

Fishery Management Report No. 20-25

Annual Management Report for Groundfish Fisheries in the Bering Sea-Aleutian Islands Management Area, 2019

by

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and

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November 2020

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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

FISHERY MANAGEMENT REPORT NO. 20-25

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November 2020

The Fishery Management Reports series was established in 1989 by the Division of Sport Fish for the publication of an overview of management activities and goals in a specific geographic area, and became a joint divisional series in 2004 with the Division of Commercial Fisheries. 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.adfg.alaska.gov/sf/publications/>. This publication has undergone regional peer review.

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This document should be cited as follows:

Beder, A., and J. Shaishnikoff. 2020. Annual management report for groundfish fisheries in the Bering Sea-Aleutian Islands Management Area, 2019. Alaska Department of Fish and Game, Fishery Management Report No. 20-25, Anchorage.

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ABSTRACT

This report summarizes harvest, effort, and management of commercial state-waters and parallel groundfish fisheries managed by the Alaska Department of Fish and Game (ADF&G) in the Bering Sea–Aleutian Islands Area (BSAI). State-waters groundfish fisheries included in this report are sablefish *Anoplopoma fimbria*, black rockfish *Sebastes melanops*, dark rockfish *Sebastes ciliatus*, Pacific cod *Gadus macrocephalus*, and key parallel fisheries. For parallel fisheries in the BSAI, ADF&G adopts most seasons, bycatch limits, and allowable gear types in the adjacent exclusive economic zone (EEZ) established by the National Marine Fisheries Service.

Key words: Bering Sea-Aleutian Islands Area, Bering Sea District, Aleutian Islands District, Dutch Harbor Subdistrict, BSAI, sablefish, *Anoplopoma fimbria*, black rockfish, *Sebastes melanops*, parallel season, Exclusive Economic Zone, EEZ, National Marine Fisheries Service, NMFS, Pacific cod, *Gadus macrocephalus*, dark rockfish, *Sebastes ciliatus*

INTRODUCTION

Commercial groundfish fisheries within state waters (0–3 nmi) are managed by the Alaska Department of Fish and Game (ADF&G) under regulations developed by the Alaska Board of Fisheries (BOF). Commercial groundfish fisheries in the exclusive economic zone (EEZ; 3–200 nmi) off Alaska are managed by National Marine Fisheries Service (NMFS) under guidelines developed by the North Pacific Fishery Management Council (NPFMC) and the Magnuson–Stevens Fishery Conservation and Management Act (MSA; DOC 2007).

Many commercially important groundfish species occur in both state waters and the EEZ. Each year, ADF&G issues an emergency order that establishes parallel groundfish seasons in state waters, adopting federal regulations except when superseded by state regulations, including season dates, gear types, bycatch limits, and inseason management actions in adjacent EEZ fisheries managed by NMFS. Harvest in a parallel fishery is accounted for under federal catch limits. ADF&G and NMFS additionally coordinate state and federal closed waters for Steller sea lion and coral garden protection areas.

The Bering Sea–Aleutian Islands Area (BSAI) includes all state waters of the Bering Sea and waters of the North Pacific Ocean adjacent to the Aleutian Islands west of 170°W long. The BSAI is further divided into districts; the Bering Sea and Aleutian Islands districts (Figure 1). Each state-waters groundfish fishery has unique fishery management boundaries described in this report. ADF&G actively manages four state-waters groundfish fisheries in the Bering Sea–Aleutian Islands Area: Aleutian Islands sablefish *Anoplopoma fimbria*, Aleutian Islands black rockfish *Sebastes melanops*, Aleutian Islands Subdistrict Pacific cod *Gadus macrocephalus*, and Dutch Harbor Subdistrict Pacific cod *G. macrocephalus*.

Groundfish harvests in this report are based on the ADF&G fish ticket database as of June 2020.

ALEUTIAN ISLANDS SABLEFISH

The Aleutian Islands state-waters sablefish fishery includes state waters of the Aleutian Islands District of the BSAI and the Western District of the South Alaska Peninsula Area south of the latitude of Cape Sarichef (54°36'N lat) and west of the longitude of Scotch Cap Light (164°44'W long; Figure 2).

BACKGROUND

The federal individual fishing quota (IFQ) program for sablefish was established in 1995. The Alaska Department of Law determined harvest of sablefish in state waters could not be limited to

IFQ holders; therefore, state-waters sablefish fisheries were established in areas where historical harvest of sablefish was sufficient to allow for a manageable fishery. All vessels harvesting sablefish in state waters must be registered with ADF&G, including those vessels harvesting IFQ or Community Development Quota (CDQ) sablefish. All harvest taken from state waters accrues to the guideline harvest level (GHL), regardless of whether harvest is accounted for in a federal fishery.

ADF&G annually reviews the NMFS sablefish stock assessment and sets the Aleutian Islands state-waters sablefish GHL at approximately 5% of the combined federal BSAI TAC (Table 1). Season dates for the state waters fishery coincide with the federal IFQ season to allow for sablefish harvest inside state waters during the entire IFQ season (Table 1). Longline, pot, jig, and hand troll are the only legal gear types. Since 1995, vessels using longline gear account for the majority of the harvest (Table 2). While trawl is not a legal gear type, bycatch in trawl fisheries has accounted for a portion of the fishery harvest since 1995.

The GHL was annually achieved from 1996 through 2002 and has not been fully harvested since then. Total fishery value peaked in 2011 at \$0.98 million (Table 1). For more history on the Aleutian Islands sablefish fishery, refer to the 2017 BSAI annual management report (Beder and Shaishnikoff 2018).

2019 FISHERY

The 2019 Aleutian Islands state-waters sablefish GHL was 385,400 pounds, an increase of 1% from the 2018 GHL (Table 1). Season dates were concurrent with the IFQ season; March 15 through November 14. Fishery harvest was 110,272 pounds taken by 23 vessels (Table 1). Vessels longlining harvested 83,129 pounds during the 2019 fishery; trawl and pot harvest by gear type is confidential (Table 2). Participants in federal IFQ fisheries accounted for 77% of the harvest. Average exvessel price was \$3.00 per pound for an estimated ex-vessel value of \$208,569 (Table 1).

ALEUTIAN ISLANDS BLACK ROCKFISH

The Aleutian Islands black rockfish fishery includes state waters of the Aleutian Islands District of the BSAI and the Western District of the South Alaska Peninsula Area south of the latitude of Cape Sarichef (54°36'N lat) and west of the longitude of Scotch Cap Light (164°44'W long; Figure 3). The fishery is further divided into the Akutan, Unalaska, and Western sections with the Akutan and Unalaska sections further divided into subsections (Figure 4).

BACKGROUND

In 1998, the NPFMC passed Amendment 46 to the Gulf of Alaska (GOA) groundfish Fishery Management Plan (FMP), removing black rockfish from the GOA FMP, and thereby delegating management in the GOA EEZ to the State of Alaska. Black rockfish in the BSAI EEZ remain under federal management. The Aleutian Islands black rockfish fishery occurs in state waters south of Cape Sarichef and west of Scotch Cap Light. Federal waters of the Pacific Ocean between Scotch Cap Light and 170°W long are also managed by ADF&G as a bycatch fishery. Starting in 2000, the Akutan and Unalaska sections were divided into subsections, each with a separate GHL to distribute fishing effort (Figure 4, Table 3). Subsection GHL apportionments are based on potential black rockfish habitat as determined by the amount of coastline. The waters from the

south end of Green Bight to Talus Point have been closed since 2000 due to concerns of localized depletion.

The Aleutian Islands black rockfish fishery opens January 1st and closes December 31st, unless closed earlier by emergency order. Fishermen may use mechanical jig or hand troll gear with a limit of five mechanical jigging machines per vessel. Fishermen are required to register with ADF&G prior to fishing and must complete a logbook for directed black rockfish fishing activity.

Very little directed effort for black rockfish has occurred in recent years, with one or fewer vessels targeting black rockfish each year (Table 4). For more history on the Aleutian Islands black rockfish fishery, refer to the 2017 BSAI groundfish annual management report (Beder and Shaishnikoff 2018).

2019 FISHERY

The GHF in 2019 was 90,000 pounds; 35,000 pounds were available in both the Akutan and Unalaska sections and 20,000 pounds were available in the Western Section (Table 3). The waters from the south end of Green Bight to Talus Point remained closed for the 2019 fishery.

The 2019 Aleutian Islands black rockfish fishery opened on January 1 and closed on December 31. No directed harvest occurred. Fishermen may retain up to 20% black rockfish as bycatch from other directed state-waters and federal groundfish fisheries. Six vessels incidentally harvested black rockfish in 2019 for a total of 823 pounds (Table 4).

ALEUTIAN ISLANDS DARK ROCKFISH

In 2009, Amendment 73 was added to the BSAI groundfish FMP and Amendment 77 was added to the GOA groundfish FMP (NOAA 2008), which removed dark rockfish from the federal FMPs, thereby extending the State of Alaska's authority for dark rockfish in the EEZ of both the BSAI and GOA. In the BSAI, there is no directed dark rockfish fishery. Bycatch of dark rockfish is limited to 20% of the directed target species onboard a vessel. Dark rockfish incidental harvest in 2019 totaled 16,745 pounds, primarily from trawl groundfish catch in the BSAI federal waters.

ALEUTIAN ISLANDS SUBDISTRICT STATE-WATERS PACIFIC COD

The AIS state-waters Pacific cod fishery includes state waters of the Aleutian Islands Subdistrict west of 170°W long, with an inner Adak section comprised of state waters between 175°W long and 178°W long (Figure 5).

BACKGROUND

Prior to 2006, Pacific cod harvest in the Aleutian Islands District was exclusively managed under parallel rules. In February 2006, the BOF approved regulations for a state-waters Pacific cod fishery in the Aleutian Islands Subdistrict (AIS) west of 170°W long (Figure 5). The *Aleutian Islands Subdistrict Pacific Cod Management Plan* (5 AAC 28.647) was adopted by emergency petition to provide the community of Adak with economic opportunities. Prior to 2016, the AIS state-waters Pacific cod GHF was divided across two seasons: A season (before June 10) and B season (after June 10). Starting in 2016, the AIS state-waters Pacific cod was managed as one season. Regulatory changes to the AIS state-waters Pacific cod fishery from 2006 through 2017 are provided in Appendix A.

The AIS state-waters Pacific cod 2019 GHL was set at 31% of the federal Aleutian Islands allowable biological catch (ABC). From 2006 to 2019, AIS state-waters Pacific cod GHLS ranged from 10.5 million pounds to 20.8 million pounds (Table 5). Since its inception, the AIS Pacific cod fishery has been generally underutilized, with the GHL being fully achieved during 4 of the past 14 years (2007, 2008, 2018, and 2019). During years when the GHL was not achieved, approximately 50% of the GHL remained unharvested. Years when the GHL was fully harvested correspond to periods when a shore-based processor was operational in Adak. Vessels using longline, trawl, pot, and jig gear have historically been eligible to participate in the fishery. Participation has fluctuated over time with only trawl or pot gear vessels participating the last five years (Table 6). The number of vessels, along with vessel size for each gear type, has varied since 2006 with a general shift toward under 60-foot overall length (OAL) pot gear vessels in recent years.

2019 FISHERY

The AIS state-waters Pacific cod 2019 GHL was 14,078,500 pounds (Table 5). The season opened on January 1 in the Adak Section to vessels 60 feet or less OAL using trawl, pot, and jig gear and vessels 58 feet or less OAL using longline gear (Tables 6 and 7). All state waters west of 170°W long opened on March 15 at 12:00 noon to trawl vessels 100 feet or less OAL, pot vessels 125 feet or less OAL, and jig and longline vessels 58 feet or less OAL. The fishery closed on March 17 with a total harvest of 13,664,555 pounds (Tables 5, 6, and 7). A total of 18 vessels, 14 pot vessels and 4 trawl vessels, participated in the 2019 AIS state-waters Pacific cod fishery (Table 6). Thirteen of the 18 vessels were under 60 feet OAL.

DUTCH HARBOR SUBDISTRICT STATE-WATERS PACIFIC COD

The 2019 Dutch Harbor Subdistrict (DHS) includes state waters of the Aleutian Islands District east of 170°W long and the state waters of the Bering Sea District that are west of 162°30.00'W long, east of 170°W long, and south of 55°30'N lat, with closed waters south of 53°06.11'N lat (Figure 6).

BACKGROUND

The DHS state-waters Pacific cod fishery for pot gear was established by the BOF in October 2013 and opened for the first time in 2014. The DHS state-waters Pacific cod fishery for jig gear was established by the BOF in October 2018 and opened for the first time in 2019. Regulatory changes to the DHS state-waters Pacific cod fisheries are provided in Appendix B.

The DHS state-waters Pacific cod season for pot gear opens seven days after closure of the BSAI federal/parallel Pacific cod A season for catcher vessels less than 60 feet OAL using longline and pot gear. Vessels participating in the DHS state-waters Pacific cod pot season are limited to a maximum of 58 feet OAL and may operating no more than 60 pots. The DHS state-waters Pacific cod fishery is an exclusive registration area for pot gear.

The 2019 DHS state-waters Pacific cod GHL for pot gear is 8% of the federal Bering Sea subarea ABC. From 2014 to 2019, DHS state-waters Pacific cod GHLS for pot gear ranged from 17.8 million pounds to 36 million pounds (Table 8). The GHL has been achieved every year. Vessel participation has ranged from 14 to 37 vessels, with the highest participation occurring in 2019 (Table 8).

The DHS state-waters Pacific cod season for jig gear opens May 1 with a regulatory GHL of 100,000 pounds. Vessels participating in the DHS state-waters Pacific cod jig season are limited to a maximum of 58 feet OAL and may operate no more than 5 jigging machines. The DHS state-waters Pacific cod fishery is a nonexclusive registration area for jig gear.

2019 POT GEAR FISHERY

The 2019 DHS state-waters Pacific cod season for pot gear opened on January 19 with a GHL of 31,922,600 pounds (Table 8). The fishery closed on February 24 with a total harvest of 32,345,033 pounds. Thirty-seven vessels participated in the 37-day fishery. Harvest was distributed throughout most of the registration area, with 69% coming from waters around Unimak Island and 31% around Unalaska, Akutan, and Akun Islands. Fleetwide daily harvest ranged from approximately 345,800 to 1.6 million pounds per day, with a daily average harvest of 1.2 million pounds. Daily CPUE ranged from 175 to 292 pound per pot, with a daily average CPUE of 229 pounds per pot. Fishermen were initially paid an average of \$0.45 per pound for an estimated fishery exvessel value of \$14.18 million. Catch was delivered to both shorebased and floating processors, with 68% of the harvest being delivered to floating processors.

2019 JIG GEAR FISHERY

The 2019 DHS state-waters Pacific cod season for jig gear opened on May 1 with a GHL of 100,000 pounds (Table 9). The fishery closed on June 6; harvest is confidential. One vessel participated in the 37-day fishery.

GROUNDFISH HARVEST FROM PARALLEL SEASONS IN THE BERING SEA–ALEUTIAN ISLANDS AREA

Each year, by emergency order, ADF&G establishes parallel groundfish seasons that mirror federal fisheries managed by NMFS. ADF&G generally adopts seasons, closed waters, bycatch limits, and legal gear types of the adjacent federal waters, unless superseded by state regulations.

Steller sea lion protection measures during a parallel season reflect NMFS closure areas, except in state waters between 175°W long and 178° W long during a parallel Pacific cod season, in which the Steller sea lion protection measures reflect those in place prior to 2011 (5 AAC 28.087(b)(3)).

Several species are harvested during the BSAI parallel fisheries; however, Pacific cod, walleye pollock *Gadus chalcogrammus*, and Atka mackerel *Pleurogrammus monopterygius* dominate parallel harvest by volume (Table 10). During 2020, parallel harvest was 9.8 million pounds for Pacific cod, 12.6 million pounds for walleye pollock, and 2.4 million pounds for Atka mackerel (Table 11).

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TABLES AND FIGURES

Table 1.—Aleutian Islands state-waters sablefish fishery GHL, harvest, effort, value, and season dates, 1995–2019.

Year	GHL ^a	Harvest ^a	Vessels	Landings	Average price per pound ^b	Fishery value ^c	Season dates		Season duration ^d
							Opened	Closed	
1995	400,000	269,220	35	59	\$2.96	\$0.50	03/15/95	11/15/95	246
1996	280,000	401,463	35	67	\$2.54	\$0.64	03/15/96	07/26/96	134
1997	270,000	317,562	37	75	\$3.55	\$0.71	03/15/97	07/20/97	128
1998	270,000	254,578	38	101	\$2.18	\$0.35	03/15/98	11/15/98	246
1999	250,000	279,778	24	38	\$2.69	\$0.47	03/15/99	08/16/99	155
2000	400,000	446,560	28	59	\$3.04	\$0.86	03/15/00	07/15/00	123
2001	425,000	464,241	31	99	\$2.85	\$0.79	05/15/01	08/08/01	86
2002	460,000	477,970	24	59	\$2.95	\$0.88	05/15/02	07/16/02	63
2003	630,000	473,426	40	104	\$3.58	\$0.92	05/15/03	11/15/03	185
2004	660,000	323,969	28	76	\$2.69	\$0.47	05/15/04	11/15/04	185
2005	550,000	203,498	27	72	\$2.79	\$0.27	05/15/05	11/15/05	185
2006	640,000	177,935	16	54	\$3.55	\$0.42	05/15/06	11/15/06	185
2007	638,000	269,282	25	59	\$3.49	\$0.62	05/15/07	11/15/07	185
2008	584,000	156,293	20	48	\$3.90	\$0.41	05/15/08	11/15/08	185
2009	542,000	279,510	24	65	\$4.90	\$0.85	05/15/09	11/15/09	185
2010	535,000	209,063	25	60	\$5.89	\$0.79	05/15/10	11/15/10	185
2011	523,000	200,635	26	73	\$7.65	\$0.98	05/15/11	11/15/11	185
2012	472,000	222,775	26	86	\$5.94	\$0.84	05/15/12	11/15/12	185
2013	442,000	222,379	16	47	\$4.42	\$0.62	05/15/13	11/07/13	177
2014	347,000	161,022	13	37	\$5.33	\$0.54	03/08/14	11/07/14	245
2015	346,000	153,823	15	44	\$5.81	\$0.56	03/14/15	11/07/15	239
2016	298,503	78,710	15	38	\$4.77	\$0.25	03/19/16	11/07/16	234
2017	331,682	119,913	23	58	\$4.44	\$0.39	03/11/17	11/07/17	242
2018	381,000	34,897	25	47	\$3.28	\$0.07	03/24/18	11/07/18	229
2019	385,400	110,272	23	55	\$3.00	\$0.21	03/15/19	11/14/19	245

Note: GHL = guideline harvest level; fishery value not exact due to differences in pricing and grading of landed catch at the dock.

^a In whole fish pounds; 2006 to present does not include discards at sea.

^b Price per pound of landed weight; 2006 to present only includes fish sold for human consumption

^c Fishery value based on landed weight, in millions of dollars; 2006 to present includes human consumption and fish meal

^d In days.

Table 2.—Aleutian Islands state-waters sablefish fishery harvest by gear type, 1995–2019.

Year	Longline	Trawl ^a	Pot	Total
1995	227,917	41,303	0	269,220
1996	401,429	26	8	401,463
1997	312,506	20	5,036	317,562
1998	252,398	2,180	0	254,578
1999	272,240	6,268	1,270	279,778
2000	446,112	0	448	446,560
2001	439,612	210	24,419	464,241
2002	456,632	1,126	20,212	477,970
2003	428,315	270	44,842	473,426
2004	273,807	129	50,033	323,969
2005	182,348	58	21,092	203,498
2006	128,764	1,207	47,964	177,935
2007	189,708	4,251	75,323	269,282
2008	123,705	0	32,589	156,293
2009	271,776	CF	CF	279,510
2010	202,075	CF	CF	209,063
2011	164,604	0	36,031	200,635
2012	215,069	CF	CF	222,775
2013	208,981	CF	CF	222,379
2014	159,514	CF	CF	161,022
2015	153,822	CF	0	153,823
2016	53,524	CF	CF	78,710
2017	48,185	CF	CF	119,912
2018	29,784	CF	CF	34,897
2019	83,129	CF	CF	107,556

Note: Harvest shown in whole fish pounds.
CF = confidential.

^a Trawl is not a legal gear type. Sablefish harvested as bycatch to other fisheries.

Table 3.—Aleutian Islands state-waters black rockfish fishery guideline harvest level (GHL), by section and subsection for the 2019 season.

Section	Subsection	GHL (pounds) ^a
Akutan	Akutan Island	10,000
	Akun Island	10,000
	Rootok Island	5,600
	Tigalda Island	9,400
	Total	35,000
Unalaska	Unalaska Bay/Wislow	3,000
	Cape Kalekta/Unalga	
	Island	3,600
	West Unalaska	12,850
	South Unalaska	12,300
	Beaver Inlet/Sedanka	
	Island	3,250
	Total	35,000
Western	No Subsections	20,000

^a In whole fish pounds.

Table 4.—Aleutian Islands state-waters black rockfish fishery GHL, harvest, effort, and value, 1994–2019.

Year	GHL ^a	Harvest ^a	Vessels	Landings	Average price per pound ^b	Fishery value ^c
1994 ^{d,e}	100,000	0	0	0	\$0	\$0
1995 ^{d,e}	100,000	CF	10	CF	CF	CF
1996 ^{d,e}	100,000	CF	12	CF	CF	CF
1997 ^{d,e}	100,000	102,746	8	18	\$0.34	\$35,000
1998 ^e	100,000	CF	5	31	CF	CF
1999 ^e	90,000	20,889	6	41	\$0.35	\$7,200
2000	90,000	CF	2	5	CF	CF
2001	90,000	CF	4	11	CF	CF
2002	90,000	CF	6	27	CF	CF
2003	90,000	2,308	5	8	CF	CF
2004	90,000	1,639	10	28	CF	CF
2005	90,000	6,014	7	19	\$0.36	\$1,319
2006	90,000	CF	2	2	CF	CF
2007	90,000	CF	4	7	CF	CF
2008	90,000	CF	4	5	CF	CF
2009	90,000	CF	2	2	CF	CF
2010	90,000	2,088	4	4	\$0	\$0
2011	90,000	3,926	6	7	CF	CF
2012	90,000	11,712	5	6	CF	CF
2013	90,000	CF	2	2	CF	CF
2014	90,000	1,985	4	6	CF	CF
2015	90,000	2,365	3	4	CF	CF
2016	90,000	377	5	6	\$0	\$0
2017	90,000	3,153	7	8	\$0	\$0
2018	90,000	CF	2	3	CF	CF
2019	90,000	823	6	6	\$0	\$0

Note: GHL = guideline harvest level, CF = confidential.

^a In whole fish pounds. Harvest includes all fishery removals including discards at sea and personal use.

^b Price per pound landed weight.

^c Fishery value based on landed weight.

^d Totals include black and dusky rockfish. In the early years of the fishery, dusky rockfish may have been misidentified as black rockfish; therefore, harvest totals include both species.

^e Due to reporting changes, this data is historical data that cannot be replicated.

Table 5.—Aleutian Islands Subdistrict state-waters Pacific cod fishery harvest, effort, and value, 2006–2019.

Year	Season	Initial GHL ^a	Harvest ^a	Vessels	Landings	Average price per pound ^b	Fishery value ^c
2006	A season	8,981,540	8,502,781	26	68	\$0.23	\$1.3
	B season	3,849,232 ^d	351,414	5	19	\$0.38	\$1.4
	TOTAL	12,830,772	8,854,195	30 ^e	87	\$0.31	\$2.7
2007	A season	8,148,202	8,229,931	27	97	\$0.45	\$3.6
	B season	3,492,086 ^f	3,409,070	12	106	\$0.52	\$1.7
	TOTAL	11,640,288	11,639,001	39	203	\$0.49	\$5.3
2008	A season	8,148,202	7,477,507	30	116	\$0.63	\$4.5
	B season	3,492,086 ^g	4,241,692	18	77	\$0.57	\$1.8
	TOTAL	11,640,288	11,719,199	45 ^e	193	\$0.61	\$6.3
2009	A season	8,425,981	5,537,886	22	50	NA	NA
	B season	3,611,135 ^g	CF	5	47	CF	CF
	TOTAL	12,037,116	CF	27	97	CF	CF
2010	A season	8,055,608	7,959,515	16	84	\$0.25	\$1.6
	B season	3,452,404 ^g	826,170	3	4	\$0.32	\$1.1
	TOTAL	11,508,012	8,785,685	16 ^e	88	\$0.29	\$2.7
2011	A season	10,879,701	CF	3	4	CF	CF
	B season	4,662,729 ^g	CF	4	16	CF	CF
	TOTAL	15,542,430	595,289	6 ^e	20	CF	CF
2012	A season	14,537,132	11,462,339	21	201	\$0.31	\$3.6
	B season	6,230,200 ^g	878,688	7	25	CF	CF
	TOTAL	20,767,332	12,341,027	26 ^e	226	CF	CF
2013	A season	14,213,056	CF	12	150	CF	CF
	B season	6,091,310 ^g	CF	1	1	CF	CF
	TOTAL	20,304,366	10,563,646	13	151	CF	CF
2014	A season	12,504,712	CF	8	133	CF	CF
	B season	5,359,162 ^g	0	0	0	\$0.00	\$0.0
	TOTAL	17,863,874	CF	8	133	CF	CF
2015	A season	12,620,583	CF	2	8	CF	CF
	B season	5,408,821 ^g	0	0	0	\$0.00	\$0.0
	TOTAL	18,029,404	CF	2	8	CF	CF

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Table 5.–Page 2 of 2.

Year	Season	Initial GHL ^a	Harvest ^a	Vessels	Landings	Average price per pound ^b	Fishery value ^c
2016		10,476,259 ^h	CF	6	39	CF	CF
2017		12,797,703	CF	3	84	CF	CF
2018		12,798,000	CF	13	132	CF	CF
2019		14,078,500	13,664,555	18	155	\$0.38	\$5.08

Note: CF = confidential.

^a In whole fish pounds.

^b Price per pound of landed weight.

^c Fishery value based on landed weight, in millions of dollars.

^d ADF&G made 3.5 million pounds of the GHL available to National Marine Fisheries Service effective on September 1.

^e Some vessels participated in both seasons.

^f Overage from the A season was deducted from the B season GHL. Initial GHL shown.

^g A season GHL was not fully harvested, and remaining A season GHL rolled over into B season GHL; initial GHL shown.

^h In 2016, regulation changed to only one season for Aleutian Island Subdistrict state-waters Pacific cod.

Table 6.—Aleutian Islands Subdistrict state-waters Pacific cod fishery harvest by gear type, 2006–2019.

Year	Season	Longline ^a	Trawl ^a	Pot ^a	Jig ^a	Total ^a
2006	A season	CF	7,053,035	CF	0	8,502,781
	B season	76,462	0	274,952	0	351,414
2007	A season	0	6,998,224	1,231,707	0	8,229,931
	B season	CF	0	2,383,163	CF	3,409,070
2008	A season	CF	6,130,304	CF	0	7,477,507
	B season	362,410	0	3,786,710	92,572	4,241,692
2009	A season	CF	1,295,595	3,879,737	CF	5,537,886
	B season	CF	0	0	CF	CF
2010	A season	0	4,899,783	3,059,731	0	7,959,515
	B season	CF	0	CF	0	826,170
2011	A season	0	CF	CF	0	CF
	B season	CF	0	CF	0	CF
2012	A season	CF	5,983,213	CF	0	11,462,339
	B season	274,856	0	555,369	48,462	878,688
2013	A season	0	CF	CF	0	CF
	B season	CF	0	0	0	CF
2014	A season	0	CF	CF	0	CF
	B season	0	0	0	0	0
2015	A season	0	CF	0	0	CF
	B season	0	0	0	0	0
2016 ^b		0	CF	0	0	CF
2017		0	0	CF	0	CF
2018		0	CF	CF	0	CF
2019		0	CF	CF	0	13,664,555

Note: CF = confidential.

^a In whole fish pounds.

^b In 2016, regulation changed to only one season for Aleutian Island Subdistrict state-waters Pacific cod.

Table 7.—Aleutian Islands Subdistrict state-waters Pacific cod season dates and duration, 2006–2019.

Year	Season	Location	Season dates		Season Duration ^a
			Opened	Closed	
2006	A season	West of 170°W long	03/15/06	03/24/06	10
	B season	West of 170°W long	06/10/06	09/01/06	84
2007	A season	West of 170°W long	03/16/07	03/23/07	8
	B season	West of 170°W long	06/10/07	09/01/07	84
		West of 170°W long	10/01/07	12/03/07	64
2008	A season	West of 170°W long	03/10/08	03/18/08	9
	B season	West of 170°W long	06/10/08	07/09/08	30
2009	A season	West of 170°W long	03/25/09	04/01/09	8
		West of 170°W long	04/07/09	06/09/09	64
	B season	West of 170°W long	06/10/09	09/01/09	84
2010	A season	West of 170°W long	03/16/10	06/04/10	81
	B season	West of 170°W long	06/10/10	09/01/10	84
		West of 170°W long	11/15/10	12/31/10	47
2011	A season	West of 170°W long	03/30/11	04/01/11	3
		West of 170°W long	04/05/11	06/09/11	66
	B season	West of 170°W long	06/10/11	09/01/11	84
		West of 170°W long	10/25/11	12/31/11	68
2012	A season	175° to 178°W long	01/01/12	06/09/12	161
		West of 170°W long	03/04/12	04/01/12	29
		West of 170°W long	04/15/12	06/09/12	56
	B season	West of 170°W long	06/10/12	09/01/12	84
2013	A season	175° to 178°W long	01/01/13	06/09/13	160
		West of 170°W long	03/15/13	04/01/13	18
	B season	West of 170°W long	06/10/13	09/01/13	84
2014	A season	175° to 178°W long	01/01/14	06/09/14	160
		West of 170°W long	03/15/14	06/09/14	87
	B season	West of 170°W long	06/10/14	12/31/14	205
2015	A season	175° to 178°W long	01/01/15	06/09/15	160
		West of 170°W long	03/03/15	06/09/15	99
	B season	West of 170°W long	06/10/15	12/31/15	205
2016 ^b		175° to 178°W long	01/01/16	12/31/16	366
		West of 170°W long	03/13/16	12/31/16	294

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Table 7.–Page 2 of 2.

Year	Season	Location	Season dates		Season Duration ^a
			Opened	Closed	
2017		175° to 178°W long	01/01/17	12/31/17	365
		West of 170°W long	02/27/17	12/31/17	308
2018		175° to 178°W long	01/01/18	03/23/18	82
		West of 170°W long	03/08/18	03/23/18	16
2019		175° to 178°W long	01/01/19	03/17/19	76
		West of 170°W long	03/15/19	03/17/19	3

^a In days.^b In 2016, regulation changed to only one season for Aleutian Island Subdistrict state-waters Pacific cod.

Table 8.—Dutch Harbor Subdistrict state-waters Pacific cod fishery harvest, effort, value, and season dates, 2014–2019.

Year	GHL ^a	Harvest ^a	Vessels	Landings	Average price per pound ^b	Fishery value ^c	Season dates		Season duration ^d
							Opened	Closed	
2014	17,863,874	17,666,510	16	205	\$0.29	\$5.01	02/11/14	09/01/14	203
2015	18,029,404	17,636,103	14	183	\$0.28	\$4.76	02/09/15	03/31/15	51
2016	35,979,072	35,519,920	24	421	\$0.26	\$9.85	02/12/16	04/22/16	71
2017	33,721,562	33,247,414	24	349	\$0.31	\$10.07	02/09/17	04/08/17	59
2018	28,360,000	29,055,603	32	286	\$0.41	\$11.82	01/30/18	03/01/18	31
2019	31,922,600	32,345,033	37	431	\$0.45	\$14.18	01/19/19	02/24/19	37

Note: GHL = guideline harvest level.

^a In whole fish pounds

^b Price per pound of landed weight of fish sold for human consumption.

^c Fishery value based on landed weight, in millions of dollars.

^d In days.

Table 9.—Dutch Harbor Subdistrict state-waters Pacific cod jig fishery harvest, effort, value, and season dates, 2019

Year	GHL ^a	Harvest ^a	Vessels	Landings	Average price per pound ^b	Fishery value ^c	Season dates		Season duration ^d
							Opened	Closed	
2019	100,000	CF	1	5	CF	CF	05/01/19	06/06/19	37

Note: GHL = guideline harvest level.

^a In whole fish pounds

^b Price per pound of landed weight.

^c Fishery value based on landed weight, in millions of dollars.

^d In days.

Table 10.—Top 25 species harvested by weight in pounds, as reported on groundfish fish tickets, in the Bering Sea–Aleutian Islands Area parallel fishery, 2019.

Species	Harvest ^{a, b}	At-sea discards ^a
Walleye pollock	12,566,070	3,419
Pacific cod	9,757,506	32,892
Atka mackerel	2,443,338	154,250
Yellowfin sole	413,014	134,041
Pacific Ocean perch	373,602	129,665
North Pacific octopus	171,097	2,157
Rock sole	84,009	37,741
Sablefish (blackcod)	80,601	2,086
Arrowtooth flounder	28,697	12,655
Sharpchin and northern rockfish	26,378	53,418
Sculpin, general	22,970	37,827
Kamchatka flounder	18,072	14,177
Other skate	17,350	50,556
Other rockfish	12,256	16,578
Flathead sole	11,835	8,207
Other flatfish	4,243	45,369
Jellyfish	6,951	54,175
Greenland turbot	3,725	505
Shortraker and rougheye rockfish	2,998	6,190
Majestic squid	1,913	257
Alaskan skate	1,118	4,735
Prowfish	939	2,255
Herring, food	346	271
Chinook salmon	223	—
Chum salmon	181	589

^a In whole fish pounds.

^b Discards at sea not included.

Table 11.—Bering Sea-Aleutian Islands Area number of vessels and landings, harvest by gear type, and at-sea discards, for Pacific cod, walleye pollock, and Atka mackerel during the parallel fishery, 1995–2019.

Year	Vessels	Landings	Harvest ^{a, b}				Total	At-sea
			Trawl	Longline	Pot	Jig/hand troll		discards ^a
Pacific cod								
1995	146	1,030	12,240,195	1,990,938	5,486,619	773,895	20,491,646	47,630
1996	157	956	5,760,550	444,538	11,540,368	407,811	18,153,267	104,680
1997	104	378	809,297	1,465,696	2,064,358	208,326	4,547,676	15,988
1998	110	400	3,975,738	4,128,807	3,624,994	210,316	11,939,854	75
1999	129	500	8,963,780	1,444,465	7,105,630	281,754	17,795,629	4,978
2000	161	573	5,369,957	3,604,038	6,523,840	102,903	15,600,739	16,654
2001	129	403	7,035,831	3,973,338	3,145,956	172,405	14,327,530	8,468
2002	111	369	13,768,587	481,119	1,887,114	351,404	16,488,224	3,493
2003	111	450	13,456,640	841,821	4,928,807	144,477	19,371,745	13,358
2004	117	568	12,247,656	1,841,934	4,616,764	461,553	19,167,907	33,153
2005	92	381	4,056,390	2,526,537	3,116,586	233,947	9,933,460	11,595
2006	107	349	2,470,193	1,238,093	2,998,600	141,285	6,848,171	51,423
2007	109	337	3,924,415	1,401,829	1,507,579	180,322	7,014,145	23,405
2008	108	372	2,526,207	2,542,514	4,582,253	327,512	9,978,486	19,875
2009	81	224	1,659,521	690,143	3,697,654	27,693	6,075,011	12,266
2010	80	308	3,247,752	2,106,124	4,949,276	736,802	11,039,954	12,990
2011	81	278	311,666	1,500,220	2,333,841	946,814	5,092,541	15,856
2012	63	204	163,562	2,413,244	1,577,736	186,731	4,341,273	4,994
2013	57	188	92,961	2,660,883	605,520	23,983	3,383,347	24,039
2014	34	231	106,441	7,865,970	1,186,530	1,324	9,160,264	19,505
2015	67	258	2,630,870	4,065,759	1,672,730	61,735	8,431,094	25,682
2016	57	159	2,220,049	1,820,888	3,014,448	62,247	7,117,632	26,705
2017	71	185	656,555	2,443,576	4,281,339	10,326	7,391,796	33,983
2018	89	247	792,778	5,508,744	4,143,572	96,388	10,541,482	33,824
2019	104	377	557,730	3,485,349	5,529,318	185,109	9,757,506	32,892

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Table 11.—Page 2 of 3.

Year	Vessels	Landings	Harvest ^{a, b}				Total	At-sea discards ^a
			Trawl	Longline	Pot	Jig/hand troll		
Walleye pollock								
1995	37	59	28,180,359	0	170	0	28,180,529	232,153
1996	40	63	20,753,566	0	96,368	0	20,849,933	468,102
1997	31	61	18,539,560	0	0	2,165	18,541,725	197,347
1998	47	92	13,385,826	6,114	1,274	0	13,393,213	154,466
1999	18	32	1,466,815	CF	CF	0	1,467,967	41,944
2000	34	50	3,647,819	5,824	2,792	0	3,656,434	5,145
2001	47	71	5,460,805	27,481	781	0	5,489,068	51,487
2002	28	49	11,172,229	CF	CF	0	11,172,548	68,374
2003	38	85	10,940,817	CF	CF	0	10,943,496	2,869
2004	50	138	20,138,475	9,402	120	0	20,147,997	61,923
2005	28	51	5,306,986	CF	CF	0	5,308,435	1,068
2006	37	54	2,904,468	CF	CF	0	2,914,527	23,032
2007	38	90	6,228,344	CF	CF	0	6,228,704	41,568
2008	31	58	5,852,028	CF	CF	0	5,859,027	256
2009	30	65	16,958,999	CF	CF	0	16,959,350	8,432
2010	28	72	9,264,496	3,037	0	0	9,267,534	1,161
2011	31	56	7,492,409	27,972	45	0	7,520,426	10,055
2012	39	68	2,351,121	39,114	93	752	2,391,080	19,099
2013	25	47	5,846,951	9,827	7	0	5,856,785	14,717
2014	23	56	3,005,535	30,811	687	0	3,037,033	14,803
2015	41	158	14,783,901	13,954	4,304	0	14,802,159	15,431
2016	41	108	5,884,127	9	2,156	0	5,886,292	332
2017	38	108	4,429,159	0	1,096	0	4,430,255	279
2018	51	138	11,754,067	7,535	2,820	0	11,764,422	2,666
2019	54	115	12,564,226	1,189	655	0	12,566,070	3,419

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Table 11.—Page 3 of 3.

Year	Vessels	Landings	Harvest ^{a, b}				Total	At-sea
			Trawl	Longline	Pot	Jig/hand troll		discards ^a
Atka mackerel								
1995	11	14	270,939	0	58	0	270,997	169,479
1996	8	13	25,654	CF	CF	0	26,220	76,820
1997	3	4	CF	0	CF	0	17,621	89
1998	5	7	2,581	CF	CF	0	2,690	8,586
1999	4	5	408,716	CF	CF	0	408,738	125,739
2000	6	7	145,410	0	216	0	145,626	25,204
2001	12	13	27,070	CF	CF	0	29,430	37,690
2002	13	19	3,793	CF	CF	0	3,793	22,533
2003	25	71	13,371	0	4,294	0	17,665	23,367
2004	32	99	133,390	CF	CF	0	133,402	42,477
2005	11	27	67,875	0	0	0	67,875	10,726
2006	8	14	120,372	CF	CF	0	120,400	91,034
2007	21	40	791,619	0	0	0	791,619	954
2008	13	25	1,383,111	0	0	0	1,383,111	174,052
2009	11	16	485	CF	CF	0	524	1,044
2010	19	39	131,747	CF	CF	0	132,088	1,924
2011	12	20	81,598	0	39	0	81,637	11,343
2012	19	34	309,229	289	101	0	309,619	53,576
2013	4	5	234	0	18	0	252	4,117
2014	5	6	268,509	0	120	0	268,629	410
2015	14	18	826,670	0	78	26	826,774	18,772
2016	11	15	1,851,205	0	2	0	1,851,207	58,449
2017	12	18	804,979	0	8	0	804,987	38,097
2018	20	47	871,702	4,050	2,384	0	878,136	39,043
2019	18	40	2,442,275	684	379	0	2,443,338	154,250

^a In whole fish pounds.^b Discards at sea not included.

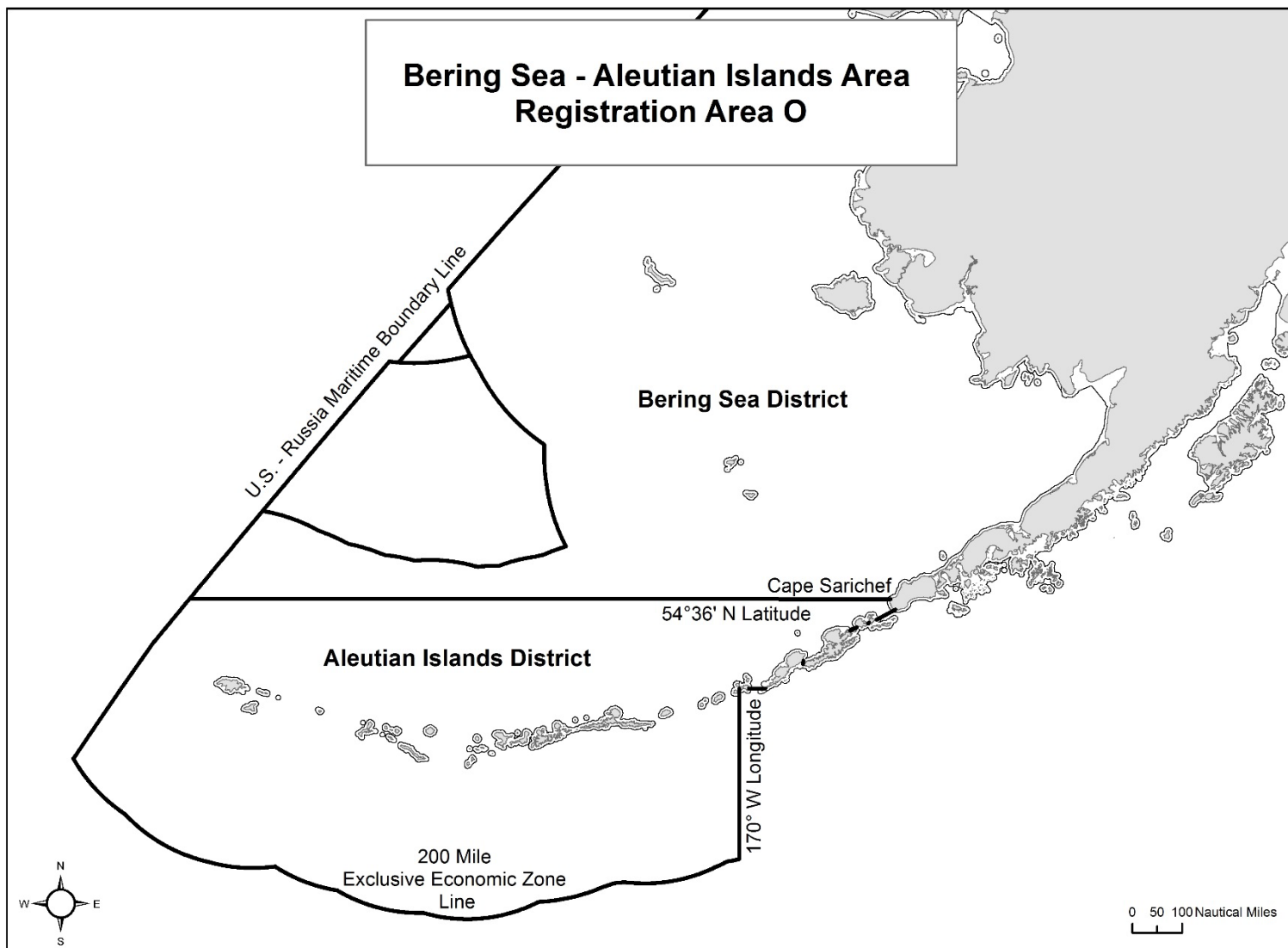


Figure 1.—Bering Sea–Aleutian Islands Area for groundfish management.

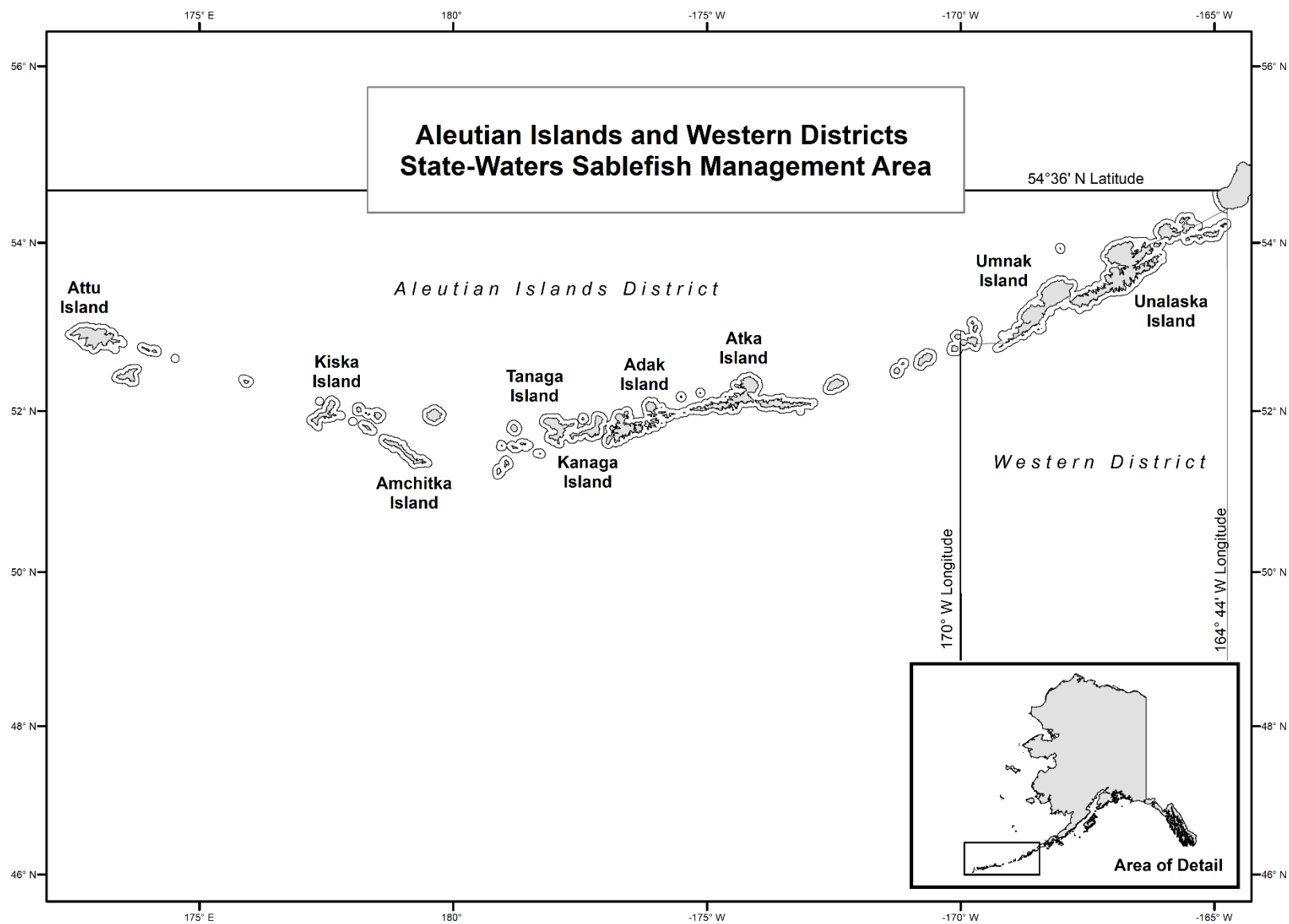


Figure 2.—Aleutian Islands state-waters sablefish fishery management area.

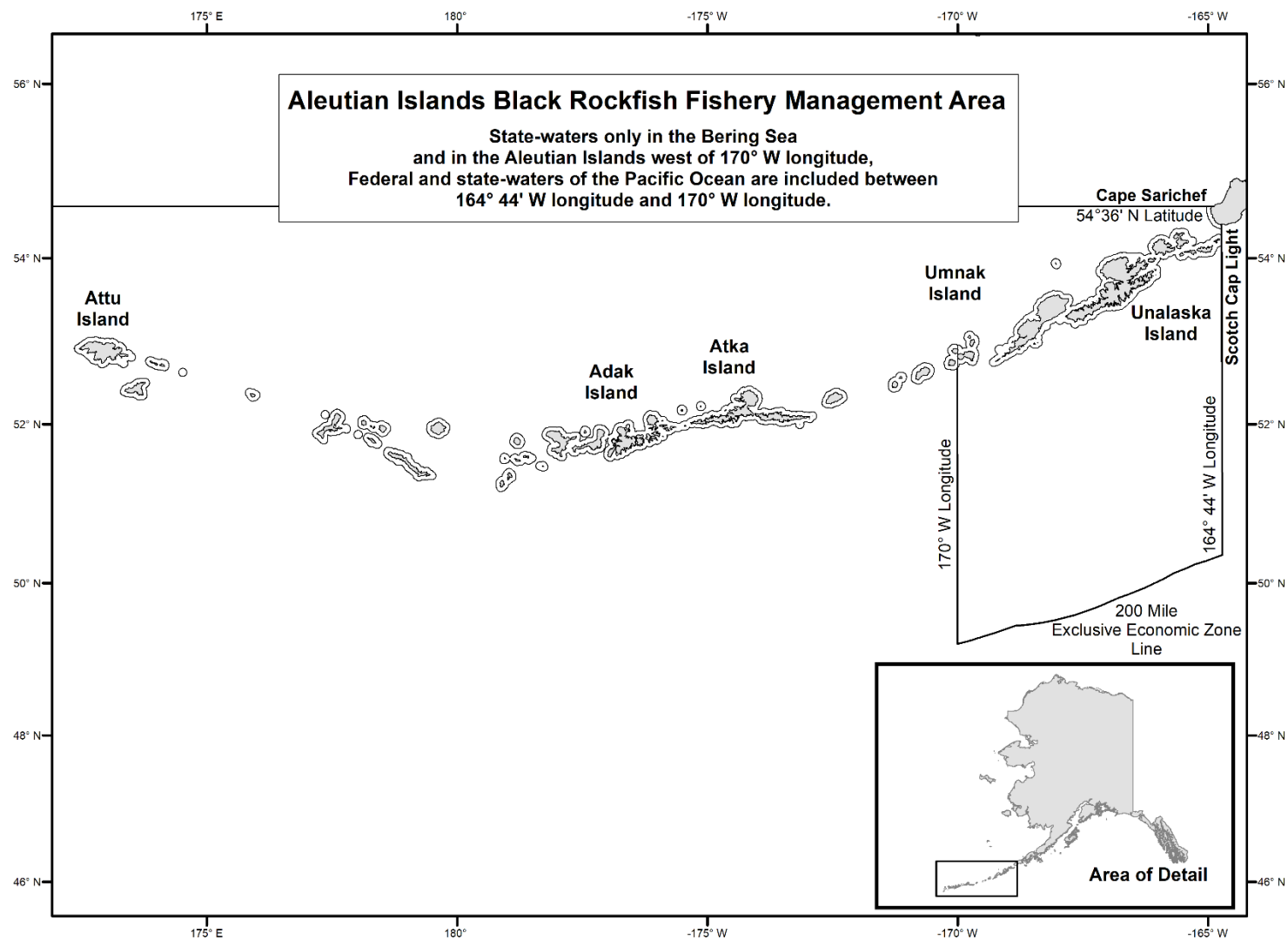


Figure 3.—Aleutian Islands state-waters black rockfish management area.

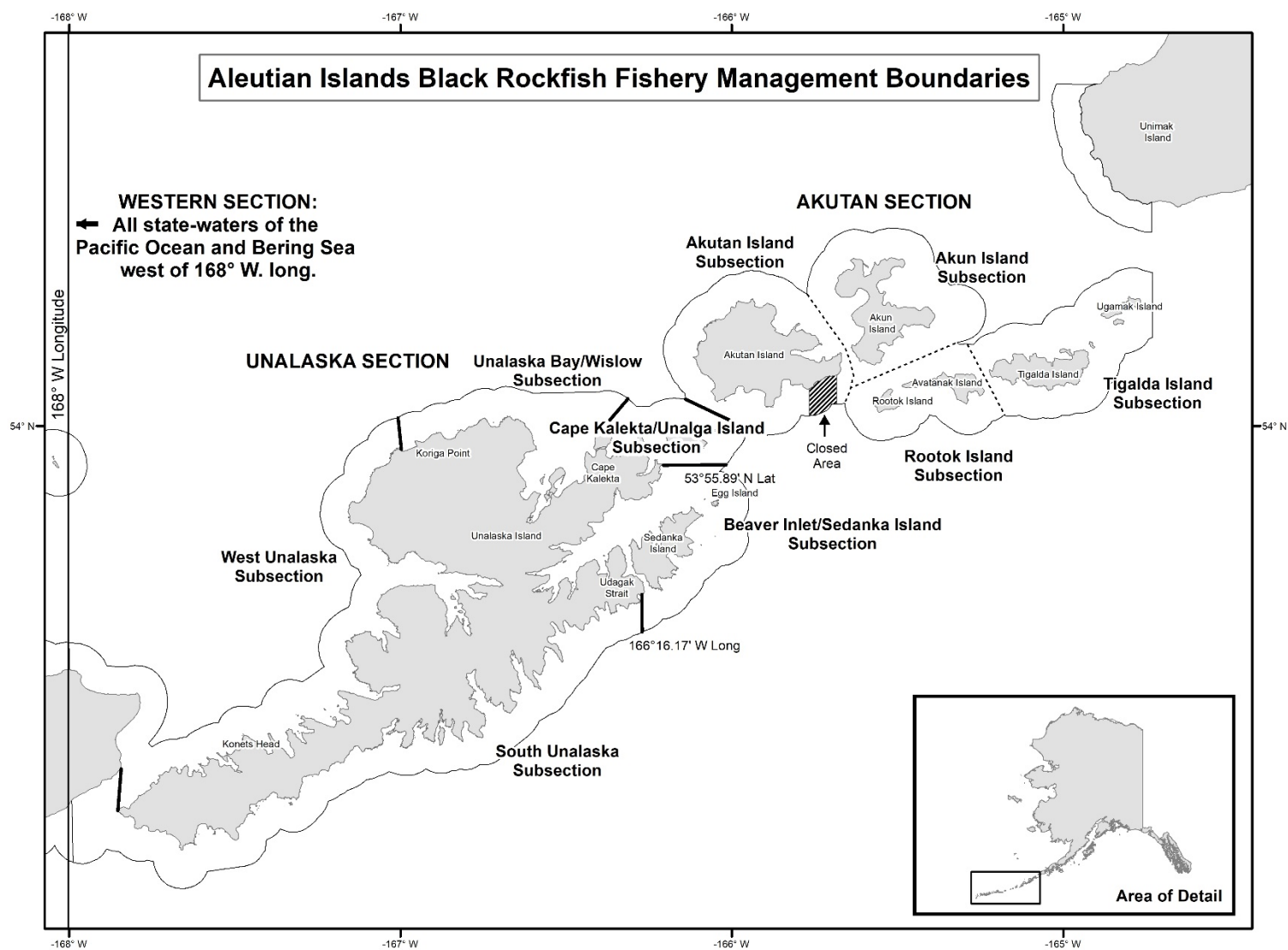


Figure 4.—Management boundaries for the Aleutian Islands state-waters black rockfish fishery.

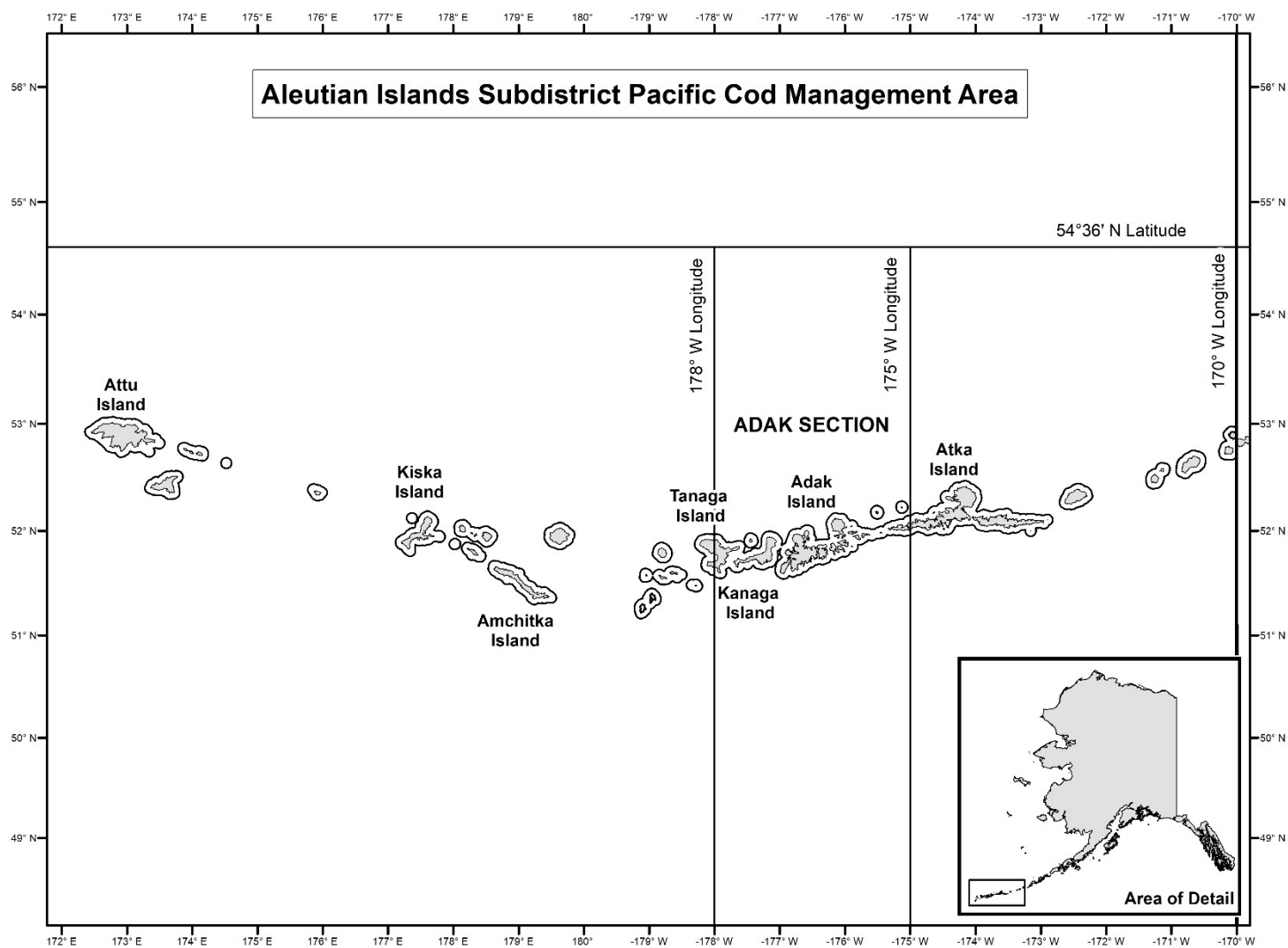


Figure 5.—Aleutian Islands Subdistrict state-waters Pacific cod fishery management area.

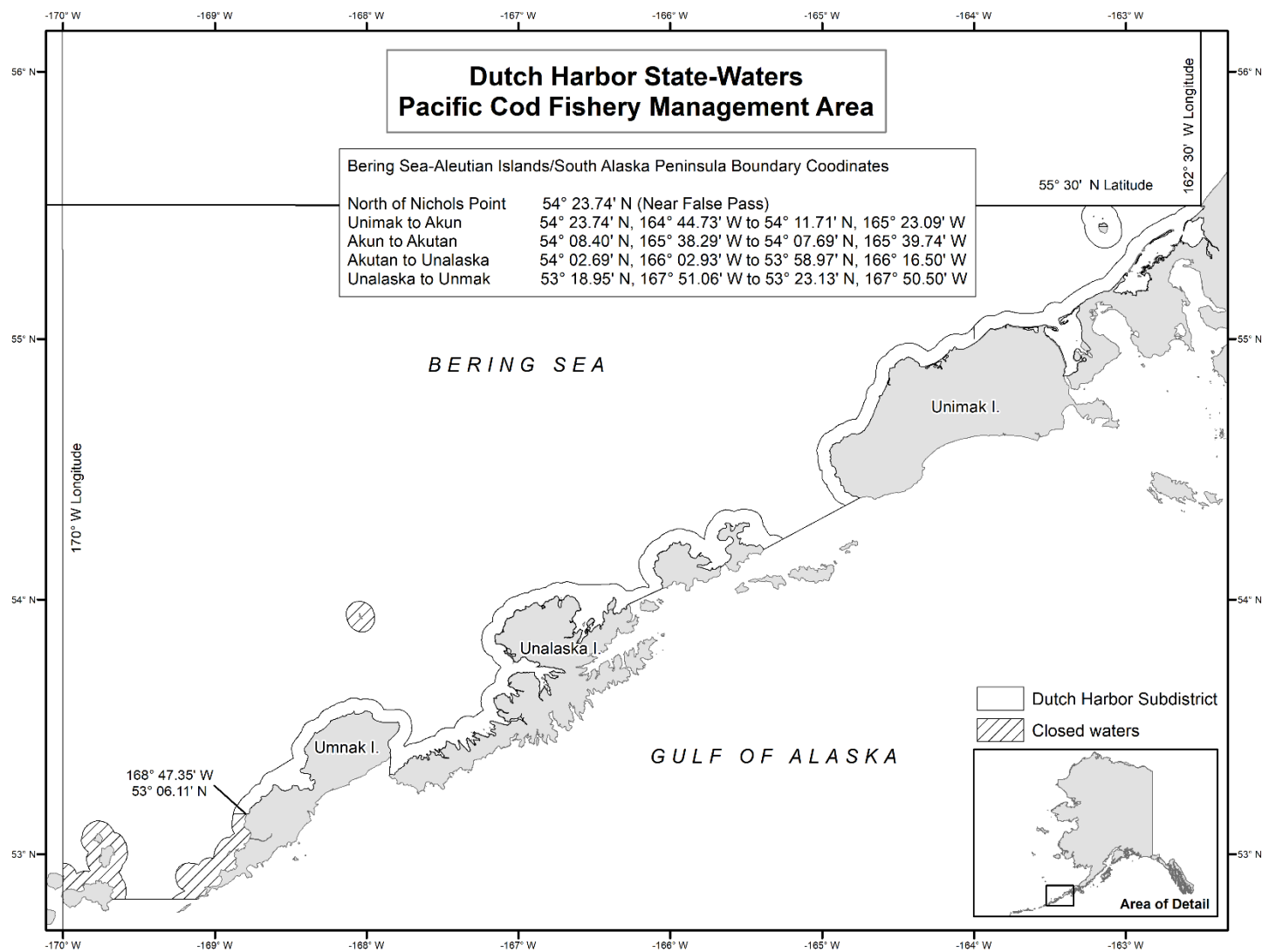


Figure 6.—Dutch Harbor Subdistrict state-waters Pacific cod fishery management area.

**APPENDIX A. ALEUTIAN ISLANDS SUBDISTRICT STATE-
WATERS PACIFIC COD FISHERY MANAGEMENT PLAN
REGULATIONS BY SEASON**

Appendix A.—Aleutian Islands Subdistrict state-waters Pacific cod fishery management plan regulatory modifications by season.

2006	<ul style="list-style-type: none"> • GHL established at 3% of federal BSAI ABC • No more than 70% of GHL may be available before or after June 10 • Season opened on or after March 15, at the conclusion of the parallel catcher-vessel trawl A season • Gear types: non-pelagic trawl, longline, jig, pot, and hand troll • Adak vessel length and gear restriction zones in place (trawl and longline gear could not be used from May 1–Sept. 15, unless operating in the 60 ft and under vessel size limitation zones near Adak Island) • Daily vessel harvest limit of 150,000 pounds vessel trip limit of 300,000 pounds • Mandatory Pacific cod retention, with proceeds from overage forfeited to state • Daily vessel reporting • Management plan sunset provision for Dec 31, 2007 • Closed areas: NMFS Steller sea lion areas, Aleutian Islands Habitat Conservation Area, coral gardens • Provision for allowing unharvested state-waters Pacific cod to be utilized by NMFS
2007	<ul style="list-style-type: none"> • Vessel length limits: pot 125 ft or less, trawl 100 ft or less, longline and jig 58 ft or less • Adak vessel length and gear restriction zones repealed from state-waters fishery management plan • Vessel trip limit reduced to 150,000 pounds • Prior to June 10 defined as A season and after June 10 as B season • Season opening and closure dates: state-waters A season opens 4 days after closure of federal catcher-vessel trawl A season, closure of state-waters season during federal BSAI catcher-vessel trawl B season on April 1, and closure of state-waters season during federal BSAI catcher-vessel pot season for vessels 60 feet or greater OAL on September 1 • Regulation allowing unharvested state-waters Pacific cod to be utilized by NMFS repealed • Management plan sunset provision repealed
2008	<ul style="list-style-type: none"> • No regulatory changes for the 2008 season
2009	<ul style="list-style-type: none"> • Vessel length for B season limited to less than 60 feet OAL for all gear types
2010	<ul style="list-style-type: none"> • Pot vessels less than 125 feet allowed to participate in the B season after August 1
2011	<ul style="list-style-type: none"> • No regulatory changes for the 2011 season
2012	<ul style="list-style-type: none"> • State-waters between 175°W long and 178°W long open January 1 and remain open until GHL is reached or June 9, whichever occurs first <ul style="list-style-type: none"> ◦ When only waters between 175°W long and 178°W long are open, vessels using non-pelagic trawl, pot, and jig gear are limited to 60 feet or less OAL and vessels using longline gear are limited to 58 feet or less OAL ◦ All state waters of the Aleutian Islands District west of 170°W long open 4 days after the parallel BSAI Pacific cod catcher-vessel trawl fishery closes, or on March 15, whichever occurs first • Steller sea lion closure for federal/parallel fishery modified <ul style="list-style-type: none"> ◦ With the exception of within 3 nautical miles of Kanaga Island/Ship Rock (51°46.70'N, 177°20.72'W), state-waters season continued to use those in place prior to 2011
2013	<ul style="list-style-type: none"> • No regulatory changes for the 2013 season

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2014	<ul style="list-style-type: none">• Clarification of rollover provisions between A and B season• Clarification of bycatch provisions• Clarification to registration requirements during concurrent state and federal Pacific cod seasons• Update of Steller sea lion and essential fish habitat closed area references
2015	<ul style="list-style-type: none">• No regulatory changes for the 2015 season
2016	<ul style="list-style-type: none">• Fishery changed to just one season• GHL established at 27% of federal AI ABC; step up provision based on achievement of GHL to max 39% of AI ABC; 15-million-pound cap on GHL
2017	<ul style="list-style-type: none">• No regulatory changes for the 2017 season
2018	<ul style="list-style-type: none">• No regulatory changes for the 2018 season
2019	<ul style="list-style-type: none">• GHL established at 31% of federal AI ABC; step up provision based on achievement of GHL to max 39% of AI ABC; step down provision based on inability to achieve GHL for two consecutive years to a minimum 15% of AI ABC; 15-million-pound cap on GHL

Note: Regulatory changes are shown according to the first season they went into effect.

**APPENDIX B. DUTCH HARBOR SUBDISTRICT STATE-
WATERS PACIFIC COD FISHERY MANAGEMENT PLAN
REGULATIONS BY SEASON**

Appendix B.–Dutch Harbor Subdistrict state-waters Pacific cod fishery management plan regulatory modifications by season.

2014
<ul style="list-style-type: none">• GHL established at 3% of federal BSAI ABC• Season opens at noon seven days following the closure of the federal BSAI hook-and –line/pot catcher vessel less than 60 feet in overall length sector• Gear types: pots; no more than 60 pots may be operated from a vessel• Vessel may not be longer than 58 feet in overall length• Mandatory Pacific cod retention• Daily vessel reporting• Closed areas: NMFS Steller sea lion areas, Aleutian Islands Habitat Conservation Area, coral gardens
2015
<ul style="list-style-type: none">• No regulatory changes for the 2015 season
2016
<ul style="list-style-type: none">• GHL increased to 6.4% of federal BS ABC• Expanded western fishing boundary to 170°W long
2017
<ul style="list-style-type: none">• No regulatory changes for the 2017 season
2018
<ul style="list-style-type: none">• No regulatory changes for the 2018 season
2019
<ul style="list-style-type: none">• Expanded eastern boundary to 162°30'W long• GHL established at 8% of the federal BS ABC; step up provision based on achievement of GHL to max 15% of BS ABC• Established nonexclusive season for mechanical jigging gear; GHL of 100,000 pounds; season opens May 1; no more than 5 jigging machines may be operated from a vessel

Note: Regulatory changes are shown according to the first season they went into effect.