

Fishery Management Report No. 11-66

Annual Management Report for the Bering Sea-Aleutian Islands Area State-Waters Groundfish Fisheries and Groundfish Harvest from Parallel Seasons in 2010

by

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December 2011

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	AAC	all standard mathematical signs, symbols and abbreviations		
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	<i>e</i>	
hectare	ha			catch per unit effort	CPUE	
kilogram	kg	at	@	coefficient of variation	CV	
kilometer	km			common test statistics	(F, t, χ^2 , etc.)	
liter	L	compass directions:		confidence interval	CI	
meter	m	east	E	correlation coefficient (multiple)	R	
milliliter	mL	north	N	correlation coefficient (simple)	r	
millimeter	mm	south	S	covariance	cov	
Weights and measures (English)		west	W	degree (angular)	°	
	cubic feet per second	ft³/s	copyright	degrees of freedom	df	
	foot	ft	corporate suffixes:	expected value	<i>E</i>	
	gallon	gal	Company	greater than	>	
	inch	in	Corporation	greater than or equal to	≥	
	mile	mi	Incorporated	harvest per unit effort	HPUE	
	nautical mile	nmi	Limited	less than	<	
	ounce	oz	District of Columbia	less than or equal to	≤	
	pound	lb	et alii (and others)	logarithm (natural)	ln	
	quart	qt	et cetera (and so forth)	logarithm (base 10)	log	
	yard	yd	exempli gratia	logarithm (specify base)	log ₂ etc.	
	Time and temperature		(for example)	e.g.	minute (angular)	'
		day	d	Federal Information Code	not significant	NS
		degrees Celsius	°C	FIC	null hypothesis	H ₀
		degrees Fahrenheit	°F	id est (that is)	percent	%
degrees kelvin		K	latitude or longitude	probability	P	
hour		h	monetary symbols (U.S.)	probability of a type I error (rejection of the null hypothesis when true)	α	
minute		min	months (tables and figures): first three letters	probability of a type II error (acceptance of the null hypothesis when false)	β	
second		s	registered trademark	second (angular)	"	
Physics and chemistry			trademark	Jan.,...,Dec	standard deviation	SD
		all atomic symbols		®	standard error	SE
		alternating current	AC	™	variance	
		ampere	A	United States (adjective)	population	Var
		calorie	cal	U.S.	sample	var
		direct current	DC	U.S.		
		hertz	Hz	United States of America (noun)		
	horsepower	hp	U.S.C.			
	hydrogen ion activity (negative log of)	pH	U.S. state	use two-letter abbreviations (e.g., AK, WA)		
	parts per million	ppm				
	parts per thousand	ppt, ‰				
	volts	V				
	watts	W				

FISHERY MANAGEMENT REPORT NO. 11-66

**ANNUAL MANAGEMENT REPORT FOR THE BERING SEA-ALEUTIAN
ISLANDS AREA STATE-WATERS GROUND FISH FISHERIES AND
GROUND FISH HARVEST FROM PARALLEL SEASONS IN 2010**

by

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December 2011

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:

Hartill, T. 2011. Annual management report for the Bering Sea-Aleutian Islands Area state-waters groundfish fisheries and groundfish harvest from parallel seasons in 2010. Alaska Department of Fish and Game, Fishery Management Report No. 11-66, Anchorage.

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ABSTRACT

Alaska Department of Fish and Game (ADF&G) manages state-waters and parallel commercial groundfish fisheries in the Bering Sea-Aleutian Islands (BSAI) Area. This report is a summary of harvest, effort, and management of groundfish from commercial state-waters and parallel fisheries in the BSAI Area. State-waters fisheries include sablefish *Anoplopoma fimbria* and black rockfish *Sebastes melanops* in the Aleutian Islands west of the longitude of Scotch Cap Light (166°44' W long), and Pacific cod *Gadus macrocephalus* in the Aleutian Islands west of 170° W long. Dark rockfish *Sebastes ciliatus* in state waters and the exclusive economic zone (EEZ) in the BSAI are managed by ADF&G as a bycatch-only fishery. For parallel fisheries in the BSAI, ADF&G adopts the seasons, bycatch limits, and allowable gear types in the adjacent EEZ which are promulgated by the National Marine Fisheries Service, except where state regulations take precedent.

Key words: Bering Sea, Aleutian Islands, BSAI, sablefish, *Anoplopoma fimbria*, black rockfish, *Sebastes melanops*, parallel season, Exclusive Economic Zone, EEZ, National Marine Fisheries Service, NMFS, Pacific cod, *Gadus macrocephalus*.

INTRODUCTION

Commercial groundfish harvests in the exclusive economic zone (EEZ) of the Bering Sea and Aleutian Islands (BSAI) are managed by National Marine Fisheries Service (NMFS) under guidelines developed by the North Pacific Fishery Management Council (NPFMC). Authorization for federal control of resources in the EEZ from 3–200 nmi (nautical miles) offshore comes from the Magnuson-Stevens Fishery Conservation and Management Act (MSFCA), originally passed by the United States Congress in 1976 (DOC 2007). Many of the species managed by NMFS also occur in state waters (0–3 nmi offshore); the State of Alaska has management authority for all groundfish resources within state waters.

Alaska Department of Fish and Game (ADF&G) issues an emergency order (EO) at the beginning of each year, creating parallel fishing seasons for groundfish fisheries that adopt NMFS rules inside state waters. Parallel fisheries mirror the seasons, gear, and bycatch limits of the federal season in the adjacent EEZ unless superseded by state regulation. During parallel fisheries, NMFS area closures, including Steller sea lion protection areas and the Aleutian Islands Habitat Conservation Areas, are in effect. The State of Alaska and NMFS regulations coordinate the closure of six coral garden areas (Figure 1) in the Aleutian Islands to commercial fishing.

ADF&G actively manages four groundfish fisheries that do not fall under parallel fishing rules in the BSAI Area (Figure 2; Appendix A). Those fisheries are Aleutian Islands state-waters sablefish *Anoplopoma fimbria*, Aleutian Islands state-waters black rockfish *Sebastes melanops*, Aleutian Islands state-waters Pacific cod *Gadus macrocephalus*, and dark rockfish *Sebastes ciliatus* in state waters and the EEZ in the BSAI and Gulf of Alaska (GOA). Dark rockfish are managed as a bycatch-only fishery in the BSAI.

In 2006 and 2007, NMFS issued Exempted Fishing Permits (EFP) for walleye pollock *Theragra chalcogramma* in the Aleutian Islands. EFPs allowed vessels to harvest walleye pollock inside Steller sea lion critical habitat areas to gain resource abundance information. In response, the State of Alaska created a management plan for an Aleutian Islands walleye pollock fishery. As part of the management plan, ADF&G issued commissioner's permits allowing vessels to harvest walleye pollock inside of state waters in accordance with terms of the EFP fishery. However, in November of 2007 the Alaska Board of Fisheries (BOF) repealed the walleye pollock fishery management plan due to NMFS concerns regarding the apparent low abundance of pollock in the area and the potential adverse effects on Steller sea lion populations.

In March 2000, the BOF established Adak vessel length and gear restriction zones for vessels targeting Pacific cod and rockfish in state waters of the central Aleutian Islands between 175°30' W and 177° W long. This report includes a summary of those regulations, harvest and effort.

Groundfish harvests in this report are based on the ADF&G fish ticket database and the fish ticket software program *Neptune* as of June 2011, and reflect the most recent additions and corrections to that database.

ALEUTIAN ISLANDS STATE-WATERS SABLEFISH FISHERY

HISTORICAL BACKGROUND

In 1995, NMFS implemented an Individual Fishing Quota (IFQ) program for sablefish in Alaska. The Alaska Department of Law advised that harvest of sablefish in state waters of Alaska could not be limited to only IFQ holders. State-waters sablefish fisheries, open to fishermen with a valid Commercial Fisheries Entry Commission (CFEC) permit card for sablefish, were established in areas where historical harvest was of sufficient quantity to allow for a manageable fishery. The Aleutian Islands state-waters sablefish fishery was established to include all state waters of the Aleutian Islands 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 sablefish season was initially established by the BOF concurrent with the federal IFQ season, from March 15 to November 15. The season opening date was changed in 2001 by the BOF to May 15. A later season opening date was intended to provide small vessel operators an opportunity to take advantage of potentially better weather conditions, when most harvest historically occurred.

The Aleutian Islands state-waters sablefish GHL is calculated at 5 percent of the combined federal Bering Sea and Aleutian Islands total allowable catches (TAC). ADF&G does not conduct stock assessments of sablefish in the Aleutian Islands; instead ADF&G relies primarily on NMFS stock assessments to set the GHL. Adjustments to the calculated GHL have been made in some years based on prior state-waters seasons fishery performance or to compensate for harvest occurring after the previous year's fishery closure. From 1995 to 2010 NMFS combined sablefish TACs for the Bering Sea and Aleutian Islands areas have ranged from 5.1 million pounds¹ to 13.2 million pounds (Table 1). From 1995 to 2010 Aleutian Islands state-waters sablefish GHLs have ranged from 250,000 pounds to 660,000 pounds

State-waters sablefish harvest ranged from a low of 157,250 pounds in 2008 to a high of 477,970 pounds in 2002 (Table 1). The GHL has not been fully harvested since 2002. Annual harvests decreased since 2003 and currently range from 150,000 to 300,000 pounds, although GHLs remained relatively high (Table 1). Reasons for the decline in harvest since 2003 are unclear; however, one explanation for the decline in harvests could be related to expansion of the Vessel Monitoring System (VMS) by NMFS in 2002. VMS was originally required for vessels targeting Atka mackerel in the Aleutian Islands, but was expanded in 2002 to include vessels with a federal fishing permit for Pacific cod or walleye pollock. Many vessels that fished for Pacific cod

¹ All weights refer to whole pounds.

in the Aleutian Islands also participated in the state-waters sablefish fishery, thereby requiring those vessels to have VMS. Prior to implementation of VMS, vessels fishing for sablefish in the state-waters fishery without Individual Fishing Quota (IFQ) could have targeted sablefish in federal waters and reported harvest came from state waters. However, once VMS was implemented, vessels fishing for sablefish in state-waters without IFQ were monitored by VMS, which would have discouraged misreporting.

Fishery values have ranged from a low of \$268,000 in 2005 to \$915,000 in 2003. The average price per pound was lowest in 1998 at \$2.18 per pound, however has steadily increased every year since 2004; the high being \$5.99 per pound in 2010 (Table 2).

From 1995 to 2000, all state groundfish gear types could harvest sablefish in state waters. In 2001, longline, pot, jig, and hand troll became the only legal gear types. Pots may be longlined west of 170° W long only. Since 1995, vessels using longline gear account for an average of 90 percent of the harvest. From 1995-2000, very little harvest was taken by vessels using pot gear. However, since 2001 harvest by pot gear has on average accounted for about 20–30 percent of the total harvest. While directed sablefish harvest with trawl gear is illegal, trawl vessels may retain sablefish as bycatch. Since 1995, sablefish harvest by trawl gear has varied widely, and usually accounts for less than 1 percent of the harvest.

Fishermen are required to register for the state-waters fishery if they harvest sablefish within state waters of the Aleutian Islands, even if they also fish IFQ or Community Development Quota (CDQ) sablefish in federal waters. Harvest taken by IFQ holders has ranged from a low of 5 percent in 2002 to a high of 94 percent in 2008, although since the fishery began, IFQ holders have taken nearly 50 percent of the total sablefish harvested.

To verify harvest taken from state waters, logbooks are required. The statistical harvest reporting area surrounding Bobrof Island in the central Aleutian Islands contained both state and federal waters until 2001. Sablefish harvest from this area was considered state-waters harvest unless verified as federal waters by interview of the vessel captain or by logbook examination. Statistical areas were revised and since 2002, statistical areas surrounding the island are state waters.

2010 FISHERY

The 2010 Aleutian Islands state-waters sablefish GHL was 535,000 pounds, a decrease of about 2 percent from the 2009 GHL. The 2010 harvest of sablefish in state waters was 209,505 pounds (Table 1). On May 15, the fishery opened and landings began the week after the opening. Harvest peaked in July, though was variable throughout the season. Fleet size ranged from two to nine vessels, with the greatest number of vessels participating in August and November. The fishery closed by regulation November 15, the tenth overall and eighth consecutive year that the fishery closed by regulation (Table 2).

During the 2010 fishery, 28 vessels (26 catcher vessels and 2 catcher processors) harvested state-waters sablefish. Consistent with the historical trend of the fishery, in 2010 the majority of harvest was taken by longline gear (approximately 97 percent; Table 3). Three vessels registered to fish state waters exclusively; these non-IFQ vessels made 6 landings of state-waters sablefish, delivering 34,160 pounds, or 16 percent of the total harvest (Table 4). Twenty-six IFQ vessels made 61 landings totaling 175,345 pounds, or 84 percent of the total harvest.

The average exvessel price for the 2010 fishery was \$5.99 per pound delivered weight (Table 2). The estimated fishery value was approximately \$767,000.

STATUS OF STOCK

NMFS conducted a cooperative annual longline survey with Japan from 1978 until 1994; the survey initially covered only the Gulf of Alaska but was expanded to cover portions of the Aleutian Islands in 1980. In 1987, NMFS began an independent annual longline survey in the Gulf of Alaska and has included biennial sampling of the Aleutian Islands since 1996.

NMFS estimated the age 4+ sablefish biomass remained relatively stable from 2005 to 2007, however, biomass has recently declined and NMFS expects the decline to continue through 2013 due to a lack of strong year classes contributing to recruitment (Hanselman et al. 2009). There is little evidence of large incoming recruit classes; however, if the stock receives average recruitment, the spawning biomass is expected to increase after 2013. In the federal stock assessment process, BSAI sablefish are not considered overfished nor does the stock appear to be approaching overfished status. The Aleutian Islands state-waters sablefish GHF is not deducted by NMFS from the allowable biological catch (ABC) when setting the TAC. However, harvest from the Aleutian Islands state-waters fishery makes up less than 1 percent of the statewide sablefish harvest, a negligible amount given the precision of sablefish abundance estimates.

ALEUTIAN ISLANDS BLACK ROCKFISH FISHERY

HISTORICAL BACKGROUND

ADF&G established a directed fishery for nearshore pelagic shelf rockfish in state waters of the eastern Aleutian Islands in December 1994. The State of Alaska's pelagic shelf rockfish includes black *Sebastes melanops*, blue *S. mystinus*, widow *S. entomelas*, yellowtail *S. flavidus*, dusky *S. variabilis*, and dark *S. ciliatus*² rockfish. In the eastern Aleutian Islands, black, dusky, and dark rockfish are the only pelagic shelf rockfish species known to be present.

The Aleutian Islands pelagic shelf rockfish fishery was established in response to local public inquiries requesting a state-managed black and other pelagic shelf rockfish fishery. Black rockfish were formerly included in the federal "other rockfish" assemblage. This assemblage included all rockfish species in the Bering Sea and Aleutian Islands except shortraker *S. borealis*, roughey *S. aleutianus*, sharpchin *S. zacentrus*, northern *S. polyspinis* rockfish, and Pacific ocean perch *S. alutus*. In 1994, "other rockfish" under federal management was a bycatch-only fishery.

ADF&G established two areas of harvest in the eastern Aleutian Islands: the state waters around Unalaska, Sedanka, and Unalga islands, and the state waters around Akutan and Akun islands (Figure 4). A GHF of 100,000 pounds was established, with 50,000 pounds for each area (Tables 5 and 6). This harvest level was deemed sufficient to provide an economically viable fishery, yet conservative enough to prevent overharvest. A conservative management policy for these slow-growing and long-lived species was considered necessary to prevent overexploitation.

Handlines and mechanical jigging machines are the only legal gear types. These gear types have a low harvest potential compared to most gear types, reducing incidental harvest of other species. These gear types also serve to slow the pace of the directed fishery.

² In March of 2008, the BOF modified the definition of pelagic shelf rockfish by splitting out the species commonly known as dusky *S. ciliatus* into two groups; dusky *S. variabilis* and dark *S. ciliatus*.

In 1998, ADF&G assumed management responsibility for black and blue rockfish in waters of the EEZ in the Gulf of Alaska as the NPFMC passed Amendment 46 to the Groundfish Fishery Management Plan, delegating management to the State of Alaska. Black and blue rockfish are shallow water, nearshore pelagic shelf species that are not well assessed by federal surveys and management practices. This action was limited to the harvest of black rockfish in the Aleutian Islands since blue rockfish have a limited distribution in Alaska and do not occur in the Aleutian Islands. NMFS retained management authority over other species of pelagic shelf rockfish in federal waters.

In 1998 the Aleutian Islands black rockfish area was expanded to include all state waters of the Aleutian Islands south of Cape Sarichef and west of Scotch Cap Light, and all federal waters of the Pacific Ocean between Scotch Cap Light and 170° W long (Figure 5). The public expressed interest in a black rockfish fishery in the vicinity of Atka Island, and GHLS were established which provided 40,000 pounds in each of the Akutan and Unalaska sections, and 20,000 pounds for the area west of 168° W long.

In 1999, ADF&G reduced the Akutan and Unalaska sections GHLS from 40,000 pounds to 35,000 pounds (Table 6). This reduction was due to concern of potential localized depletion of the black rockfish stock around Akutan Island and the eastern part of Unalaska Island. The GHL for the Western Section remained at 20,000 pounds. Since 1995, approximately 60 percent of the black rockfish harvest was from two statistical areas, one just south of Akutan Island and the other off the outer coast of Sedanka Island. In the Akutan Section between 1997 and 1999, 61 percent of the harvest was from the area just south of Akutan Island, most was from waters between Talus Point and Green Bight. In 2000, this area was closed to the retention of black rockfish to prevent localized depletion in this heavily fished area. In 2000, the Akutan and Unalaska sections were divided into subsections, each with a separate GHL to disperse fishing effort (Table 7). These GHLS were based on potential black rockfish habitat as determined by the amount of coastline.

Most of the black rockfish harvest has come from the Akutan Section, accounting for 64 percent of the overall harvest in the last 15 years. The Western Section accounts for less than 1 percent of black rockfish harvest in the last 15 years, all of which was harvested incidentally by trawl and longline gear. Participation in the fishery has fluctuated widely throughout the years with a maximum of 15 vessels in 2004. In recent years, fishermen have reported difficulties in selling black rockfish because many processors are not willing to purchase fish in small quantities. Participants from past years also cited difficulty distinguishing black rockfish from dark and dusky rockfish which have a lower commercial value.

2010 FISHERY

The 2010 GHL was 90,000 pounds; 35,000 pounds was available in both the Akutan and Unalaska sections and 20,000 pounds was available in the Western Section (Table 7). The waters from the south end of Green Bight to Talus Point remained closed for the 2010 fishery.

No vessels registered for the 2010 black rockfish fishery. Fishermen may retain up to 5 percent black rockfish as bycatch to other directed fisheries. Three vessels retained black rockfish as bycatch in state waters and one vessel from federal waters within the Aleutian Islands black rockfish management area.

STATUS OF STOCK

The black rockfish stock in the Aleutian Islands is managed conservatively because ADF&G does not conduct surveys and because the species is long-lived and slow-growing. ADF&G established a dockside sampling program for black rockfish in 1999. Information obtained through this program provides ADF&G with basic biological data that may assist in future management decisions and stock status determination. Average length of black rockfish and average age through otolith analysis can be determined by the data collected through the sampling program.

Historically, dockside samplers have obtained black rockfish lengths and otoliths from commercial fisheries, sport fishermen, and independently fishing from docks as well as from chartered survey vessels in small areas in the Aleutian Islands. Sampling took place in 1997, 1999, 2000, 2002, and 2004 through 2006 (Table 8). No sampling has occurred since 2007 due to low fishing effort, and since 2001, no commercial deliveries of black rockfish have occurred in Dutch Harbor. No dockside samplers have been sent to other ports because deliveries have been spread throughout the year and were unpredictable.

In 2004 and 2005, ADF&G conducted several surveys of black rockfish as a continuation of previous Nearshore Marine Fisheries Research grants which were intended to increase knowledge of black rockfish stocks in the western Gulf of Alaska including the Chignik area, Shumagin Islands, and eastern Aleutian Islands. Chartered vessels were used to locate areas of black rockfish concentrations, gather specimens for determination of growth parameters, and continue mapping of prime habitat areas. Hydroacoustics were used to document the size and location of specific rockfish schools. Emphasis was placed on gathering information on black rockfish younger than five years and also comparing fish density in a closed area near Akutan Island in the eastern Aleutian Islands with other areas which are open to fishing. Density estimates were made in 2005 from the Akutan study and compared to areas around the Shumagin Islands and Chignik. The densities in the areas around Akutan were comparable to or slightly higher than the Shumagin Islands and Chignik areas (Unpublished 2007 National Oceanic and Atmospheric Administration Final Comprehensive Performance Report, Black Rockfish Surveys in the Western Gulf of Alaska, Dan Urban, ADF&G, Kodiak, AK).

In 2006, samples were obtained during an ADF&G age-structure study conducted in Unalaska Bay. Black rockfish were found in small numbers throughout the bay. Of the 338 fish sampled only 27 were black rockfish and the remaining 311 were dark rockfish.

ALEUTIAN ISLANDS DARK ROCKFISH FISHERY

HISTORICAL BACKGROUND

In 2009, amendment 73 was added to the federal fishery management plan (FMP) for BSAI groundfish and amendment 77 to the federal FMP for GOA groundfish (NOAA 2008). These amendments removed dark rockfish from the federal FMP's, thereby extending the State of Alaska's authority of dark rockfish into the EEZ. Dark rockfish are a nearshore, shallow water species that are rarely caught in federal waters. Dark rockfish were part of the "other rockfish" complex in the BSAI; it was estimated that dark rockfish made up only a small percentage of the total other rockfish biomass. Separating dark rockfish from the other rockfish complex and shifting management authority to the State of Alaska allows for regionally-based, responsive management. This action was taken to reduce the chance of localized depletion.

In the BSAI there is no directed dark rockfish fishery. Bycatch of dark rockfish is limited to 5 percent of the directed fishery harvest. In 2010, 103,606 pounds of dark rockfish were harvested. Of that only 35 pounds were retained, all of which was either processed as fish meal or discarded at the dock. The remaining 103,571 pounds were discarded at sea.

ALEUTIAN ISLANDS DISTRICT STATE-WATERS PACIFIC COD FISHERY

HISTORICAL BACKGROUND

In February 2006, the BOF approved regulations for a nonexclusive registration area state-waters Pacific cod fishery in the Aleutian Islands District west of 170° W long (Figure 6). The Aleutian Islands District Pacific Cod Management Plan 5 AAC 28.647, was adopted by emergency regulation to provide the community of Adak with economic opportunities. The management plan was to sunset on December 31, 2007.

The fishery GHL is set in regulation at 3 percent of the federal BSAI TAC with a maximum of 70 percent of the GHL available before June 10. In the initial fishery management plan the fishery opened on or after March 15, at the conclusion of the initial parallel catcher-vessel trawl sector for Pacific cod in the federal BSAI Area. Non-pelagic trawl, longline, jig, and pot gear were all permissible in the 2006 fishery with no vessel size limits. Trawl and longline gear could not be used from May 1 through September 15, unless operating in the Adak vessel length and gear restriction zones. Vessels were limited to 150,000 pounds per day and 300,000 pounds per trip. All Pacific cod caught must be retained and any harvest exceeding the daily or trip limit must be immediately reported to ADF&G, with proceeds from the overage forfeited to the state. Area closures and restrictions were set to match the parallel Pacific cod fishery. NMFS Steller sea lion closures, Aleutian Islands Habitat Conservation Area closures, and coral garden closures in effect during the parallel Pacific cod season remain closed during the state-waters Pacific cod fishery. Adak vessel length and gear restriction zones applied only during the 2006 state-waters fishery.

In October 2006, the BOF made several changes to the Aleutian Islands Pacific cod management plan. The management plan defined the portion of the GHL available before June 10 as the A season, and the portion available beginning June 10 as the B season. The A season opening date was changed to four days after the closure of the initial parallel catcher-vessel trawl fishery for Pacific cod in the federal BSAI Area, repealing the fixed opening date and allowing a window between the federal and state fisheries. Vessel size limits of 125' or less overall length (OAL) for pot vessels, 100' or less OAL for trawl vessels, and 58' or less OAL for longline and jig vessels were adopted. In addition, the trip limit was lowered to 150,000 pounds. The vessel size limits and the smaller trip limit were adopted in part as an effort to slow the pace of the fishery during the A season. The BOF repealed the regulations applying to the Adak vessel length and gear restriction zones for the duration of the state-waters fishery. The regulation that allowed unharvested state-waters Pacific cod to be utilized by NMFS was repealed allowing the fishery to reopen if a harvestable surplus remains. The new regulations took effect beginning in the 2007 fishery.

No changes were made to the regulations for the 2008 season. In the fall of 2008, the BOF limited vessels participating in the 2009 B season to less than 60 feet in length for all gear types. However, the following year that was modified to allow pot vessels less than 125 feet to participate in the 2010 B season after August 1.

2010 FISHERY

The 2010 state-waters Pacific cod GHL for the Aleutian Islands west of 170° W long was 11,508,012 pounds (Table 9). The GHL was apportioned so that a maximum of 70 percent (8,055,608 pounds) was available for the A season, and 30 percent (3,452,404 pounds) for the B season.

The A season opened March 16 and closed June 4 (Table 10). During that time nearly 99 percent of the GHL (7,959,514 pounds) was harvested (Table 9). Due to the small amount of GHL remaining the A season remained closed until the opening of the B season. At the conclusion of the A season, 96,094 pounds of the GHL remained and was rolled over to the B season. A total of 16 vessels participated in the A season, including 13 trawl catcher vessels and 3 pot catcher processors. In addition, two shorebased processors and two floating processors participated. During the season, 84 deliveries were made, with the vast majority made by trawl vessels (Table 11). The average exvessel price for the A season was \$0.25 per pound (Table 10) and the estimated fishery value for the A season based on landed pounds was approximately \$1.6 million.

The state-waters Pacific cod B season opened by regulation on June 10 with a GHL of 3,548,498 pounds (3,452,404 pounds plus 96,094 pounds rolled over from the A season), and closed by regulation on August 31 (Table 10). Harvest from the B season is confidential due to limited participation. By regulation, if the B season GHL has not been harvested by September 1, when the federal catcher-vessel pot fishery opens, the state-waters B season will close and a parallel season will immediately reopen in state waters. In 2010 the GHL was not fully harvested by September 1, therefore the season closed and a parallel season was opened. Due to an adequate amount of B season GHL remaining at the conclusion of the federal catcher vessel pot fishery on November 15, the state-waters B season was immediately reopened, and the B season remained open until December 31, when it closed by regulation. Harvest from the B season is confidential due to a limited amount of participation.

ADAK VESSEL LENGTH AND GEAR RESTRICTION ZONES

In March 2000 the BOF established gear and vessel length restrictions for Pacific cod and rockfish fisheries in the central Aleutian Islands. Two zones were defined, each with different restrictions (Figure 7). At the time these gear and vessel length restrictions were enacted, the Pacific cod fishery in the Aleutian Islands District was a parallel fishery only; there was no state-waters fishery. Currently, the two zones are only in effect during a parallel fishery. Since 2007, regulations governing the state-waters Pacific cod fishery supersede the gear and vessel length restrictions.

Zone 1 includes state waters between Adak, Great Sitkin, and Tagalak islands, and waters adjacent to Adak Island in the Bay of Islands and between Boot Point and Cape Kagigikak on Adak Island. In this zone only vessels 60 feet or less OAL may be used year-round to take Pacific cod or rockfish. Legal gear types for targeting Pacific cod and rockfish within this area are pot, longline, mechanical jig, and hand troll, except when targeting black rockfish for which jig and handline are the only legal gear types. In 2005 trawl also became a legal gear type when targeting Pacific cod in Zone 1.

Zone 2 encompasses all state waters between 175°30' W long and 177° W long exclusive of all waters defined in Zone 1. In this zone, only vessels 60 feet or less OAL may be used to take Pacific cod from May 1 to September 15. Legal gear types within this area are pot, longline, mechanical jig, and hand troll.

Within the two zones there are no restrictions on the amount of hand troll, longline, or pot gear. A maximum of five mechanical jig machines may be operated from a vessel. The vessel length and gear restrictions do not apply to fisheries for other species in these two zones.

When the vessel size and gear restrictions around Adak were established in 2000, interest in the area was high. However, ADF&G statistical areas did not provide adequate detail to determine the exact participation and harvest in the fisheries affected by these regulations. New statistical areas became valid January 2001 allowing ADF&G to better track harvest in these zones.

Since the creation of the Adak Vessel Length and Gear Restriction Zone, the majority of the Pacific cod harvest has occurred from January 1 through May 14, when the restrictions of Zone 2 are not in effect. Approximately 90 percent of the 37 million pounds of Pacific cod harvested in Zone 1 and 2 from 2001 to 2009 was taken by trawl gear (Table 12). Longline fishermen harvested nearly 7 percent of the overall harvest of Pacific cod in both zones during 2001–2009.

The majority of the rockfish harvested in the area between 2001 and 2009 was harvested by trawl gear, predominantly in Zone 2 during the time of year the vessel length and gear restrictions are not in effect. All trawl harvest of rockfish was incidental to other fisheries. The majority of the remaining rockfish were also incidentally harvested during longline fisheries.

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

Each year, by emergency order, ADF&G establishes parallel seasons that mirror federal fisheries managed by NMFS. Emergency orders may specify area closures, gear restrictions, and enforcement requirements, as the commissioner determines reasonably necessary to correspond with federal fishery management measures. ADF&G generally mirrors the seasons, bycatch, and legal gear types of the adjacent federal waters, unless superseded by state regulations. Federal seabird avoidance requirements are recognized in parallel seasons. All vessels participating in parallel Pacific cod, walleye pollock, and Atka mackerel fisheries are required to use a Vessel Monitoring System (VMS), except for vessels using jig or hand troll gear. State of Alaska non-pelagic trawl gear closure areas are in effect during parallel seasons (5 AAC 39.164 (b)(4)-(11)). Gear and vessel lengths are limited in the Adak Vessel Length and Gear Restriction Zones when fishing for rockfish or Pacific cod. The BOF passed regulation that went into effect in June 2009 prohibiting vessels over 58 feet OAL from using longline gear to target Pacific cod in the BSAI.

Parallel fisheries occur for Pacific cod, walleye pollock, Atka mackerel *Pleurogrammus monopterygius*, Pacific ocean perch, shortraker and rougheye rockfish, sharpchin and northern rockfish, Greenland turbot *Reinhardtius hippoglossoides*, arrowtooth flounder *Atheresthes stomias*, rock sole *Lepidopsetta bilineatus*, yellowfin sole *Pleuronectes asper*, flathead sole *Hippoglossoides elassodon*, an aggregated rockfish species complex, and an aggregated flatfish species complex.

When the state-waters fishery is closed, Pacific cod is managed as parallel a fishery. Pacific cod retained during parallel fisheries in the BSAI Area during 2010 was approximately 11 million

pounds taken by 80 vessels, with 45 percent of the harvest taken by pot vessels (Table 13). The overall number of vessels and deliveries has decreased since 1995, due in part to Steller sea lion protection measures enacted in the Aleutian Islands. The inception of the state-waters Pacific cod fishery in 2006 may also have lead to a decreased parallel fishery harvest, due to the parallel fishery being closed during the state-waters fishery. The 2010 harvest of Pacific cod from parallel fisheries was almost entirely from the Aleutian Islands District of the BSAI Area.

Walleye pollock harvest from state waters of the BSAI Area in 2010 was approximately 9.3 million pounds and was taken by 28 vessels (Table 13). Walleye pollock was harvested primarily in the directed fishery.

Harvest of Atka mackerel in state waters of the BSAI has varied since 1995, irrespective of the number of participating vessels, ranging from 524 pounds in 2009 to 1.3 million pounds in 2008 (Table 13). All harvest of Atka mackerel occurs in the Aleutian Islands District of the BSAI Area.

There are 34 species of rockfish in Alaskan waters, 13 of which occur in the BSAI Area (Kramer and O'Connell 1988). For management purposes these species are divided into groups. Pacific ocean perch is managed separately from other groups. Shortraker and rougheye rockfish form another group, and sharpchin and northern rockfish form a third group. All remaining rockfish species comprise the "other rockfish" group. Other rockfish harvested from 1995 to 2010 have included dusky, dark, thornyhead *Sebastolobus alascanus*, yelloweye *Sebastes ruberrimus*, harlequin *S. variegatus*, silvergray *S. brevispinis*, redbanded *S. babcocki*, darkblotched *S. crameri*, and redstripe *S. proriger*. ADF&G fish ticket database also contains records of harvest for blackgill *S. melanostomus*, canary *S. pinniger*, China *S. nebulosus*, copper *S. caurinus*, greenstripe *S. elongatus*, rosethorn *S. helvomaculatus*, tiger rockfish *S. nigrocinctus*, and yellowmouth *S. reedi*, although their occurrence in the BSAI Area is questionable and could have been misidentified at the dock. Thornyhead rockfish accounts for 84 percent of the other rockfish harvest from 1995 through 2010. Dark rockfish was removed from the other rockfish group in 2009, when management authority of dark rockfish in the EEZ was delegated to the State of Alaska. Harvest of dark rockfish for 2010 is reported in a separate section of this report.

Rockfish harvest in parallel fisheries varies depending on year and group. Shortraker and rougheye rockfish harvest is generally about 5,000 pounds per year, although the 2010 harvest of 11,847 pounds was the highest since 1995 (Table 13). Since 1995 harvest of sharpchin and northern rockfish has fluctuated from a low of zero pounds to a high of 78,584 pounds. However, in most years, more sharpchin and northern rockfish are discarded at sea than retained (Table 13). In 2010, 9,098 pounds of sharpchin and northern rockfish were retained, in addition 9,080 pounds were harvested and discarded. Of the groups of rockfish, the 'other rockfish' group accounts for the most consistent participation, landings and harvest. Since 1995 harvest has ranged from 18,326 pounds to 57,063 pounds. In 2010, 29,408 pounds were harvested and retained, in addition 2,065 pounds were harvested and discarded at sea. Pacific ocean perch as well as sharpchin and northern rockfish are harvested primarily using trawl gear. Shortraker and rougheye as well as 'other rockfish' are primarily harvested using longline gear. Nearly all rockfish harvested since 1995 has been caught in the Aleutian Islands District.

There are 30 species of flatfish in Alaskan waters, 26 of which occur in the BSAI Area (Kramer et al. 1995). For management purposes, NMFS splits those species into five fisheries, each with their own TAC. There are fisheries for Greenland turbot, yellowfin sole, rock sole, arrowtooth

flounder, and flathead sole. All remaining flatfish species are harvested in a fishery for the species complex called “other flatfish.”

Harvest of Greenland turbot has varied widely, from around 7,000 pounds in 2005, 2008, and 2009, to 339,336 pounds in 1998 (Table 13). Most Greenland turbot caught is retained, with an average of 3 percent discarded at sea from 1995 through 2009. Harvest of Greenland turbot from the BSAI parallel fishery comes nearly entirely from the Aleutian Islands District. The harvest from state waters in the 2010 season (7,200 pounds) was one of the lowest since 1995, yet similar to harvests occurred in 2008 and 2009.

Parallel fishery harvest of arrowtooth flounder in 2010 was 93,884 pounds and has ranged from a low of 2,121 pounds in 1995 to a high of 221,555 pounds in 1999 (Table 13). Harvest from Aleutian Islands District makes up 97 percent of the annual arrowtooth flounder harvest.

Rock sole, yellowfin sole, and flathead sole harvest in BSAI parallel fisheries has averaged less than 16,000 pounds per year since 1995 (Table 13). However in 2010, harvest of rock sole and flathead sole was higher than any year dating back to 1995, and yellowfin sole harvest of 17,738 pounds was the second highest since 1995. Nearly 75 percent of the yellowfin, rock, and flathead sole harvest has come from the Aleutian Islands District.

“Other flatfish” harvest has included: dover sole, rex sole *Errex zachirus*, butter sole *Isopsetta isolepsis*, English sole *Parophrys vetulus*, starry flounder *Platichthys stellatus*, sand sole, and Alaska plaice *Pleuronectes quadrituberculatus*. In most years, rex sole accounts for the majority of the “other flatfish” harvest, followed by starry flounder, Alaska plaice, and unidentified. Harvest of fish in the “other flatfish” group has varied widely from 1995 through 2010, with only 163 pounds harvested in 2001 and a high of 96,785 pounds harvested in 2010 (Table 13).

ACKNOWLEDGMENTS

Many thanks go to Janis Shaishnikoff for performing data queries for completion of this report.

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TABLES AND FIGURES

Table 1.—Aleutian Islands state-waters sablefish fishery guideline harvest levels (GHLs) compared to the federal total allowable catch (TAC), state-waters harvest, and number of vessels and deliveries, 1995–2010.

Year	Federal TAC ^{a,b}	GHL as Percent of Federal TAC	State-waters GHL ^a	Harvest ^a	Number of	
					Vessels	Deliveries
1995	8,377,556	4.8%	400,000	269,220	35	59
1996	5,070,626	5.5%	280,000	401,463	35	67
1997	5,070,626	5.3%	270,000	317,562	37	75
1998	5,908,382	4.6%	270,000	254,578	38	101
1999	5,996,566	4.2%	250,000	279,778	24	38
2000	8,598,018	4.7%	400,000	446,560	28	59
2001	8,950,757	4.7%	425,000	464,241	31	99
2002	9,873,920	4.7%	460,000	477,970	24	59
2003	13,227,720	4.8%	630,000	473,426	39	102
2004	13,227,720	5.0%	660,000	323,969	26	67
2005	11,155,377	4.9%	550,000	203,498	25	67
2006	12,830,888	5.0%	640,000	177,935	16	54
2007	12,764,750	5.0%	638,000	272,556	26	62
2008	11,684,380	5.0%	584,000	157,250	24	56
2009	10,846,632	5.0%	542,000	279,795	26	70
2010	10,714,356	5.0%	535,000	209,505	28	67

^a In whole pounds.

^b Total allowable catch for the federal Bering Sea-Aleutian Islands Area.

Table 2.—Aleutian Islands state-waters sablefish fishery economic performance, season length, and season dates, 1995–2010.

Year	Fishery Value	Average Price per Pound ^a	Season Length ^b	Season Dates	
				Opened	Closed
1995	\$502,000	\$2.96	245	15-March	15-Nov
1996	\$642,000	\$2.54	133	15-March	26-Jul
1997	\$710,000	\$3.55	127	15-March	20-Jul
1998	\$350,000	\$2.18	245	15-March	15-Nov
1999	\$474,000	\$2.69	154	15-March	16-Aug
2000	\$855,000	\$3.04	122	15-March	15-Jul
2001	\$788,000	\$2.85	85	15-May	8-Aug
2002	\$876,000	\$2.95	63	15-May	16-Jul
2003	\$915,000	\$3.58	184	15-May	15-Nov
2004	\$470,000	\$2.69	184	15-May	15-Nov
2005	\$268,000	\$2.79	184	15-May	15-Nov
2006	\$296,000	\$3.50	184	15-May	15-Nov
2007	\$620,000	\$3.47	184	15-May	15-Nov
2008	\$380,000	\$3.85	184	15-May	15-Nov
2009	\$849,000	\$4.89	184	15-May	15-Nov
2010	\$767,000	\$5.99	184	15-May	15-Nov

^a Per pound delivered weight.

^b In days.

Table 3.—Aleutian Islands state-waters directed and bycatch harvest of sablefish in whole pounds by gear type, 1995–2010.

Year	Longline	Trawl	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	426,679	270	46,477	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	190,174	4,255	78,127	272,556
2008	124,661	0	32,589	157,250
2009	272,061	CF	CF	279,795
2010	202,517	CF	CF	209,505
2000-2009				
Average	294,085	726	32,909	327,720

Note: CF = confidential.

Table 4.—Aleutian Islands state-waters sablefish fishery percentage of fleet, deliveries, and harvest attributed to federal quota and non-quota vessels, 1995–2010.

Year	Non-IFQ ^a			IFQ ^b		
	Fleet	Deliveries	Harvest	Fleet	Deliveries	Harvest
1995	23%	51%	38%	77%	49%	62%
1996	26%	49%	57%	74%	51%	43%
1997	43%	63%	53%	57%	37%	47%
1998	55%	74%	42%	45%	26%	58%
1999	29%	39%	53%	71%	61%	47%
2000	14%	41%	80%	86%	59%	20%
2001	74%	85%	93%	26%	15%	7%
2002	75%	86%	95%	25%	14%	5%
2003	46%	54%	64%	54%	46%	36%
2004	38%	49%	59%	62%	51%	41%
2005	20%	43%	49%	80%	57%	51%
2006	19%	37%	41%	81%	63%	59%
2007	27%	42%	24%	73%	58%	76%
2008	29%	22%	6%	71%	78%	94%
2009	31%	37%	22%	69%	63%	78%
2010	10%	9%	16%	90%	91%	84%

^a Vessels without federal Individual Fishing Quota (IFQ) or Community Development Quota (CDQ).

^b Vessels with federal Individual Fishing Quota or Community Development Quota.

Table 5.—Aleutian Islands state-waters black rockfish fishery harvest statistics and economic performance, 1994–2010.

Year	Guideline Harvest Level ^a	Number of		Harvest ^a	Exvessel Value ^b	Fishery Value
		Vessels	Deliveries			
1994 ^c	100,000	0	0	0	0	0
1995 ^c	100,000	10	CF	CF	CF	CF
1996 ^c	100,000	12	CF	CF	CF	CF
1997 ^c	100,000	8	18	102,746	\$0.34	\$35,000
1998 ^d	100,000	5	CF	CF	CF	CF
1999 ^d	90,000	6	41	20,889	\$0.35	\$7,200
2000 ^d	90,000	2	CF	CF	CF	CF
2001 ^d	90,000	4	CF	CF	CF	CF
2002 ^d	90,000	6	CF	CF	CF	CF
2003 ^d	90,000	5	CF	CF	CF	CF
2004 ^{d,e}	90,000	9	33	2,801	\$0.19	\$530
2005 ^{d,e}	90,000	7	CF	CF	CF	CF
2006 ^{d,e}	90,000	2	CF	CF	CF	CF
2007 ^{d,e}	90,000	3	CF	CF	CF	CF
2008 ^{d,f}	90,000	4	CF	CF	CF	CF
2009 ^{d,f}	90,000	2	CF	CF	CF	CF
2010 ^{d,f}	90,000	4	4	2,088	NA	NA

Note: CF = confidential, NA = not available.

^a In whole pounds.

^b Per pound whole weight.

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

^d Harvest includes black rockfish only.

^e Harvest includes bycatch harvest taken during trawl operations.

^f All black rockfish harvest was taken as bycatch to other directed groundfish fisheries.

Table 6.—Aleutian Islands state-waters black rockfish fishery harvest by section, 1994–2010.

Year	Akutan Section		Unalaska Section		Western Section	
	GHL ^a	Harvest ^b	GHL ^a	Harvest ^b	GHL ^a	Harvest ^b
1994 ^c	50,000	0	50,000	0	NA	0
1995 ^c	50,000	0	50,000	CF	NA	0
1996 ^c	50,000	0	50,000	CF	NA	0
1997 ^c	50,000	CF	50,000	CF	NA	0
1998 ^d	40,000	CF	40,000	0	20,000	0
1999 ^d	35,000	13,465	35,000	CF	20,000	CF
2000 ^d	35,000	CF	35,000	CF	20,000	CF
2001 ^d	35,000	CF	35,000	CF	20,000	CF
2002 ^d	35,000	CF	35,000	CF	20,000	CF
2003 ^d	35,000	CF	35,000	0	20,000	CF
2004 ^d	35,000	CF	35,000	CF	20,000	0
2005 ^d	35,000	CF	35,000	CF	20,000	0
2006 ^d	35,000	CF	35,000	CF	20,000	CF
2007 ^d	35,000	CF	35,000	CF	20,000	CF
2008 ^d	35,000	CF	35,000	CF	20,000	CF
2009 ^d	35,000	0	35,000	0	20,000	CF
2010 ^d	35,000	0	35,000	0	20,000	0

Note: NA = not applicable, CF = confidential.

^a Guideline harvest level in whole pounds.

^b In whole pounds.

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

^d Harvest totals include black rockfish only.

Table 7.—Aleutian Islands state-waters black rockfish fishery guideline harvest level (GHL) in whole pounds, by section and subsection for the 2010 fishery.

Section	Subsection	GHL (Pounds)
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

Table 8.—Aleutian Islands black rockfish age (from otoliths) and length data, 1997–2010.

Year	Sample Location	Sample Size	Age ^a		Length ^b	
			Average	Range	Average	Range
1997	Unalaska Island	9	17.1	11 to 32	43.9	35 to 49
1998		ND	ND	ND	ND	ND
1999	Unalaska Island	92	15.9	8 to 30	45.3	37 to 51
2000	Unalaska Island	10	8.8	7 to 10	41.0	37 to 45
2001		ND	ND	ND	ND	ND
2002	Akutan Island	531	16.5	4 to 52	45.8	26 to 54
2003		ND	ND	ND	ND	ND
2004	Akutan Island	287	19	5 to 41	43.6	20 to 56
2005	Akutan Island	244	11	2 to 28	40.7	16 to 56
2006	Unalaska Island	27	13.8	6 to 29	45.1	38 to 52
2007		ND	ND	ND	ND	ND
2008		ND	ND	ND	ND	ND
2009		ND	ND	ND	ND	ND
2010		ND	ND	ND	ND	ND

Note: ND = no data.

^a In years (from otoliths).

^b In centimeters.

Table 9.—Aleutian Islands state-waters Pacific cod fishery guideline harvest level (GHL) and harvest apportionment by season, 2006–2010.

Year	Season	Initial GHL ^a	Harvest ^a	Number of	
				Vessels	Deliveries
2006	A season	8,981,540	8,502,781	26	68
	B season	3,849,232 ^b	CF	5	CF
	TOTAL	12,830,772	CF	30 ^c	CF
2007	A season	8,148,202	8,229,931	27	97
	B season	3,492,086 ^d	3,409,070	15	106
	TOTAL	11,640,288	11,639,001	41 ^c	203
2008	A season	8,148,202	7,477,507	30	116
	B season	3,492,086 ^e	4,241,692	18	77
	TOTAL	11,640,288	11,719,199	45 ^c	193
2009	A season	8,425,981	5,537,886	22	50
	B season	3,611,135 ^e	CF	5	CF
	TOTAL	12,037,116	CF	27	CF
2010	A season	8,055,608	7,959,514	16	84
	B season	3,452,404 ^e	CF	3	CF
	TOTAL	11,508,012	CF	16 ^c	CF

Note: CF = confidential.

^a In whole pounds.

^b ADF&G transferred 3.5 million pounds of the GHL to National Marine Fisheries Service effective on September 1, 2006.

^c Some vessels participated in both the A and B season.

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

^e A season GHL was not fully harvested, remaining A season GHL rolled over into B season GHL. Initial GHL shown.

Table 10.—Aleutian Islands state-waters Pacific cod fishery economic performance, season length and dates, 2006–2010.

Year	Season	Season Dates		Season Length ^a	Fishery Value ^b	Average Price per Pound ^c
		Opened	Closed			
2006	A season	15-Mar	24-Mar	9	\$1.3	\$0.23
	B season	10-Jun	1-Sep	84	CF	CF
2007	A season	16-Mar	23-Mar	7	\$3.6	\$0.45
	B season	10-Jun	1-Sep	83	\$0.9	\$0.52
	B season	1-Oct	3-Dec	63	\$0.4	\$0.52
2008	A season	10-Mar	18-Mar	8	\$4.5	\$0.63
	B season	10-Jun	9-Jul	29	\$1.8	\$0.57
2009	A season	25-Mar	1-Apr	7	\$0.4	\$0.25
	A season	7-Apr	9-Jun	63	\$0.6	\$0.22
	B season	10-Jun	1-Sep	83	CF	CF
2010	A season	16-Mar	4-Jun	50	\$1.6	\$0.25
	B season	10-Jun	1-Sep	83	CF	CF
	B season	15-Nov	31-Dec	46	CF	CF

Note: CF = confidential.

^a In days.

^b In millions of dollars.

^c Per pound dressed weight.

Table 11.—Aleutian Islands state-waters Pacific cod fishery harvest in whole pounds by gear type, 2006–2010.

Year	Season	Longline	Trawl	Pot	Jig	Total
2006	A season	CF	7,053,035	CF	0	8,502,781
	B season	CF	0	CF	0	CF
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	7,959,514
	B season	CF	0	CF	0	CF

Note: CF = confidential.

Table 12.—Adak Vessel Length and Gear Restriction Zones harvest of Pacific cod and rockfish by gear type, 2001–2010.

Year	Zone	Vessels	Pacific Cod ^a					Vessels	Rockfish ^{a,b}				
			Trawl ^c	Longline	Pot	Jig/hand troll	Total		Trawl	Longline	Pot	Jig/hand troll	Total
2001	1 ^d	12	CF	36,400	0	CF	184,518	3	0	219	0	0	219
	2 ^e	8	0	17,893	0	18,806	36,699	6	0	5,978	CF	CF	5,982
	2 ^f	24	3,686,795	55,460	51,165	29,698	3,823,118	11	17,370	5,978	CF	CF	23,427
	Total ^g	30					4,007,636	13					23,646
2002	1 ^d	5	253,151	CF	0	CF	284,069	3	CF	CF	0	0	956
	2 ^e	2	CF	CF	0	0	CF	3	0	2,616	0	0	2,616
	2 ^f	16	8,054,430	CF	0	CF	8,055,015	8	5,946	2,616	0	0	8,562
	Total ^g	18					CF	9					9,518
2003	1 ^d	3	412,132	0	0	0	412,132	3	CF	CF	0	0	7,584
	2 ^e	3	0	CF	0	CF	265	9	0	CF	CF	0	8,654
	2 ^f	22	8,135,237	CF	0	CF	8,135,502	20	15,452	CF	CF	0	24,106
	Total ^g	22					8,547,634	20					31,689
2004	1 ^d	5	CF	CF	0	CF	272,024	3	6050	183	0	0	6,233
	2 ^e	2	0	CF	0	0	CF	6	0	2,759	0	0	2,759
	2 ^f	20	4,890,615	24,482	0	0	4,915,096	18	7,873	3,520	0	0	11,393
	Total ^g	22					5,187,121	19					17,626
2005	1 ^d	5	CF	CF	0	CF	197,734	2	CF	CF	0	0	CF
	2 ^e	3	0	9,978	0	0	9,978	4	0	2,328	0	0	2,328
	2 ^f	14	1,896,825	828,842	0	0	2,725,668	7	15,141	2,328	0	0	17,468
	Total ^g	15					2,923,402	9					CF
2006 ^h	1 ^d	11	279,745	101,426	CF	CF	401,624	2	0	CF	0	0	CF
	2 ^e	5	0	51,047	0	0	51,047	4	0	1,372	0	0	1,372
	2 ^f	24	2,739,606	707,498	CF	CF	3,582,236	10	6,513	1,688	0	0	8,201
	Total ^g	26					3,983,960	10					CF

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Table 12.—Page 2 of 2.

Year	Zone	Vessels	Pacific Cod ^a					Vessels	Rockfish ^{a,b}				
			Trawl ^c	Longline	Pot	Jig/hand troll	Total		Trawl	Longline	Pot	Jig/hand troll	Total
2007	1 ^d	3	CF	CF	0	0	20,350	7	CF	1,597	0	CF	1,800
	2 ^e	1	0	CF	0	0	CF	3	0	4,840	0	0	4,840
	2 ^f	14	1,387,267	230,217	CF	CF	1,652,679	19	22,484	5,843	0	0	28,327
	Total ^g	16					CF	21					30,127
2008	1 ^d	10	CF	8,819	CF	35,076	64,921	5	CF	383	CF	0	409
	2 ^e	7	0	CF	CF	147,138	235,388	3	0	CF	CF	0	403
	2 ^f	24	712,287	299,493	455,034	152,350	1,619,164	19	12,076	CF	CF	0	12,479
	Total ^g	28					1,684,085	21					12,888
2009	1 ^d	3	CF	CF	0	0	110,034	5	CF	CF	0	0	504
	2 ^e	0	0	0	0	0	0	2	0	CF	0	0	CF
	2 ^f	13	549,853	CF	CF	0	586,405	12	940	1,141	0	0	2,081
	Total ^g	14					696,439	13					CF
2010	1 ^d	7	319,987	94,789	5,768	0	420,544	6	CF	1,439	CF	CF	1,443
	2 ^e	1	CF	CF	CF	CF	918	2	CF	CF	CF	CF	656
	2 ^f	15	893,981	293,293	CF	CF	1,397,456	22	4,374	3,860	0	0	8,234
	Total ^g	15						22					

Note: CF = confidential.

^a In pounds.

^b Includes all species of rockfish commercially harvested.

^c From 2001 to 2004, in Zone 1 from May 1 to September 15, trawl was an illegal gear-type for targeting Pacific cod while gear restrictions in Zone 2 were in effect. Beginning in 2005, trawl became a legal gear-type for targeting Pacific cod in Zone 1 year-round.

^d Zone 1 includes the waters of Sitkin Sound, the Bay of Islands, nearshore waters inside a line from Boot Point to Cape Kagigikak on Adak Island, and inside waters between Adak, Kagalaska, Little Tanaga, Umak, Great Sitkin, and Tagalak islands.

^e Zone 2 gear restrictions are in effect only from May 1 to September 15. Zone 2 includes state waters of Alaska between 175°30' W long and 177° W long surrounding Zone 1 waters.

^f Includes harvest for the entire year within waters encompassed by Zone 2.

^g Includes harvest for the entire year within waters encompassed by Zone 1 and Zone 2.

^h Pacific cod harvest does include harvest which occurred during the state-waters Pacific cod fishery.

Table 13.—Bering Sea-Aleutian Islands Area parallel fishery harvest by gear type, number of vessels and landings, and at-sea discards, 1995–2010.

Year	Number of ^a		Harvest in pounds ^a					At-sea discards
	Vessels	Landings	Trawl	Longline	Pot	Jig/Hand troll	Total	
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
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	9,267,533	1,161

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Table 13.—Page 2 of 7.

Year	Number of		Harvest in pounds ^a					At-sea discards
	Vessels	Landings	Trawl	Longline	Pot	Jig/Hand troll	Total	
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
Pacific ocean perch								
1995	10	16	10,226	0	0	0	10,226	23,657
1996	17	25	13,225	0	0	0	13,225	55,559
1997	9	12	2,213	CF	CF	0	5,907	4,625
1998	18	30	85,704	0	0	0	85,704	9,409
1999	4	5	CF	CF	CF	0	23,442	20,640
2000	3	3	CF	CF	0	0	420	4,310
2001	4	6	4,989	0	0	0	4,989	2,093
2002	10	10	3,291	0	0	0	3,291	3,375
2003	18	42	18,375	0	0	0	18,375	1,002
2004	25	65	3,246	0	0	0	3,246	5,310
2005	9	25	56,004	0	0	0	56,004	1,494
2006	13	22	42,245	CF	CF	0	42,251	2,258
2007	33	78	265,499	CF	CF	0	265,533	25,696
2008	17	35	145,478	0	0	0	145,478	24,820
2009	15	33	8,895	0	0	0	8,895	1,804
2010	12	34	19,641	122	0	0	19,763	3,521

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Year	Number of		Harvest in pounds ^a					At-sea discards
	Vessels	Landings	Trawl	Longline	Pot	Jig/Hand troll	Total	
Shortraker and rougheye rockfish								
1995	16	19	CF	11,295	0	CF	11,496	2,584
1996	22	27	CF	10,102	0	CF	10,765	0
1997	14	17	CF	6,532	0	CF	6,766	1,559
1998	4	9	CF	2,738	0	CF	4,470	0
1999	7	10	CF	2,952	0	CF	3,020	7,084
2000	15	21	0	10,272	0	0	10,272	3,234
2001	21	34	0	7,524	CF	CF	7,660	797
2002	5	5	CF	339	CF	0	345	710
2003	7	8	CF	334	CF	0	644	1,199
2004	13	22	245	2,685	CF	CF	2,988	365
2005	8	9	CF	690	0	CF	724	490
2006	13	16	CF	2,895	CF	0	3,700	1,365
2007	15	29	852	6,265	0	0	7,116	5,835
2008	12	17	217	3,607	0	0	3,824	1,673
2009	14	18	517	5,159	0	0	5,676	468
2010	18	32	794	11,053	0	0	11,847	1,342
Sharpchin and northern rockfish								
1995	2	4	CF	0	0	0	CF	1,862
1996	4	5	1,945	0	0	0	1,945	55,822
1997	0	0	0	0	0	0	0	0
1998	1	1	CF	0	0	0	CF	9,136
1999	2	3	CF	0	0	0	CF	19,076
2000	5	6	243	0	CF	CF	327	23,414
2001	1	1	0	CF	0	0	CF	20,308
2002	5	6	1,922	CF	CF	0	1,993	6,466
2003	14	17	1,669	CF	CF	0	1,679	24,658
2004	25	48	13,191	0	0	0	13,191	23,701
2005	6	7	287	0	0	0	287	18,667
2006	5	10	178	0	0	0	178	4,563
2007	11	21	25,749	0	0	0	25,749	7,536
2008	7	12	78,584	0	0	0	78,584	16,857
2009	7	7	83	0	0	0	83	2,056
2010	19	45	5,812	3,286	0	0	9,098	9,080

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Year	Number of		Harvest in pounds ^a					At-sea discards
	Vessels	Landings	Trawl	Longline	Pot	Jig/Hand troll	Total	
Other rockfish ^b								
1995	30	55	CF	24,872	CF	CF	24,933	2,195
1996	30	54	66	43,613	CF	CF	43,769	140
1997	26	51	CF	19,113	0	CF	19,865	1,333
1998	34	98	883	25,590	0	0	26,473	4,730
1999	24	35	1,756	16,525	CF	CF	18,326	7,687
2000	27	59	0	43,934	CF	CF	44,042	7,919
2001	38	105	CF	56,931	130	CF	57,063	5,268
2002	33	74	182	56,052	0	339	56,574	1,105
2003	42	116	474	57,647	550	0	58,671	4,045
2004	43	128	2,697	34,978	CF	CF	37,798	1,316
2005	36	87	437	25,554	CF	CF	26,017	781
2006	26	66	1,255	15,210	259	0	16,724	3,133
2007	33	90	8,420	21,513	CF	CF	30,259	3,279
2008	46	91	2,213	30,914	CF	CF	33,128	3,914
2009	50	108	2,452	26,342	0	0	28,794	1,189
2010	42	95	1,658	27,750	0	0	29,408	2,065
Greenland turbot								
1995	17	26	174,262	107,109	0	0	281,372	4,837
1996	32	48	735	170,135	0	0	170,870	5,508
1997	23	44	1,298	84,420	0	0	85,718	8,949
1998	26	81	1,022	338,314	0	0	339,336	0
1999	15	28	CF	73,225	CF	0	85,021	1,587
2000	19	37	CF	109,079	CF	0	110,607	15,109
2001	29	68	CF	149,819	CF	0	151,722	843
2002	14	34	CF	45,303	CF	0	46,020	670
2003	13	31	CF	50,590	CF	0	51,141	3,175
2004	17	29	CF	15,378	CF	0	15,992	2,324
2005	6	9	CF	6,238	CF	0	6,494	1,643
2006	15	22	2,112	17,984	0	0	20,096	1,852
2007	9	13	36,170	CF	CF	0	64,630	1,443
2008	10	13	358	6,783	0	0	7,141	1,026
2009	6	7	CF	CF	0	0	7,464	599
2010	7	12	87	7,113	0	0	7,200	1,324

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Year	Number of		Harvest in pounds ^a					At-sea discards
	Vessels	Landings	Trawl	Longline	Pot	Jig/Hand troll	Total	
Arrowtooth flounder								
1995	10	16	2,111	CF	CF	0	2,121	18,681
1996	15	24	7,724	CF	CF	0	7,759	26,757
1997	8	17	15,075	CF	CF	0	15,141	5,806
1998	9	17	14,897	CF	CF	0	15,514	15,658
1999	5	10	220,813	741	0	0	221,555	531,072
2000	10	12	2,496	CF	CF	0	11,121	15,389
2001	19	33	674	CF	CF	0	3,251	34,055
2002	15	29	15,090	CF	CF	0	15,227	22,493
2003	36	72	23,828	CF	CF	0	24,305	21,782
2004	39	110	77,206	CF	CF	0	80,907	53,434
2005	24	48	28,083	CF	CF	0	28,748	9,650
2006	32	45	8,119	CF	CF	0	13,363	18,860
2007	23	52	112,740	CF	CF	0	130,676	9,720
2008	16	36	29181	CF	CF	0	32,671	6,510
2009	23	62	106,387	CF	CF	0	108,422	11,958
2010	26	60	87,222	6,662	0	0	93,884	44,852
Rock sole								
1995	8	10	4,056	CF	CF	0	4,162	48,408
1996	13	20	3,107	0	0	0	3,107	118,601
1997	7	12	5,880	0	0	0	5,880	58,033
1998	7	9	2,181	0	0	0	2,181	133,355
1999	4	6	2,181	0	0	0	2,181	209,046
2000	19	27	43,952	CF	CF	0	43,977	50,277
2001	14	27	7,708	CF	CF	0	7,723	132,203
2002	7	9	8,984	0	0	0	8,984	152,306
2003	22	66	75,160	0	0	0	75,160	131,402
2004	31	71	17,830	CF	CF	0	17,976	270,276
2005	14	22	10,052	CF	CF	0	10,385	40,399
2006	21	35	12,235	CF	CF	0	12,508	86,730
2007	33	86	7,202	CF	CF	0	7,234	68,030
2008	24	55	23,067	CF	CF	0	23,077	42,931
2009	21	29	12,994	0	0	0	12,994	25,827
2010	30	100	116,429	7	0	0	116,436	193,160

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Year	Number of		Harvest in pounds ^a					At-sea discards
	Vessels	Landings	Trawl	Longline	Pot	Jig/Hand troll	Total	
Yellowfin sole								
1995	4	4	CF	0	CF	0	192	2,865
1996	6	8	16,008	CF	CF	0	16,038	71,964
1997	3	3	CF	0	CF	0	16	CF
1998	5	7	828	0	52	0	880	8,891
1999	2	3	34,778	0	0	0	34,778	21,910
2000	1	1	CF	0	CF	0	CF	1,115
2001	3	3	CF	0	CF	0	23	61,296
2002	1	1	CF	0	CF	0	CF	27,072
2003	4	5	29	CF	CF	0	31	24,990
2004	6	10	108	CF	CF	0	609	1,237
2005	9	11	220	CF	CF	0	329	4,412
2006	5	5	88	0	0	0	88	950
2007	4	6	23	CF	CF	0	133	5,492
2008	4	4	CF	0	CF	0	641	CF
2009	1	1	CF	0	CF	0	CF	CF
2010	5	5	17,738	0	0	0	17,738	18,600
Flathead sole								
1995	7	11	816	CF	CF	0	829	1,290
1996	16	24	5,877	0	0	0	5,877	64,413
1997	6	14	16,898	0	0	0	16,898	10,434
1998	12	23	12,847	CF	CF	0	12,850	29,037
1999	5	11	19,129	0	0	0	19,129	59,068
2000	15	18	4,867	0	81	0	4,948	6,268
2001	16	22	2,723	0	11	0	2,734	18,861
2002	21	29	11,082	CF	CF	0	11,096	59,128
2003	25	42	5,435	CF	CF	0	5,467	29,527
2004	35	85	10,155	CF	CF	0	10,523	17,964
2005	25	41	5,394	0	47	0	5,441	4,226
2006	20	29	5,606	CF	CF	0	5,831	8,165
2007	24	48	28,093	0	79	0	28,172	10,713
2008	13	27	23,835	0	0	0	23,835	940
2009	24	51	12,212	CF	CF	0	12,215	1,535
2010	18	43	46,607	0	0	0	46,607	6,334

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Table 13.—Page 7 of 7.

Year	Number of		Harvest in pounds ^a					At-sea discards
	Vessels	Landings	Trawl	Longline	Pot	Jig/Hand troll	Total	
Other flatfish^c								
1995	10	16	317	0	357	0	674	CF
1996	16	24	6,603	0	0	0	6,603	33,067
1997	10	24	7,579	0	0	0	7,579	23,338
1998	21	39	11,303	CF	CF	0	11,495	49,145
1999	7	10	36,071	0	0	0	36,071	10,334
2000	6	6	245	CF	CF	0	286	2,766
2001	6	9	159	CF	CF	0	163	21,077
2002	13	17	2,496	0	0	0	2,496	3,007
2003	18	37	3,167	CF	CF	0	3,174	1,667
2004	26	68	9,406	0	0	0	9,406	4,948
2005	15	32	7,691	0	0	0	7,691	3,801
2006	16	23	2,333	CF	CF	0	2,339	12,887
2007	14	40	80,018	0	0	0	80,018	6,171
2008	23	53	70,044	CF	CF	0	70,057	2,895
2009	20	38	64,886	CF	CF	0	64,951	CF
2010	17	37	96,785	0	0	0	96,785	11,701

Note: CF = confidential.

^a Does not include at-sea discards.

^b Other rockfish includes: dusky *Sebastes variabilis*, dark *Sebastes ciliatus*, thornyhead *Sebastolobus alascanus*, yelloweye *Sebastes ruberrimus*, harlequin *S. variegatus*, silvergray *S. brevispinis*, redbanded *S. babcocki*, darkblotched *S. crameri*, and redstripe *S. proriger*, blackgill *S. melanostomus*, canary *S. pinniger*, China *S. nebulosus*, copper *S. caurinus*, greenstripe *S. elongatus*, rosethorn *S. helvomaculatus*, tiger rockfish *S. nigrocinctus*, and yellowmouth *S. reedi*.

^c Other flatfish includes: dover sole *Microstomus pacificus*, rex sole *Errex zachirus*, butter sole *Isopsetta isolepsis*, English sole *Parophrys vetulus*, starry flounder *Platichthys stellatus*, sand sole *Psettichthys melanostictus*, and Alaska plaice *Pleuronectes quadrituberculatus*.

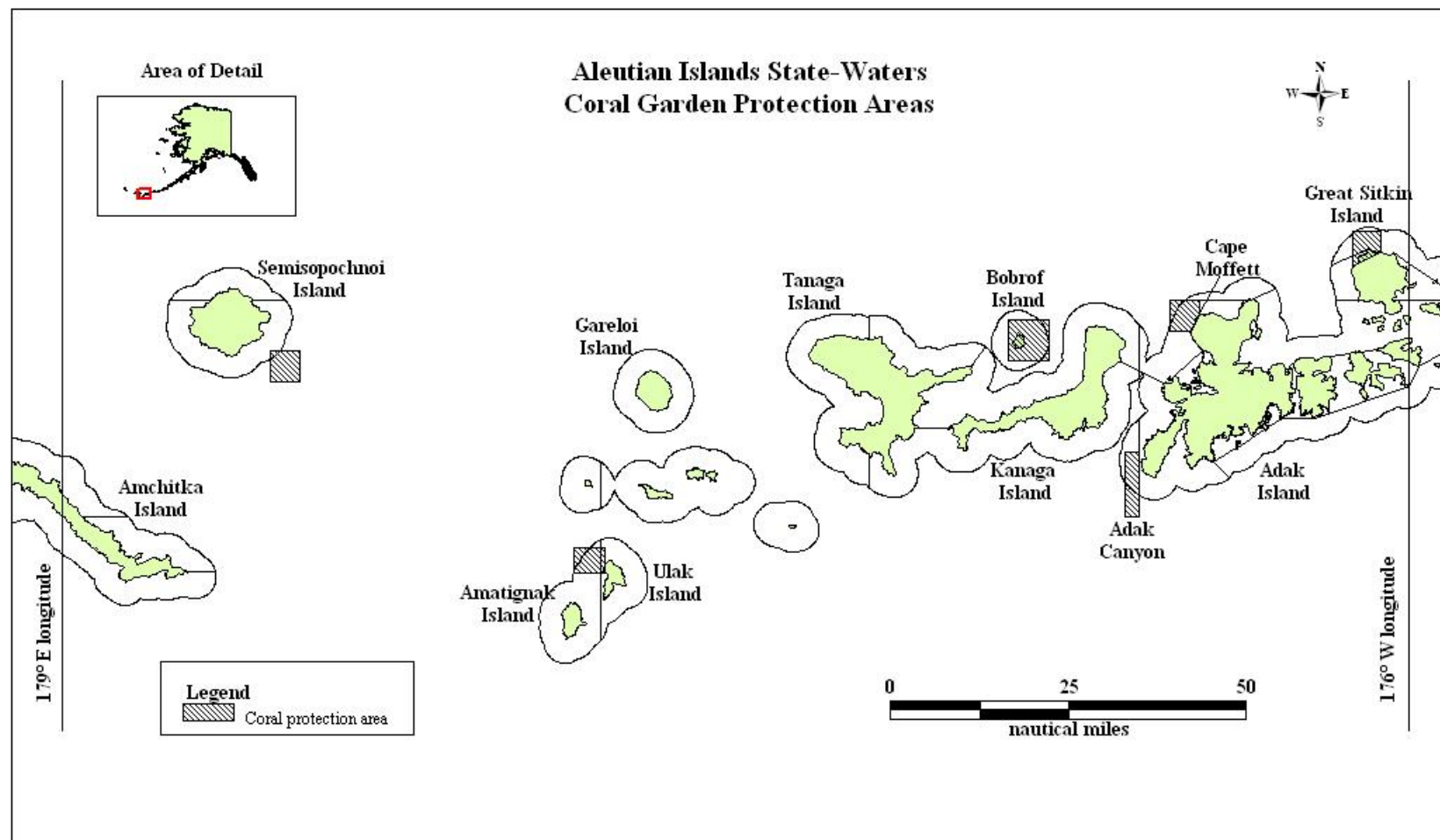


Figure 1.—Aleutian Islands Coral Garden Protection Areas closed to fishing.

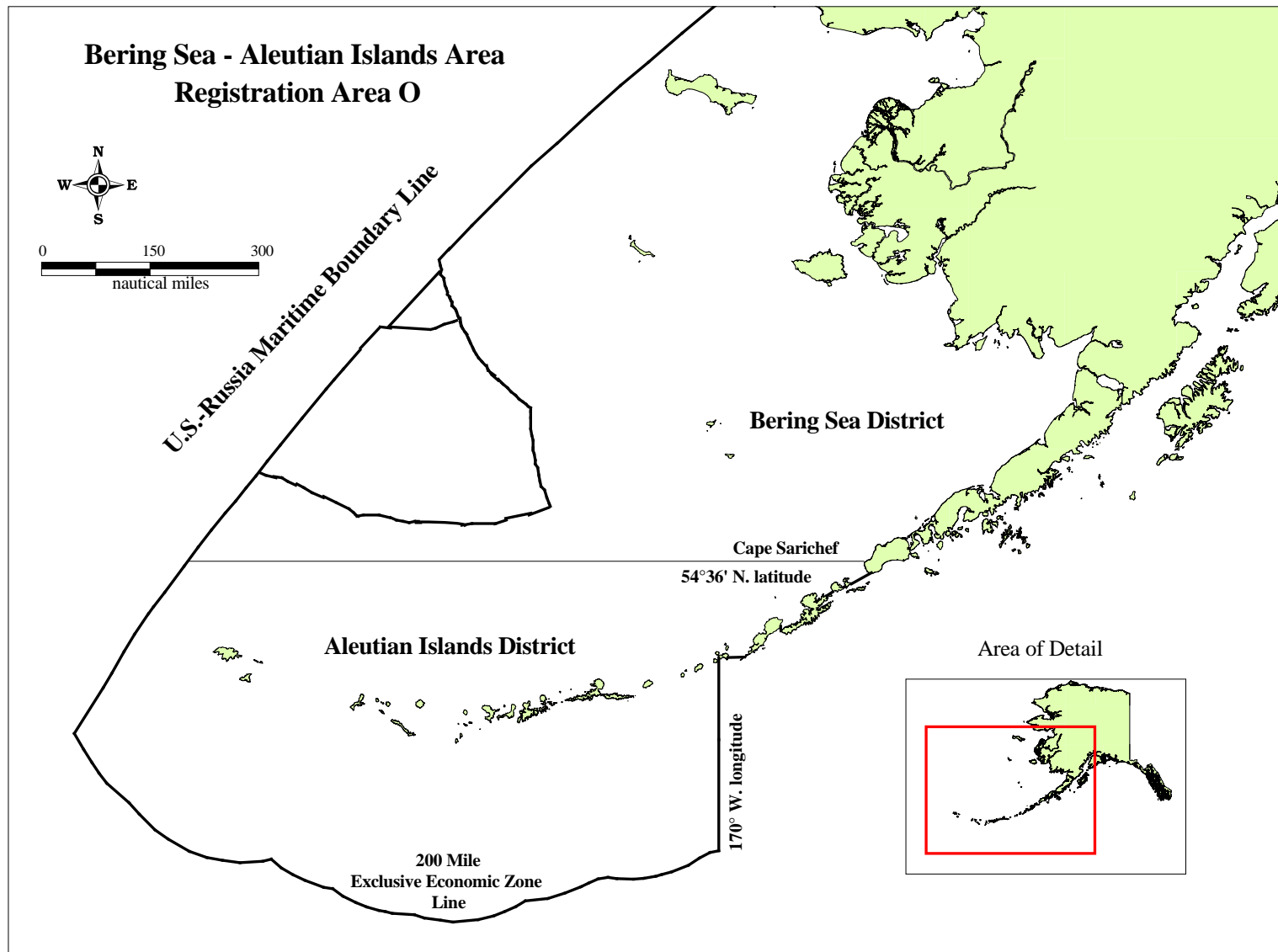


Figure 2.—The Bering Sea-Aleutian Islands Area for groundfish management.

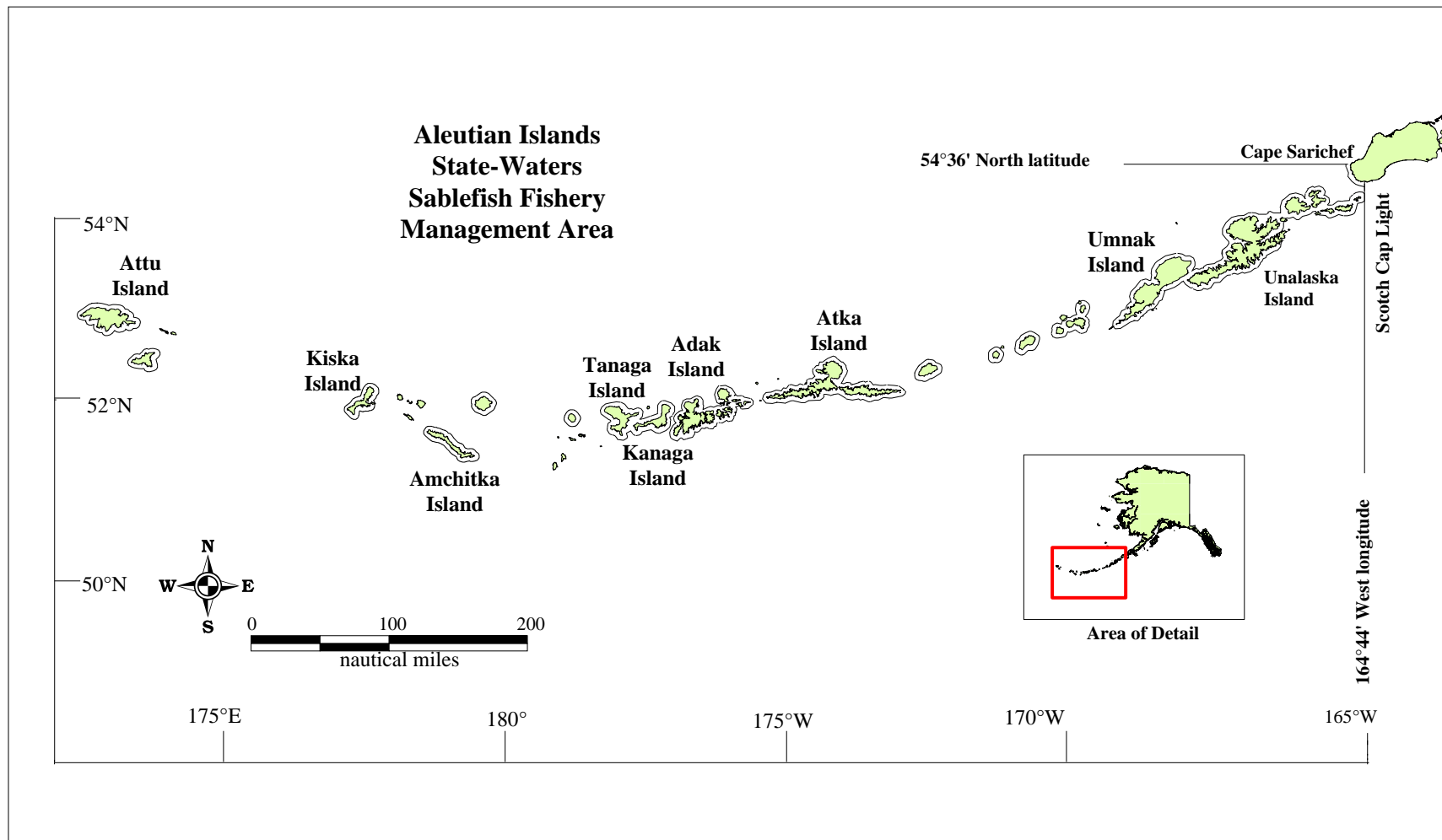


Figure 3.—The Aleutian Islands state-waters sablefish fishery management area.

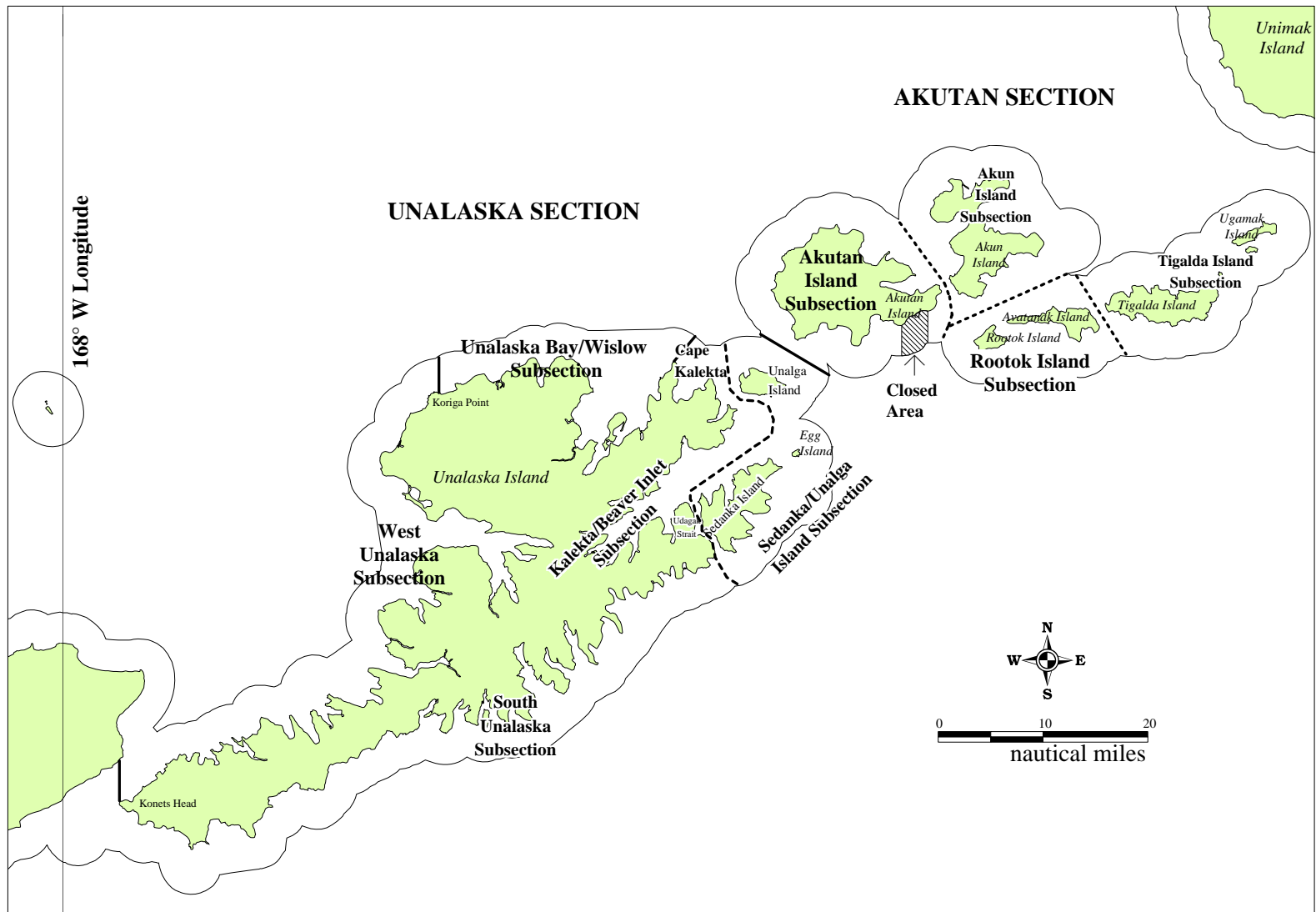


Figure 4.—Subsections of the Unalaska and Akutan Sections of the Aleutian Islands state-waters black rockfish fishery.

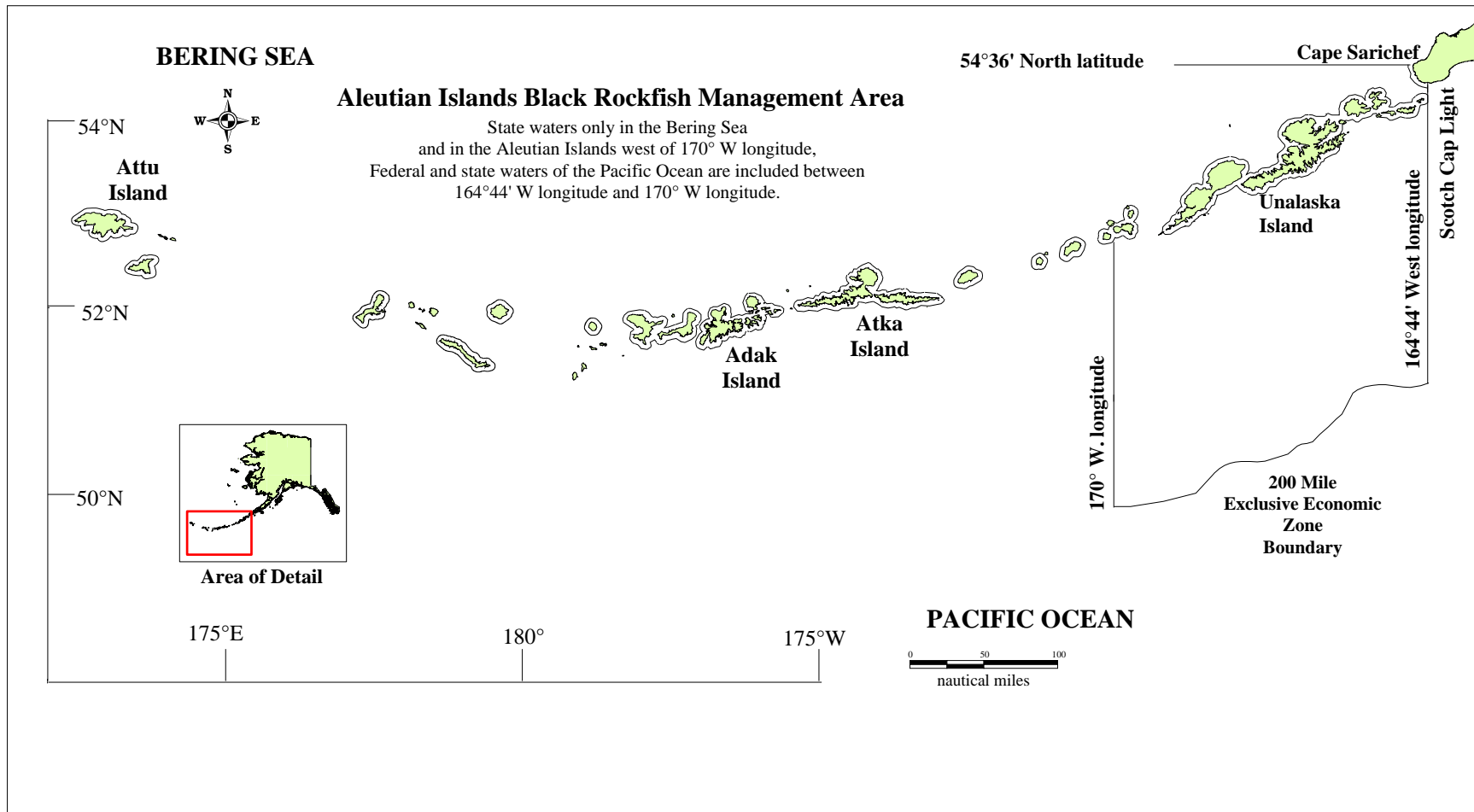


Figure 5.—The Aleutian Islands state-waters black rockfish management area.

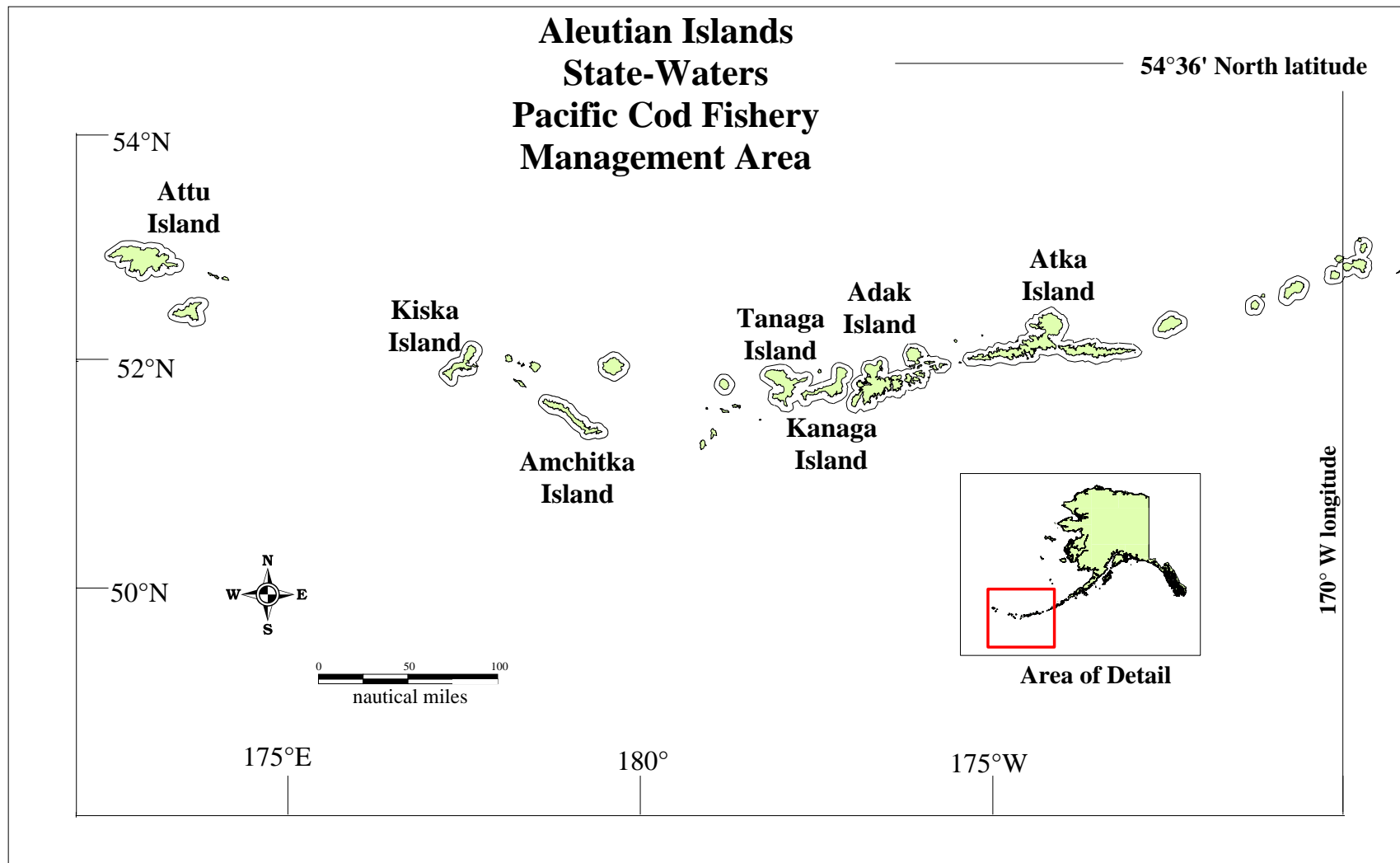


Figure 6.—The Aleutian Islands state-waters Pacific cod fishery management area.

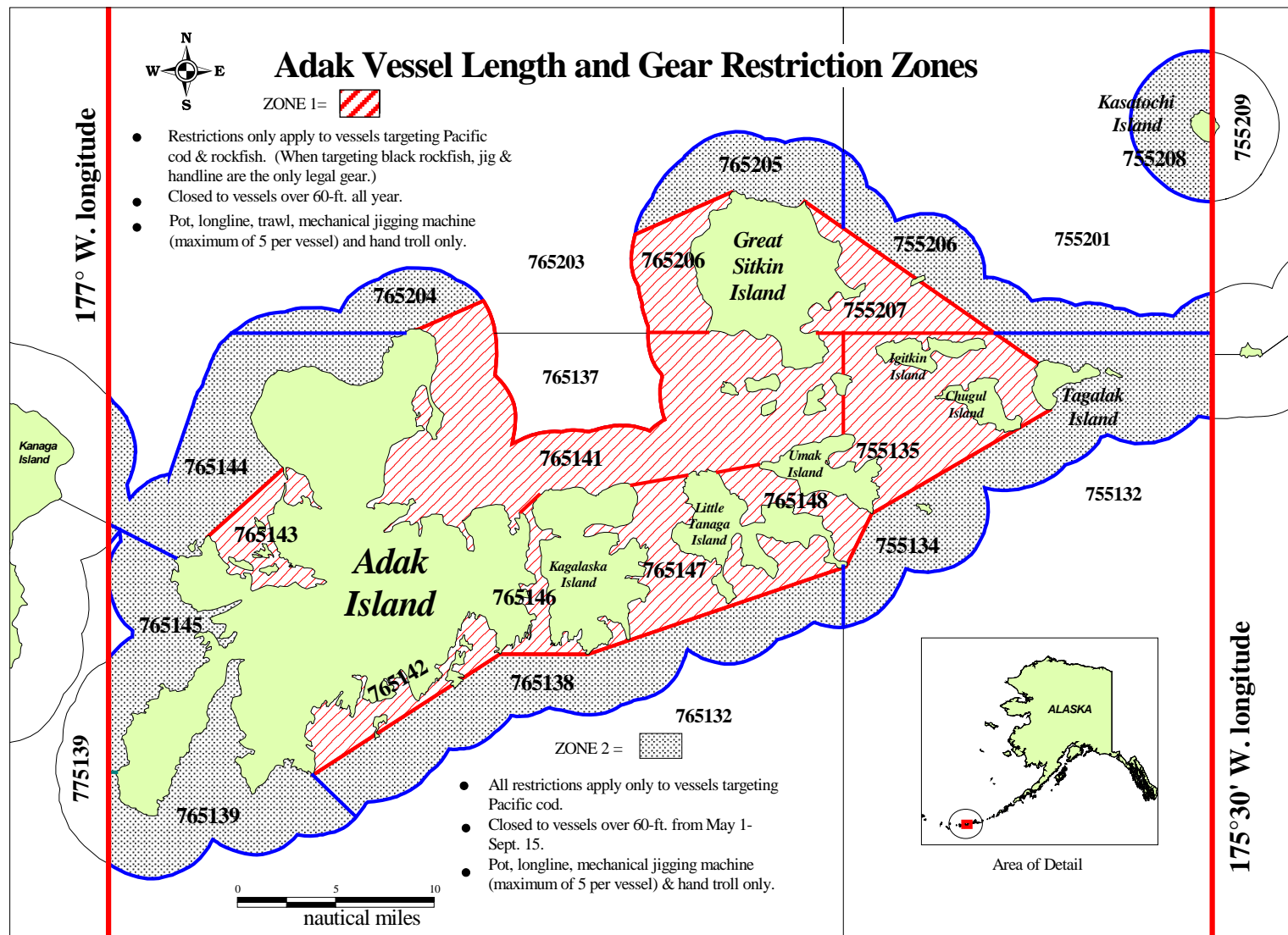
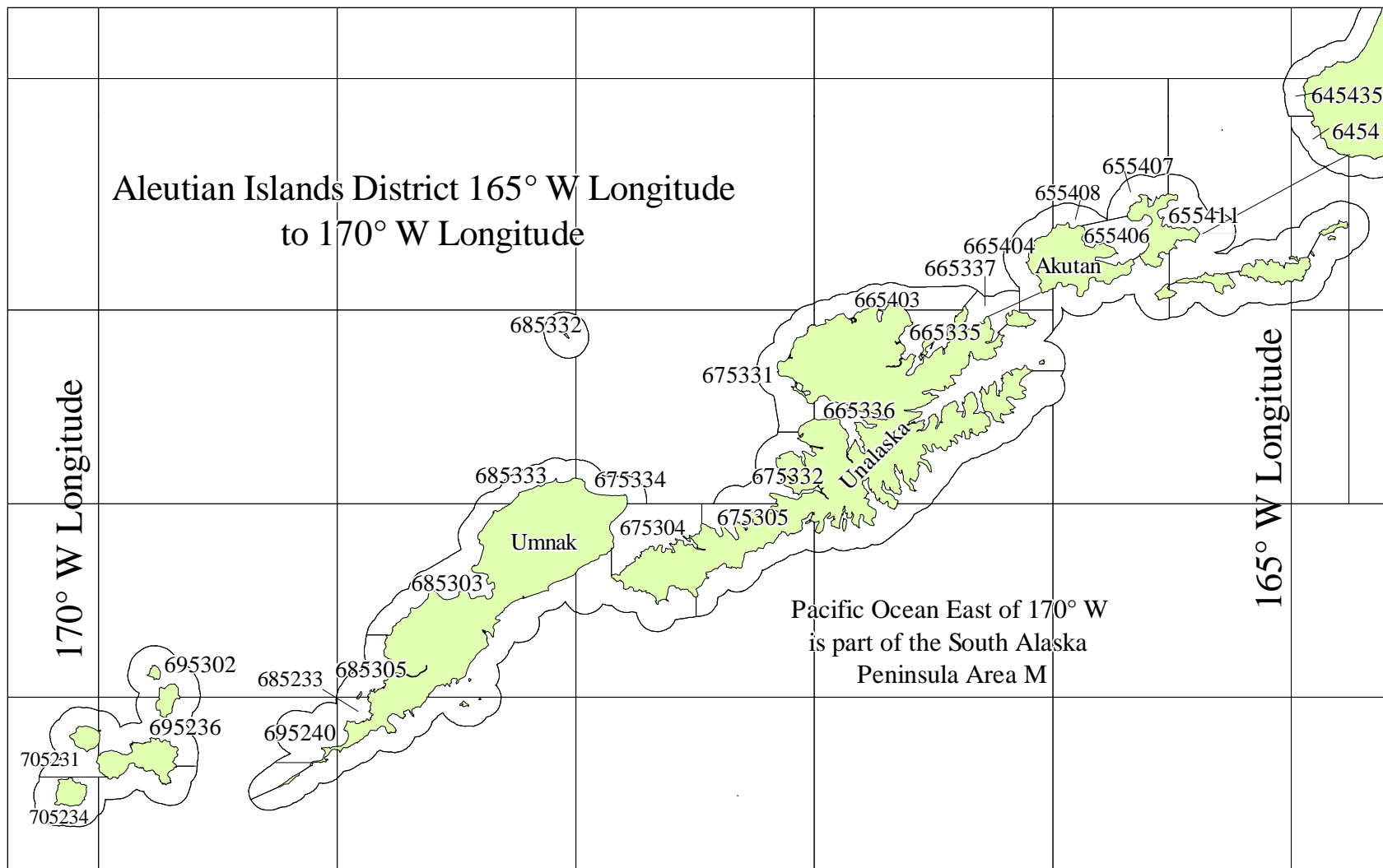
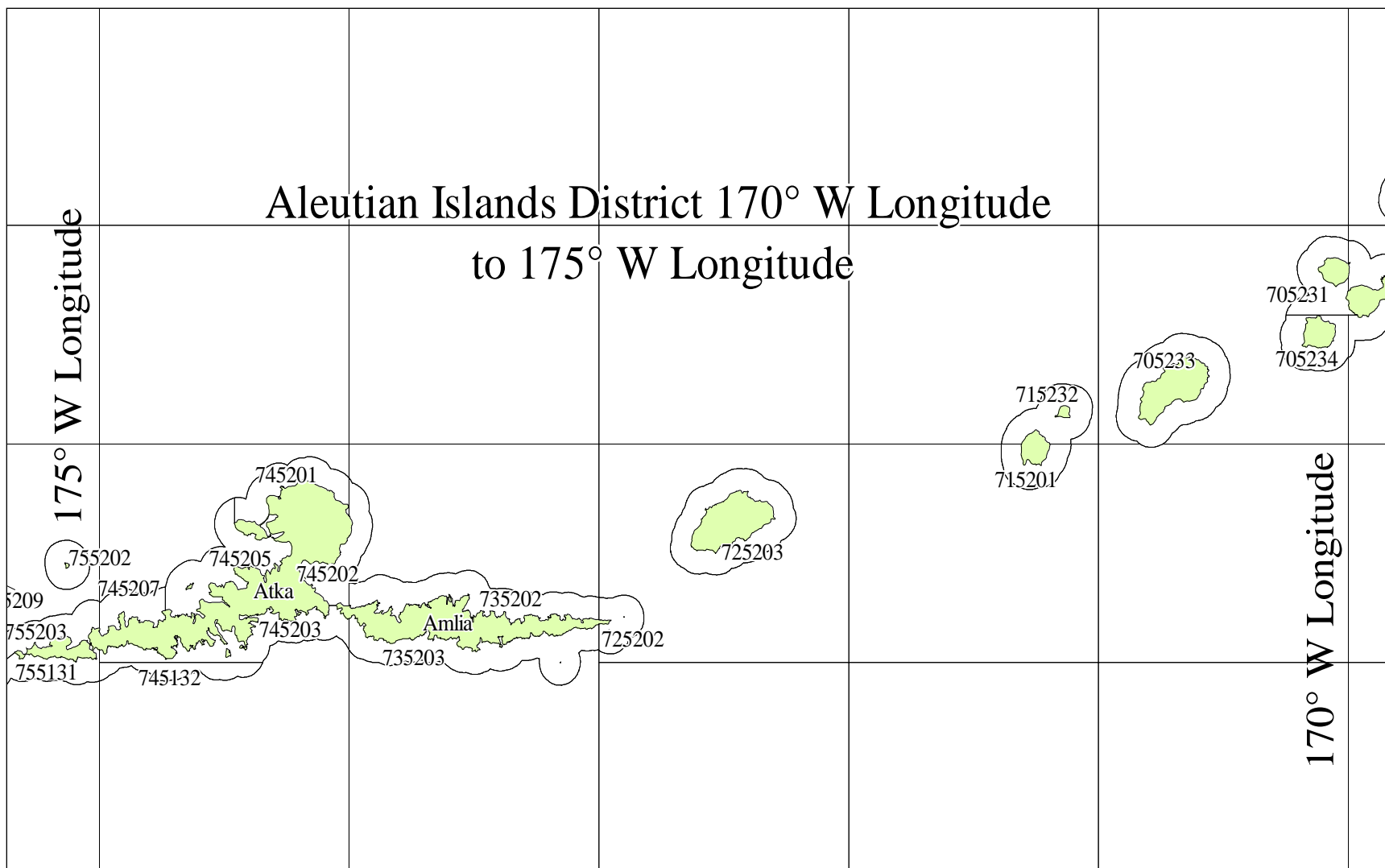


Figure 7.—Adak Vessel Length and Gear Restriction Zones and statistical reporting areas.

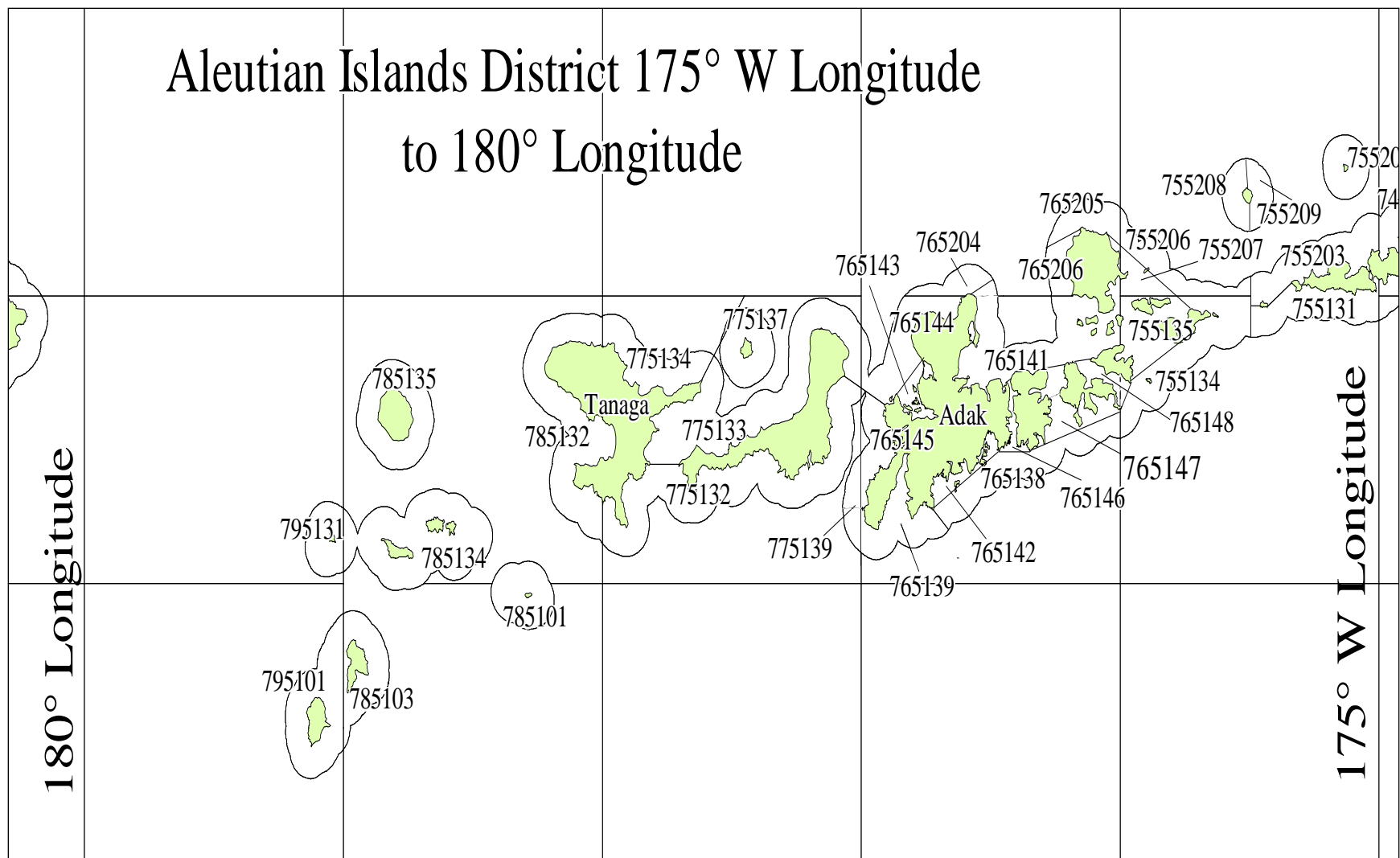
**APPENDIX A. ALEUTIAN ISLANDS DISTRICT STATE-
WATERS STATISTICAL AREAS FOR GROUND FISH**



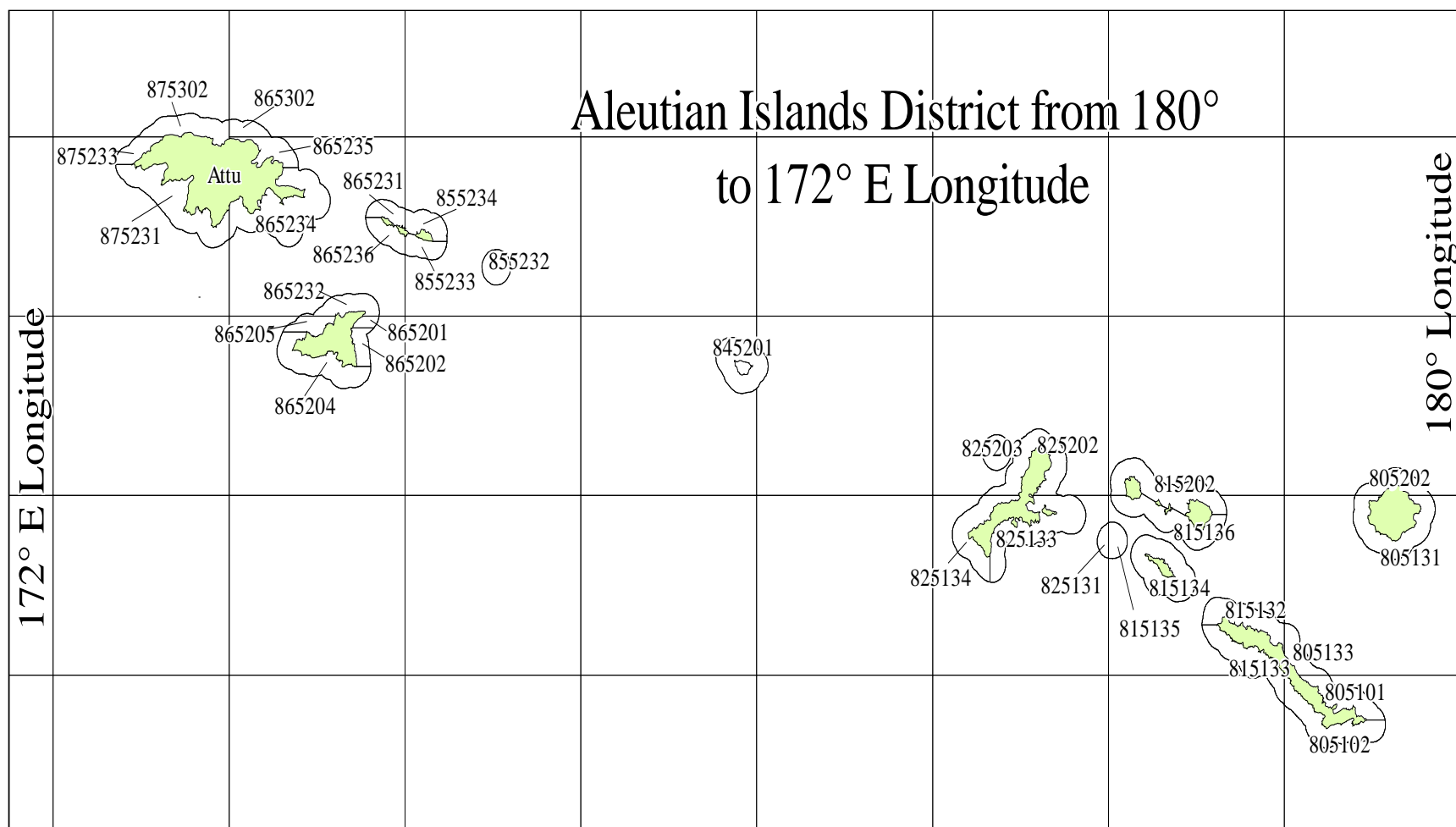
Appendix A1.—Aleutian Islands District state-waters statistical areas for groundfish from 165° W long to 170° W long.



Appendix A2.—Aleutian Islands District state-waters statistical areas for groundfish from 170° W long to 175° W long.



Appendix A3.—Aleutian Islands District state-waters statistical areas for groundfish from 175° W long to 180° long.



Appendix A4.—Aleutian Islands District state-waters statistical areas for groundfish from 180° long to 172° E long.