Fishery Management Report No. 05-70

North Alaska Peninsula Salmon Management Plan, 2006

by

Robert L. Murphy

and

Philip Tschersich

December 2005

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

Symbols and Abbreviations

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

Weights and measures (metric)

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

Weights and measures (English)

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

Time and temperature

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

Physics and chemistry

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

General

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

Measures (fisheries)

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

Mathematics, statistics

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

FISHERY MANAGEMENT REPORT NO. 05-70

NORTH ALASKA PENINSULA SALMON MANAGEMENT PLAN, 2006

by

Robert L. Murphy
and
Philip Tschersich
Division of Commercial Fisheries, Kodiak

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, Alaska, 99518-1599

December 2005

The Division of Sport Fish Fishery Management Reports series was established in 1989 for the publication of an overview of Division of Sport Fish management activities and goals in a specific geographic area. Since 2004, the Division of Commercial Fisheries has also used the Fishery Management Report series. 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.

Robert L. Murphy
and
Philip Tschersich
Alaska Department of Fish and Game, Division of Commercial Fisheries,
211 Mission Road, Kodiak, Alaska, USA

This document should be cited as:
Murphy, R. L. and P. Tschersich. 2005. North Alaska Peninsula Salmon Management Plan, 2006. Alaska Department of Fish and Game, Fishery Management Report No. 05-70, Anchorage.

TABLE OF CONTENTS

Page

LIST OF TABLES ii

LIST OF FIGURES ii

LIST OF APPENDICES ii

ABSTRACT 1

INTRODUCTION 1

GPS COORDINATES AND ENFORCEMENT 1

FISHERY ANNOUNCEMENTS 2

CATCH REPORTING 2

NORTH PENINSULA MANAGEMENT STRATEGY 3

Northwestern District 3
- Dublin Bay Section 3
- Urilia Bay Section 3
- Swanson Lagoon Section 3
- Bechevin Bay Section 3
- Izembek-Moffet Bay Section 3

Northern District 3
- Black Hills Section 3
- Nelson Lagoon Section 4
- Herendeen-Moller Bay Section 4
- Port Moller Bight Section 5
- Bear River and Three Hills Sections 5
- Ilnik Section 7
- Inner Port Heiden and Cinder River Sections 8

BEAR RIVER TEST FISHERY 8

REFERENCES CITED 9

FIGURES 11

APPENDIX A. SCHEDULED NORTH ALASKA PENINSULA FISHING PERIODS 15

LIST OF TABLES

Table **Page**

1. Nelson River weir sockeye salmon escapement interim objectives. 4
2. Bear River sockeye salmon escapement interim objectives. 5
3. Sandy River sockeye salmon escapement interim objectives. 6
4. Sockeye salmon stocks used to manage four sections in the Northern District. 6
5. Ilnik River sockeye salmon escapement interim objectives (if Ocean River flows into Ilnik Lake). 7
6. Ocean River aerial survey sockeye salmon escapement interim objectives (only needed if Ocean River flows directly into the Bering Sea). 8

LIST OF FIGURES

Figure **Page**

1. Alaska Peninsula with North Alaska Peninsula Management Area commercial salmon fishing districts depicted. 12
2. Alaska Peninsula with North Alaska Peninsula Management Area commercial salmon fishing sections depicted. 13
3. Alaska Peninsula Management Area regional office and weir locations. 14

LIST OF APPENDICES

Appendix **Page**

A1. Scheduled North Alaska Peninsula fishing periods as described in the 2004-2007 regulation book. 16

ABSTRACT

The 2006 projected North Peninsula salmon harvests are 2,243,000 salmon: 8,000 Chinook salmon *Oncorhynchus tshawytscha*, 2,100,000 sockeye salmon *O. nerka*, 70,000 coho salmon *O. kisutch*, 25,000 pink salmon *O. gorbuscha*, and 40,000 chum salmon *O. keta*. The bulk of the salmon harvest is projected to occur in the Northern District from Nelson Lagoon to Strogonof Point. The North Peninsula is predominantly fished by drift gillnet and set gillnet fleets, but in some locations purse seine gear is used. In 2006, salmon enumerating weirs on the Nelson, Bear, Sandy, and Ilnik Rivers will be used to facilitate in-season escapement assessment.

Key words: North Alaska Peninsula, Nelson Lagoon, Bear River, Three Hills, Ilnik, salmon, commercial fisheries management

INTRODUCTION

The purpose of this document is to provide commercial salmon fishermen and buyers with information and guidelines that will be used by the Alaska Department of Fish and Game (ADF&G) to manage the commercial salmon fisheries of the North Alaska Peninsula during 2006.

The North Peninsula, a portion of the Alaska Peninsula Management Area, consists of the Northern and Northwestern Districts and encompasses Bering Sea coastal waters from Cape Menshikof west to Cape Sarichef (Figure 1). The Northern District includes all state waters between the westernmost tip of Cape Menshikof and the southernmost tip of Moffet Point. The Northwestern District includes all state waters between Moffet Point and Cape Sarichef on Unimak Island. Five species of salmon are commercially harvested on the North Peninsula: Chinook *Oncorhynchus tshawytscha*, sockeye *O. nerka*, coho *O. kisutch*, pink *O. gorbuscha*, and chum salmon *O. keta*.

The Cinder River Section, Inner Port Heiden Section, and Ilnik Lagoon comprise an overlap area described under 5 AAC 39.120 (d) where both Area M (Alaska Peninsula and Aleutian Islands) and Area T (Bristol Bay) permit holders may fish under certain conditions (ADF&G 2004). Area M permit holders may fish anytime during open fishing periods in all of the above locations. Area T permit holders may fish in the Cinder River and Inner Port Heiden Sections from May 1 through June 30, and from August 1 through September 30 during open fishing periods. Area T permit holders may also fish in Ilnik Lagoon beginning August 1 during open fishing periods.

The projected 2006 North Alaska Peninsula salmon catch is approximately 2,243,000 fish, of which 8,000 are expected to be Chinook salmon, 2,100,000 sockeye salmon, 70,000 coho salmon, 25,000 pink salmon, and 40,000 chum salmon. The sockeye salmon 2006 projected harvest is 33% below the 2005 harvest of 3,115,792 fish, while the projected harvest of other species is directly related to market conditions. The 2006 Nelson (Sapsuk) River sockeye salmon run is to be 555,000 fish (range 284,000-826,000 fish) with a forecasted harvest of 405,000 sockeye salmon. The late Bear River (post July 31) sockeye salmon run is forecasted to be 678,000 fish (range 392,000-964,000 fish) with a forecasted harvest of 561,000 sockeye salmon (Eggers *In prep*).

GPS COORDINATES AND ENFORCEMENT

The ADF&G and the Alaska Department of Public Safety use global positioning system (GPS) technology to identify districts, sections, closed waters, and regulatory fishing coordinates published in regulations or emergency orders.

FISHERY ANNOUNCEMENTS

The Northern District will be managed from the Port Moller ADF&G office, while the Northwestern District will be managed from the Cold Bay ADF&G office (Figure 1). Management staff can be reached by SSB 3.230 MHz or over VHF channel 72 in Port Moller or VHF channel 6 in Cold Bay and through the following contacts:

Port Moller:
Alaska Dept. of Fish & Game
Phone (907) 375-2716
Fax (907) 375-2715
SSB 3.230 MHz

Cold Bay:
Alaska Dept. of Fish & Game
Phone (907) 532-2419
Fax (907) 532-2470
SSB 3.230 or 3.260 MHz

Inseason emergency orders and news releases will be made available to the industry and the public by at least one of the following methods:

- Communicated directly to the local buyers/processors and fishermen via fax, email, or verbally.
- Transmitted over one or more of the following radio frequencies: SSB 3.230 MHz and VHF 72 in Port Moller or VHF 6 in Cold Bay.
- News releases will be displayed at several places in Port Moller and at ADF&G offices in Port Moller, Cold Bay and Sand Point.
- In Port Moller and Cold Bay after business hours at the phone number listed above using recorded messages.

The ADF&G will attempt to give a minimum of six hours advance notice of commercial fishing openings when established by emergency order. However, there may be times when less than six hours notice is given for a commercial fishery opening/closure/extension.

CATCH REPORTING

Buyers/processors must report their salmon purchases by location, species (in both numbers of fish and pounds), and number of deliveries, by 9:00 AM the day after delivery to the ADF&G in Port Moller for harvests in the Northern District, or in Cold Bay for harvests in the Northwestern District**.**

When purchasing salmon, the buyer must complete fish tickets showing the statistical area where the fish were harvested. The harvest location may be different than the area where the delivery occurred. Fish tickets must be sent to the appropriate ADF&G office in Port Moller or Cold Bay within seven (7) days of the delivery (5 AAC 39.130 (c); ADF&G 2004). The following addresses should be used:

Port Moller:
Alaska Dept. of Fish & Game
P.O. Box 163
Port Moller, AK 99571-8999
Phone (907) 375-2716
Fax (907) 375-2715

Cold Bay:
Alaska Dept. of Fish & Game
P.O. Box 50
Cold Bay, AK 99571
Phone (907) 532-2419
Fax (907) 532-2470

NORTH PENINSULA MANAGEMENT STRATEGY

The North Peninsula salmon fisheries will be managed on the basis of catch-per-unit-effort (CPUE) abundance indicators, salmon abundance determined during ADF&G test fisheries, and escapement estimated by aerial surveys and weir counts. Scheduled weekly fishing periods during the open season are listed in Appendix A1 and in the 2004-2007 Commercial Finfish Regulations (ADF&G 2004). When possible, the management of North Peninsula fisheries will take into account processing requirements while maximizing harvest opportunity and ensuring escapement requirements.

NORTHWESTERN DISTRICT

Dublin Bay Section

Commercial salmon fishing periods in the Dublin Bay Section (Figure 2) will occur as scheduled in the 2004-2007 Commercial Finfish Regulations (Appendix A1).

Urilia Bay Section

The commercial salmon fishing season in the Urilia Bay Section (Figure 2) may open by emergency order in June if the sockeye salmon escapement goal in Christianson Lagoon is likely to be met (25,000-50,000 fish; Nelson et al. *In prep*). Christianson Lagoon will be managed based on sockeye salmon abundance through July 31 and Peterson Lagoon will be managed based on chum salmon abundance through August 31. The entire Urilia Bay Section will be managed based on coho salmon abundance in August and September.

Swanson Lagoon Section

Sockeye and chum salmon stocks in the Swanson Lagoon Section (Figure 2) will be managed based on abundance estimates in Swanson Lagoon through August. The escapement goal for Swanson Lagoon is 8,000-16,000 sockeye salmon. The section will be managed based on local coho salmon abundance determined from aerial surveys and commercial CPUE data in September.

Bechevin Bay Section

The Bechevin Bay Section (Figure 2) will open concurrently with the Ikatan Bay Section (part of the South Peninsula) according to the South Unimak and Shumagin Islands June Salmon Management Plan (5 AAC 09.365 (b)). Post June, the Bechevin Bay Section will be managed based on the strength of local chum and pink salmon stocks. Fishing periods throughout the Bechevin Bay Section will be established by emergency order.

Izembek-Moffet Bay Section

Chum salmon are the most abundant species found in the Izembek-Moffet Bay Section (Figure 2) through August, then coho salmon become the predominant species. Management decisions will be based on aerial escapement surveys and CPUE data. If there is little or no market for chum salmon, and fishermen target local sockeye salmon producing systems, then management will be based on the sockeye salmon run strength to these systems.

NORTHERN DISTRICT

Black Hills Section

During June, the Black Hills Section (Figure 2) will be managed based on the strength of local Chinook salmon stocks. Management during July and early August will be based on the abundance of local sockeye salmon runs in the Black Hills Section. During late August and September, the Black Hills Section will be managed based on local coho salmon abundance and harvest effort.

Nelson Lagoon Section

In 2003-2004, the Alaska Peninsula escapement goals were reviewed and changes to the Nelson River goals were adopted (Nelson et al. *In prep*). The lower escapement goal was reduced from 100,000 to 97,000 sockeye salmon while the upper goal increased from 150,000 to 219,000 fish.

The Nelson Lagoon fishery will be managed based on interim escapement objectives at the Nelson River weir (Table 1; Figure 2). Commercial salmon fishery harvests will also be used to evaluate run strength.

Table 1.–Nelson River weir sockeye salmon escapement interim objectives.

Date	Escapement for period	Cumulative Escapement
30-Jun	30,000 - 60,000	30,000 - 60,000
5-Jul	20,000 - 45,000	50,000 - 105,000
10-Jul	20,000 - 50,000	70,000 - 155,000
15-Jul	15,000 - 30,000	85,000 - 185,000
20-Jul	10,000 - 25,000	95,000 - 210,000
25-Jul	2,000 - 9,000	97,000 - 219,000
Season total escapement goal	97,000 - 219,000	

Escapements may be increased if escapement quality is poor due to a high percentage of net-marked fish, high percentage of jack salmon (length ≤400 mm from mideye to fork of tail or age-.1), or a low female to male sex ratio. The estimated number of female sockeye salmon in the escapement should comprise half the total escapement goal range by July 25 (50,000-110,000 female sockeye salmon).

The escapement goal range for Chinook salmon in the Nelson River system is 2,400-4,400 fish (Nelson et al. *In prep*). To provide adequate escapement for Chinook salmon in Nelson Lagoon, fishing periods through June 15 are limited in duration from 6:00 AM Monday to 12:00 MIDNIGHT Wednesday (Appendix A). From June 16 to June 30 four fishing days may be allowed each week. Additional fishing time may be allowed if daily sockeye salmon catches are large or cumulative weir counts exceed interim objectives. However, if it is evident in June that the Chinook or sockeye salmon runs are weak, the number of fishing days will be reduced. The amount of Chinook salmon fishing gear used in the fishery will be considered when evaluating sockeye salmon catches.

During July, fishing time will be dependent upon sockeye salmon escapements and daily catches. If escapement data from the Nelson River weir cannot be determined due to high water events, then daily catch rates (primarily) and daily catch per boat (secondarily) will be used to evaluate run strength.

Beginning August 16, the Nelson Lagoon fishery is managed based on coho salmon run strength. No more than three fishing days will be allowed per week unless coho salmon escapements are expected to exceed the lower escapement goal of 18,000 fish (Nelson et al. *In prep*), or if the fishing effort has minimal impact on achieving adequate escapement.

Herendeen-Moller Bay Section

Prior to July 20, the Herendeen and Port Moller Bay Section (Figure 2) will be managed based on the abundance of chum and pink salmon stocks. Pink salmon that enter Herendeen Bay (especially during even years) will be harvested without jeopardizing local chum salmon stocks in openings established by emergency order after July 20. Management will be based on in-season escapement determined by aerial surveys and catch information.

Port Moller Bight Section

The Port Moller Bight Section (Figure 2) will be managed based on the status of Bear River sockeye salmon escapement. Fishery openings and closures will be concurrent with the Bear River Section.

Bear River and Three Hills Sections

The Bear River and Three Hills Sections (Figure 2) will be managed for each interim lower escapement objective and the season-ending escapement goal at Bear River (Table 2). The Bear River sockeye salmon escapement is divided into historic proportions of the early and late runs to ensure that all components of the Bear River run receive adequate escapement. The total season-ending goal in Bear River, including a post-weir estimate, is 293,000-488,000 sockeye by September 15 (Table 2). The escapement goal range for the early run, from June 1 through July 31, is 176,000-293,000 sockeye salmon (Table 2; Nelson et al. *In prep*). The escapement objective range for the late run from August 1 through August 25, when the weir is removed, is 87,000-165,000 sockeye salmon. The average post-weir estimate of approximately 30,000 sockeye salmon, although not actively managed, is included in the Bear River late-run escapement goal of 117,000-195,000. The total season-ending escapement goal at Bear River, including both the early and late runs, as well as the post-weir estimate, is 293,000-488,000 sockeye salmon by September 15

Table 2.–Bear River sockeye salmon escapement interim objectives.

Date	Escapement for period	Cumulative Escapement
Early-run component:		
15-Jun	4,000 - 8,000	4,000 - 8,000
20-Jun	11,000 - 22,000	15,000 - 30,000
25-Jun	15,000 - 25,000	30,000 - 55,000
30-Jun	30,000 - 60,000	60,000 - 115,000
5-Jul	30,000 - 50,000	90,000 - 165,000
10-Jul	25,000 - 35,000	115,000 - 200,000
15-Jul	15,000 - 30,000	130,000 - 230,000
20-Jul	10,000 - 20,000	140,000 - 250,000
25-Jul	20,000 - 20,000	160,000 - 270,000
31-Jul	16,000 - 23,000	176,000 - 293,000
Weir early-run goal	176,000 - 293,000	
Late-run component:		
5-Aug [a]	15,000 - 30,000	191,000 - 323,000
10-Aug	20,000 - 35,000	211,000 - 358,000
15-Aug	17,000 - 35,000	228,000 - 393,000
20-Aug	15,000 - 30,000	243,000 - 423,000
25-Aug	20,000 - 35,000	263,000 - 458,000
Weir late-run objective	87,000 - 165,000	
Post-weir objective	30,000	
Total late-run goal	117,000 - 195,000	
Total season-ending goal	293,000 - 488,000	

[a] Escapement occurring during the July 26-31 period that results in the escapement to exceed the 20,000 fish escapement objective, will be applied to the late run escapement objective. However, no more than 15,000 fish shall be applied to the late run escapement objective. This will aid the ADF&G in managing the late Bear River sockeye salmon run more effectively when the run is earlier than expected.

If one of the interim escapement objectives (Table 2) is not achieved, fishing in the Bear River and Three Hills Sections will be curtailed to reach the cumulative escapement objectives.

The number of jack (length < 400 mm mid eye to fork of tail or age-.1) and net-marked sockeye salmon in the Bear River escapement are important when evaluating escapement quality. Typically, the number of jack salmon is less than 10%. If the number of jack salmon, on a daily basis or for the season, is above 10%, the escapement objective may be increased to compensate for the reduction in reproductive potential. If the number of net-marked salmon becomes excessive, the escapement objectives may be increased to preserve escapement quality.

The Sandy River sockeye salmon annual escapement goal, 40,000-60,000 fish (Nelson et al. *In prep;* Table 3), is estimated using weir counts. If weir counts are unavailable due to difficulties with the weir such as a high water event, aerial survey data will be used to estimate the escapement and manage the fisheries.

Table 3.–Sandy River sockeye salmon escapement interim objectives.

Date	Escapement for period	Cumulative escapement
20-Jun	2,000 - 3,000	2,000 - 3,000
25-Jun	4,000 - 7,000	6,000 - 10,000
30-Jun	9,000 - 15,000	15,000 - 25,000
5-Jul	10,000 - 15,000	25,000 - 40,000
10-Jul	5,000 - 10,000	30,000 - 50,000
15-Jul	4,000	34,000 - 54,000
20-Jul	3,000	37,000 - 57,000
25-Jul	3,000	40,000 - 60,000
Season total escapement goal	40,000 - 60,000	

Prior to July 21, the Three Hills Section will be managed based on Bear River, Sandy River, and Ilnik River sockeye salmon abundance (Figure 2; Table 4). If escapement objectives in Bear or Sandy River are not being met, a portion of the Bear River Section may be closed while the Three Hills Section may remain open. This strategy has been used successfully in the past to achieve escapement objectives while providing fishing opportunity and avoiding escapement surplus. If escapement into Ilnik and/or Ocean River (if Ocean River flows directly into the Bering Sea) is inadequate and area closures in the Ilnik Section are not an effective conservation action, the eastern portion of the Three Hills Section may be closed to provide additional protection for fish needed for escapement.

During June, management decisions regarding sockeye salmon may be conservative in the Bear River Section to protect Chinook salmon stocks in the King Salmon, Bear, and Sandy Rivers (Figure 2). In August and September, management decisions in the Three Hills Section will consider the strength of Ilnik Lagoon coho salmon runs.

Table 4.–Sockeye salmon stocks used to manage four sections in the Northern District.

	Sockeye Salmon Stocks	
Section	Pre July 21	Post July 20
Bear R.	Bear R., Sandy R.	Bear R., Sandy R.
Three Hills	Bear R., Sandy R., Ilnik R.	Bear R., Sandy R.
Ilnik	Ilnik R., Meshik R., Bear R.[a], Ugashik R.[a]	Bear R.
Nelson Lagoon	Nelson R.	Nelson R.

[a] Bear and Ugashik Rivers sockeye salmon will be considered only if a management concern exists for these stocks.

Ilnik Section

In February 2004, the Alaska Board of Fisheries changed regulations in the Ilnik Section (Figure 2; 5 AAC 09.369 (j)). The changes permit fishing in that portion of the Ilnik Section northeast of Unangashak Bluffs to Strogonof Point as early as June 25 based on the escapement levels in Ilnik (Table 5) and Meshik Rivers. Aerial surveys will be used to determine escapement into the Meshik River. The area northeast of Unangashak Bluffs will be managed based on Meshik River sockeye salmon run strength unless a management concern exists for Ilnik River sockeye salmon. In this case, closures northeast of Unangashak Bluffs will occur. In 2004, the first year of the new management plan, a conservative two and a half days of fishing per week was permitted northeast of Unangashak Bluffs to Strogonof Point because the impact of fishing on this area on Meshik River sockeye salmon stocks was unknown. A baseline of inseason aerial survey data was started in 2004. The sockeye salmon escapement at Meshik River in 2004 (82,200 sockeye salmon) was almost five times higher than the upper range of the escapement goal (10,000-20,000 fish; Nelson et al. *In prep*). The total sockeye salmon escapement into systems within the Inner Port Heiden Section during 2004 was 103,700 fish. During 2005, the number of fishing days permitted was increased to a maximum of four and a half days per week. The 2005 sockeye salmon escapement into Meshik River (including Red Bluff Creek) was 113,100 fish. Processor harvest limits during 2004 and 2005 likely had an effect on the increased salmon escapement of many North Peninsula rivers. In 2005, processor harvest limits were in effect for two and a half weeks. During 2006, it is expected that four and a half days per week of fishing will be allowed in the Ilnik Section northeast of Unangashak Bluffs to Strogonof Point, assuming the Meshik and Ilnik river sockeye salmon escapements are met.

Management action will be considered in the Ilnik Section after closures in the Bear River and Three Hills Sections if the Bear River sockeye salmon run is not meeting escapement objectives. Prior to July 21, management action will also be taken in the Ilnik Section if closures are implemented in the Area T Egegik District to protect Ugashik River sockeye salmon (Figure 2). If Bear and Ugashik rivers' sockeye salmon runs are expected to meet escapement objectives prior to July 21, fishing time in the Ilnik Section will be based on abundance of Ilnik and Meshik River sockeye salmon. From July 20 to August 15, the Ilnik Section will be managed based on Bear River sockeye salmon abundance.

Table 5.–Ilnik River sockeye salmon escapement interim objectives (if Ocean River flows into Ilnik Lake).

Date	Escapement for period	Cumulative escapement
20-Jun	5,000 - 8,000	5,000 - 8,000
25-Jun	5,000 - 7,000	10,000 - 15,000
30-Jun	5,000 - 10,000	15,000 - 25,000
5-Jul	5,000 - 10,000	20,000 - 35,000
10-Jul	10,000	30,000 - 45,000
15-Jul	5,000	35,000 - 50,000
20-Jul	3,000 - 7,000	38,000 - 57,000
25-Jul	2,000 - 3,000	40,000 - 60,000
Season total escapement goal	40,000 - 60,000	

The sockeye salmon management objective for the Ocean River (Table 6) is based on aerial surveys when the river flows directly into the Bering Sea (not through Ilnik Lake) as in 1972-1975, 1986-1987, and 2005. When this occurs, many of the fish bound for Ocean River do not pass through the Ilnik River, and therefore do not pass the weir. For the years noted above, an average of 20% of the Ilnik River system escapement spawned in Ocean River. If the Ocean River were to flow directly into the Bering Sea during 2006, the Ocean River escapement objective will be subtracted from the Ilnik River escapement goal. Because of the proximity of the Ocean River terminus to the Three Hills Section, management actions may be taken in the Three Hills Section to meet escapement objectives in Ocean River.

Table 6.–Ocean River aerial survey sockeye salmon escapement interim objectives (only needed if Ocean River flows directly into the Bering Sea).

Date	Cumulative number
15-Jun	1,000 - 1,600
20-Jun	2,000 - 3,000
25-Jun	3,000 - 5,000
5-Jul	6,000 - 9,000
10-Jul	7,000 10,000
15-Jul	7,600 11,400
20-Jul	8,000 - 12,000
Season total escapement objective	8,000 - 12,000

From August 15 through September 30, the Ilnik Section will be managed based on Ilnik Lagoon coho salmon run strength. The strength of Unangashak and Ilnik Rivers coho salmon runs, and the amount and distribution of fishing effort will also determine fishing time in the Ilnik Section. If large scale closures of the Bear River and Three Hills Sections occur during August and September for concern over late-run Bear River sockeye salmon, then the Ilnik Section may also remain closed for conservation of late-run Bear River sockeye salmon.

Inner Port Heiden and Cinder River Sections

The Inner Port Heiden and Cinder River Sections (Figure 2) will be managed on the basis of Chinook salmon abundance during May and early June. The weekly fishing periods established in regulation are expected during this period (Appendix A1). Sockeye salmon abundance during mid June through July and coho salmon abundance after July will dictate fishing time in these sections. Beginning June 25, fishing time permitted in the Ilnik Section located northeast of Unangashak Bluffs (Figure 2) will be concurrent with fishing time in the Inner Port Heiden Section unless management concern exists for Ilnik, Bear, or Ugashik Rivers. Area T permit holders may fish in the open waters of these sections during every month except July (5 AAC 39.120 (d)). Area M permit holders are allowed to fish in the open waters of these sections during May through September. The fishing season in that portion of the Cinder River Section outside of Shagong Lagoon (Cinder River Lagoon) cannot open earlier than August 1 (ADF&G 2004). Fishermen in the Cinder River Section are reminded that the following waters are closed to commercial salmon fishing under 5 AAC 09.350 (ADF&G 2004):

Cape Menshikof: all waters of the Cinder River Section located north and east of a line extending 304° from a point on the shore at 57° 24.40’ N. lat. 158° 03.00’ W. long.

Cinder River Lagoon: all waters enclosed by a line from 57° 20.00’ N lat., 158°08.02’ W long., to 57° 21.30' N. lat., 158°02.63' W. long.

BEAR RIVER TEST FISHERY

During the 2006 season, the ADF&G may conduct a test fishery in the vicinity of Bear River (Figure 2) to assess the marine abundance of sockeye salmon. The main objective of the test fishery is to decrease the likelihood of exceeding the Bear River escapement goal while avoiding large surplus escapements and to maximize the harvest of surplus salmon into Bear River. The test fishery will occur during commercial fishing closures after build-ups of fish are expected (usually 3-5 days after a closure). The ADF&G management staff in Port Moller will assess the sockeye salmon abundance after each test fishery. Management decisions will incorporate all information available including daily catch rates prior to the fishery closure, aerial survey observations, daily escapement estimates, and test fishery results. If salmon

build-ups occur in the test fishery area, management actions can include opening the commercial fishery to provide harvest opportunities while providing a closed water area to protect milling Bear River bound sockeye salmon. In the past, the ADF&G has closed areas around Bear River to ensure escapement requirements were achieved while providing a harvest opportunity outside the closed area.

The ADF&G office in Port Moller will establish and maintain a list of permit holders willing to participate in the test fishery program. Enrollment will begin on May 15 and continue until the first test fishing date. Enrollment can be completed in person, by phone, or over the radio. The permit holder must have at least five seasons of experience drift gillnet salmon fishing in the vicinity of Bear River, and each vessel must be able to chill the catch using refrigerated sea water.

All eligible names will be randomly chosen and a sequential list of charter vessels will be announced over the VHF radio and kept available at the ADF&G office in Port Moller. The sequential list will be maintained throughout the season. If the permit holder is unavailable to participate in the test fishery (permit holder cannot be contacted prior to 8:00 PM the day before the test fishery), the vessel will be moved to the bottom of the list and the next vessel on the list will be announced. Additional permit holders may enroll after the initial enrollment and drawing if additional test fish vessels are needed. However, these vessels will be placed at the end of the established list, in the order in which their enrollments are received.

Two chartered vessels will depart Port Moller in the morning of each test fishing day, and the vessel skippers will supply all necessary gear to make four sets at designated locations in the vicinity of Bear River. One vessel will fish north of the river mouth, and the other south of the river mouth. One ADF&G observer will be on board each vessel. The ADF&G will pay $1,000 per day to charter each vessel. Proceeds from the sale of fish harvested in the ADF&G test fishery will be deposited in the ADF&G test fish fund to cover test fish expenses, including ADF&G personnel and equipment costs for age, length, and sex data collection. Each vessel must meet requirements specified by the ADF&G as stated in the North Alaska Peninsula Sockeye Salmon Test Fishery Operational Plan 2006 (Murphy *In prep*), where more specifics about the program can be obtained.

REFERENCES CITED

ADF&G (Alaska Department of Fish and Game). 2004. 2004-2007 Bristol Bay, Alaska Peninsula. Atka-Amlia, and Aleutian Islands Areas Commercial Fishing Regulations, 2004 edition. Alaska Department of Fish and Game, Division of Commercial Fisheries, Juneau.

Eggers, D. M. *In prep.* Run Forecasts and Harvest Projections for 2006 Alaska Salmon Fisheries and Review of the 2005 Season. Alaska Department of Fish and Game, Anchorage.

Murphy, R. L. *In prep.* Alaska Peninsula salmon catch and escapement operational plans, 2006. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report, Kodiak.

Nelson, P. A., J. J. Hasbrouck, M. J. Witteveen, K. A. Bouwens, and I. Vining. *In prep*. Review of Salmon Escapement Goals in the Alaska Peninsula and Aleutian Islands Management Areas. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report, Kodiak.

FIGURES

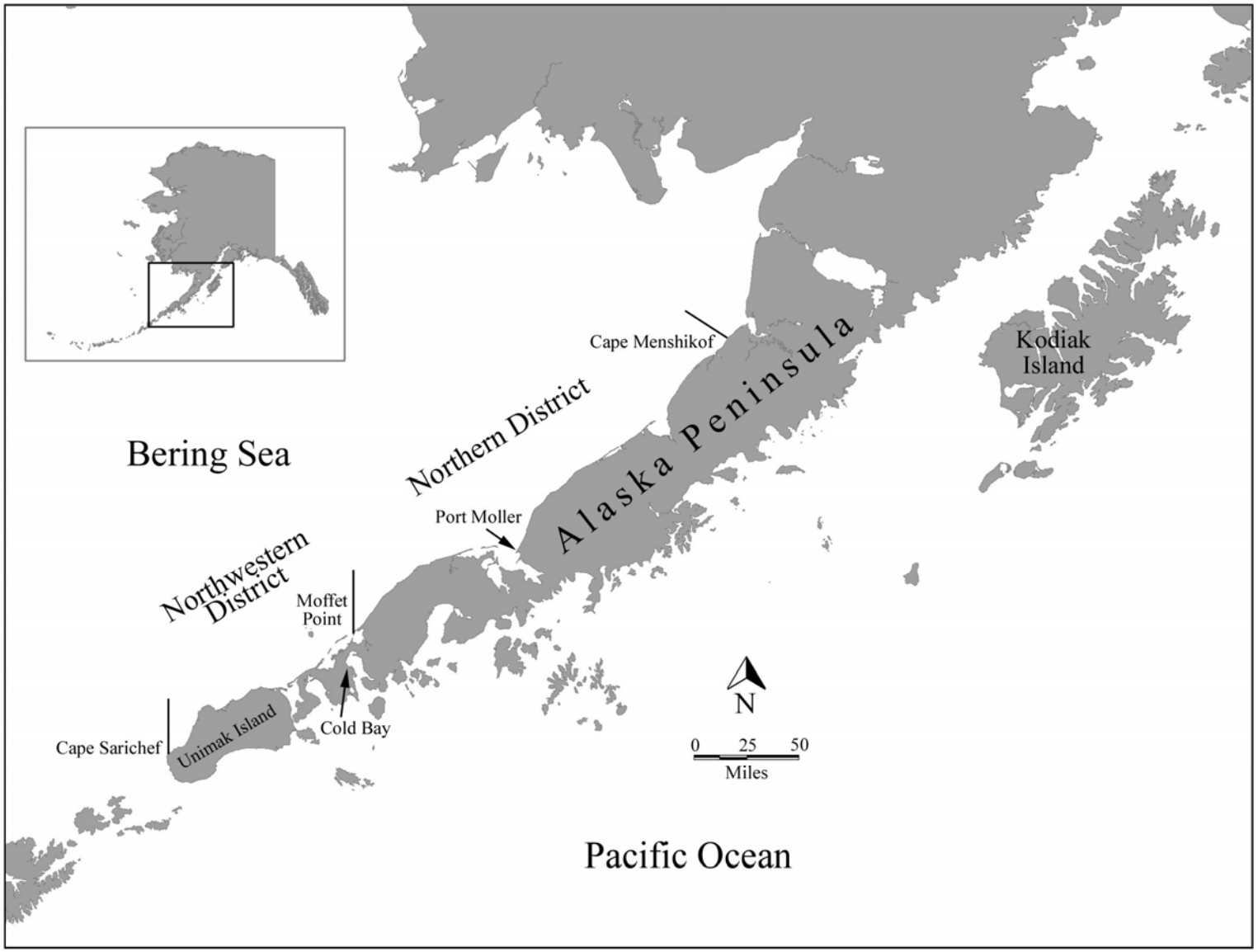

Figure 1.-Alaska Peninsula with North Alaska Peninsula Management Area commercial salmon fishing districts depicted.

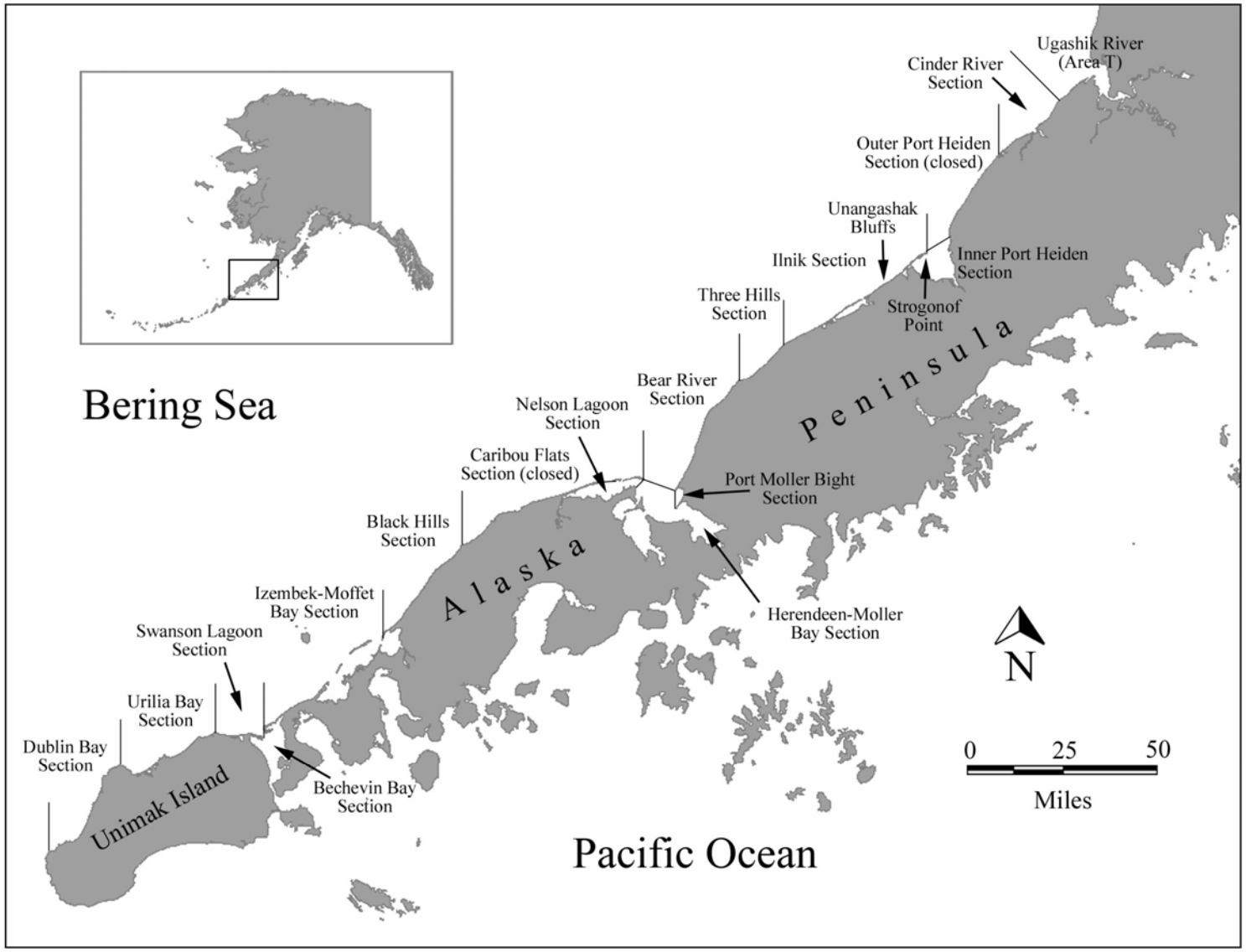

Figure 2.–Alaska Peninsula with North Alaska Peninsula Management Area commercial salmon fishing sections depicted.

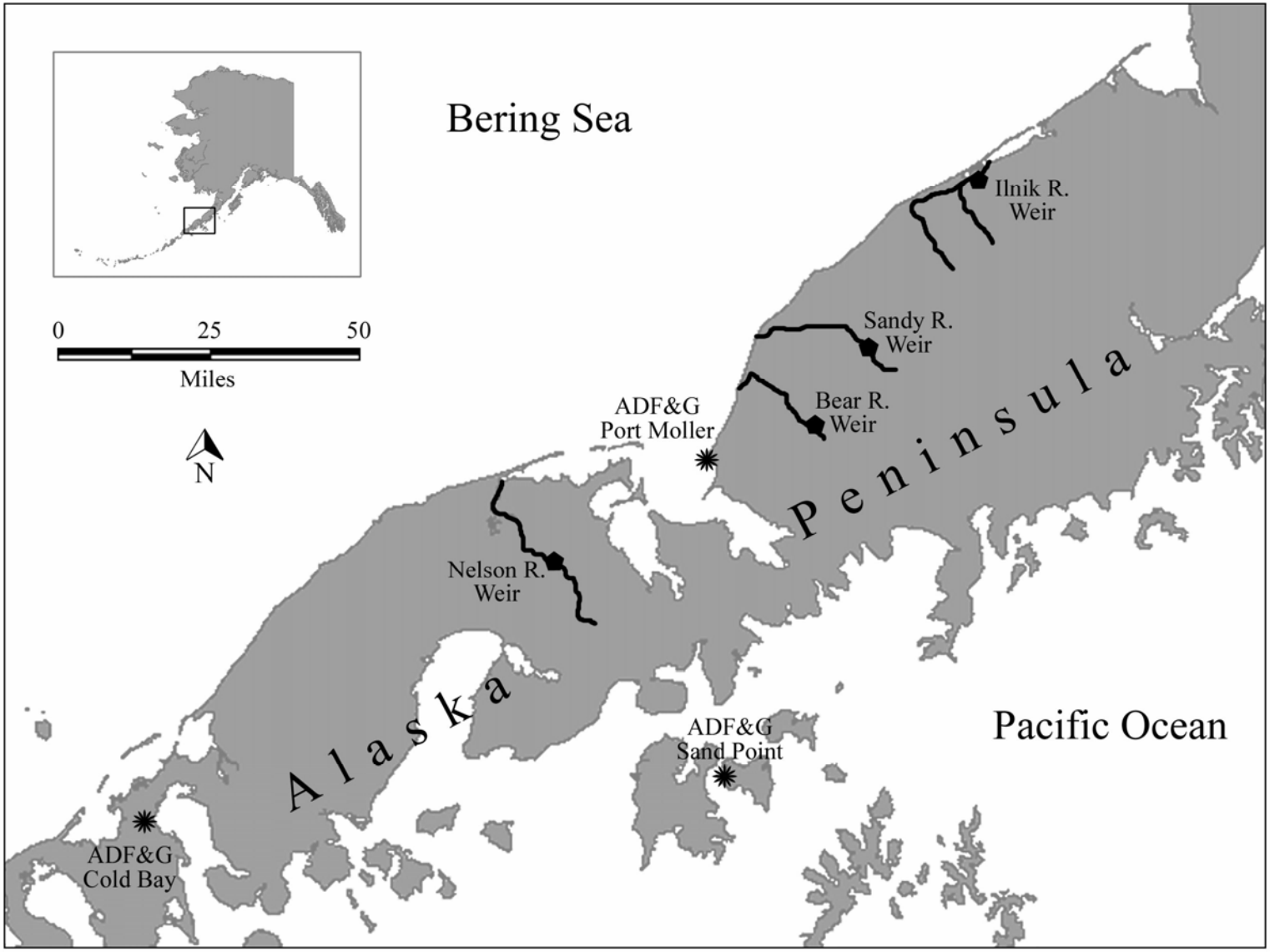

Figure 3.-Alaska Peninsula Management Area regional office and weir locations.

APPENDIX A. SCHEDULED NORTH ALASKA PENINSULA FISHING PERIODS

Appendix A1.-Scheduled North Alaska Peninsula fishing periods as described in the 2004-2007 regulation book.

Section	Open Season	Scheduled Fishing Period
Cinder River, Outside Shagong Lagoon	August 1 - September 30	6:00 AM Monday to 6:00 PM Wednesday
Cinder River, inside Shagong Lagoon	May 1 - September 30	6:00 AM Monday to 6:00 PM Wednesday
Outer Port Heiden	No open season	
Inner Port Heiden	May 1 - September 30	6:00 AM Monday to 6:00 PM Wednesday
Ilnik Section southwest of Unangashak Bluffs (159° 10.25' W long.) excluding Ilnik Lagoon and within the Seal Islands	June 25 - September 30	6:00 AM Monday to 6:00 PM Wednesday
Ilnik Section between Unangashak Bluffs (159°49.45' W long.) to Strogonof Point (158° 50.45' W long.).	June 25 - September 30	6:00 AM Monday to 6:00 PM Wednesday
Ilnik Section inside Ilnik Lagoon and within the Seal Islands	May 1 – June 24	12:00 NOON Monday to 11:59 PM Wednesday
Ilnik Section inside Ilnik Lagoon and within the Seal Islands	June 25 - September 30	6:00 AM Monday to 6:00 PM Wednesday
Three Hills	June 25 - June 30	6:00 AM Monday to 6:00 PM Wednesday
Three Hills	July 1 - September 30	6:00 AM Monday to 6:00 PM Thursday
Bear River	May 1 - June 30	6:00 AM Monday to 6:00 PM Wednesday
Bear River	July 1 - September 30	6:00 AM Monday to 6:00 PM Thursday

-continued-

Appendix A1.-Page 2 of 2.

Section	Open Season	Fishing Period
Port Moller Bight	May 1 - September 30	6:00 AM Monday to 6:00 PM Thursday
Herendeen-Moller Bay	May 1 - July 20	6:00 AM Monday to 6:00 PM Thursday
Nelson Lagoon	May 1 - June 15	6:00 AM Monday to 12:00 MIDNIGHT Wednesday
Nelson Lagoon	June 16 - August 15	6:00 AM Monday to 12:00 MIDNIGHT Thursday
Nelson Lagoon	August 16 - September 30	6:00 AM Monday to 12:00 MIDNIGHT Wednesday
Caribou Flats	No open season	
Black Hills	May 1 - June 30	6:00 AM Monday to 6:00 PM Wednesday
Black Hills	July 1 - September 30	6:00 AM Monday to 6:00 PM Thursday
Izembek-Moffet Bay	June 1 - August 10	6:00 AM Monday to 6:00 PM Thursday
Swanson Lagoon	June 1 - August 10	6:00 AM Monday to 6:00 PM Thursday
Urilia Bay[a]	By Emergency Order Only	6:00 AM Monday to 6:00 PM Thursday
Dublin Bay	July 10 - August 10	6:00 AM Monday to 6:00 PM Thursday
Bechevin Bay	June 1 - September 30	By Emergency Order Only

[a] In recent years, the fishing season in the Urilia Bay Section has been delayed until late June to obtain a substantial amount of sockeye salmon escapement before fishing begins. Consequently, in 2005 the Urilia Bay Section will remain closed to commercial salmon fishing until Monday, June 20 unless observed escapements justify an earlier opening.