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North Alaska Peninsula Salmon Management Plan, 2022

by

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and

Charles W. Russell

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Alaska Department of Fish and Game **Division of Commercial Fisheries**

Symbols and Abbreviations

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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)

Mathematics, statistics

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

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ABSTRACT

The purpose of this document is to provide commercial salmon fishermen and buyers with information and guidelines used by the Alaska Department of Fish and Game (ADF&G) to manage the commercial salmon fisheries of the North Alaska Peninsula during 2022.

The 2022 projected North Alaska Peninsula salmon harvest is 2,834,000 fish, comprised of 2,000 Chinook salmon *Oncorhynchus tshawytscha*, 2,657,000 sockeye salmon *O. nerka*, 46,000 coho salmon *O. kisutch*, 18,000 pink salmon *O. gorbuscha*, and 111,000 chum salmon *O. keta*. The bulk of the salmon harvest is projected to occur in the Northern District between the Nelson Lagoon and Outer Port Heiden Sections. The predominant gear types used in the North Alaska Peninsula are drift and set gillnets, though purse seine is a legal gear type in some areas. In 2022, salmon enumeration weirs on the Nelson, Bear, Sandy, and Ilnik Rivers will be used to facilitate inseason escapement assessment and management.

Keywords: Area M, North Alaska Peninsula, Nelson Lagoon, Bear River, Three Hills, Ilnik, Port Heiden, salmon, commercial fisheries, management plan, Chinook salmon, *Oncorhynchus tshawytscha*, sockeye salmon, *O. nerka*, coho salmon, *O. kisutch*, pink salmon, *O. gorbuscha*, chum salmon, *O. keta*, drift gillnet, set gillnet, purse seine.

INTRODUCTION

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

The Cinder River, Inner Port Heiden, and Ilnik Lagoon Sections comprise an overlap area described under 5 AAC 39.120(d)[1] where both Area M and Area T (Bristol Bay) permit holders may fish under certain conditions (Figure 2). In 2013 the Alaska Board of Fisheries (BOF) allowed Area T permit holders to fish in the inner portion of the Cinder River and Inner Port Heiden Sections during all months when open fishing periods occur. Area M permit holders may fish during open fishing periods in all the above locations. Area T permit holders may also fish in Ilnik Lagoon Section beginning August 1 during open fishing periods. The Outer Port Heiden Section is not part of the overlap area (Figure 3).

The combined 2022 North Alaska Peninsula projected commercial salmon harvest is not a formal forecast and is based on the recent 5-year average harvest, general abundance, and harvest trends. The 2022 North Alaska Peninsula commercial salmon harvest is projected to be 2,834,000 fish, of which 2,000 are expected to be Chinook salmon, 2,657,000 sockeye salmon, 46,000 coho salmon, 18,000 pink salmon, and 111,000 chum salmon. The 2022 projected sockeye salmon harvest is below the 2021 actual harvest of 2,877,144 fish. The actual harvest of other species is directly related to market conditions and tends to vary annually. For example, there is often a harvestable surplus of coho salmon available in the fall; however, in some years in the recent past, the lack of processor interest or other viable marketing avenues at specific locations preclude a directed harvest.

[1] ADF&G. 2019. 2019–2021 Alaska Peninsula, Atka–Amlia Islands, Aleutian Islands, and Chignik Areas Commercial Salmon Fishing Regulations. Alaska Department of Fish and Game, Juneau.

Formal forecasts are prepared only for the Nelson Lagoon, and late Bear River sockeye salmon runs. The 2022 Nelson River total sockeye salmon run is forecasted to be 285,000 fish (range 92,000–493,000 fish) with a harvest of 127,000 sockeye salmon (Brenner et al. 2022*)*. The late Bear River (post-July 31) total sockeye salmon run is forecasted to be 394,000 fish (range 225,000–692,000 fish) with a forecasted harvest of 238,000 fish (Brenner et al. 2022).

GPS COORDINATES AND ENFORCEMENT

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. GPS is based on the North American 1983 datum.

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. Management staff can be reached over VHF channel 72 in Port Moller or through the following contacts:

Port Moller:
Alaska Dept. of Fish & Game
Phone (907) 375-2716
robert.murphy@alaska.gov
charlie.russell@alaska.gov

Cold Bay:
Alaska Dept. of Fish & Game
Phone (907) 532-2419
elisabeth.fox@alaska.gov
tyler.lawson@alaska.gov

Inseason news releases will be made available to the industry and the public by one or more of the following methods:

- Communicated directly to the local buyers/processors and fishermen via email or verbally.
- Transmitted over one or more of the following radio frequencies: VHF 72 in Port Moller.
- 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, after business hours at the phone number listed above using recorded messages.

News releases and catch reports will also be updated on the Westward Region web site located at: http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareaakpeninsula.main

When possible, ADF&G will give a minimum of 6 hours advance notice of commercial fishing openings when established by emergency order. However, there may be times when less than 6 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; 5 AAC 39.130), and number of deliveries by 8:00 AM the day after delivery. Reports are made to the ADF&G office in Port Moller for harvests in the Northern District (between stat areas 313-10 and 318-20), and to ADF&G in Cold Bay for harvests in the Northwestern District (between stat areas 311-20 and 312-40). According to 5 AAC 39.010, a person engaged in

commercial fishing may retain finfish from lawfully taken commercial catch for that person's own use, including for the use as bait in a commercial fishery. Finfish retained under this section may not be sold or bartered and must be reported on a fish ticket.

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)). The following addresses should be used:

Port Moller:
Alaska Dept. of Fish & Game
P.O. Box 163
Port Moller, AK 99571-8999

Cold Bay:
Alaska Dept. of Fish & Game
P.O. Box 50
Cold Bay, AK 99571

REGULATION CHANGES

At the February 2019 board meeting, no regulation changes were adopted in the commercial fishery. The next scheduled regulatory meeting will be in 2023.

NORTH ALASKA PENINSULA MANAGEMENT STRATEGY

The North Alaska Peninsula salmon fisheries will be managed on escapement estimated by weir counts and aerial surveys, catch-per-unit-effort (CPUE) abundance indicators, and salmon abundance determined during the ADF&G test fishery and other information when available. During the open season, scheduled weekly fishing periods are listed in Appendix A1 and in the 2021–2022 Commercial Finfish Regulations. Northern District sections such as Herendeen–Moller Bay, Port Moller Bight, Inner Port Heiden, Cinder River, and the Black Hills have historically had little or no effort over the past 25 years (Figure 4). The department will open these areas to encourage participation and provide opportunities for harvest if interests warrant. As has occurred over many years, the department will continue to work with industry in areas with no or limited effort to provide additional harvest opportunity. If effort levels increase substantially, then adjustments to fishing periods will occur.

NORTHWESTERN DISTRICT

Northwestern District fishing periods are managed by ADF&G in Cold Bay. Questions about fishing in these sections should be directed to the Cold Bay office.

Dublin Bay Section

Commercial salmon fishing periods in the Dublin Bay Section (Figure 4) will be open to commercial salmon fishing before September 1 from 6:00 AM Monday to 6:00 PM Thursday, and from September 1 through September 30 by emergency order only, as summarized in Appendix A1.

Urilia Bay Section

Commercial salmon fishing periods in the Urilia Bay Section (Figure 4) may open by emergency order if the sockeye salmon sustainable escapement goal (SEG) in Christianson Lagoon is likely to be met (25,000–50,000 fish; Schaberg et al. 2019). Christianson Lagoon will be managed through July 31 based on sockeye salmon abundance, and Peterson Lagoon will be managed through August 31 based on chum salmon abundance. During August and September, the Urilia Bay Section will be managed based on coho salmon abundance. In season abundance will be determined by aerial surveys and daily harvests.

Swanson Lagoon Section

Sockeye and chum salmon stocks in the Swanson Lagoon Section (Figure 4) will be managed through August based on local area abundance estimates, and openings will be determined using emergency orders. Abundance will be determined by aerial surveys and daily harvests. At the February 2019 Board of Fisheries meeting, the SEG and Stock of Concern status for Swanson Lagoon was removed following recommendations outlined in Schaberg et al. 2019. In recent years, a sandbar has intermittently blocked adult salmon from entering the Swanson Lagoon or juvenile salmon from exiting the lagoon, making escapement objectives untenable. In September, the section will be managed by emergency order based on local area coho salmon abundance determined from aerial surveys.

Bechevin Bay Section

In June, the Bechevin Bay Section (Figure 4) 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 by emergency order based on the strength of local chum and pink salmon stocks, as determined by aerial surveys. Fishing periods throughout the Bechevin Bay Section will be established by emergency order after June 30.

Izembek–Moffet Bay Section

Through August, chum salmon are the most abundant species found in the Izembek–Moffet Bay Section (Figure 4) and openings will be scheduled from 6:00 AM Monday to 6:00 PM Thursday. From September 1 to September 30, coho salmon become the predominant species, and openings will be based on emergency order. Management decisions will be based on aerial surveys. If there is little or no market for chum salmon, and fishermen target local sockeye salmon producing systems, management decisions will be based on the sockeye salmon run strength to these systems.

NORTHERN DISTRICT

Black Hills Section

During June, the Black Hills Section (Figure 4) will be managed based on the strength of local Chinook and sockeye salmon stocks. Management during July and early August will be based on the abundance of local sockeye and chum salmon runs in the Black Hills Section. North Creek is the dominant sockeye salmon producing system in the Black Hills Section and has an SEG of 7,500 to 10,000 fish (Schaberg et al. 2019). If substantial effort occurs in the Black Hills Section and that effort targets chum salmon bound for Moffet Lagoon, management actions in the Black Hills Section will consider the strength of the chum salmon runs into Moffet Lagoon. During late

August and September, the Black Hills Section will be managed based on local coho salmon abundance and harvest effort.

Nelson Lagoon Section

The Nelson River biological escapement goal (BEG) is 97,000 to 219,000 sockeye salmon (Table 1; Figure 5; Schaberg et al. 2019). The Nelson Lagoon fishery will be managed based on interim escapement objectives at the Nelson River weir (Table 1; Figure 5). Commercial salmon fishery harvests will also be used to evaluate run strength. Sockeye salmon escapement 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 mid eye 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 approximately half the total escapement goal range by July 25 (50,000–110,000 female sockeye salmon).

Table 1.–Nelson River 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
Total	97,000 – 219,000	

The BEG range for Chinook salmon in the Nelson River system is 2,400 to 5,000 fish (Schaberg et al. 2019). To provide adequate escapement for Chinook salmon in Nelson Lagoon, weekly fishing periods through June 15 are limited in duration from 6:00 AM Monday to midnight Wednesday (Appendix A1). From June 16 to August 15, four fishing days per week may be allowed. 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 can be reduced, but factors such as sockeye salmon run strength and harvest of Chinook salmon will be evaluated. The amount of effort directed at harvesting Chinook salmon in the fishery (e.g., mesh size of fishing gear used) will be considered when evaluating sockeye salmon escapement strategy.

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 on coho salmon run strength. No more than three fishing days will be allowed per week unless coho salmon escapement in the Nelson River is expected to exceed the SEG lower bound of 18,000 fish (Schaberg et al. 2019), or if the fishing effort has minimal impact on achieving adequate escapement.

Herendeen–Moller Bay Section

Prior to July 20, the Herendeen–Moller Bay Section (Figure 4) will be managed on a fishing schedule based on the abundance of chum and pink salmon stocks. Herendeen Bay chum and pink salmon (especially during even-numbered years for pink salmon) will be managed by emergency order after July 20. Management will be based on inseason abundance determined by aerial surveys and catch information.

Port Moller Bight Section

The Port Moller Bight Section (Figure 4) will be managed by emergency order based on the status of sockeye salmon escapement at the Bear River weir (Figure 5).

Bear River and Three Hills Sections

The Bear River Section will be managed for each interim escapement objective and the season-ending escapement goal at Bear and Sandy Rivers, while the Three Hills Section will be managed based on escapement at Bear, Sandy and Ilnik Rivers (Tables 2–4; Figures 4 and 5). The Bear River sockeye salmon escapement objective is divided into proportions of the early and late runs to account for both components of the Bear River run. The combined early and late run Bear River escapement goal, including a post-weir estimate, is an SEG of 293,000 to 488,000 sockeye salmon by September 15 (Table 2; Schaberg et al. 2019). The SEG range for the early run, from June 1 through July 31, is 176,000 to 293,000 sockeye salmon (Table 2). The escapement goal range for the late run, from August 1 through August 25, when the weir is removed, is 87,000 to 165,000 sockeye salmon (Table 2). The post-weir objective of 30,000 sockeye salmon is included in the Bear River late-run SEG of 117,000 to 195,000 fish (Table 2).

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
Total early-run goal	176,000	–	293,000			
Late-run component:						
5-Aug	15,000	–	30,000	15,000	–	30,000
10-Aug	20,000	–	35,000	35,000	–	65,000
15-Aug	17,000	–	35,000	52,000	–	100,000
20-Aug	15,000	–	30,000	67,000	–	130,000
25-Aug	20,000	–	35,000	87,000	–	165,000
Total late-run objective	87,000	–	165,000			
Post-weir objective	30,000					
Total late-run goal	117,000	–	195,000			
Season total escapement goal	293,000	–	488,000			

If one of the interim escapement objectives (Table 2) is not achieved, fishing in all or part of the Bear River and Three Hills Sections will be curtailed until cumulative escapement objectives are reached. Sockeye salmon escapement during the July 26–31 period in excess of the 23,000 fish upper escapement objective will be applied to the first interim objective of the late-run escapement (August 1–5). However, no more than 15,000 fish from the early run shall be applied to the late-run escapement objective. This will aid ADF&G in managing the late Bear River sockeye salmon run more effectively when the run is earlier than expected.

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 is important when evaluating escapement quality. In normal years, the number of jack salmon is less than 10% of the total run. If the daily proportion of jack sockeye salmon exceeds 10%, the escapement objective may be increased to compensate for the reduction in reproductive potential. If the number of net-marked salmon becomes excessive (>10%), the escapement objectives may be increased to preserve escapement quality.

The Sandy River sockeye salmon SEG is 34,000 to 74,000 fish (Table 3; Figure 5; Schaberg et al. 2019). If weir counts at Sandy River are unavailable due to difficulties with the weir such as a high-water event, an aerial survey 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 – 8,000	6,000 – 11,000
30-Jun	7,000 – 17,000	13,000 – 28,000
5-Jul	8,000 – 19,000	21,000 – 47,000
10-Jul	5,000 – 13,000	26,000 – 60,000
15-Jul	3,000 – 7,000	29,000 – 67,000
20-Jul	3,000 – 4,000	32,000 – 71,000
25-Jul	2,000 – 3,000	34,000 – 74,000
Total	34,000 – 74,000	

Prior to July 21, the Three Hills Section will be managed based on Bear River, Sandy River, and at times Ilnik River sockeye salmon escapement depending on the status of the Ocean River (Table 4; Figures 4 and 5). If escapement objectives in the Bear or Sandy Rivers 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 surplus escapement into Bear River. If escapement into Ilnik and/or Ocean River (Ocean River is part of the Ilnik River system and occasionally Ocean River flows directly into the Bering Sea) is inadequate, and area closures in the Ilnik Section are not an effective conservation action, the fishery in the eastern portion of the Three Hills Section may be closed to provide additional protection for fish needed for escapement.

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

	Sockeye salmon stocks	
Section	Through July 20	After July 20
Nelson Lagoon	Nelson R.	Nelson R.
Bear River	Bear R., Sandy R.	Bear R., Sandy R.
Three Hills	Bear R., Sandy R., Ilnik R.	Bear R., Sandy R.
Ilnik		
SW of Unangashak Bluffs	Ilnik R., Ugashik R.	Bear R.
NE of Unangashak Bluffs	Ilnik R., Meshik R., Ugashik R.	Bear R.
Outer Port Heiden	Meshik R., Ugashik R.	Meshik R. (through July 31)

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. In August and September, management decisions in the Three Hills Section will consider the strength of Ilnik Lagoon coho salmon runs. Inseason abundance of coho salmon will be determined by aerial surveys.

Ilnik Section

The portion of the Ilnik Section outside of the Ilnik Lagoon and southwest of Unangashak Bluffs will be managed based on Ilnik River sockeye salmon run strength through July 20 unless a management concern exists for Ugashik River sockeye salmon (Table 5; Figure 2). The portion of the Ilnik Section northeast of Unangashak Bluffs to Strogonof Point (Figure 2) will be managed based on Ilnik and Meshik Rivers sockeye salmon run strength unless a management concern exists for Ilnik or Ugashik Rivers sockeye salmon. Aerial surveys will be used to determine escapement into the Meshik River. Between July 20 and August 15, fishing time in the entire Ilnik Section will be based on Bear River sockeye salmon run strength. After August 15, local coho salmon run strength based on CPUE will determine fishing time in the Ilnik Section unless a concern exists for Bear River late-run sockeye salmon.

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

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
Total	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 into the Ilnik River) as in 1972–1975, 1986–1987, 2005–2013, and 2016. When this occurs, many of the fish bound for Ocean River do not pass through the Ilnik River weir (Figure 5). For the years noted above, an average of about 30% of the total Ilnik River watershed escapement spawned in Ocean River. If the Ocean River were to flow directly into the Bering Sea during 2022, the Ocean River escapement objective would be subtracted from the Ilnik River escapement goal (Table 7). 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. If escapements are lagging behind the escapement objectives at the Ilnik River weir, and the Ocean River is flowing through Ilnik Lagoon, the department may institute closures in the vicinity of the Ocean River to prevent milling sockeye salmon from being harvested as occurred in 2014 and 2015.

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

Date	Cumulative number		
15-Jun	1,500	–	2,400
20-Jun	3,000	–	4,500
25-Jun	4,500	–	7,500
30-Jun	6,000	–	10,500
5-Jul	9,000	–	13,500
10-Jul	10,500	–	15,000
15-Jul	11,400	–	17,100
20-Jul	12,000	–	18,000
Total	12,000	–	18,000

Table 7.–Ilnik River sockeye salmon interim escapement objectives if Ocean River flows directly into the Bering Sea.

Date	Escapement for period			Cumulative escapement		
20-Jun	3,500	–	5,600	3,500	–	5,600
25-Jun	3,500	–	4,900	7,000	–	10,500
30-Jun	3,500	–	7,000	10,500	–	17,500
5-Jul	3,500	–	7,000	14,000	–	24,500
10-Jul	7,000	–	7,000	21,000	–	31,500
15-Jul	3,500	–	3,500	24,500	–	35,000
20-Jul	2,100	–	4,900	26,600	–	39,900
25-Jul	1,400	–	2,100	28,000	–	42,000
Total	28,000	–	42,000			

After August 15, the Ilnik Section will be managed based on coho salmon. The Ilnik River coho salmon escapement goal is 9,000 fish.

Inner Port Heiden and Cinder River Sections

The Inner Port Heiden and Cinder River Sections (Figure 2) will be managed based on Chinook salmon abundance during May through mid-June. The weekly fishing periods established in regulation may be adjusted in the Inner Port Heiden and Cinder River Sections to accommodate effort (Appendix A1). Liberal fishing time will be given for low effort levels if escapement warrants. Sockeye salmon escapement from mid-June through July and coho salmon escapement after July will dictate fishing time in these sections. The Meshik River sockeye salmon escapement objective is 48,000 to 86,000 fish. The Cinder River sockeye salmon escapement objective is 36,000 to 94,000 fish. Area M and T permit holders may fish in the open waters of the Cinder River and Inner Port Heiden Sections. Area T permit holders are also allowed, along with Area M permit holders, to fish after July 31 in that portion of the Ilnik Section within Ilnik Lagoon (5 AAC 39.120(d); Figure 2). The fishing season in that portion of the Cinder River Section outside of Shagong Lagoon (Cinder River Lagoon) cannot open earlier than August 1 (5 AAC09.310(a)(1)(B); Figure 2). Fishermen in the Cinder River Section are reminded that the following waters are closed to commercial salmon fishing under 5 AAC 09.350 (1) and (2):

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°23.59' N lat and 158°01.68' W long. to a point offshore at the three nautical mile line at 57°26.33' N lat and 158°06.21' W long.

Cinder River Lagoon: all waters enclosed by a line from 57°21.14' N lat, 158°06.82' W long, to 57°21.46' N lat, 158°04.68' W long.

The weekly fishing period in the Cinder River Section is 6:00 AM Thursday to 6:00 PM Saturday. Also, in the Cinder River Section set gillnet gear may not be placed further than one-half mile from the mean high tide mark. Beginning June 20, fishing time permitted in the portion of the Ilnik Section located northeast of Unangashak Bluffs (Figure 2) will be concurrent with fishing time in the Inner Port Heiden Section (if effort occurs), unless management concern exists for Ilnik or Ugashik Rivers sockeye salmon and either interim or season total escapement goals appear likely not to be met. Depending on effort levels in the Inner Port Heiden Section, fishing time may be

concurrent with openings in the Outer Port Heiden Section since both areas will be managed based on Meshik River salmon runs.

Outer Port Heiden Section

In the Outer Port Heiden Section, fishing is permitted west of a line from 57°05.52' N lat, 158°34.45' W long to 57°08.85' N lat, 158°37.50' W long between June 20 and July 31 (5 AAC 09.310(a)(2)(B) and 5 AAC 09.350(3)) and out to 3 nmi from land (Figure 3). Weekly fishing periods in the Outer Port Heiden Section are scheduled to be 2.5 days per week (Appendix A1). Fishing time in the Outer Port Heiden Section will be based on Meshik River sockeye salmon escapement unless management actions are taken for the conservation of Ugashik River sockeye salmon in the Egegik District of Area T. The sockeye salmon escapement goal in the Meshik River system will be estimated by aerial surveys beginning in June and finalized in early to mid-August. The closed waters at Reindeer Creek are 1,000 yards from the stream terminus.

BEAR RIVER TEST FISHERY

During the 2022 season, ADF&G may conduct a test fishery near the mouth of Bear River (Figures 4 and 5) to gauge the marine abundance of local sockeye salmon. The main objective of the test fishery is to decrease the likelihood of exceeding the Bear River escapement goal and to maximize the harvest opportunity on the Bear River sockeye salmon stock. The test fishery will occur during commercial fishing closures after build-ups of fish are expected (usually 3–5 days after a closure). 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 estimates, daily escapement counts, and test fishery results. If salmon build-ups occur in the test fishery area, management actions may include opening the commercial fishery to provide additional harvest opportunities while providing a closed water area to protect milling Bear River bound sockeye salmon. As in the past, ADF&G may close areas around Bear River to ensure escapement requirements are 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 will continue until the day prior to the first test fishing date. Enrollment may be completed in person, by phone, or over the radio. The participating vessels must be able to chill the catch using refrigerated sea water. Each vessel must meet requirements specified by ADF&G as stated in the North Alaska Peninsula Sockeye Salmon Test Fishery Operational Plan (Murphy et al. 2020).

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 once the list is established, 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 on 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. Test fisheries on the North Peninsula may also occur in other locations if staff decides to generate revenue for the management of North Alaska Peninsula fisheries management.

In 2022, it is expected that a cost-recovery fishery will occur (Murphy et al. 2020). The goal of the cost recovery fishery is to use drift gillnet vessels to harvest a certain number (or value) of salmon that will help support the North Alaska Peninsula weir operations and Port Moller office operations. The same selection process outlined above for the test fishery will occur for the cost recovery fishery. There may be times when the cost recovery fishery also provides valuable abundance information and will be used for inseason management. The location where the cost recovery occurs will be based on the proximity of the fishing fleet and industry and where the fish can be harvested as efficiently as possible.

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Murphy, R. L., R. H. Johnson, and W. S. Middleton. 2020. North Alaska Peninsula sockeye salmon test and cost recovery fishery operational plan, 2020–2021. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Operational Plan ROP.CF.4K.2020.07, Kodiak

Schaberg, K. L., H. Finkle, M. B. Foster, A. St. Saviour, and M. L. Wattum. 2019. Review of salmon escapement goals in the Alaska Peninsula and Aleutian Islands Management Areas, 2018. Alaska Department of Fish and Game, Fishery Manuscript No. 19-01, Anchorage.

FIGURES

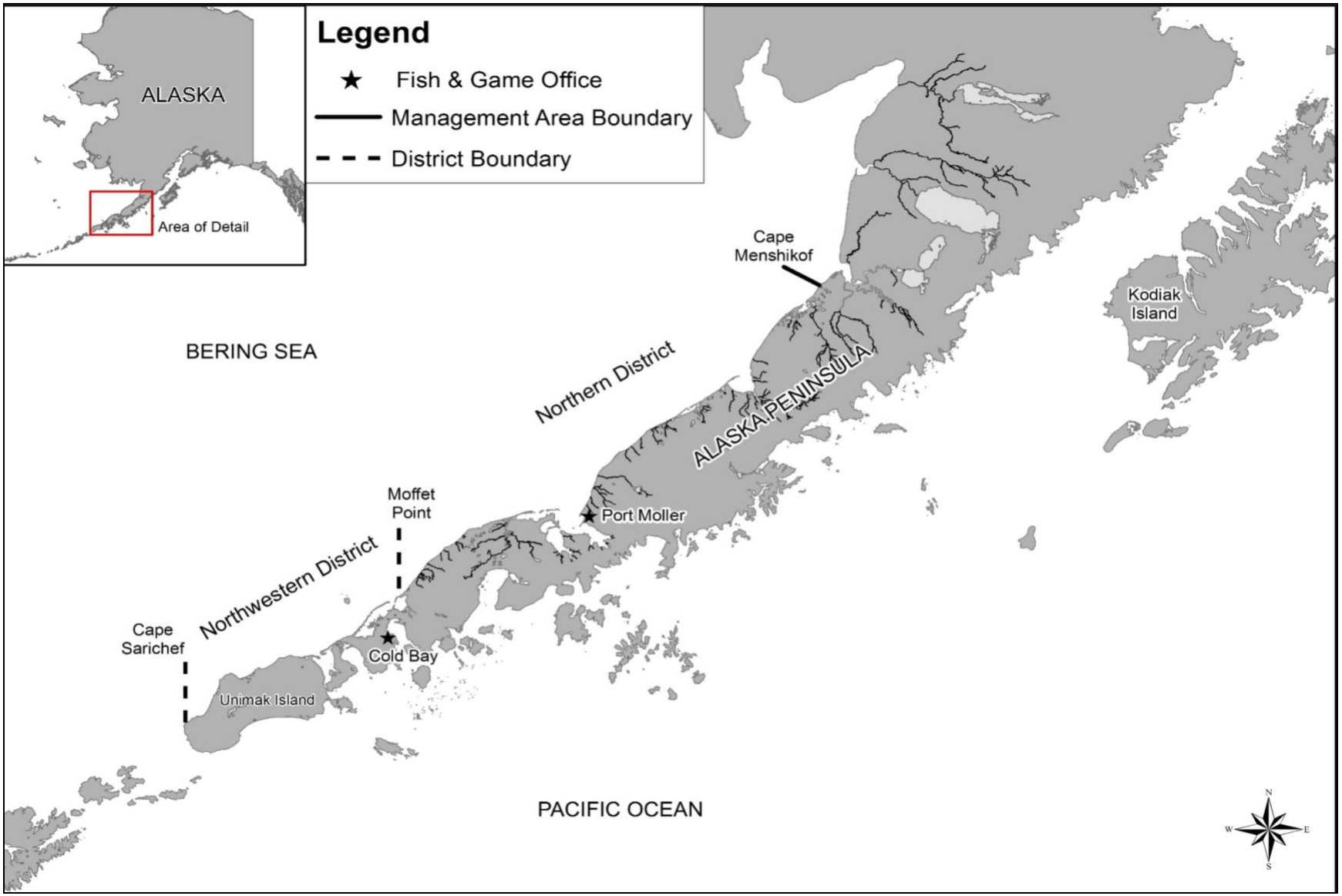

Figure 1.– Map of the Alaska Peninsula with North Alaska Peninsula commercial salmon fishing districts.

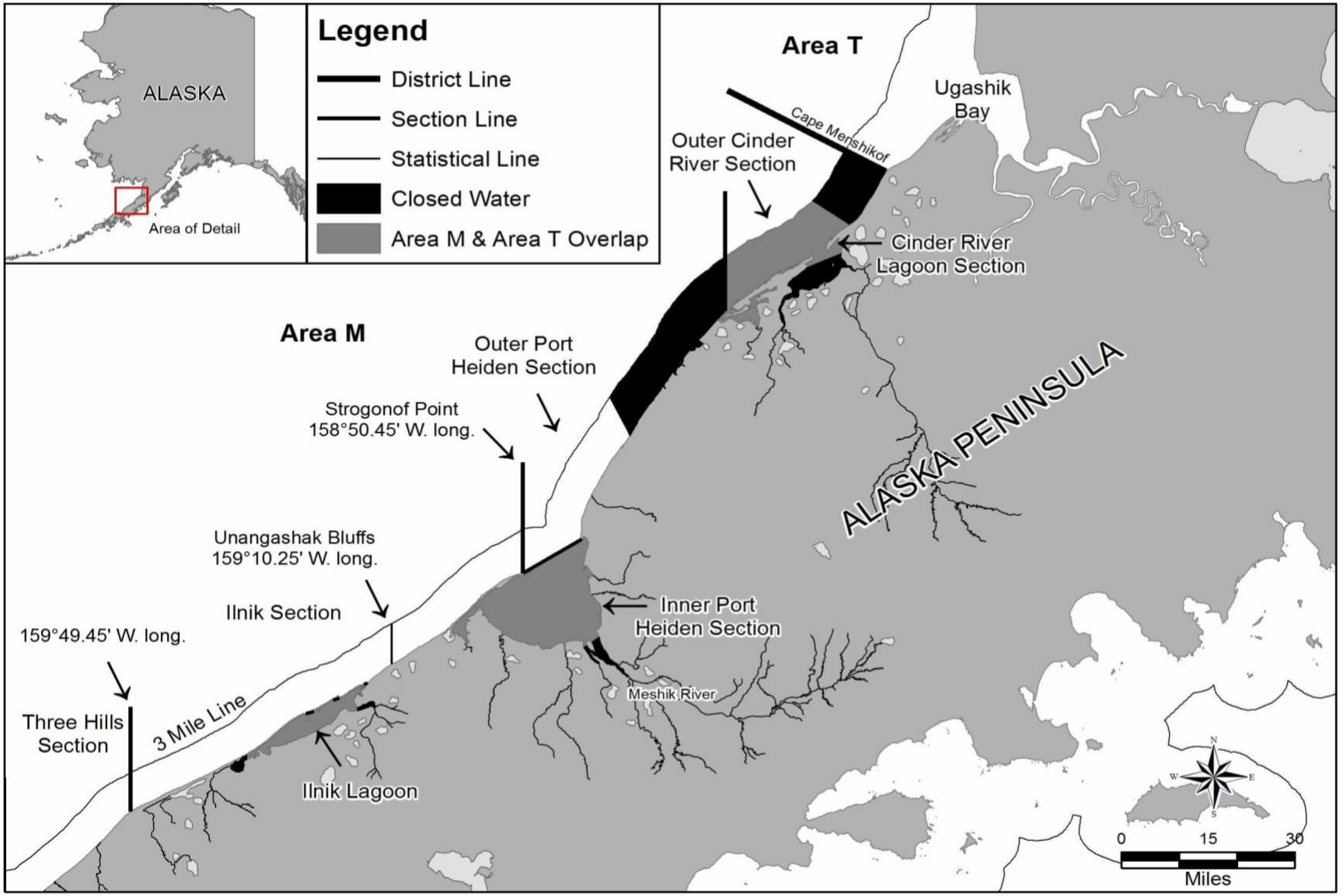

Figure 2.– Map of the Area M and Area T overlap area (Ilnik Lagoon, Inner Port Heiden, and Cinder River Section) with the portion of the Outer Port Heiden Section opened to commercial salmon fishing.

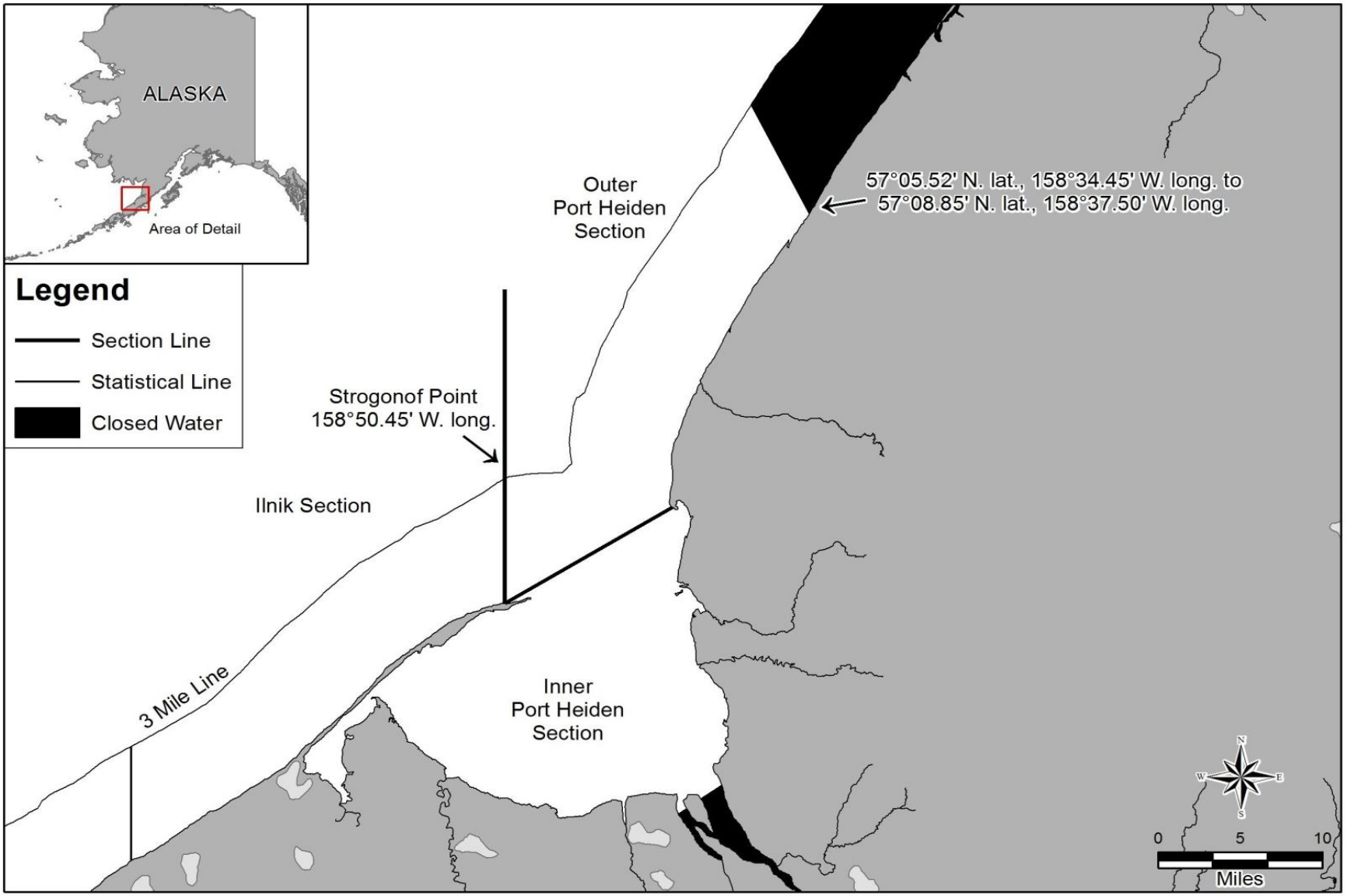

Figure 3.– Map of the Outer Port Heiden Section.

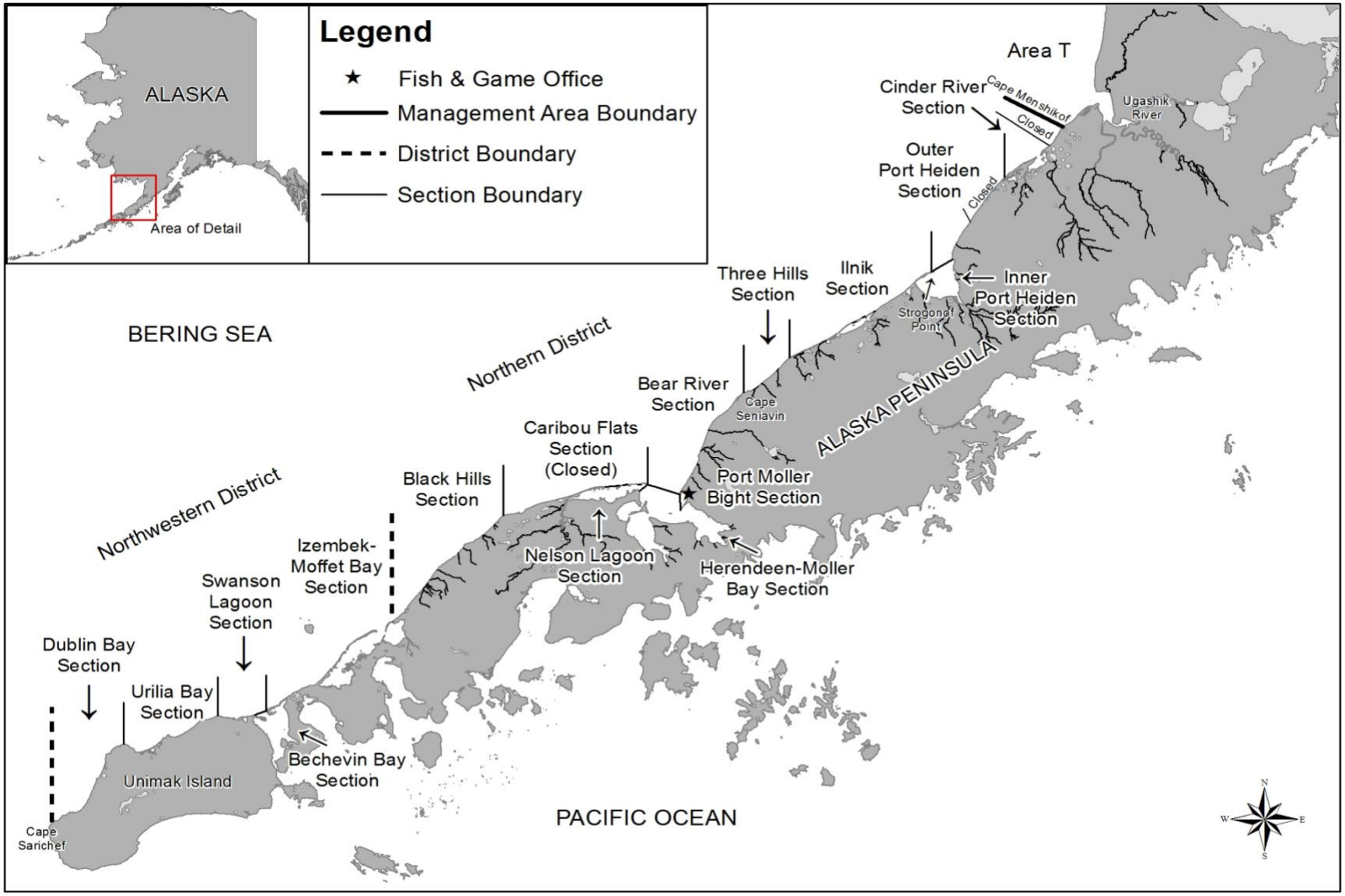

Figure 4.– Map of the Alaska Peninsula with North Alaska Peninsula commercial salmon fishing sections.

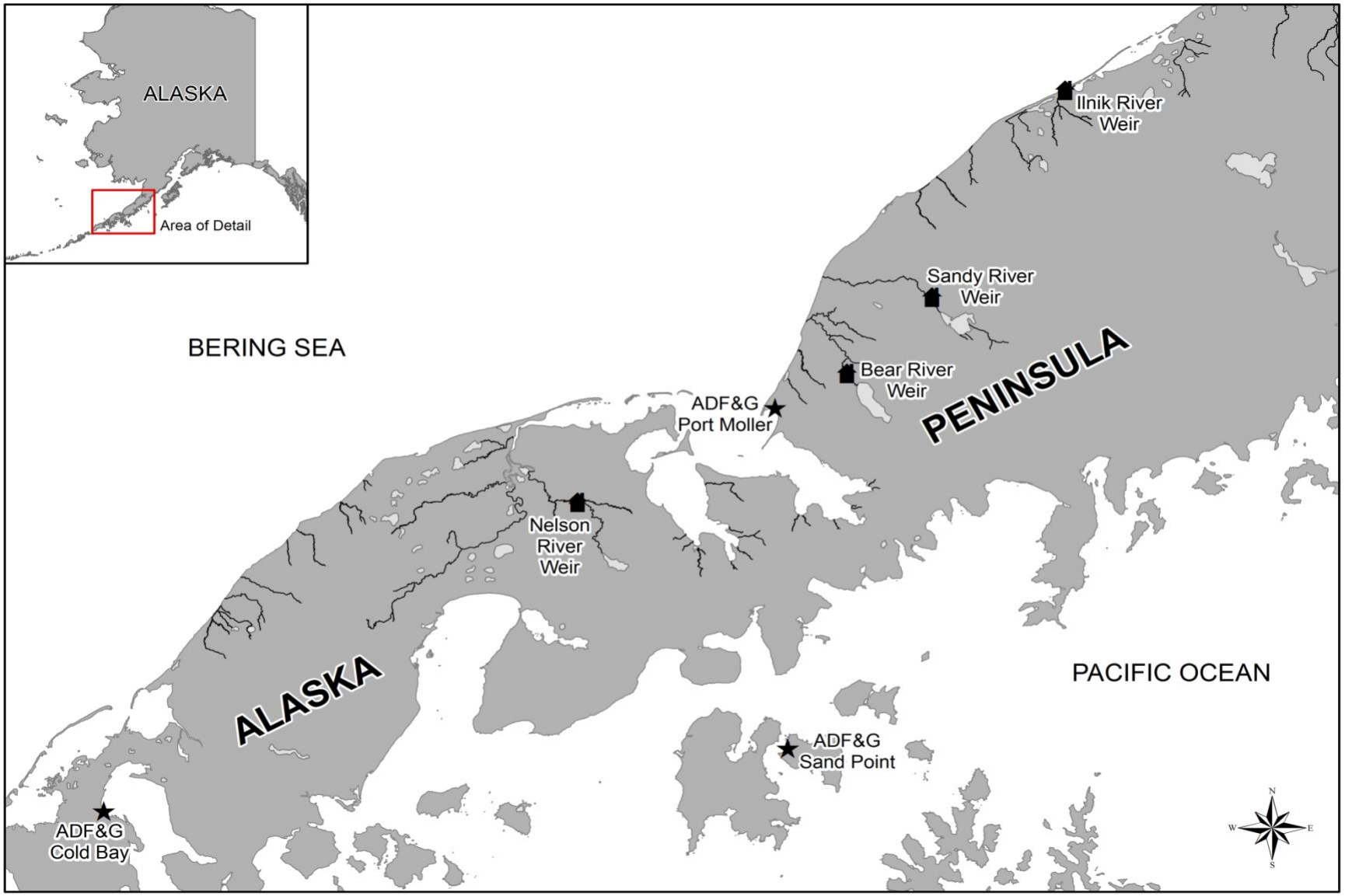

Figure 5.– Map of the Alaska Peninsula seasonal offices and North Alaska Peninsula weir locations.

APPENDIX A. SCHEDULED NORTH ALASKA PENINSULA FISHING PERIODS

Appendix A1.–Scheduled North Alaska Peninsula fishing periods as described in regulations.

Section	Open season	Scheduled fishing period
Cinder River		
Outside Shagong Lagoon	August 1–September 30	6:00 AM Thursday to 6:00 PM Saturday
Inside Shagong Lagoon	May 1–September 30	6:00 AM Thursday to 6:00 PM Saturday
Outer Port Heiden		
(W of 57° 05.52' N. lat., 158° 34.45' W. long. to 57° 08.85' N. lat., 158°37.50' W. long.)	June 20–July 31	6:00 AM Monday to 6:00 PM Wednesday
(E of 57° 05.52' N. lat., 158° 34.45' W. long. to 57° 08.85' N. lat., 158°37.50' W. long.)	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 20–September 30	6:00 AM Monday to 6:00 PM Wednesday
Between Unangashak Bluffs (159°10.25' W. long.) to Strogonof Point (158° 50.45’ W. long.).	June 20–September 30	6:00 AM Monday to 6:00 PM Wednesday
Inside Ilnik Lagoon and within the Seal Islands	May 1–June 19	noon Monday to 11:59 PM Wednesday
Inside Ilnik Lagoon and within the Seal Islands	June 20–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

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Section	Open season	Scheduled 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 midnight Wednesday
	June 16–August 15	6:00 AM Monday to midnight Thursday
	August 16–September 30	6:00 AM Monday to midnight Wednesday
Caribou Flats	No open season	
Black Hills	May 1–June 30	6:00 AM Monday to 6:00 PM Wednesday
	July 1–September 30	6:00 AM Monday to 6:00 PM Thursday
Izembek-Moffet Bay	June 1–August 31	6:00 AM Monday to 6:00 PM Thursday
	September 1–September 30	by emergency order only
Swanson Lagoon	June 1–August 31	by emergency order only
	September 1–September 30	by emergency order only
Bechevin Bay[a]	June 1–September 30	by emergency order only
Urilia Bay[b]	June 1–September 30	by emergency order only
Dublin Bay	June 1–August 31	6:00 AM Monday to 6:00 PM Thursday
	September 1–September 30	by emergency order only

[a] Bechevin Bay is included in the South Unimak and Shumagin Islands June Salmon Management Plan and opens by executive order as listed in 5 AAC 09.365 (d)

[b] 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.