

Fishery Management Report No. 17-19

**Alaska Peninsula–Aleutian Islands Management Area
Herring Fishery Management Plans, 2017**

by

Mary E. Loewen

March 2017

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



Symbols and Abbreviations

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Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H_A
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	e
hectare	ha	at	@	catch per unit effort	CPUE
kilogram	kg	compass directions:		coefficient of variation	CV
kilometer	km	east	E	common test statistics	(F, t, χ^2 , etc.)
liter	L	north	N	confidence interval	CI
meter	m	south	S	correlation coefficient	
milliliter	mL	west	W	(multiple)	R
millimeter	mm	copyright	©	correlation coefficient (simple)	r
		corporate suffixes:		covariance	cov
Weights and measures (English)		Company	Co.	degree (angular)	$^\circ$
cubic feet per second	ft ³ /s	Corporation	Corp.	degrees of freedom	df
foot	ft	Incorporated	Inc.	expected value	E
gallon	gal	Limited	Ltd.	greater than	>
inch	in	District of Columbia	D.C.	greater than or equal to	\geq
mile	mi	et alii (and others)	et al.	harvest per unit effort	HPUE
nautical mile	nmi	et cetera (and so forth)	etc.	less than	<
ounce	oz	exempli gratia	e.g.	less than or equal to	\leq
pound	lb	(for example)		logarithm (natural)	ln
quart	qt	Federal Information Code	FIC	logarithm (base 10)	log
yard	yd	id est (that is)	i.e.	logarithm (specify base)	log ₂ , etc.
		latitude or longitude	lat or long	minute (angular)	'
Time and temperature		monetary symbols (U.S.)	\$, ¢	not significant	NS
day	d	months (tables and figures): first three letters	Jan, ..., Dec	null hypothesis	H_0
degrees Celsius	°C	registered trademark	®	percent	%
degrees Fahrenheit	°F	trademark	™	probability	P
degrees kelvin	K	United States (adjective)	U.S.	probability of a type I error (rejection of the null hypothesis when true)	α
hour	h	United States of America (noun)	USA	probability of a type II error (acceptance of the null hypothesis when false)	β
minute	min	U.S.C.	United States Code	second (angular)	"
second	s	U.S. state	use two-letter abbreviations (e.g., AK, WA)	standard deviation	SD
Physics and chemistry				standard error	SE
all atomic symbols				variance	
alternating current	AC			population sample	Var
ampere	A			sample	var
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				

FISHERY MANAGEMENT REPORT NO. 17-19

**ALASKA PENINSULA-ALEUTIAN ISLANDS MANAGEMENT AREA
HERRING FISHERY MANAGEMENT PLANS, 2017**

by

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March 2017

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ABSTRACT

A Pacific herring *Clupea pallasii* sac roe fishery may occur in the Alaska Peninsula-Aleutian Islands Management Area (Area M) in 2017. This document is a guide for commercial herring harvesters, buyers, and tender operators and describes the management strategy, guideline harvest levels (GHLs), fishing industry requirements for participation, and provides Alaska Department of Fish and Game (ADF&G) contact information. Dates and times for possible commercial fishing periods will be established by emergency order and can be obtained from ADF&G.

The commercial food and bait fisheries for Pacific herring *Clupea pallasii* in the Alaska Peninsula-Aleutian Islands Herring Management Area (Area M) can occur within the Unimak, Akutan, Unalaska, Umnak, and Adak districts. The Dutch Harbor food and bait herring fishery takes place from June 24 until February 28 and is allocated 7% of the Togiak sac roe herring total allowable harvest (minus the Togiak spawn-on-kelp fishery fixed allocation). The 2017 Dutch Harbor food and bait herring allocation is 1,727 tons, of which 242 tons (14%) is allocated to the gillnet fishery and 1,485 tons (86%) is allocated to the purse seine fishery. The Adak food and bait herring fishery is allocated 500 tons that may be harvested, from June 24 until February 28, with either purse seine or gillnet gear. This document describes how the fisheries will be managed, the industry requirements to participate in the fisheries, and how to contact and relay information to the Alaska Department of Fish and Game.

Key words: Pacific herring, *Clupea pallasii*, sac roe, Alaska Peninsula, Aleutian Islands, Alaska Peninsula-Aleutian Islands, Area M, North Peninsula, South Peninsula, Port Moller, Sand Point, management plan, Alaska Board of Fisheries, guideline harvest level, commercial food and bait fishery, Dutch Harbor herring fishery

INTRODUCTION

This document provides commercial Pacific herring *Clupea pallasii* harvesters and buyers with guidelines that the Alaska Department of Fish and Game (ADF&G) will use to manage the Alaska Peninsula-Aleutian Islands Management Area (Area M) commercial herring sac roe or food and bait fisheries.

Area M (Figure 1, 5 AAC 27.600) is divided into three herring management subareas: the North Alaska Peninsula, consisting of Bering Sea waters extending west from Cape Menshikof to Cape Sarichef (Figures 2–4); the South Alaska Peninsula, consisting of Pacific Ocean coastal waters extending west of Kupreanof Point to near Cape Lazaref, on the south side of Unimak Island, 163°30' W long (Figures 4 and 5); and the Aleutian Islands, consisting of Bering Sea waters extending west of Unimak Pass and Pacific Ocean waters extending west from a point near Cape Lazaref, on the south side of Unimak Island, 163°30' W long to the International Date Line (Figure 1 and Figures 6–8). The North Peninsula, South Peninsula, and Aleutian Islands fisheries will be managed independently of each other. Fishermen may only harvest food and bait herring in the Unimak, Akutan, Unalaska, Umnak, and Adak districts (Figures 6–8).

PACIFIC HERRING SAC ROE FISHERY OVERVIEW

The North Alaska Peninsula sac roe herring fishery occurred annually from 1982 through 1996, and sporadically from 1998 through 2014 (Wilburn 2015). In 2014 and 2015, a commercial herring sac roe fishery did not occur in the waters of the North Alaska Peninsula due to lack of industry interest (Wilburn 2015). In 2016, 3 vessels participated in the Port Moller fishery.

The South Alaska Peninsula herring sac roe fishery occurred annually from 1980 through 1996, except in 1983 when the Alaska Board of Fisheries (BOF) allocated the herring harvest to a food and bait fishery. Since 1997, there has been little industry interest due to poor market conditions and no harvest has taken place (Russell 2016).

In 2004, the BOF established the Alaska Peninsula-Aleutian Islands Herring Management Plan (5 AAC 27.657). This plan sets a 500-ton herring guideline harvest level (GHL) in the Adak District, for harvest as either sac roe or food and bait. In 2010, the BOF amended the plan to allow both purse seine and gillnet gear the ability to harvest the GHL. Season dates are from June 24 through February 28. To date, no herring have been harvested in this fishery.

PACIFIC HERRING FOOD AND BAIT FISHERY OVERVIEW

There are two food and bait fisheries in Area M: the Dutch Harbor (Unimak, Akutan, Unalaska, and Umnak districts) and the Adak (Adak District) herring fisheries. In 2016, a fishery occurred in the Unalaska district, with two vessels participating.

In recent years, three management plans have been used to manage the Dutch Harbor herring fishery: (1) the *Bering Sea Herring Fishery Management Plan* (5 AAC 27.060) mandates that if any of the southwest Alaska herring stocks between Port Clarence and Togiak districts are below their minimum threshold, the Dutch Harbor food and bait fishery will be closed for the season; (2) the *Bristol Bay Herring Management Plan* (5 AAC 27.865) establishes a 7% allocation of the Togiak Districts sac roe herring harvest to the Dutch Harbor food and bait fishery; and (3) the *Dutch Harbor Food and Bait Herring Fishery Allocation Plan* (5 AAC 27.655) which divides the 7% allocation by gear type: 86% for the purse seine fishery and 14% for the gillnet fishery.

At the February 2016 Alaska Peninsula, Aleutian Islands, and Chignik meeting, the Alaska Board of Fisheries (BOF) made changes to the *Dutch Harbor Food and Bait Herring Fishery Allocation Plan* (5 AAC 27.655). The date at which the herring seine fishery may harvest any remaining herring gillnet allocation was changed from July 25 to July 20. After July 20, if the gillnet fishery has not harvested its allocation, the remaining allocation may be taken by either group. Additionally, if the seine group exceeds its allocation before July 20, then that amount shall be deducted from any remaining quota for that year after July 20. If the seine group exceeds the total allocation after July 20, then the seine group overage shall be deducted from the next years' seine allocation as stated in 5 AAC 27.655(b).

In 2004, the BOF created the *Alaska Peninsula-Aleutian Islands Herring Management Plan* (5 AAC 27.657), establishing a herring fishery in the Adak District (Figure 3) with a 500-ton allocation independent of the Dutch Harbor food and bait allocation. This plan was amended at the 2010 BOF meeting to allow both purse seine and gillnet gear to harvest the 500-ton Adak allocation. Since the plan's inception in 2004, there has been no harvest in the Adak District.

ALASKA PENINSULA-ALEUTIAN ISLANDS MANAGEMENT AREA HERRING SAC ROE MANAGEMENT PLAN

In the Alaska Peninsula-Aleutian Islands Management Area herring sac roe fishery, the permit holder and buyer will be responsible for determining acceptable herring quality. The herring fishery will not be closed by ADF&G based on roe quality except in cases where excessive herring are expected to be wasted. Permit holders are encouraged to check with their buyer prior to fishing to determine industry standards for product quality and size. All herring harvested during the sac roe season that are sold as bait or discarded due to quality problems will be included as part of the total herring harvest.

GHLs are not established for any management units except for the Port Moller (Table 1) and Adak districts (5 AAC 27.657). The herring sac roe fisheries may open contingent upon 1) the industry notifying ADF&G of interest in harvesting herring from a specific area, 2) ADF&G documenting herring biomass, and 3) ADF&G establishing a GHL. ADF&G office locations and inseason news release broadcast frequencies are listed in Appendix A1.

A global positioning system (GPS; North American Datum 1983) will be used to determine latitude and longitude coordinates throughout all Alaska Peninsula and Aleutian Islands herring fisheries (5 AAC 27.606).

NORTH AND SOUTH ALASKA PENINSULA

The North Alaska Peninsula Management area and the Port Heiden, Port Moller, and Amak districts (Figures 2–4) may be opened for commercial herring sac roe fishing from April 15 through July 15. In accordance with the *Bering Sea Herring Fishery Management Plan* (5 AAC 27.060(c)), herring fishing in the Port Moller District will be allowed only if ADF&G has documented a herring biomass threshold of at least 1,000 tons in the area. The GHL will be determined using a sliding scale exploitation rate, in which the allowable exploitation rate increases with stock abundance (Table 1). A minimum of six hours advance notice will be given prior to any fishing period in the Port Moller area, unless it is an extension of a current fishing period. If effort decreases, the six-hour notice may be reduced or eliminated. Purse seine and gillnet gear will have concurrent openings throughout the North Alaska Peninsula.

In the South Alaska Peninsula Management area, the Sand Point, Pavlof, and King Cove districts (Figures 4 and 5) may be opened for commercial sac roe herring fishing from April 15 through July 15 (5 AAC 27.610(a)). Fishing openings will be contingent upon industry interest in harvesting herring from a specific area and ADF&G documentation of sufficient herring biomass. No more than a 25-ton harvest will be allowed from any section unless ADF&G documents a herring biomass that would support a larger harvest. Little spawning herring biomass has been documented in South Alaska Peninsula waters, in part because of a limited number of aerial surveys. ADF&G plans to conduct aerial surveys and is requesting that any herring biomass observations be reported to ADF&G personnel in Sand Point.

ALEUTIAN ISLANDS

All districts within the Aleutian Islands, which include the Unimak, Akutan, Unalaska, and Umnak districts may open to commercial sac roe herring fishing between April 15 through noon June 24 (Figure 6; 5 AAC 27.610(e)(1)). Fishing periods and GHLs in the Aleutian Islands will be contingent upon the industry expressing interest in harvesting herring in a specific area and ADF&G documenting sufficient herring biomass.

In the Adak District (Figure 8), up to 500 tons of herring may be taken during the periods established by emergency order from June 24 through February 28 (5 AAC 27.657).

REGISTRATION REQUIREMENTS

Fishing Vessels

All Alaska Peninsula–Aleutian Islands Area seine and gillnet commercial herring permit holders must register by contacting ADF&G in Dutch Harbor, Cold Bay, Sand Point, or Port Moller at least 48 hours before the sac roe season opens.

Tenders and Processors

All herring tenders and processors must register with ADF&G prior to buying or tendering herring (5 AAC 27.662). North Alaska Peninsula buyers, processors, and tender agents may register with ADF&G staff in the Port Moller or Kodiak offices in person or through other means (e.g., radio, fax, or phone; Appendix A1). For the South Alaska Peninsula and Aleutian Islands districts, registration can be accomplished through the ADF&G offices in Cold Bay, Sand Point, Dutch Harbor, or Kodiak (Appendix A1). Catch reporting instructions will be explained during the registration process.

CATCH REPORTING

Processors and tender operators must report daily to ADF&G while involved in the herring sac roe fishery (Appendix A1; 5 AAC 27.662). Daily reports must include the amount of herring harvested by catcher boats and an accurate estimate of herring onboard tenders. Because the allowable harvest could quickly be exceeded, harvesters are encouraged to report harvests after each set, while tenders and processors are asked to report immediately upon completion of each delivery.

FISH TICKETS

Permit holders must provide specific harvest locations (statistical area or a specific landmark) to buyers, so that locations can be recorded on fish tickets. Fish tickets must be delivered to local ADF&G personnel prior to departure from the area, and no later than 10 days after termination of buying operations in the area, or as otherwise specified by local representatives of ADF&G (5 AAC 27.662; Appendix A1). Fish tickets must include the weight of harvested herring in either units of short tons (2,000 lb.) or total pounds.

GILLNET AND SEINE SPECIFICATIONS

The aggregate length of herring gillnets in use by a herring Commercial Fisheries Entry Commission (CFEC) permit holder may not exceed 150 fathoms and the gillnet mesh may be up to 2.5", except that in the Akutan and Unalaska districts gillnet mesh may be up to 3.5" (5 AAC 27.631(d)). The permit holder must be present while gillnet gear is being fished (5 AAC 27.631(a)(b)). A purse seine may not exceed 1,000 meshes in depth and 100 fathoms in length (5 AAC 27.632).

INDUSTRY COOPERATION

Cooperation of harvesters, tender operators, spotter pilots, and processors is encouraged when ADF&G personnel request herring samples from the commercial catch. Samples will be collected for monitoring age composition, which assists in determining the health of a stock and in forecasting the following year's run strength. ADF&G will also be monitoring spawning activities and will be soliciting information regarding herring sightings to supplement information gathered by ADF&G personnel. ADF&G's ability to monitor herring biomass is limited by aircraft availability and funding constraints. Industry cooperation in locating herring will enable ADF&G to more efficiently monitor Alaska Peninsula–Aleutian Islands Area herring stocks. Harvesters and spotter pilots are encouraged to provide herring biomass estimates and spawning information to ADF&G. Past cooperation has proven valuable when evaluating stock status and managing the fishery.

ALASKA PENINSULA–ALEUTIAN ISLANDS (DUTCH HARBOR) FOOD AND BAIT HERRING FISHERY

FISHERY REQUIREMENTS

In order for ADF&G to open Unimak, Akutan, Unalaska, or Umnak districts (Figure 6) to food and bait herring fishing, each southwest Alaska herring biomass projection must surpass its BOF mandated district threshold (5 AAC 27.060). These biomass projections are for fisheries located in the Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, Cape Romonzof, Togiak, and Norton Sound districts (Figure 1). The Pacific herring spawning biomass in the Togiak District was not estimated in 2016, nor was any estimation made of the age composition of the 2016 harvest due to budget cuts. Traditionally, ADF&G has used an age structured assessment (ASA) model to forecast the spawning biomass of Togiak herring. The ASA model requires estimates of the spawning biomass as well as estimates of the age composition of the spawning biomass and the harvest. Because that data is no longer available due to budget cuts, the 2017 biomass is forecast as the average spawning biomass for all years for which data is available (1978-2015) less 10% in order to be conservative. This method produces an estimate of 130,852 tons (Appendix A2).

ALLOCATION

ADF&G will attempt to manage the Dutch Harbor food and bait herring fishery so that the harvest remains within the allocation (Table 1; Appendix B1). A “rollover” provision was adopted during the 2001 BOF meeting (5 AAC 27.655(b)); during years when herring harvest exceeds the allocation, the amount of harvest over the allocation shall be deducted from the next year’s allocation, by gear group.

Of the Dutch Harbor food and bait harvest, 86% is allocated to the seine fishery and 14% to the gillnet fishery (5 AAC 27.655 (a)). Furthermore, 100 tons may be reserved from the purse seine allocation for an experimental herring pound fishery (5 AAC 27.655 (c)). After July 20, if the gillnet fishery has not harvested its allocation, the remaining allocation may be taken by either group. Additionally, if the seine group exceeds its allocation before July 20, then that amount shall be deducted from any remaining quota for that year after July 20. If the seine group exceeds the total allocation after July 20, then the seine group overage shall be deducted from the next year’s seine allocation (5 AAC 27.655(b)). The 2017 harvest allocation is 242 tons for the gillnet fishery and 1,485 tons for the purse seine fishery (Table 1).

REGISTRATION REQUIREMENTS FOR PERMIT HOLDERS, TENDERS, AND PROCESSORS

All processors must make daily reports of all herring purchased from fishermen and other processing records as specified by ADF&G (5 AAC 27.662(2)). These daily reports can be provided to ADF&G by VHF, SSB, phone, fax, or e-mail. The following ADF&G offices can be contacted for information concerning the Dutch Harbor and Adak food and bait herring fisheries:

Sand Point:

Alaska Department of Fish and Game
P.O. Box 129
Sand Point, AK 99661

Phone: (907) 383-2066

Fax: (907) 383-2606

VHF channels 6 and 72

Dutch Harbor:

Alaska Department of Fish and Game
P.O. Box 920587
Dutch Harbor, AK 99692

Phone: (907) 581-1239

Fax: (907) 581-1572

VHF 12

Single Side Band 4.125 MHz , WIM 76 (call sign)

Prior to harvesting, buying, or processing any herring, permit holders must register at the ADF&G office in Dutch Harbor, Sand Point, or Kodiak. Even if no herring are harvested or vessels are not actively fishing, each permit holder, tender, and processor must still report daily by 10:00 AM or until registration from the fishery is withdrawn. If conditions arise that require additional time for permit holders to report herring harvests, ADF&G must be informed of the situation prior to fishing operations. Catch reporting instructions will be explained in detail during registration.

FISH TICKETS

Permit holders must provide specific harvest locations (statistical area and specific landmark) to buyers so that they can be recorded on fish tickets. **Fish tickets must be delivered, by mail or in person, to the Dutch Harbor or Sand Point ADF&G offices within ten days after the closure of the fishery** (5 AAC 27.662(3)). If 10 days are insufficient time to submit fish tickets, other arrangements must be made by contacting ADF&G in Sand Point.

FISHING PERIODS

The herring gillnet fishery can open by emergency order beginning noon June 24 and may be extended until the allocation is reached, or until ADF&G decides that an additional fishing period might exceed the allocation or the season ends on February 28 (5 AAC 27.610(e)(2)(A)). It is the intention of ADF&G to begin the fishery no later than July 1. Effort levels and harvest rates will be considered when establishing fishery openings. If possible, the fishery will be conducted in the waters of Unalaska Bay (Figure 7).

The initial purse seine herring fishing period may occur as early as noon July 15 (5 AAC 27.610(e)(2)(B)). Due to the harvest capabilities and competitive nature of the fleet, unless the harvesters form a combine, ADF&G anticipates that purse seine fishing periods will be short in duration. Short openings over several days may be required to prevent exceeding the allocation. Generally, there will be a 12-hour closure between fishing periods to allow permit holders an opportunity to deliver their catch and ADF&G to assess the harvest and processing

capacity. The fishery may be extended until the allocation is reached if the harvesters form a combine and ADF&G receives harvest reports promptly from all permit holders. ADF&G may cancel or extend a fishing period with little notice.

In the past, widespread overharvesting has occurred in the Dutch Harbor food and bait fishery. To avoid potential overharvest issues, ADF&G instituted the policy that if the average allocation per vessel fished (total allocation/number of vessels registered) is less than 150 tons per registered vessel, ADF&G will drastically limit both the length of the fishing periods and the size of the area open to commercial herring fishing.

Harvesters and spotter pilots are encouraged to relay biomass information to ADF&G prior to the opening. Past cooperation between ADF&G and the fishing industry has proven valuable in gaining information critical to management of the fishery. ADF&G will try to assess herring biomass in the area prior to opening the fishery.

HERRING SEINE POUND FISHERY

One hundred tons of herring may be allocated to the herring seine pound fishery, which is deducted from the purse seine allocation. A person planning to operate a pound must check in with ADF&G and include detailed plans describing the design and operation of the pound, including exact location and timing of pound operation. These plans must be received by ADF&G in a timely manner to allow preparation of a Commissioner's permit for pound operation. A permit holder intending to operate a pound is encouraged to register with ADF&G in Dutch Harbor or Sand Point no later than 5:00 PM June 30, 2017.

Herring for pounding may only be harvested during purse seine fishery openings. If the herring pound allocation is not harvested, it will then be rolled over into the seine allocation. If two or more permit holders register for the pound fishery, the pound allocation is divided equally among them.

GEAR TESTING

Prior to opening the fishery, purse seine gear may be tested during daylight hours until 5:00 PM July 14. Permit holders must contact ADF&G in Dutch Harbor on VHF channel 12 or in person prior to setting gear to establish a designated time and place for gear testing. In addition, any fish caught during gear testing must immediately be released unharmed. After the fishery has been closed and all herring on the vessel have been offloaded, participants may, after notifying ADF&G, set their net to straighten, clean, and organize their gear at a time and place designated by ADF&G.

COMMERCIAL HARVEST SAMPLING

Cooperation from harvesters, tender operators, and processors will be appreciated when ADF&G personnel request herring samples from the commercial catch. These samples will be used to determine the age, sex, and size composition of the stock.

ALASKA PENINSULA–ALEUTIAN ISLANDS (ADAK) FOOD AND BAIT HERRING FISHERY

Beginning in 2004, the BOF authorized a herring set gillnet fishery in the Adak District (Figure 8) with a 500-ton allocation. However in 2010, the BOF amended the regulations to include both seine and gillnet gear in the harvest of up to 500 tons within the waters around Adak. This allocation is independent of the Dutch Harbor food and bait allocation. Herring can be harvested in this fishery as either sac roe or food and bait (Russell 2015). ADF&G has no information about the size, timing, or condition of herring stocks in the Adak area. ADF&G may station a representative in Adak to manage this fishery and collect herring samples.

COMMISSIONER’S PERMIT

Each permit holder, tender operator, and buyer must register and obtain a Commissioner’s permit for the Adak herring fishery at the ADF&G office in Sand Point or Dutch Harbor prior to catching, tendering, buying, or processing herring. The buyer and tender reporting requirements are described in 5 AAC 27.662. Permit holders are encouraged to check with their markets prior to fishing to determine which products are acceptable.

FISHING SEASONS, AREA, AND GEAR OPERATION

In that portion of the Adak District from 175°30’ W long to 177° W long, herring may be taken in the food and bait fishery, using seine or gillnet gear from June 24 through February 28 (5 AAC 27.657; Figure 8).

The permit holder must be physically present while the set gillnet is being fished. Each set gillnet in operation must be anchored and buoyed at both ends. Each buoy must be plainly and legibly marked with the permanent vessel license plate number (ADF&G number) of the vessel operating the gear. The numbers must be painted on the top one-third of the buoy in numerals at least four inches in height, one-half inch in width, and in a color contrasting to that of the buoy. The buoy markings must be visible above the water surface. (5 AAC 27.631(b)(c)). A purse seine may not be more than 1,000 meshes in depth and 250 fathoms in length. (5 AAC 27.632).

REFERENCES CITED

- Russell, C. W. 2015. Alaska Peninsula-Aleutian Islands herring sac roe and food and bait fisheries annual management report, 2015. Alaska Department of Fish and Game, Fishery Management Report No. 15-10.
- Russell, C. W. 2016. Alaska Peninsula-Aleutian Islands herring sac roe and food and bait fisheries annual management report, 2015. Alaska Department of Fish and Game, Fishery Management Report No. 16-10, Anchorage.
- Wilburn, D. M. 2015. Alaska Peninsula-Aleutian Islands herring sac roe and food and bait fisheries annual management report, 2014. Alaska Department of Fish and Game, Fishery Management Report No. 15-10, Anchorage.

TABLES AND FIGURES

Table 1.–Port Moller District herring sac roe guideline harvest levels.

Stock size (tons)	Sliding scale exploitation rate ^a	Allowable harvest (tons) ^b
< 1,000	0%	0
1,001–1,500	10%	100–150
1,501–2,000	10%	150–200
2,001–2,500	15%	300–375
2,501–3,000	15%	375–450
> 3,001	20%	> 600

^a The guideline harvest level (GHL) increases proportionally to spawning biomass observed by ADF&G. A sliding scale exploitation rate will be used to determine the GHL.

^b Herring harvested along the Bering Sea coast (southwest of Cape Seniavin) will be allocated to the Port Moller and Herendeen bays guideline harvest level if it is determined that these herring were traveling into Port Moller or Herendeen bays.

Table 2.–Harvest allocation of the 2017 forecasted Pacific herring run biomass, Togiak District, Bristol Bay.

	Biomass (short Tons)
2017 Togiak District Forecasted Biomass	130,852
Total Allowable Harvest (20% exploitation rate)	26,170
Togiak Spawn on Kelp Fishery (Fixed Allocation)	1,500
Remaining Allowable Harvest	24,670
Dutch Harbor Food/Bait Allocation ^a	1,727
Purse Seine Allocation (86%) ^b	1,485
Overharvest penalty from previous year	0
2017 Seine Allocation	1,485
Gillnet Allocation (14%) ^c	242
Overharvest penalty from previous year.	0
2017 Gillnet Allocation	242

^a The Dutch Harbor Food/Bait allocation is 7% of the remaining allowable harvest from the Togiak District.

^b The purse seine allocation for 2017 is 86% of the Dutch Harbor allocation.

^c The gillnet allocation for 2017 is 14% of the Dutch Harbor allocation.

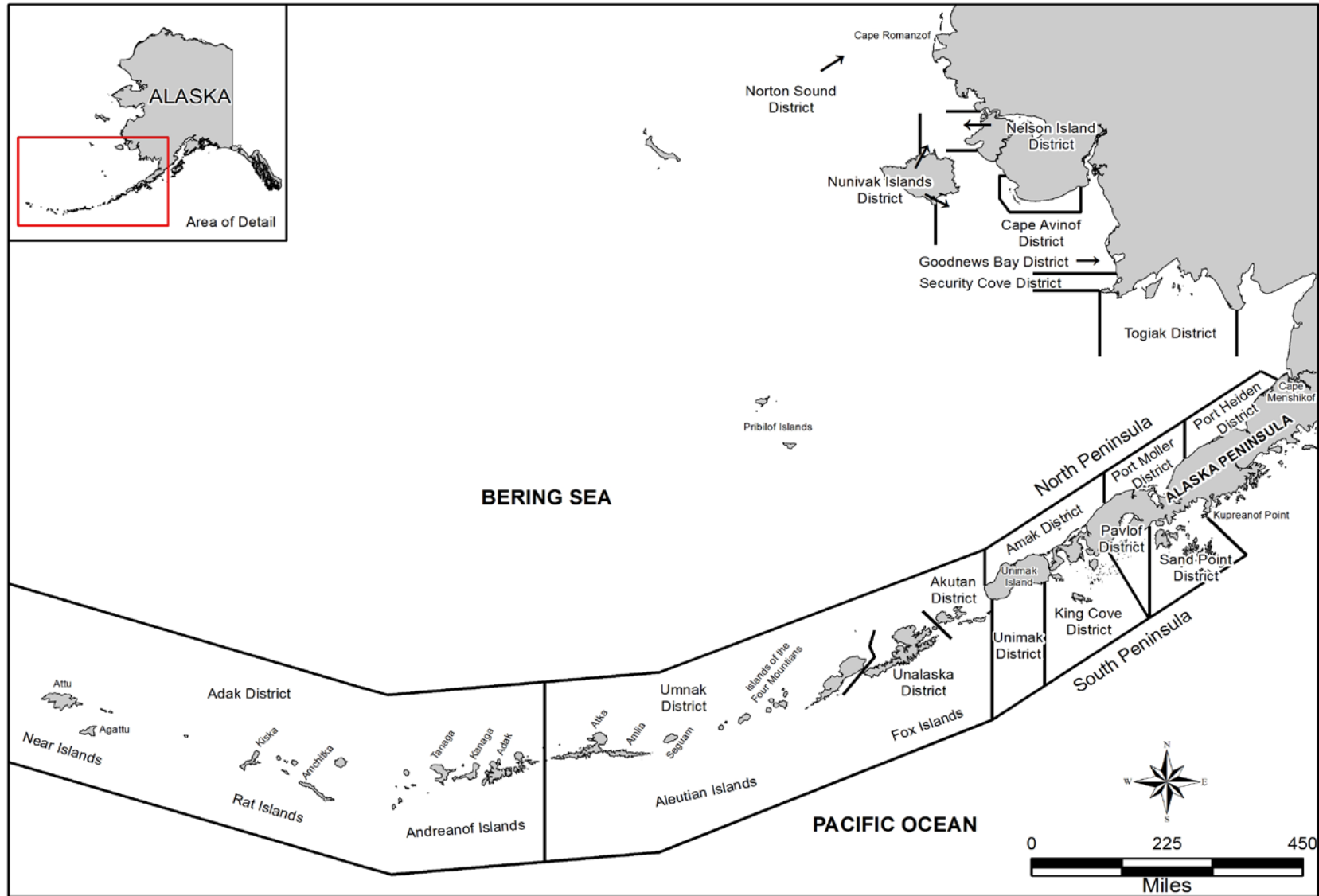


Figure 1.—Map of the Alaska Peninsula–Aleutian Islands herring management area and Bering Sea Management Plan commercial herring districts.

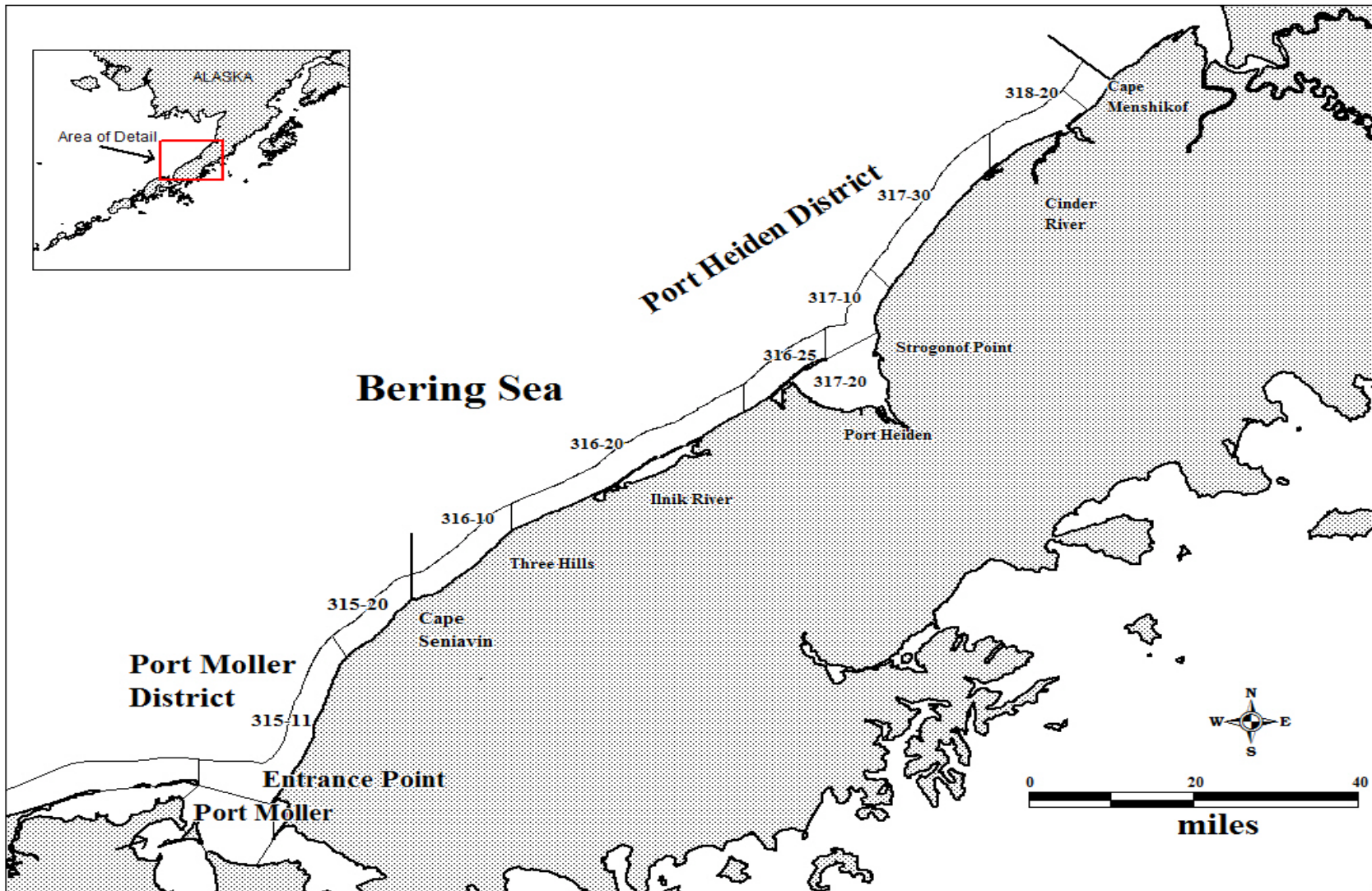


Figure 2.—Map of the north Alaska Peninsula, showing the Port Heiden and Port Moller districts with commercial herring fishing statistical areas.

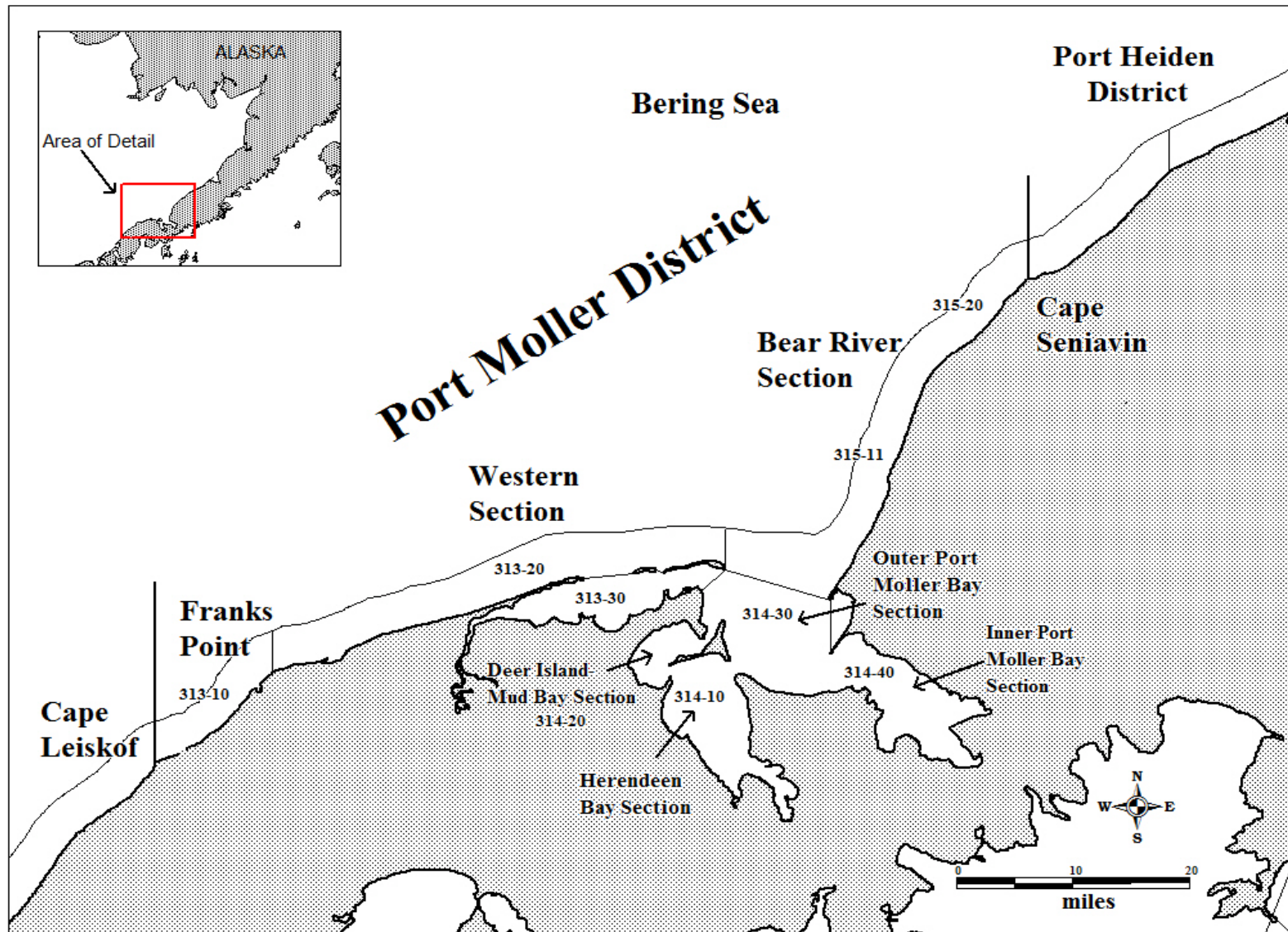


Figure 3.—Map of the north Alaska Peninsula, showing the Port Moller District with commercial herring fishing statistical areas.

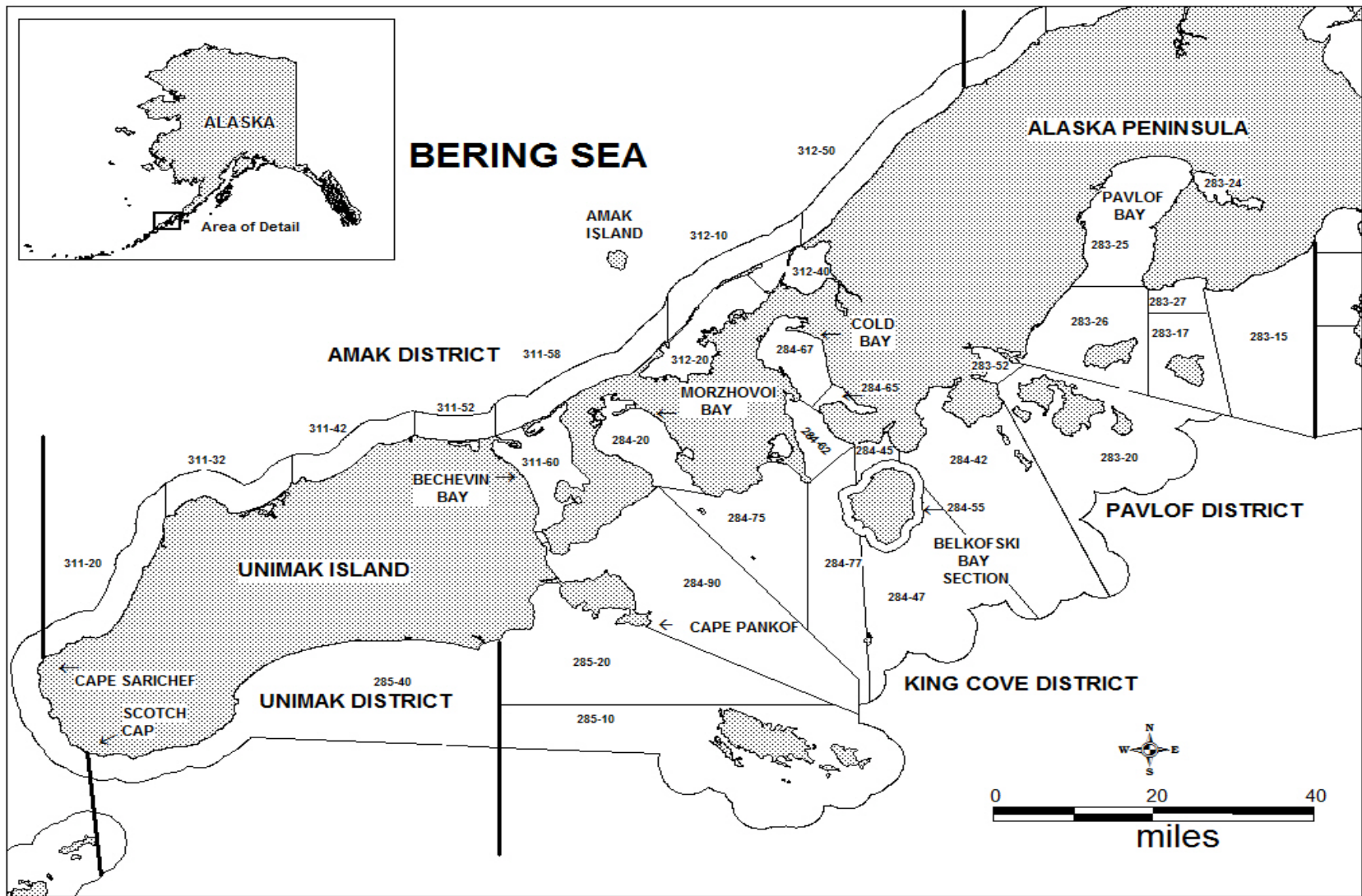


Figure 4.—Map of the Alaska Peninsula from Pavlof Bay to Cape Sarichef with commercial herring fishing districts and statistical areas.

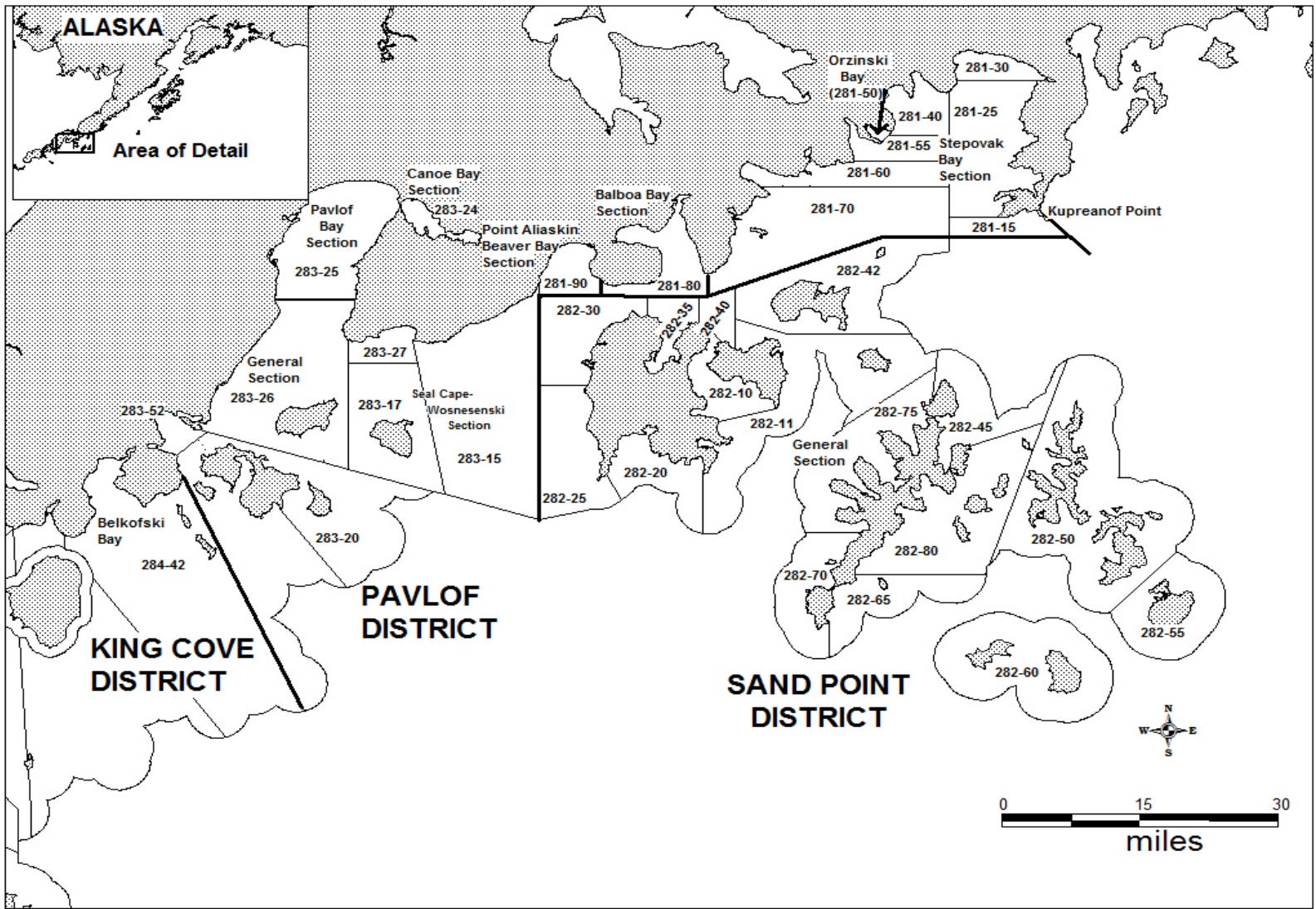


Figure 5.—Map of the south Alaska Peninsula from Kupreanof Point to Belkofski Bay with commercial herring fishing districts and statistical areas.

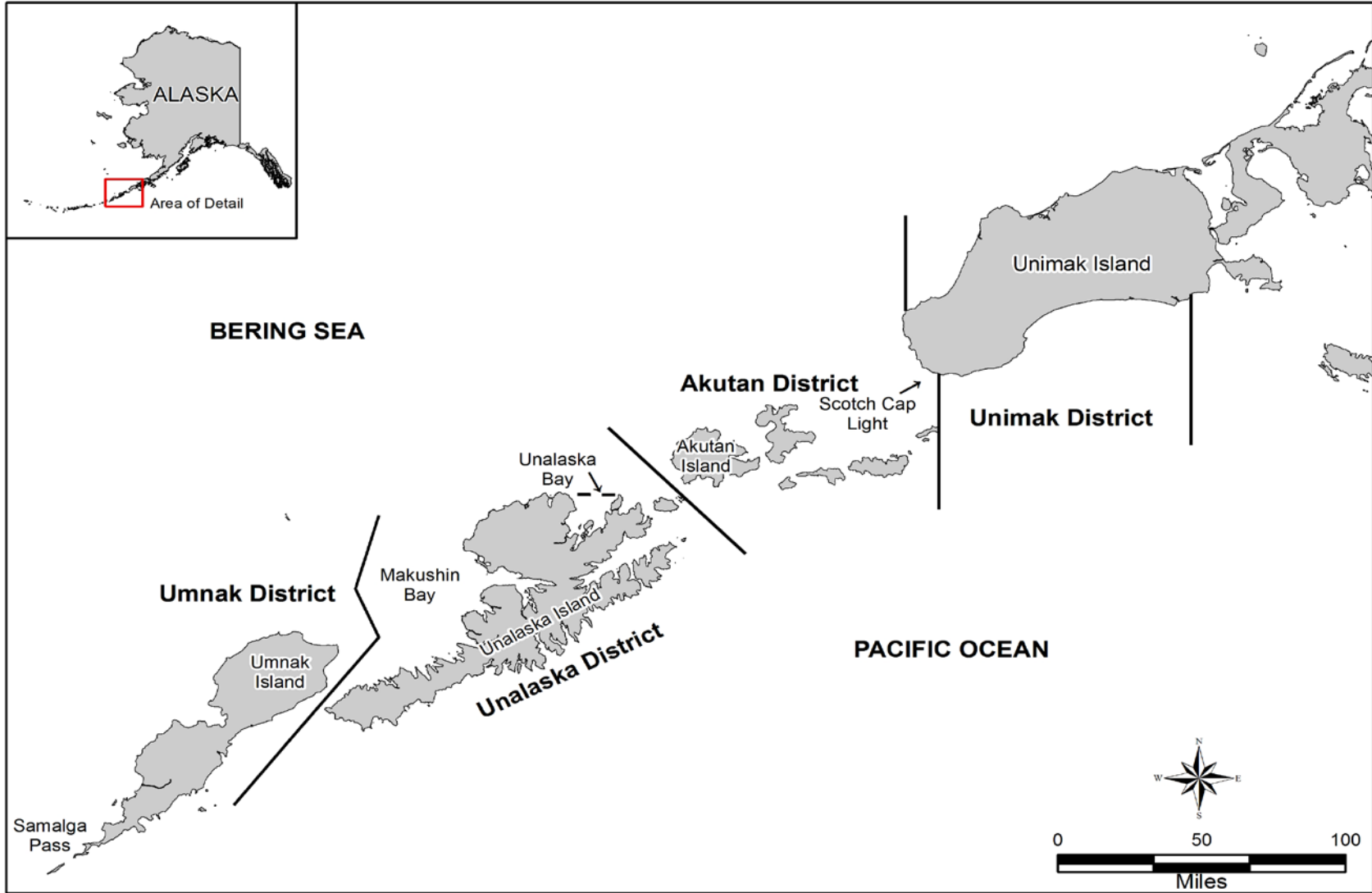


Figure 6.–Map of the eastern Aleutian Islands from Samalga Pass to Unimak Island illustrating the herring fishing district boundaries

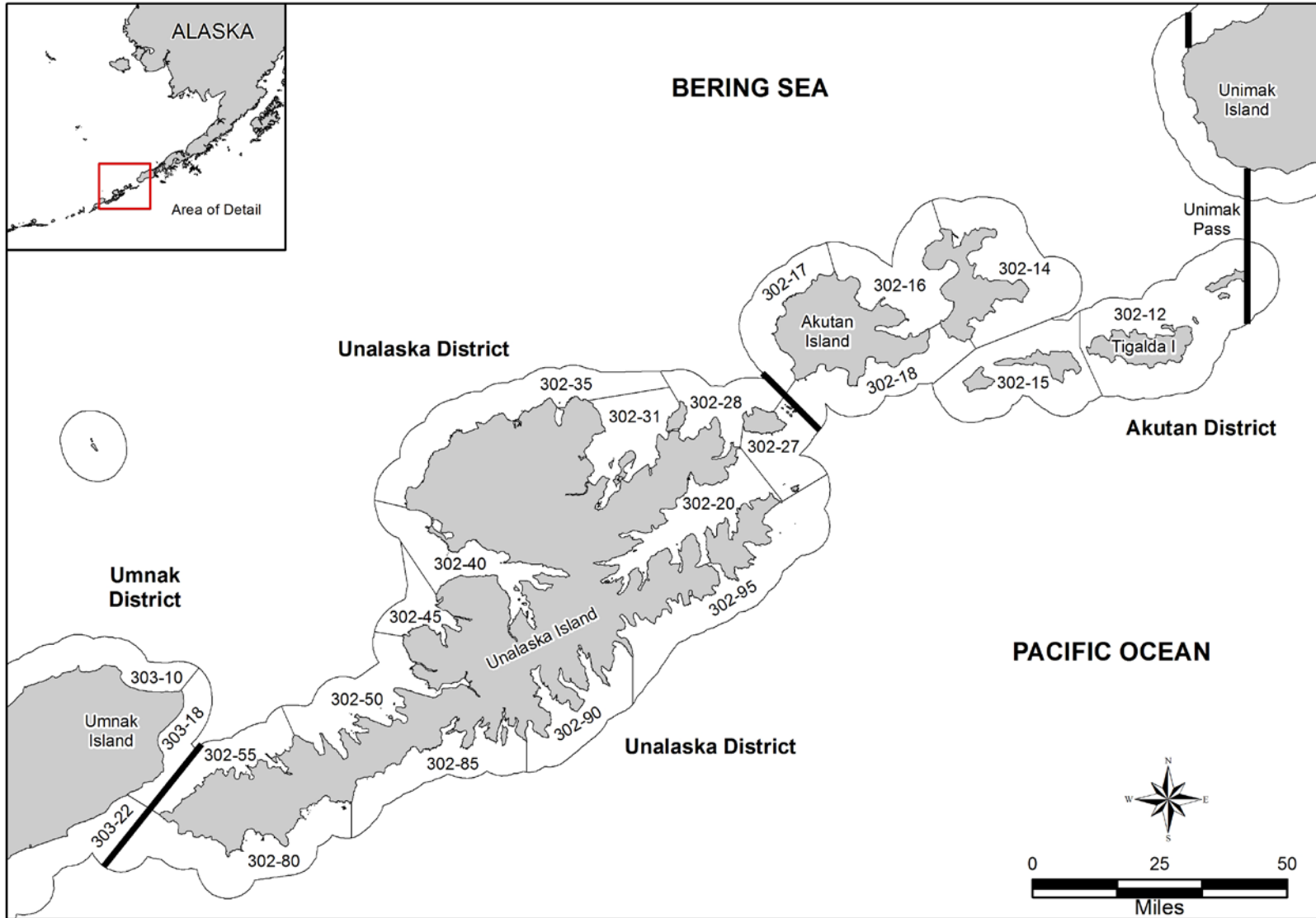


Figure 7.—Map of the Aleutian Islands from Tigalda Island to Umnak Island with commercial herring fishing districts and statistical areas.

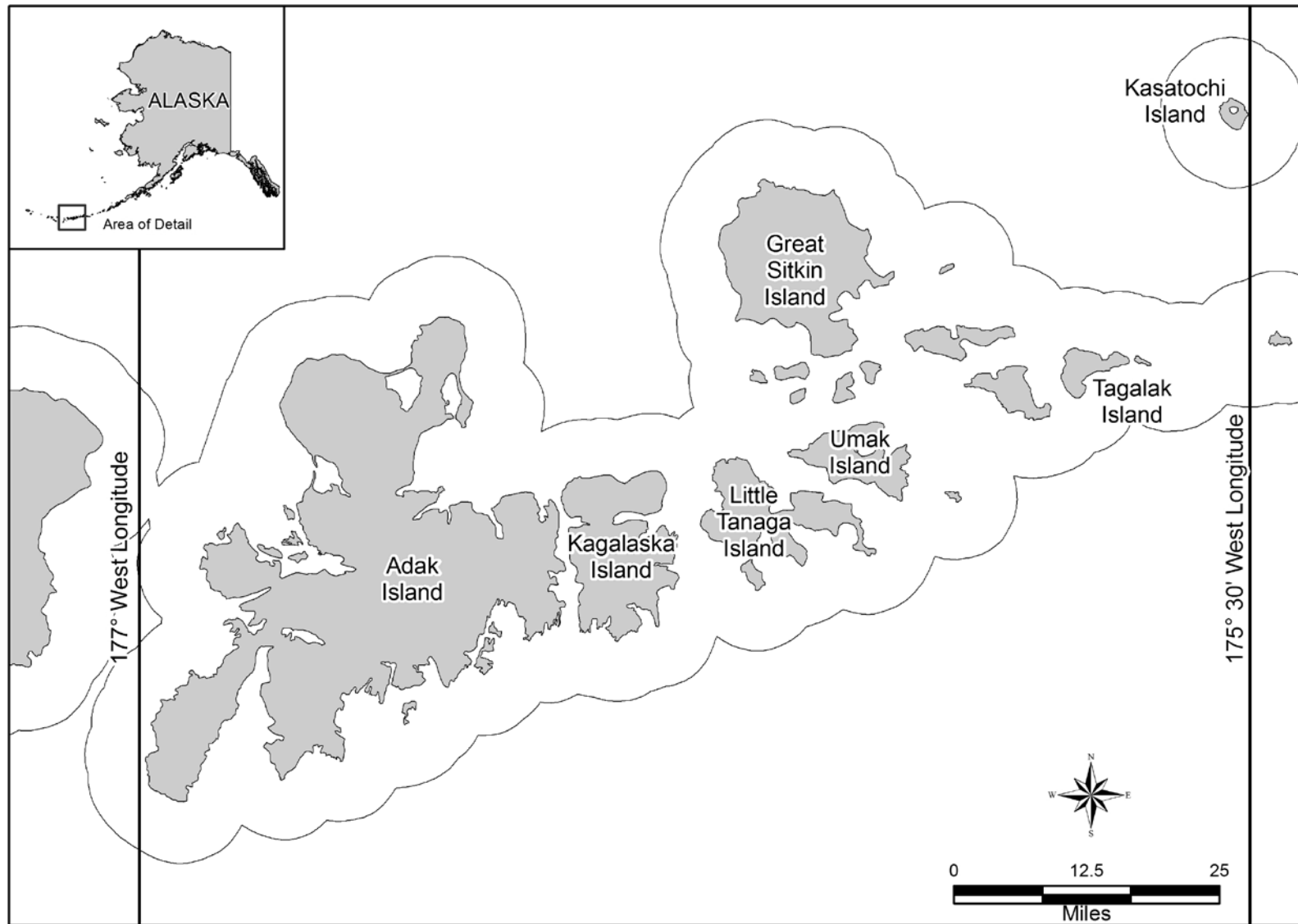


Figure 8.—Map of the Adak District exploratory fishing area.

APPENDIX A. ADF&G OFFICE CONTACTS

Appendix A1.–Alaska Peninsula and Aleutian Islands Alaska Department of Fish and Game office information.

Sand Point

Alaska Department of Fish and Game
P.O. Box 129
Sand Point, AK 99661
Phone: (907) 383-2066
Fax: (907) 383-2606
Recorded message: (907) 383-2334
VHF: Channels 6 and 73

Cold Bay

Alaska Department of Fish and Game
P.O. Box 50
Cold Bay, AK 99571
Phone: (907) 532-2419
Fax: (907) 532-2470
VHF: Channel 6

Kodiak

Alaska Department of Fish and Game
351 Research Court
Kodiak, AK 99615
Phone: (907) 486-1830
Fax: (907) 486-1841
Dispatch #7410

Dutch Harbor

Alaska Department of Fish and Game
P.O. Box 920587
Dutch Harbor, AK 99692
Phone: (907) 581-1239
Fax: (907) 581-1572
VHF: Channel 9
Single Side Band: 4.125 MHz, call sign WIM 76

Port Moller

Alaska Department of Fish and Game
P.O. Box 163
Port Moller, AK 99571-8999
phone (907) 375-2716
fax (907) 375-2715
VHF: Channel 72
Single Side Band: 3.230 MHz, call sign WNGV 537

**APPENDIX B. 2017 ALASKA DEPARTMENT OF FISH AND
GAME TOGIAK HERRING FORECAST**

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
NEWS RELEASE



Sam Cotten, Commissioner
Scott Kelley, Director



Contact:
 Greg Buck, Area Research Biologist
 Phone: (907) 267-2355
 Fax: (907) 267-2442

Anchorage Regional Office
 333 Raspberry Road
 Anchorage, AK 99518
 Date Issued: October 3, 2016

2017 TOGIAK HERRING FORECAST

The 2017 Togiak herring forecast and harvest allocations are listed below for the Togiak District sac roe and spawn-on-kelp fishery, and the Dutch Harbor food and bait fishery. This forecast is based on a maximum 20% exploitation rate of the projected biomass as defined in regulation 5 AAC 27.865 Bristol Bay Herring Management Plan.

Table 1. 2017 Togiak District Pacific herring biomass and harvest forecast and allocation by fishery and gear.

	Biomass (Short Tons)	Harvest (Short Tons)
Forecasted Biomass	130,852	
Total Allowable Harvest (20% exploitation rate)		26,170
Togiak Spawn-on-Kelp Fishery (Fixed Allocation)		1,500
Remaining Allowable Harvest		24,670
Dutch Harbor Food/Bait Allocation (7% of remaining allowable harvest)		1,727
Remaining Allowable Harvest for Togiak District Sac Roe Fishery:		22,943
Purse Seine Allocation (70%)		16,060
Gill Net Allocation (30%)		6,883

2017 TOGIAK HERRING FORECAST SUMMARY

The Pacific herring spawning biomass in the Togiak District was not estimated in 2016 nor was any estimation made of the age composition of the 2016 harvest due to budget cuts. Traditionally, the department has used an age structured assessment (ASA) model to forecast the spawning biomass of Togiak herring. The ASA model requires estimates of the spawning biomass as well as estimates of the age composition of the spawning biomass and the harvest. Because that data is no longer available to us, we forecast the 2017 biomass as the average spawning biomass for all years for which we have data (1978-2015) less 10% in order to be conservative. This method produces an estimate of 130,852 tons (Table 1). Because we are not using the ASA model for the 2017 forecast we have no predictions regarding age composition or

2017 Togiak Herring Forecast

individual size of herring for 2017. As the department ceased estimating the spawning biomass of Togiak herring in 2015, the historical average used here is a static number and unless the budget situation changes we will not be able to estimate spawning biomass or age composition in the future. The current management plan calls for a forecast based on an estimated biomass but we no longer have the budget to estimate the biomass of this stock. This forecast strategy therefore, should be viewed as a temporary measure until a more long term strategy for this fishery can be developed.