1) Promote maximum production opportunities for future KMA salmon returns by ensuring salmon escapements of sufficient magnitude and distribution;
- 2) Provide for orderly fisheries while maximizing harvest opportunities on the highest quality salmon; and
- 3) Adhere to the biological and allocative requirements of all management plans adopted by the Alaska Board of Fisheries (BOF) for the KMA salmon fishery.

There are 10 management plans that direct management activities for specific portions of the KMA (Table 1). Every salmon fishing section within the KMA has a season-long regulatory management plan. Proper implementation of these plans requires a major effort in communication between Alaska Department of Fish and Game (ADF&G) and industry personnel.

Salmon run timing within the KMA follows a general chronology, by species (Figure 1). Commercial fisheries management is based on the run timing of four targeted salmon species: sockeye *Oncorhynchus nerka*, pink *O. gorbuscha*, chum *O. keta*, and coho *O. kisutch* salmon. Commercial salmon fisheries are structured around the seasonal abundance of salmon. Inseason adjustment in areas open to fishing and fishing time are dictated by escapement requirements (Nelson et al. 2005).

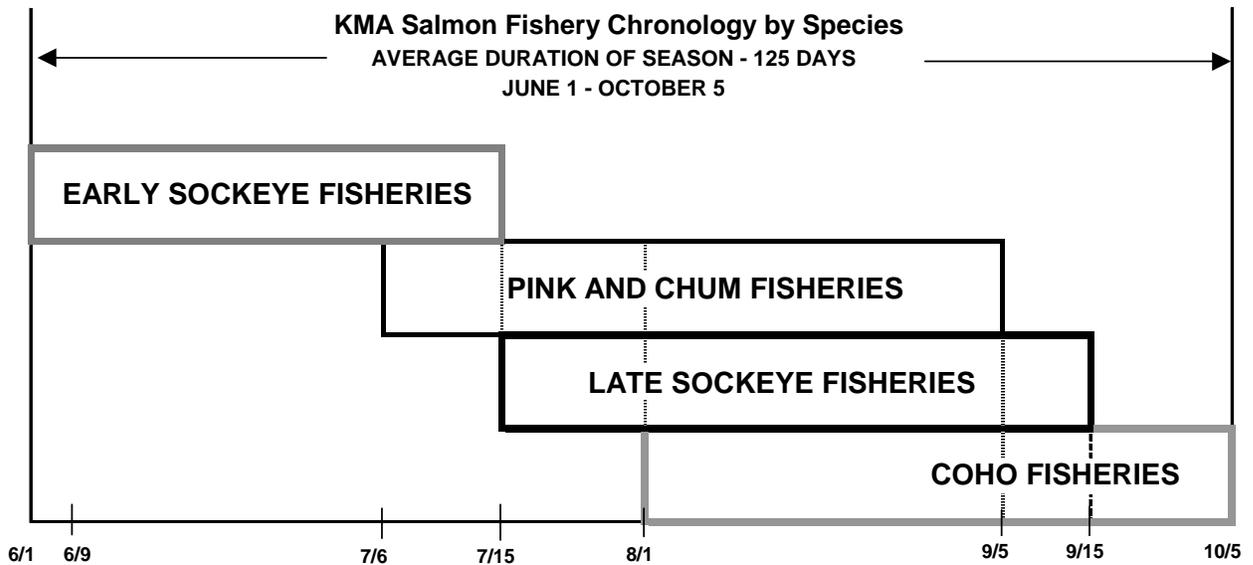


Figure 1.-Commercial salmon fishery chronology by species, for the Kodiak Management Area.

The KMA salmon fisheries are managed with data that are compiled and evaluated daily. Data used to make fishery management decisions include: (1) escapement information from weir counts and/or aerial surveys, (2) harvest trends (total catch and fishery performance), and (3) information on fish abundance near spawning streams.

Management of major sockeye salmon runs is escapement based, and utilizes daily escapement information from up to seven salmon counting weirs. Management of smaller sockeye salmon runs also utilizes escapement information from salmon counting weirs when available, or other indications of run strength such as aerial or foot surveys.

The initial fishing periods for pink salmon are determined preseason and weekly fishing period duration depends on the magnitude of the pink salmon forecast. Adjustments in weekly fishing time and areas open to fishing will occur as the actual run strength becomes apparent through assessment of harvest and escapement estimates.

Chum and coho salmon management requires a combination of these two approaches. Both species are initially harvested in directed sockeye or pink salmon fisheries. Terminal or near-terminal fisheries targeting chum or coho salmon require an assessment of actual run strength, using escapement counts from weirs or aerial surveys and current harvest information.

Commercial fisheries are not currently directed toward surplus Chinook salmon *O. tshawytscha*. Harvests of Chinook salmon occur during fisheries that are directed toward sockeye and pink salmon.

HARVEST PROJECTIONS

Based on preseason projections, a total of approximately 20,000 Chinook, 2,099,200 sockeye, 422,700 coho, 18,734,000 pink, and 878,630 chum salmon could be available for harvesting throughout the KMA in 2006 (Table 2; Eggers 2006).

Of this total, the Kodiak Regional Aquaculture Association (KRAA) has forecasted the harvest of salmon returning to the Kitoi Bay Hatchery as approximately 40,100 sockeye, 152,700 coho,

6,384,000 pink, and 208,600 chum salmon. Additional enhanced salmon production, from projects conducted by KRAA and ADF&G, should contribute about 171,900 sockeye salmon to the common property fisheries (e.g., Spiridon Lake, Hidden Lake, etc.; Tables 2 and 3).

FISHING PERIODS

All fishing periods will be established by Emergency Order (EO). The approximate initial opening dates and times for 2006 commercial fisheries in the KMA are listed in Table 4.

ADVANCE NOTICE

For the initial sockeye salmon fisheries from June 1 to June 14, there will be at least 42 hours advance notice. All subsequent fishing periods will have at least 18 hours advance notice.

For the opening of the Cape Igvak Section (Appendix A8) fishery, there will be at least 24 hours advance notice.

For the openings in the Inner or Outer Akalura, Inner or Outer Upper Station, or Dog Salmon Flats Sections (Appendix A7), there will be at least 24 hours advance notice.

For adjustments to closed waters (increase or decrease), there will be at least 18 hours advance notice.

For extension of a previously announced fishing period, or for inperiod closure of an announced fishing period, there will be at least 3 hours advance notice.

FISHERY OPENING TIMES

Most fishing periods, through August 15 open at NOON and close at 9:00 PM. Beginning on August 16, most fishing periods will close at 6:00 PM, instead of 9:00 PM.

There are several exceptions to this opening/closure schedule:

Cape Igvak fisheries open at 12:01 AM and close at 12:01 AM from June 5 through July 25. The 12:01 AM opening and closure time allows for more orderly fisheries due to the possibility of relatively short notice given for extensions of fishing periods.

Except for the initial commercial test fishery (June 5 to June 9), Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay Section (Appendix A7) fisheries will begin and end at different times through September 15, as follows:

In the Olga Bay Section, fishing periods open at 6:00 AM and shall close at 9:00 AM the following day¹.

In the Moser Bay Section, fishing periods open at NOON and shall close at 3:00 PM the following day¹.

In the Alitak Bay Section, fishing periods open at 6:00 PM. and shall close at 9:00 PM the following day¹.

In the Cape Alitak Section, fishing periods open at 6:00 AM the day following the openings of the Olga Bay, Moser Bay, and Alitak Bay Sections, and shall close at 9:00 AM the following day¹.

¹ Extensions are possible; any extension to fishing time will be in 24-hour increments.

The Humpy-Deadman Section opens and closes at the same time as the Cape Alitak Section through July 15. From July 16 through August 15, fishing periods open at NOON and close at 9:00 PM. Beginning on August 16, most fishing periods will close at 6:00 PM, instead of 9:00 PM.

Inner Ayakulik Section (Appendix A4) fisheries usually begin near low tide. These will be daylight openings, and fishing begins when ADF&G personnel, located on the bluff northeast of the Ayakulik River mouth, launch a flare. When such openings occur, the opening time for the Outer Ayakulik Section may be adjusted to coincide with the Inner Ayakulik Section.

Inner Kitoi Bay Section (Appendix A2) common property fisheries will usually begin between NOON and 12:30 PM, when a flare is launched by hatchery staff within inner Kitoi Bay.

TIMING AND LENGTH OF INITIAL FISHING PERIODS

Sockeye Salmon

The first KMA commercial salmon fishery will begin at NOON June 1 in the Central and North Cape Sections of the Northwest Kodiak District, in the Outer Karluk Section of the Southwest Kodiak District, and in the Foul Bay and Waterfall Bay Special Harvest Areas (SHAs) of the Afognak District. The initial June fishing period in the Central, North Cape, and Outer Karluk Sections is considered a commercial test fishery, used to help gauge the strength of the sockeye salmon runs. Because of concerns about the possible harmful effects of excess early-run sockeye salmon escapement into the Karluk Lake system, it is the intent of ADF&G to try to curtail some of the very early returns of Karluk sockeye salmon.

June 1 Commercial Fisheries

Commercial salmon fishing will begin at NOON Thursday June 1, 2006, in the following management areas:

- The Central and North Cape Sections of the Northwest Kodiak District, and the Outer Karluk Section of the Southwest Kodiak District (Appendices A3 and A4). For these sections, this will be a 57-hour commercial test fishing period, from NOON Thursday June 1 through 9:00 PM Saturday June 3. An extension of this period will depend on escapement buildups in Karluk Lagoon. The commercial catch from this period will be used to assess the strength of the Central and North Cape Sections of the Northwest Kodiak District, and the Outer Karluk Section of the Southwest Kodiak District the sockeye salmon run to the Karluk system, with consideration of the Ayakulik, Frazer (Dog Salmon), and Upper Station sockeye salmon runs.
- The Foul Bay and Waterfall Bay Special Harvest Areas (Appendix A2). These fisheries will be open continuously, beginning at NOON Thursday June 1, and will occur 24 hours per day, for as long as there are harvestable surpluses of salmon and orderly fisheries are occurring. Commercial fisheries in these management units target enhanced sockeye salmon production, and may extend through early July.

June 5 to June 9 Commercial Fisheries

Commercial salmon fishing is expected to begin between June 5 and June 9, 2006, in the following management areas.

- Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay, and Izhut Bay Sections of the Afognak District (Appendix A2). These fisheries will open at NOON Monday June 5, and will remain open continuously, 24 hours per day, as long as there are harvestable surpluses of salmon and orderly fisheries are occurring. The fishery for the Kitoi Bay Hatchery early chum salmon runs may extend through late June, depending on chum salmon broodstock requirements and cost recovery needs.
- Cape Alitak, Humpy-Deadman, Alitak Bay, Moser Bay, and Olga Bay Sections of the Alitak District (Appendix A7). These fisheries may open at NOON Monday June 5 as a commercial test fishery, depending on early indications of sockeye salmon run strength to Frazer and Upper Station (including catches from the ADF&G Chip Cove test fishery and estimates of salmon buildup and escapement). If a commercial test fishery were allowed on June 5, it would be announced no later than June 3, and would be no more than 33-hours in length, with no extension. All sections would open and close concurrently, from NOON Monday June 5 through 9:00 PM Tuesday June 6.
- Cape Igvak Section of the Mainland District (Appendix A8). Chignik sockeye salmon run strength. The first Cape Igvak fishery may occur between June 5 and June 9. Fishing Chignik sockeye salmon are considered, by regulation, the principal stock harvested in the Cape Igvak Section from June 1 to July 25. The timing of initial commercial fisheries in the Cape Igvak Section depends on the evaluation of the periods in the Cape Igvak Section will be in 24-hour increments, beginning at 12:01 AM.
- Anton Larson, Sharatin Bay, Terror Bay, Inner Uganik Bay, Spiridon Bay, Zachar Bay, and Uyak Bay Sections of the Northwest Kodiak District (Appendix A3). These sections will open at NOON Friday June 9, for a 33-hour commercial test fishing period. Management of these sections is based on local chum or sockeye salmon runs. Two commercial test fisheries are allowed before June 15, but must run concurrently with open fishing periods in the Central and North Cape Sections. A second commercial test fishery is scheduled for June 14.

June 14 to June 21 Commercial Fisheries

Commercial fisheries in the following management units may also occur on or after June 14, if escapement objectives are met or exceeded.

- Anton Larson, Sharatin Bay, Terror Bay, Inner Uganik Bay, Spiridon Bay, Zachar Bay, and Uyak Bay, of the Northwest Kodiak District (Appendix A3). These sections may open at NOON Wednesday, June 14 as a 33-hour commercial test-fishing period. Commercial test fisheries must run concurrently with open fisheries in the Central and North Cape Sections.
- Southwest Afognak, Perenosa Bay, Pauls Bay, and Northwest Afognak of the Afognak District (Appendix A2). Commercial salmon fishing will open at NOON Wednesday, June 14 for a 33-hour fishing period. This initial fishing period targets early-run sockeye salmon bound for Pauls, Portage, Thorsheim, Long Lagoon, Saltery, Ocean Beach, Swikshak, and/or Kafilja Creeks. A second fishing period for minor sockeye salmon systems should occur on Wednesday, June 21.
- Eastside Kodiak District (Appendix A6).
- Big River and Outer Kukak Bay Sections of the Mainland District (Appendix A8).
- Spiridon Bay Special Harvest Area (Telrod Cove; Appendix A3). The initial commercial salmon fishing period targeting enhanced sockeye salmon returning to Telrod Cove is not expected to occur prior to Wednesday, June 21. The actual starting date will depend on the salmon buildups in Telrod Cove and ADF&G's ability to monitor the commercial fisheries.
- Inner and Outer Ayakulik Sections of the Southwest Kodiak District (Appendix A4). The initial fishing period in the Inner and Outer Ayakulik Sections and the Southeast Afognak Section is solely dependent on sockeye salmon escapement to the Ayakulik (Red) or Afognak (Litnik) systems, respectively. Small harvestable surpluses are projected, which could allow for short fisheries near the peak of the sockeye salmon runs.
- The Southeast Afognak Section of the Afognak District (Appendix A2).

Additional fishing time from mid-June to early-July will be based on sockeye salmon run strength as determined by escapements, salmon buildups, and fishery performance. In order to maintain sockeye salmon escapements within established objectives, commercial fishing may be extended.

Directed commercial fisheries within the Inner Karluk Section (Appendix A4) are solely dependent on Karluk River sockeye salmon escapement, and are only expected to occur if it appears likely that the Karluk sockeye salmon escapement goal will be exceeded.

For most late-run sockeye salmon stocks, a portion of the harvestable surplus is taken during fishing periods targeting pink salmon. Consequently, a blended management strategy is needed to ensure that escapements for each species are achieved. Commercial fisheries targeting Upper Station late-run sockeye salmon may begin August 10 and fisheries targeting Karluk late-run sockeye salmon may begin August 16.

Pink Salmon

In addition to the three management criteria identified in the introduction of this document, the KMA harvest strategy for pink salmon also utilizes:

- A fixed opening date (July 6);
- Pink salmon forecasts to set the length of the initial fishing periods; and
- Coordination of multiple fisheries, whenever possible, to disperse the purse seine fleet.

The initial fishing periods will be 105 hours in length, except for the Mainland District fisheries. From July 6 to July 25, fishing time for that portion of the Mainland District north of Cape Aklek will not exceed 57 hours per week (this does not include the Cape Igvak or Wide Bay Sections, which are managed in accordance with the Cape Igvak Salmon Management Plan, 5 AAC 18.360). During the peak harvest period, from late-July to mid-August, fishing periods may be adjusted to match the actual strength of the pink salmon run. The following schedule of pink salmon fishing periods for the 2006 season are provided for industry and ADF&G planning purposes, especially for the first three fishing periods.

Changes to the following schedule should be expected, if the actual pink salmon run is weaker than forecast. No extensions will occur during the first two periods. Extensions to later fishing periods may occur.

First Period: 105 hours - NOON Thursday, July 6 through 9:00 PM Monday, July 10. Harvests during this period provide important data to assess early run strength of KMA pink and chum salmon stocks. There will be no extension in fishing time following this period. In the Mainland District north of Cape Aklek this period will only be 57 hours, from NOON July 6 through 9:00 PM July 8.

Second Period: 105 hours - NOON Wednesday, July 12 through 9:00 PM Sunday, July 16. During the second period, run strength for both pink and chum salmon will again be assessed from harvest data. There will be no extension in fishing time following this period. In the Mainland District north of Cape Aklek this period will only be 57 hours, from NOON July 12 through 9:00 PM July 14.

Third Period: 105 hours - NOON Tuesday, July 18 through 9:00 PM Saturday, July 22. The previous closures will likely allow an influx of pink and chum salmon into terminal closed areas, resulting in the build up of potential escapement. At this time, a combination of harvest and early escapement and/or buildup information should provide an indication of the actual run strength for major pink salmon stocks. In the Mainland District north of Cape Aklek this period will only be 57 hours, from NOON July 18 through 9:00 PM July 20. In the Inner or Outer Kitoi Bay, Izhut Bay, or Duck Bay Sections, fishery restrictions may occur to meet hatchery cost recovery needs.

Fourth Period: 105 hours - NOON Monday, July 24 through 9:00 PM Friday, July 28. A fairly realistic estimate of the total run strength should be evident by the end of the period. The pink salmon harvest should increase during this period. If the pink salmon run is strong, extensions in fishing time will occur. In the Inner or Outer Kitoi Bay, Izhut Bay, or Duck Bay Sections, fishery restrictions may occur to meet hatchery cost recovery needs.

Subsequent fishing periods should follow the same weekly, Monday through Friday, pattern unless escapement information indicates that an extension or reduction of fishing time is necessary. Fishing time will be based on pink salmon returns to individual systems. Differential

fishing time, by management unit, may occur as stronger production areas are targeted, while moderate or lower production areas are provided additional protection. There may be changes in closed water sanctuaries to increase escapement levels or to harvest surplus salmon. Beginning approximately August 16, management emphasis will begin to shift toward the run strength of late-run Karluk and Upper Station sockeye salmon and late chum salmon for the Alitak District and westside Kodiak.

From July 20 through August 31, there will be cost recovery fisheries for the Kitoi Bay Hatchery. These cost recovery fisheries will primarily occur within the Inner Kitoi Bay Section, but may also expand into the Outer Kitoi Bay Section. There may be restricted fishing time in the Izhut Bay and Duck Bay Sections during this time period, to allow fish to move into the Kitoi Bay Sections for cost recovery and broodstock needs.

Chum Salmon

The supplemental Kitoi Bay Hatchery chum salmon run is projected to be fair this season. Extended fishing time in the vicinity of the hatchery should be expected in June and early July.

With the exception of chum salmon returning to the Kitoi Bay Hatchery, a major portion of the 2006 chum salmon harvest will occur in non-terminal locations during directed sockeye and pink salmon fisheries. The initial fishing periods targeting chum salmon will begin on July 6, and will follow the same opening dates and times as those for pink salmon. System-specific chum salmon fisheries that occur during the pink salmon fishery may result in some management units (such as the Kizhuyak Bay, Sturgeon, Spiridon Bay, Zachar Bay, Inner or Outer Kukak, or Outer Ugak Bay Sections) having more or less fishing time than those targeting primarily pink salmon stocks. Again, from July 6 to July 25, fishing time for that portion of the Mainland District north of Cape Aklek will not exceed 57 hours per week. Additional fishing time after July 25 for that portion of the Mainland District north of Dakavak Bay will depend on assessment of local chum salmon runs. Chum salmon run strength will be assessed primarily from aerial surveys and harvest data.

Coho Salmon

Initially, coho salmon harvests will occur in non-terminal locations during directed pink salmon fisheries. System-specific coho salmon fisheries may occur during the pink salmon fishery, and may result in some management units having more or less fishing time than those primarily targeting pink salmon stocks (such as the Pauls Bay, Perenosa, Zachar Bay, or Inner Ayakulik Sections). Coho salmon run strength will be assessed from weir escapements, aerial surveys, and harvest data.

A directed coho salmon fishery in the Pauls Bay Section will begin on August 1. Directed coho salmon fisheries in the Shuyak Island Section may also begin on August 1. The supplemental Kitoi Bay Hatchery coho salmon runs have been successful over the past several years, and are projected to be strong again this season. Additional fishing time in the vicinity of the hatchery should be expected in early September once pink salmon broodstock requirements are ensured. After September 10, coho salmon fishing may be allowed in the Settler Cove Special Harvest Area if at least 500 coho salmon are available for harvest.

INPERIOD CLOSURES

From July 6 through July 25 there are limits on the number of sockeye salmon that may be harvested in areas bordering the North Shelikof Strait (5 AAC 18.363). Purse seine permit

holders operating in the North Shelikof Strait from July 6 to 25 are advised that inperiod closures of designated Seaward Zones will likely occur (Appendices A2 and A8). Since the plan went into effect (1990), Seaward Zone closures have occurred every year except 1991 and 2000.

Seaward Zone closures, if required, will be announced on single side band radio (SSB) frequency 4.125 MHz, from the ADF&G office in Kodiak and on VHF 6 and SSB frequency 4.125 MHz from the *R/V K-Hi-C* on the fishing grounds. Inperiod Seaward Zone closures announcement times will be 8:30 AM, 10:00 AM, 2:00 PM, or 5:00 PM. There will be at least 3 hours advance notice given for Seaward Zone closures.

INSEASON EMERGENCY ORDER ANNOUNCEMENTS

After enough information has been collected to determine the fishing time needed to harvest surplus fish, a fishery announcement (News Release) will be issued in the following manner:

- (1) A news release (NR) will be issued that details:
 - (a) The date, time, and number of the emergency order announcement;
 - (b) The length of the fishing period;
 - (c) The opening and closing times and dates of the fishing period;
 - (d) The areas opening to fishing;
 - (e) The areas closing to fishing;
 - (f) The location of closed water adjustments (if any); and
 - (g) A list of any previous news release information that is still pertinent.
- (2) The NR will be posted at the main entrance of the Kodiak ADF&G office at 211 Mission Road. Copies of the NR will be available outside the main entrance, in the Kodiak ADF&G office during regular office hours (Monday through Friday, 8:00 AM to 4:30 PM), and posted at the Region IV commercial salmon fishery web site.
- (3) The NR (fishery announcement) will be recorded on a 24-hour recorded message phone (486-4559).
- (4) The NR will be made available to local radio stations (KVOK-AM / KRXX-FM and KMXT-FM).
- (5) The Kodiak ADF&G management staff will monitor SSB radio channel 3.230 MHz (call sign WON 32), and Matrix satellite phone dispatch number 7410, during regular office hours, and will reply to public and industry inquiries.
- (6) The NR will be distributed to all registered processors by fax, email, telephone, hand delivery, or through the ADF&G recorded message phone.
- (7) Copies of EOs, which detail specific regulation changes and justifications, will be available to interested recipients.

Fishery announcements are generally very detailed and complicated. It is advised that tender operators and permit holders obtain a written copy, or use a tape recorder to document the exact wording of each announcement as it is broadcast.

ADF&G STAFF CONTACT NUMBERS

ADF&G Kodiak management staff are available to answer questions regarding commercial salmon fishery regulations, openings, closures, and harvests.

General Information – 486-1830

Matrix Satellite Dispatch - #7410

Jeff Wadle – 486-1808

Record-a-phone – 486-4559

Joe Dinnocenzo – 486-1807

After Hours Cell Phone – 539-5495

Geoff Spalinger – 486-1804

Email – kodiaksalmon@fishgame.state.ak.us

NOTABLE REGULATIONS AND CHANGES MADE DURING THE 2005 BOARD OF FISHERIES MEETING

The Alaska Board of Fisheries (BOF) met in Anchorage during January 2005 to discuss Kodiak salmon fishery regulations. The BOF amended the KMA salmon season to allow June 1 fishery openings. Several additional changes were made that will again be in effect for the 2006 commercial salmon fishery. A synopsis of several important regulations and regulation changes follows, but all participants in the Kodiak commercial salmon fishery are urged to make themselves aware of all applicable regulations. Copies of the KMA commercial salmon fishery regulations and the most recent Kodiak Area Salmon Statistical Chart are available at the Kodiak ADF&G office. It is important to get the latest edition of the statistical chart for the 2006 season, as there were many closed water and section line changes established for the 2006 season. All latitude and longitude coordinates in Kodiak Area regulations have been converted to decimal minutes and are based on the North American Datum of 1983. All latitude and longitude coordinates are measured using GPS technology.

SECTION LINES

There are some section lines which are incorrect in regulation. The following descriptions are the correct coordinates and will be established with the first commercial salmon fishery EO for the 2006 season. Statistical maps prior to 2005 are outdated and should not be used for the 2006 KMA commercial salmon season. Revised statistical charts are available in the Kodiak ADF&G office. Section line corrections include:

- (1) Duck Bay/Izhut Bay Sections: The boundary line between these two sections is slightly different in regulation. The coordinates for Peril Cape should be 58° 08.06' N lat., 152° 15.77' W long. (old coordinates - 58° 07.50' N lat., 152° 16.30' W long.).
- (2) Southeast Afognak/Duck Bay Sections: The boundary line between these two sections has changed at Cape Kostromitinof, from a latitude (east-west) line to a longitude (north-south) line. The new coordinate is the longitude of Cape Kostromitinof at 152° 33.40' W long. (old coordinate - 58° 05.00' N lat.).
- (3) Inner Karluk/Sturgeon Sections: The boundary line between these two sections has changed at Cape Karluk, with the line moving further south. The new coordinate is the latitude of Cape Karluk at 57° 34.20' N lat. (old coordinate - 57° 34.70' N lat.).

CLOSED WATER AREAS

All freshwater streams and rivers of the KMA are closed to commercial salmon fishing. Additionally, adjacent to streams and rivers, all saltwater within 500 yards of the seaward extremities of the exposed tideland banks is closed to commercial salmon fishing, unless:

- (1) Alternatives are specifically listed in the regulation book (see 5 AAC 18.350. CLOSED WATERS); or
- (2) The stream number is circled on the most recent version of the salmon statistical chart, issued annually by ADF&G. For streams with circled numbers commercial salmon fishing is allowed to the stream terminus; or
- (3) Closed water areas are specifically reduced or increased inseason by EO at a particular stream or bay (announced by NR); or
- (4) Closed waters markers are in place. The intent is to maintain a 500-yard closed water area from the stream terminus, at all stages of the tide, unless the area is made larger or smaller by regulation or EO. If closed waters markers are in place, the closure line may be a straight line or may be an arc, as follows:
 - (a) The closure line is a straight line between two regulatory markers if specifically stated in regulation or EO, or if, at all stages of the tide, the markers are farther than 500 yards from the seaward extremities of the exposed tideland banks of the salmon streams located inside the markers.
 - (b) The closed water line will be an arc if necessary to maintain the 500-yard distance from the seaward extremities of the exposed tideland banks of the salmon stream at any stage of the tide. Then, waters closed to salmon fishing will be a line arcing from the markers to a point 500 yards directly off the seaward extremities of the exposed tideland banks that designates the stream mouth. The actual shape of the closed water area will change as the tide ebbs and floods.

As stated in 5 AAC 18.350. CLOSED WATERS. (b). If the location of a regulatory marker is in conflict with the closed waters listed in this section, it is illegal to fish on the streamward side of that marker. There will be no inseason adjustments of closed water markers unless ADF&G personnel are available to remove the normal markers, install new markers, and subsequently reinstall the normal markers. There will be at least 18 hours advance notice prior to adjusting closed waters.

Additional Closed Water Sanctuaries for the 2006 Season

In addition to the closed water areas listed in the regulations (5 AAC 18.350), the following two closed water sanctuaries will be in effect for the 2006 season:

Buskin River Closed Water Sanctuary

The stream mouth of the Buskin River (stream #259-211) moves considerably from year to year. The north shore marker has been placed further up the beach and an offshore point has been designated to aid in triangulation of the closed water area. The offshore point is at the reef directly east of the spit, and may be marked with a buoy. This closed waters area is in effect for subsistence and commercial fisheries. The location of the closed waters will be described in the first salmon EO as follows:

5 AAC 18.350 CLOSED WATERS (a)(4) Northeast Kodiak District. (E) Buskin River: all waters inside of a line running from a marker on the bluff north of the mouth of the Buskin River at approximately 57° 45.88' N lat., 152° 28.33' W long. to a point offshore at 57° 45.35' N lat., 152° 28.15' W long., to a marker located onshore south of the river mouth at approximately 57° 45.11' N lat., 152° 28.81' W long.

Ayakulik River Closed Water Sanctuary

Should commercial fishing be allowed in the Inner Ayakulik Section, ADF&G regulatory markers will be placed in such a manner as to better define the stream terminus of the Ayakulik River. Two markers shall be placed on each side of the river mouth. Aligning the front marker with the back marker on each side triangulates the closed water area. The intent of this closed water sanctuary is to prevent fishing gear from being set to completely block access to the river for migrating fish.

RELEASE OF LARGE CHINOOK (KING) SALMON BY PURSE SEINE FISHERMEN

The ADF&G may now require commercial fishermen to release large Chinook salmon (greater than 28 inches in length) from their catch. If ADF&G does require the release of Chinook salmon, any Chinook salmon greater than 28 inches would have to be released unharmed, immediately. This would apply only in the Inner Karluk, Outer Karluk, Inner Ayakulik, or Outer Ayakulik Sections, and only if the department determines that the Karluk or Ayakulik Chinook salmon runs will not meet seasonal escapement goals (5 AAC 18.395).

USE OF NET PENS

Floating net pens may be used in the KMA to hold live commercially caught salmon prior to processing. However, any fishermen that choose to use a net pen to hold live salmon must obtain a permit at the Kodiak ADF&G office (5 AAC 18.395). The permit will outline restrictions, conditions, and reporting requirements. It is the responsibility of the permit holder to obtain any additional licenses or permits that may be required. Any fishermen that wishes to use a net pen should contact salmon management staff at the Kodiak Fish and Game office.

WASTE OF SALMON

Waste of salmon will not be tolerated and may result in fishing period closures (AS 16.05.831 and 5 AAC 93.310). Salmon taken commercially may be used or sold as bait (5 AAC 93.350).

PERSONAL USE OF COMMERCIALY TAKEN SALMON (HOME PACK)

It is legal for commercial fishermen to keep for their own use salmon legally taken in their commercial gear during open commercial fishing periods (home pack). However, the number of fish harvested and kept for home pack must be reported on a fish ticket. These fish may not be sold or bartered (5 AAC 39.010).

At the next delivery, record the number of each species of salmon caught but not sold in the lower right hand corner of the fish ticket, in the space designated for that purpose.

DIRECT MARKETING

There has been an increase in interest by Kodiak commercial salmon fishermen to market their own lawfully taken commercial catch (direct marketing). In the KMA, the amount of salmon being harvested, custom processed, and kept by local fishermen, has increased dramatically over the past several years. If fish are to be sold later for human consumption, then the commercial fishermen must be properly registered and licensed. There are several ways to legally market

your own fish, but some require special registration and licensing. Registration and licensing ensures accurate reporting of harvests, which is essential for sound management of commercial fisheries.

Direct marketers are responsible for filing their own fish tickets with ADF&G and may be required to complete a Commercial Operators Annual Report. Direct marketers must also register with the ADF&G salmon management office in Kodiak.

FISH TRANSPORTERS

A fish transporter differs from a tender. A tender acts as the agent of a registered processor or buyer, and is the first point of sale of fish from the Commercial Fisheries Entry Commission (CFEC) permit holder to that processor or buyer. A fish transporter is an agent of the CFEC permit holder(s), and is authorized to take legally harvested fish from one or more commercial salmon fisherman to a buyer or buyers. A fisherman or group of fishermen may hire a fish transporter, who may then legally take their fish to the first point of sale.

A Fish Transporter Permit is required, and must be in possession of the operator during the transport and sale of fish. The ADF&G Division of Commercial Fisheries in Juneau issues Fish Transporter Permits. All fish transporters must also be registered with the ADF&G Kodiak commercial salmon fishery management staff. The transporting vessel used must be licensed as a commercial fishing vessel and all people working aboard the vessel must have crewmember licenses.

Fish transporters are required to report their activities to ADF&G and to fill out a fish ticket for all fish taken aboard their vessel. The commercial fisherman who caught the salmon is required to provide the fish transporter with fish ticket information such as the CFEC permit number, the area of harvest, catch dates, and catcher vessel ADF&G number, and must sign the fish ticket. The number of fish by species and the weight of the fish by species must be estimated and recorded on the fish ticket. Final weights and fish counts will be verified upon delivery of the fish to the buyer or processor. The buyer or processor submits the finalized fish ticket to ADF&G.

Additional information and Fish Transporter Permit applications are available from the ADF&G Kodiak staff.

FISH TICKETS / HARVEST REPORTS

It is the legal responsibility of commercial fishermen, tenders or transporters, and processors and buyers to assure that all information on a fish ticket is complete and correct. Prior to completing and signing fish tickets, permit holders, tender operators, and/or processing personnel should make sure that the proper harvest information has been entered by statistical area, and the fish ticket is complete, legible, and accurate.

PROCESSORS / TENDERS

Management of the KMA commercial salmon fishery requires timely, accurate harvest reporting. Without accurate information, a more conservative harvest strategy will be adopted and less fishing time will be allowed. Processors and buyers are required to accurately report catches daily to ADF&G (5 AAC 39.130 (a)(3)). In order to process the harvest information and use it for management decisions, catch reports must include the estimated number of salmon harvested by species, for each gear type from each major catch area (by statistical area, or by geographic

area such as a bay, cape, or headland). ADF&G management staff will contact processors to arrange the daily reporting times and format. Daily reports can be made verbally, by fax, or by email. Processors should obtain correct, up to date, information from tender operators prior to providing daily reports to ADF&G.

Each day, tender operators must provide their processing companies with an accurate count of deliveries and number of salmon delivered, by species and by catch area. Alternately, tender operators may report, the total number of pounds and the average weight by species, by catch area.

Statistical area numbers are used to record harvest location(s) on fish tickets. Be sure that the location of the catch, rather than the location of the tender pick-up, is recorded on the fish ticket.

The correct harvest location and number of fish harvested by species must be recorded on each fish ticket. This information is extremely important in evaluating inseason harvests, stock contribution, and effort distribution. In order to provide maximum allowable fishing time, especially in areas such as the Cape Igvak Section and the north Shelikof Strait, it is imperative that the correct statistical areas and numbers of fish by species are reported on the fish ticket at the time of delivery.

PURSE SEINE FISHERMEN

Be certain that your fish tickets show the number of fish of each species, or the total weight and average by species, for your delivery. Purse seine permit holders must, at a minimum, provide estimates of harvest by statistical area to tender operators. For example: " $\frac{1}{3}$ of my sockeye were from Cape Alitak (257-20) and $\frac{2}{3}$ were from Outer Ayakulik (256-20). The rest of my fish were $\frac{1}{2}$ and $\frac{1}{2}$ from each of those two areas." Do not record the location of the tender as the harvest location.

SET GILLNET FISHERMEN

Again, make sure your fish tickets show the number of fish of each species, or the total and average weight by species, for your delivery. Because of the fixed nature of set gillnet gear, each permit holder's reporting area (statistical area) is usually consistent between landings. In the event that you move a gillnet into a new statistical area, make sure the tender operator is provided with that information.

REFERENCES CITED

- Eggers D. M., 2006. Run forecasts and harvest projections for 2006 Alaska salmon fisheries and review of the 2005 season. Alaska Department of Fish and Game, Division of Commercial Fisheries, Special Publication 05-01, Anchorage.
- Nelson P. A., M. J. Witteveen, S. G. Honnold, I. Vining and J. J. Hasbrouck. 2005. Review of salmon escapement goals in the Kodiak Management area. Alaska Department of Fish and Game, Fishery Manuscript No. 05-05, Anchorage.

TABLES

Table 1.-Alaska Board of Fisheries approved fishery management plans for the Kodiak Management Area, 2006.

MANAGEMENT PLAN	YEAR INITIATED	MGMT. UNITS AFFECTED	DATES IN EFFECT
Cape Igvak Salmon Management Plan (5 AAC 18.360)	1978	Cape Igvak Section Wide Bay Section	6/1 - 7/25
Alitak Bay District Salmon Management Plan (5 AAC 18.361)	1987	Alitak Bay District	6/1 - 10/31
Westside Kodiak Management Plan (5 AAC 18.362)	1990	NW Kodiak District SW Kodiak District SW Afognak Section	6/1 - 10/31
North Shelikof Strait Sockeye Salmon Management Plan (5 AAC 18.363)	1990	NW Afognak Section SW Afognak Section Shuyak Island Section Big River Section Hallo Bay Section Inner and Outer Kukak Bay Sections Dakavak Bay Section	7/6 - 7/25
Crescent Lake Coho Salmon Management Plan (5 AAC 18.364)	1990	Special Harvest Area in the Central Section near Port Lions	7/15 - 10/31
Eastside Afognak Management Plan (5 AAC 18.365)	1993	Southeast Afognak Section Raspberry Strait Section Inner and Outer Kitoi Bay Sections Duck Bay Section Izhut Bay Section	6/1 - 10/31
Spiridon Lake Sockeye Salmon Management Plan (5 AAC 18.366)	1993	Special Harvest Area in Spiridon Bay Section	6/1 - 10/31
Eastside Kodiak Salmon Management Plan (5 AAC 18.367)	1995	Eastside Kodiak District NE Kodiak District	6/14 - 10/31
North Afognak / Shuyak Island Salmon Management Plan (5 AAC 18.368)	1995	NE Afognak Section Perenosa Bay Section Pauls Bay Section Shuyak Island Section NW Afognak Section	6/1 - 10/31
Mainland District Salmon Management Plan (5 AAC 18.369)	1999	Mainland District	6/14 - 10/31

Table 2.-Actual versus projected 2005 commercial salmon harvest, by species and fishery, and 2006 harvest projections, for the Kodiak Management Area.

	Chinook	Sockeye	Coho	Pink	Chum	Total
Projected Harvest 2005 ^a	20,000	2,611,000	526,200	18,185,100	1,169,600	22,511,900
Actual Harvest 2005 ^a	14,411	3,047,004	396,030	30,139,254	477,416	34,074,115
Projected Harvest 2006	20,000	2,099,200	422,700	18,734,000	878,630	22,154,530

FISHERY	2005 Harvest		2006 Harvest
	Projection ^b	Actual ^c	Projection ^b
Early Sockeye Salmon Fisheries (6/1-7/15)			
Kitoi Bay Hatchery ^d	4,200	11,247	24,100
Cape Igvak ^e	248,300	304,809	143,300
Karluk ^f	404,000	674,427	314,000
Ayakulik ^g	120,700	0	70,500
Alitak Bay District ^h	375,000	459,943	189,000
Minor Systems ⁱ	41,700	42,118	38,000
Minor Enhancement ^j	38,100	25,713	10,900
Spiridon ^k	69,500	33,457	107,900
<u>Other</u>	<u>115,500</u>	<u>155,203</u>	<u>83,900</u>
Subtotal	1,417,000	1,706,917	981,600
Late Sockeye Salmon Fisheries (7/16-10/31)			
Kitoi Bay Hatchery ^d	2,800	33,458	16,000
Cape Igvak ^e	37,800	0	0
Karluk ^f	581,000	781,824	876,000
Ayakulik ^g	21,300	1,360	23,500
Alitak Bay District ^h	456,000	317,824	97,000
Minor Systems ⁱ	11,200	5,361	12,000
Spiridon ^k	34,200	22,540	53,100
<u>Other</u>	<u>49,700</u>	<u>177,720</u>	<u>40,000</u>
Subtotal	1,194,000	1,340,087	1,117,600
TOTAL SOCKEYE	2,611,000	3,047,004	2,099,200
Pink Salmon Fisheries			
Kitoi Bay Hatchery ^d	10,185,100	13,603,742	6,384,000
Afognak (Wild) ^l	700,000	557,839	1,100,000
Westside Kodiak ^m	3,200,000	5,325,296	8,300,000
Alitak ⁿ	2,000,000	4,192,842	1,000,000
Eastside/Northend Kodiak ^o	1,600,000	5,985,723	1,600,000
<u>Mainland ^p</u>	<u>500,000</u>	<u>473,812</u>	<u>350,000</u>
Subtotal	18,185,100	30,139,254	18,734,000
Chum Salmon Fisheries			
Kitoi Bay Hatchery ^d	247,600	91,814	208,630
Afognak (Wild) ^l	73,800	12,600	33,500
Westside Kodiak ^m	507,100	201,067	294,800
Alitak ⁿ	46,100	22,839	40,200
Eastside/Northend Kodiak ^o	138,300	99,194	167,500
<u>Mainland ^p</u>	<u>156,700</u>	<u>49,902</u>	<u>134,000</u>
Subtotal	1,169,600	477,416	878,630

-continued-

Table 2.-Page 2 of 2

FISHERY	2005 Harvest		2006 Harvest
	Projection ^b	Actual ^c	Projection ^b
Coho Salmon Fisheries			
Kitoi Bay Hatchery ^d	152,200	151,729	152,700
Afognak (Wild) ^l	74,800	5,737	40,500
Westside Kodiak ^m	205,700	167,980	148,500
Alitak ⁿ	18,700	6,977	13,500
Eastside/Northend Kodiak ^o	56,100	52,644	51,300
Mainland ^p	18,700	10,963	16,200
Subtotal	526,200	396,030	422,700
GRAND TOTAL ^q	22,511,900	34,074,115	22,154,530

^a In number of salmon (rounded to nearest hundred). Does not include subsistence, sport, personal use, or ADF&G test fish harvests.

^b Projected harvests for enhanced and major sockeye systems are based on the formal forecasts for those individual stocks (total run minus escapement) and the projected harvest from minor sockeye systems and other salmon species are based on less formal escapement to return relationships. The 2006 sockeye salmon harvest should be greater than forecast, based in past forecasting performance.

^c Actual harvest is the number 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. Additional salmon, likely bound for the Kitoi Bay Hatchery are harvested in parts of the Southeast Afognak Section (252-33) and Northeast Afognak Section (252-10 and 252-20).

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

^f From the southwest Afognak Section, Northwest Kodiak District (except for Spiridon and Settler Cove Terminal Harvest Areas), Inner and Outer Karluk Sections, plus 50% of Halibut Bay Section from June 21 through July 15 and 100% after July 31.

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

^h From the Alitak Bay District. Frazer and Upper Station harvest estimates are based on initial run and fishery timing and stock separation.

ⁱ From minor systems at Inner and Outer Ugak Bay (Saltery), Bushkin River, Perenosa Bay (Portage), Northwest Afognak (Thorsheim and Long Lagoon), Big River (Swikshak), and Outer Kukak Bay (Kafliya and Kuliuk) Sections.

^j From the Foul Bay, Waterfall Bay, and Settler Cove Special Harvest Areas. Enhancement project sockeye salmon production is expected from Malina and Laura Lakes (Pauls Bay) systems, but is mixed with wild stock production from these minor systems.

^k From the Spiridon Lake Special Harvest Area (Talrod Cove), plus an estimate of Spiridon-bound sockeye taken in adjacent areas.

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

^m From the Southwest Kodiak District (256- and 255-) and the Northwest Kodiak District (254- and 253-) except for the North Cape, Anton Larson, Sharatin, and Kizhuyak Section, and part of the Central Section (259-35 to 259-39).

ⁿ From the Alitak District.

^o From the Eastside Kodiak District (258- and 259-40 to 259-42), Northeast Kodiak District (259-27 to 259-25), and the North Cape, Anton Larson, Sharatin, and Kizhuyak Sections, plus part of the Central Section (259-35 to 259-39).

^p From the Mainland District.

^q Includes the projected 2005 harvest of 20,000 Chinook Salmon, the actual 2005 harvest of 14,400 Chinook salmon and a projected 2006 harvest of 20,000 Chinook Salmon.

Table 3.-Forecast of the 2006 salmon runs and expected number available for harvest from KRAA stocking projects.

System	Species	Forecast			Expected Harvest
		Estimate	Low	High	
Spiridon Lake ^a	sockeye	160,912	142,787	183,457	160,912
Hidden Lake ^a	sockeye	3,665	1,483	8,231	3,665
The Waterfall Lakes ^{a,b}	sockeye	6,816	4,345	12,524	6,816
Crescent Lake ^a	sockeye	474	119	2,331	474
	coho	3,300	2,500	4,100	3,300
Kitoi Bay Area ^a	pink ^c	6,718,961	5,547,699	7,884,290	6,383,961
	chum ^c	263,630	197,722	329,537	208,630
	coho ^{c,d}	158,677	135,987	206,288	152,677
	sockeye	54,137	46,064	62,211	40,137
Katmai Lake ^a	coho	750	560	940	750
Totals:	pink	6,718,961	5,547,699	7,884,290	6,383,961
	chum	263,630	197,722	329,537	208,630
	coho	162,727	139,047	211,328	156,727
	sockeye	226,004	194,798	268,754	212,004

Note: Forecasts prepared by ADF&G staff S. Schrof and R. Baer and Kodiak Regional Aquaculture Association staff Drew Aro.

^a Barrired systems and/or with Special Harvest Areas.

^b Estimated returns to Little Waterfall and Big Waterfall Creeks are combined.

^c Pink, chum and coho salmon forecast estimates includes brood stock needed for the Kitoi Bay Hatchery program. The expected harvest estimate excludes brood stock needs.

^d Includes the expected returns from Jennifer and Ruth Lakes stocking program.

Table 4.-Commercial salmon season opening times and dates for early sockeye salmon fisheries in the Kodiak Management Area, 2006.

FISHERY	EARLY SALMON FISHERY OPENING TIME & DATE	
	Firm Time & Date	Approximate Time /Date
Early Sockeye Salmon Fisheries		
Central, North Cape, and Outer Karluk Sections ^a	NOON June 1	-
Foul Bay and Waterfall Bay Special Harvest Areas ^b	NOON June 1	-
Kitoi Bay Hatchery - (Duck, Izhut, and Kitoi Sections) ^b	NOON June 5	-
Alitak Bay District ^c		NOON June 5
Cape Igvak Section ^d	-	12:01 AM June 5
Remainder of NW Kodiak District (except Kizhuyak Sections) ^e	NOON June 9	-
SW Afognak Section ^f	NOON June 14	-
Inner and Outer Ayakulik Sections ^g	-	Low Tide June 21
Spiridon Bay Special Harvest Area (Telrod Cove)	-	NOON June 21
<u>Minor Systems</u> ^f		
Uganik (Inner Uganik Section)	NOON June 9	-
Saltery (Inner Ugak Section)	NOON June 14	-
Paramanof (NW Afognak Section)	NOON June 14	-
Swikshak (Big River Section)	NOON June 14	-
Kaflia (Outer Kukak Section)	NOON June 14	-
Pauls/Perenosa (Pauls and Perenosa Bay Sections)	-	NOON June 14

^a This is considered a commercial test fishery, beginning NOON June 1. Extensions of this fishing period will depend on sockeye salmon escapement into the Karluk system.

^b These areas will be open continuously, 24 hours per day, for as long as orderly fisheries are maintained and enhancement project salmon are available for harvest.

^c Approximate opening time/date is as shown. Sockeye salmon escapements, build-ups, and Chip Cove test-fishery catches will determine actual fishery opening date. The initial fishery is considered a commercial test-fishery with a maximum fishing time of 33 hours. There will be no extension of the initial commercial test-fishery opening.

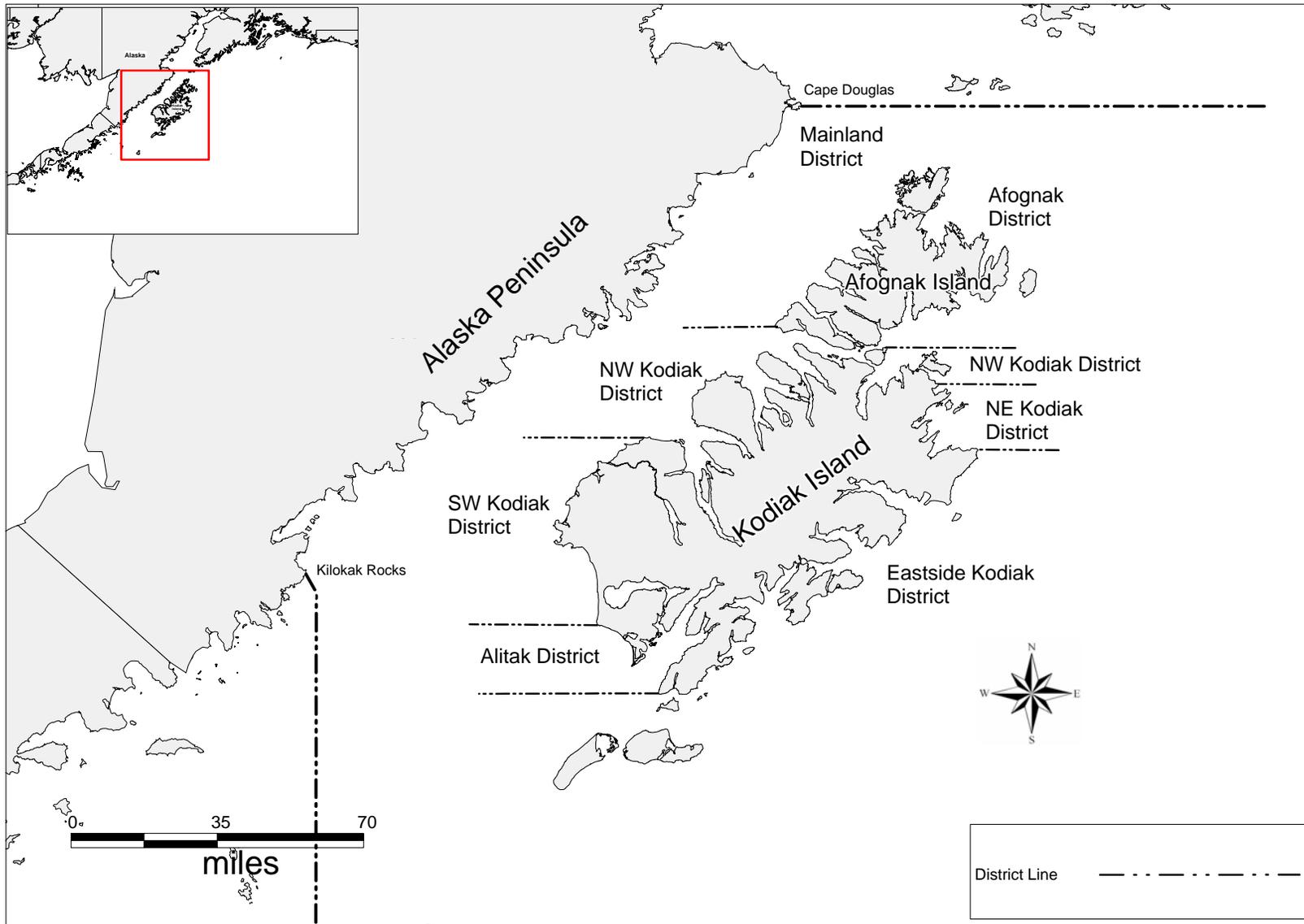
^d Approximate opening time/date is as shown. The opening date will be determined by Chignik sockeye salmon escapement and the achievement of allocative criteria (the anticipated harvest) in the Chignik Management Area. Fishing time will be in 24-hour increments, beginning at one minute after midnight (12:01 AM).

^e Approximate opening time/date is as shown. Strong early runs to local streams or very strong early runs to major sockeye salmon systems could allow for an earlier opening date.

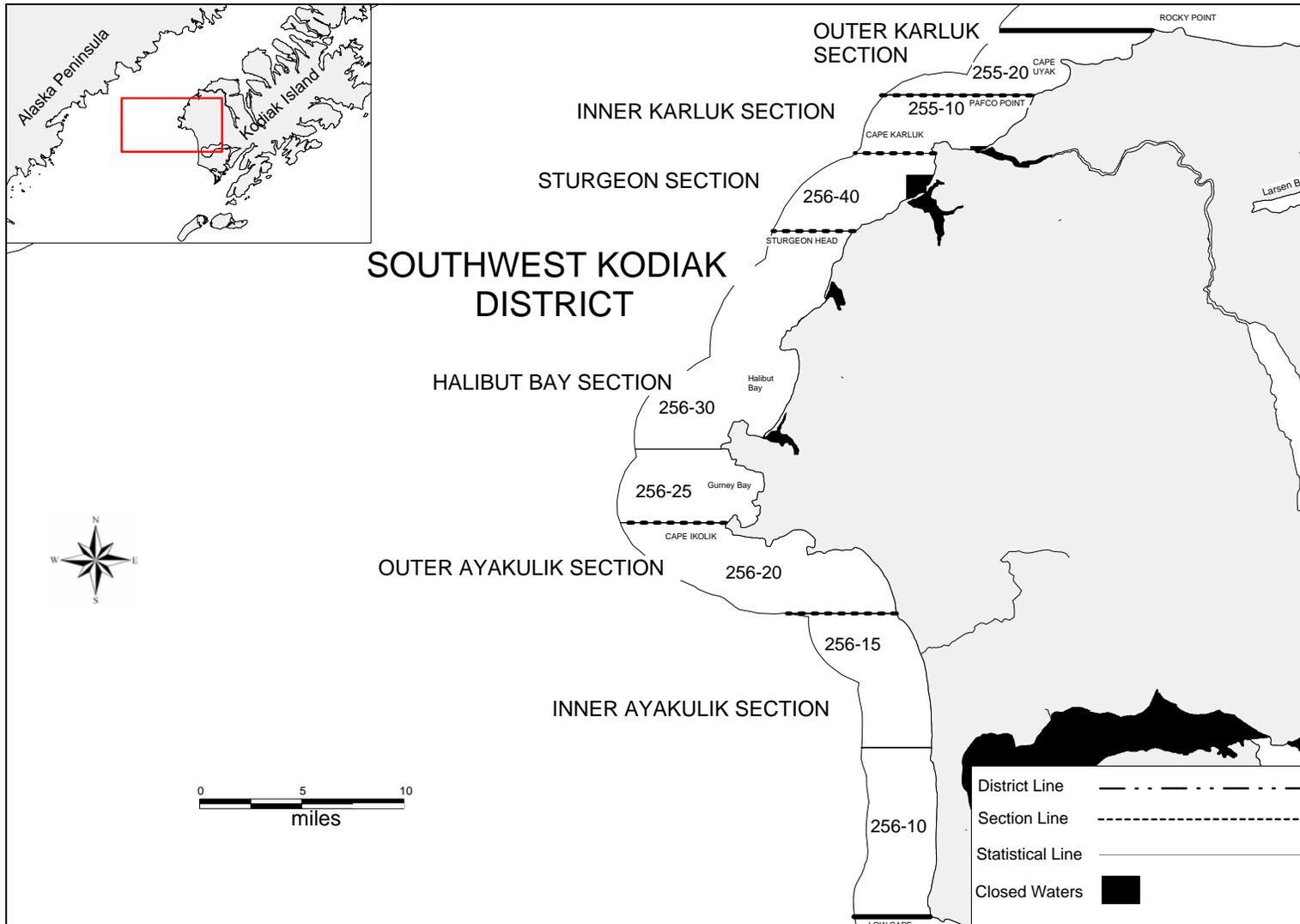
^f Actual opening time/date is shown for some minor systems, approximate opening time/date is shown for other minor systems.

^g Approximate opening time/date is as shown. The sockeye salmon escapement into the Ayakulik River will determine fishery opening time/date. The opening will occur during daylight hours near low tide; Inner Ayakulik Section openings normally begin with a flare.

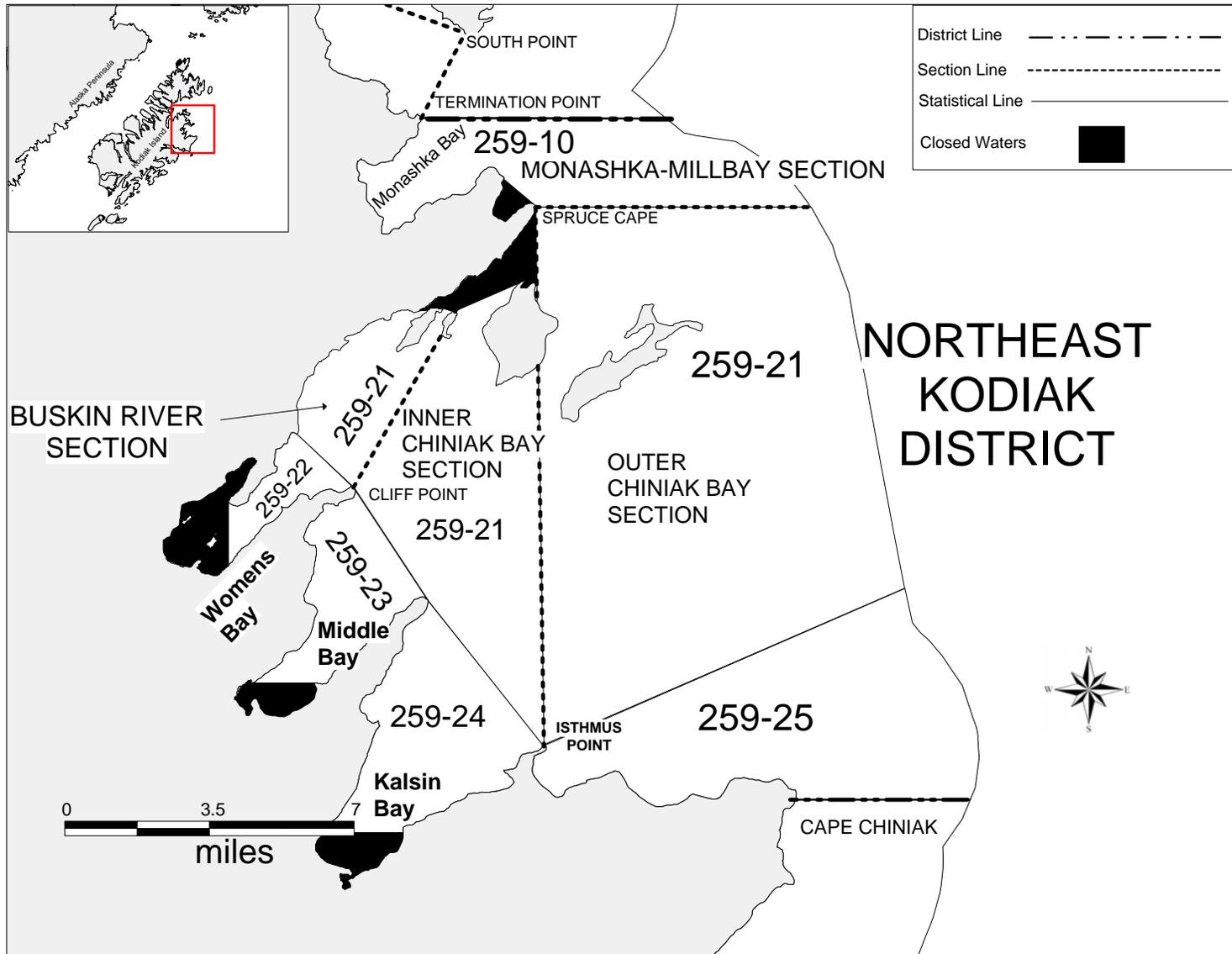
**APPENDIX A. MAPS OF THE KODIAK MANAGEMENT AREA
SALMON FISHING DISTRICTS**



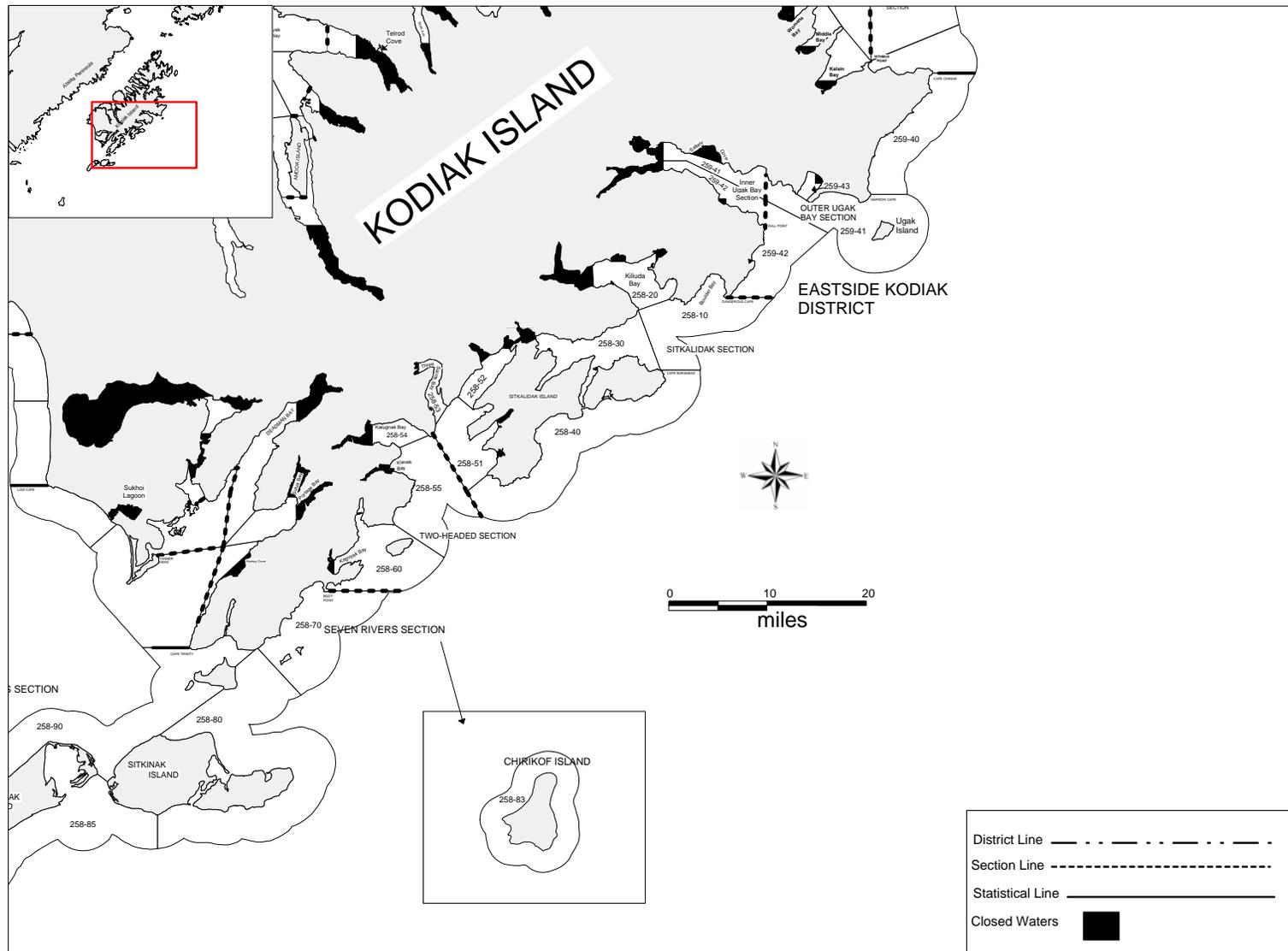
Appendix A1.-Map of the Kodiak Management Area identifying commercial salmon fishing districts.



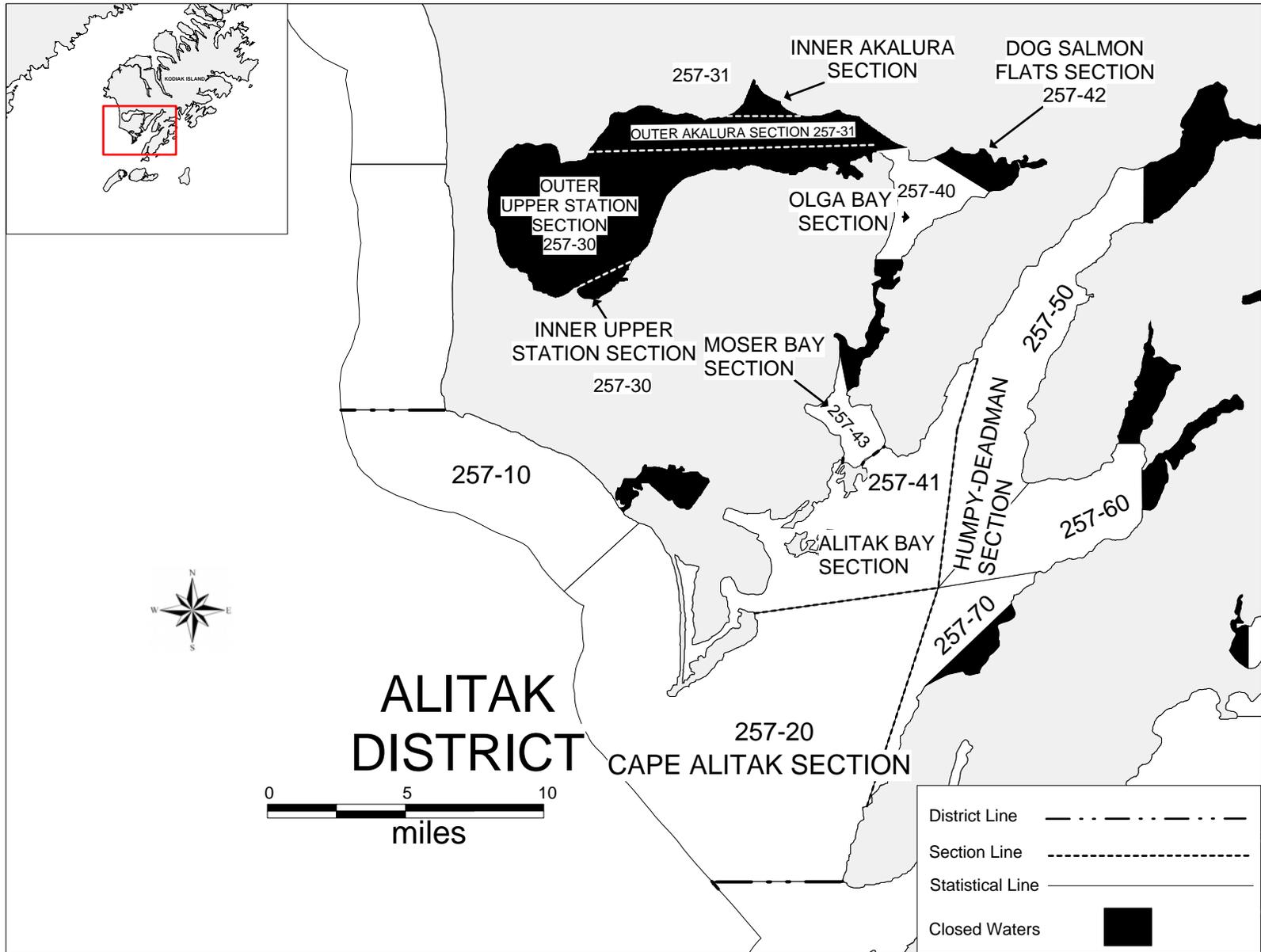
Appendix A4.-Map of the Southwest Kodiak District identifying commercial salmon fishing sections and statistical areas.



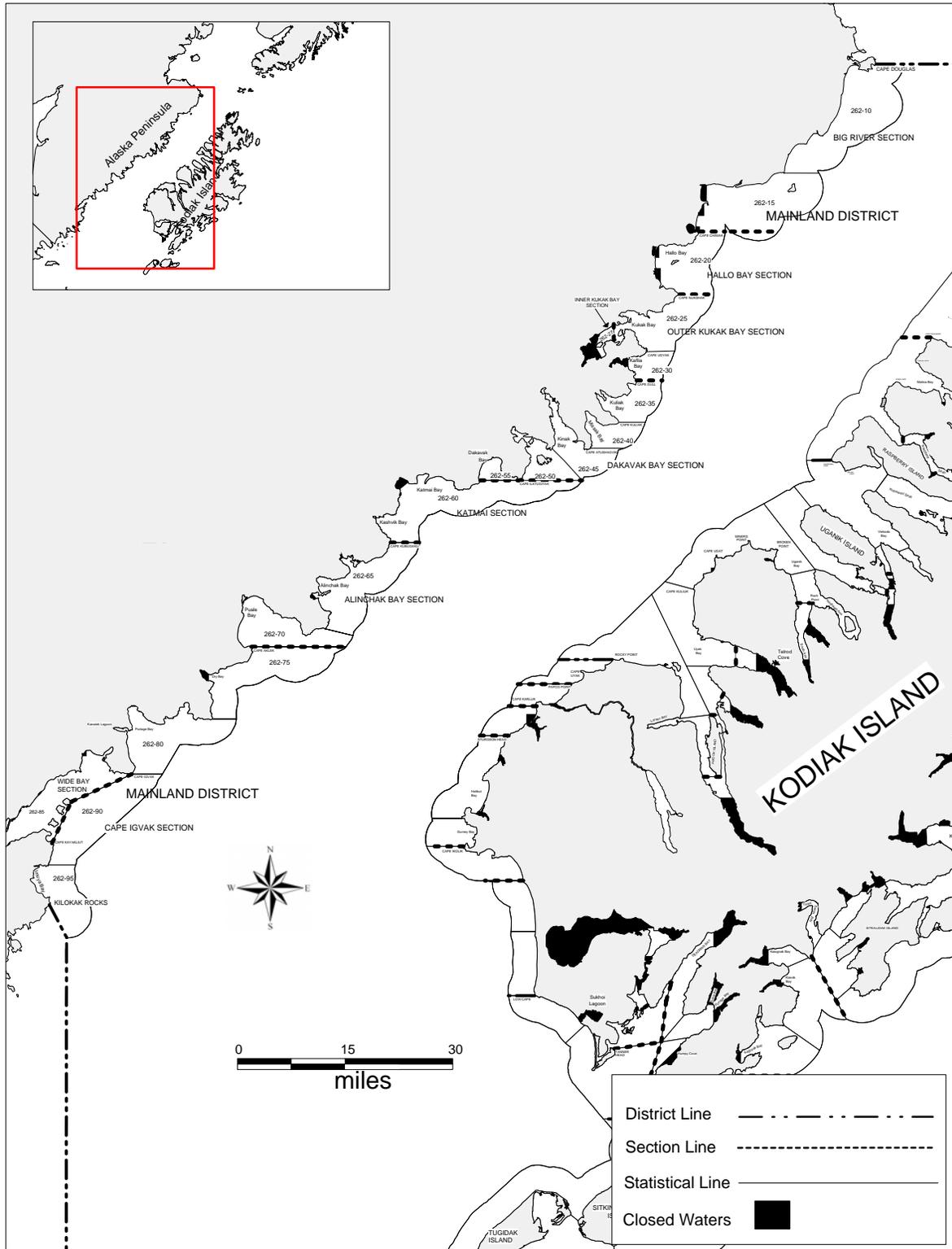
Appendix A5.-Map of the Northeast Kodiak District identifying commercial salmon fishing sections and statistical areas.



Appendix A6.-Map of the Eastside Kodiak District identifying commercial salmon fishing sections and statistical areas.



Appendix A7.-Map of the Alitak District identifying commercial salmon fishing sections and statistical areas.



Appendix A8.-Map of the Mainland District identifying commercial salmon fishing sections and statistical areas.