

**Fishery Management Report No. 07-62**

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**Bering Sea-Aleutian Islands Area State-Waters  
Groundfish Fisheries and Groundfish Harvest from  
Parallel Seasons in 2006**

by

**Krista Milani**

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December 2007

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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

***FISHERY MANAGEMENT REPORT NO. 07-62***

**BERING SEA-ALEUTIAN ISLANDS AREA STATE-WATERS GROUND FISH  
FISHERIES AND GROUND FISH HARVEST FROM PARALLEL SEASONS  
IN 2006**

by

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December 2007

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# TABLE OF CONTENTS

	<b>Page</b>
LIST OF TABLES.....	ii
LIST OF FIGURES.....	ii
ABSTRACT.....	1
INTRODUCTION.....	1
ALEUTIAN ISLANDS STATE-WATERS SABLEFISH FISHERY.....	2
Historic Background.....	2
2006 Fishery.....	3
Status of Stock.....	4
ALEUTIAN ISLANDS BLACK ROCKFISH FISHERY.....	4
Historic Background.....	4
2006 Fishery.....	6
Status of Stock.....	6
2006 ALEUTIAN ISLANDS DISTRICT STATE-WATERS PACIFIC COD FISHERY.....	7
EXEMPTED FISHING PERMIT WALLEYE POLLOCK FISHERY.....	8
ADAK VESSEL LENGTH AND GEAR RESTRICTION ZONES.....	9
GROUNDFISH HARVEST FROM PARALLEL SEASONS IN THE BERING SEA-ALEUTIAN ISLANDS AREA.....	9
ACKNOWLEDGMENTS.....	12
REFERENCES CITED.....	12
TABLES AND FIGURES.....	13

## LIST OF TABLES

<b>Table</b>	<b>Page</b>
1. Aleutian Islands state-waters sablefish fishery GHGs compared to the federal TAC, state-waters harvest, and number of vessels and deliveries, 1995–2006.....	14
2. Aleutian Islands state-waters sablefish fishery economic performance, season length and season dates, 1995–2006.....	15
3. Aleutian Islands state-waters directed and incidental sablefish harvest in whole pounds by gear type, 1995–2006.....	16
4. Aleutian Islands state-waters sablefish fishery percentage of vessels, deliveries and harvest attributed to quota and non-quota vessels, 1995–2006.....	17
5. Aleutian Islands state-waters black rockfish fishery harvest statistics and economic performance, 1994–2006.....	18
6. Aleutian Islands state-waters black rockfish fishery harvest by section, 1994–2006.....	19
7. Aleutian Islands state-waters black rockfish fishery GHG in whole pounds, by section and subsection for the 2006 fishery.....	20
8. Aleutian Islands black rockfish age (from otoliths) and length data, 1997–2006.....	21
9. Aleutian Islands state-waters Pacific cod fishery GHG and harvest apportionment, 2006.....	22
10. Aleutian Islands state-waters Pacific cod fishery economic performance, season length and dates, 2006.....	23
11. Aleutian Islands state-waters Pacific cod fishery harvest in whole pounds by gear type, 2006.....	23
12. "Adak Vessel Length and Gear Restriction Zones" harvest of Pacific cod and rockfish by gear type, 2001–2006.....	24
13. Bering Sea-Aleutian Islands Area harvest, number of vessels and deliveries from state waters in the parallel seasons for Pacific cod, walleye pollock, Atka mackerel, Pacific Ocean perch, shortraker/rougheye rockfish, sharpchin/northern rockfish and other rockfish fisheries, 1995–2006.....	25
14. Bering Sea-Aleutian Islands Area harvest in whole pounds by gear type from state waters in the parallel seasons for Pacific cod, walleye pollock, Atka mackerel, Pacific ocean perch, shortraker/rougheye rockfish, sharpchin/northern rockfish, other rockfish, Greenland turbot, arrowtooth flounder, rock sole, yellowfin sole, flathead sole and other flatfish fisheries, 1995–2006.....	26
15. Bering Sea-Aleutian Islands Area harvest, number of vessels and deliveries from state waters in the parallel seasons for Greenland turbot, arrowtooth flounder, rock sole, yellowfin sole, flathead sole and other flatfish fisheries, 1995–2006.....	31

## LIST OF FIGURES

<b>Figure</b>	<b>Page</b>
1. The Bering Sea – Aleutian Islands Area for groundfish management.....	33
2. The Aleutian Islands state-waters sablefish fishery management area.....	34
3. Harvest of Aleutian Islands state-waters sablefish in 2006 showing statistical areas where harvest over 1,000 pounds occurred.....	35
4. Subsections of the Unalaska and Akutan Sections of the Aleutian Islands state-waters black rockfish fishery.....	36
5. The Aleutian Islands state-waters black rockfish management area.....	37
6. The Aleutian Islands state-waters Pacific cod fishery management area.....	38
7. The Aleutian Islands state-waters areas open to Exempted Fishing Permit pollock fishing by Commissioner’s permit.....	39
8. Adak vessel length and gear restriction zones and statistical reporting areas.....	40

## ABSTRACT

The Alaska Department of Fish and Game (ADF&G) actively manages fisheries for sablefish *Anoplopoma fimbria* and black rockfish *Sebastes melanops* in state waters of the Aleutian Islands District of the Bering Sea-Aleutian Islands Area. In 2006 ADF&G began managing a Pacific cod *Gadus macrocephalus* fishery in the Aleutian Islands west of 170° W. State waters include all waters within three nautical miles of shore.

This report reviews the harvest and management of state-waters sablefish, black rockfish and Pacific cod in the Aleutian Islands.

Harvest and effort for vessels targeting Pacific cod and rockfish in state waters for the vessel length and gear restriction zones of the central Aleutian Islands near Adak Island are summarized.

For all other groundfish fisheries that occur within state waters in the Bering Sea-Aleutian Islands Area, ADF&G adopts the seasons, bycatch limits and allowable gear types in the adjacent Exclusive Economic Zone (EEZ) and promulgated by the National Marine Fisheries Service (NMFS), except where Board of Fisheries regulations take precedent. ADF&G issues a global emergency order (EO) at the beginning of each year to establish the commercial parallel groundfish seasons, bycatch limits and gear types for those fisheries not actively managed by the State of Alaska to coincide with federal regulations of the adjacent EEZ. This report summarizes the harvest of groundfish from the Bering Sea – Aleutian Islands Area in those parallel fisheries from 1995 to 2006.

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-Aleutian Islands (BSAI) are primarily managed by the 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 nautical miles offshore comes from the Fishery Conservation and Management Act, now known as the Magnuson-Stevens Act, originally passed by the United States Congress in 1976 (MSFCMA 1996). Many of the species managed by NMFS also occur in state waters (0-3 nautical miles offshore). The State of Alaska has management authority for groundfish resources within state waters.

For groundfish fisheries that are actively managed by NMFS but occur inside state waters, ADF&G issues an emergency order (EO) at the beginning of each year, creating what is referred to as parallel fishing seasons. Parallel fisheries mirror the seasons, gear and bycatch limits of the federal season in adjacent EEZ unless superseded by other Alaska Board of Fisheries (BOF) regulations. This report summarizes the harvest from state waters in parallel fisheries from 1995 through 2006. Waters under the jurisdiction of the State of Alaska for groundfish management are from shore to three nautical miles (nmi) offshore. ADF&G has full management authority for black rockfish in the Gulf of Alaska (from 0-200 nmi).

Exceptions to parallel fishing seasons occur for those fisheries that ADF&G has established separate harvest quotas, seasons, and/or regulations for state-waters. ADF&G actively manages three groundfish fisheries which do not fall under parallel fishing rules in the BSAI Area (Figure 1). Those fisheries are Aleutian Islands sablefish *Anoplopoma fimbria*, Aleutian Islands black rockfish *Sebastes melanops* and Aleutian Islands Pacific cod *Gadus macrocephalus*. This report describes the sablefish fishery from 1995 through 2006 and the black rockfish fishery from 1994 through 2006. The Aleutian Islands Pacific cod fishery opened for the first time in 2006 and is also covered in this report.

In 2006 NMFS issued an exempted fishing permit (EFP) allowing vessels to harvest walleye pollock *Theragra chalcogramma* inside of Steller sea lion critical habitat. ADF&G issued a Commissioner's permit to allow vessels to harvest walleye pollock inside of state waters in accordance with terms of the EFP fishery.

In March 2000, the BOF established vessel length and gear restrictions for vessels fishing Pacific cod and all rockfish in state waters of the central Aleutian Islands between 175° 30' and 177° W long. This report summarizes those regulations, which became effective in July 2000, and the effects of those regulations on harvest.

Groundfish harvests in this report are based on the ADF&G fish ticket database and the fish ticket software program *Neptune* as of June 2007, and reflect the most recent additions and corrections to that database. The statistical harvest reporting area surrounding Bobrof Island in the central Aleutian Islands contained both state and federal waters until 2000. 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. In 2001, statistical areas were revised, and the territorial waters surrounding Bobrof Island are now entirely comprised of state-waters statistical areas.

## **ALEUTIAN ISLANDS STATE-WATERS SABLEFISH FISHERY**

### **HISTORIC BACKGROUND**

In 1995, the NMFS implemented an individual fishing quota (IFQ) system for the harvest of sablefish. The Alaska Department of Law advised that the harvest of sablefish in the state waters of Alaska could not be limited to only IFQ permit holders, therefore any valid Commercial Fisheries Entry Commission (CFEC) interim use permit holder for sablefish could participate. A sablefish fishery was established in state waters of Alaska where the historical harvest was of sufficient quantity to allow for a manageable fishery. ADF&G determined that a state-waters sablefish fishery was manageable, and a fishery was established in the Aleutian Islands. The Aleutian Islands state-waters sablefish fishery includes 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 2).

The BOF originally established the sablefish season from March 15 to November 15, unless the guideline harvest level (GHL) was obtained and the fishery was closed earlier by emergency order (EO). The opening and closing dates were concurrent with the federal IFQ sablefish fishery. In 2001 the BOF changed the season opening for sablefish in the state-waters fishery to May 15. Historically most fishing occurred in late spring and summer. The later season was requested by the public to provide small vessel operators an opportunity to take advantage of potentially better weather conditions.

The initial GHL was set according to recent state-waters harvest history, thus the 1995 season opened with a GHL of 400,000 pounds<sup>1</sup>. ADF&G does not conduct stock assessment of sablefish in the Aleutian Islands. ADF&G relies primarily on NMFS longline surveys to set the GHL. NMFS surveys in 1995 and 1996 showed sablefish stock reductions in the federal Bering Sea, Aleutian Islands, and Western Gulf of Alaska Sablefish Regulatory Areas, therefore state-waters GHLs were lowered for the 1996 and 1997 fisheries. In 1998 the total allowable catch

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<sup>1</sup> All weights refer to whole pounds.

(TAC) for the federal Bering Sea and Aleutian Islands Sablefish Regulatory Areas increased by 16.5 percent (Table 1). However, the department did not increase the state-waters GHL in an attempt to help mitigate the over harvest, which occurred during the previous two seasons. The federal TAC increased slightly in 1999; however, due to poor fishery performance during the previous year, ADF&G decreased the GHL by 7%. Based on recent fishery performance, historic fishery harvest, and the federal TAC, the GHL for the 2000 fishery was set at 400,000 pounds, an increase of 60% over the 1999 fishery. This trend continued with a GHL for the 2001 fishery of 425,000 pounds, an increase of 6% over the 2000 fishery, a 2002 fishery GHL of 460,000 pounds, a 2003 fishery GHL of 630,000 pounds, and a 2004 fishery GHL of 660,000 pounds. In 2005 the federal TAC was reduced by 16% thus decreasing the state GHL to 550,000 pounds.

From 1995 to 2000, all legal groundfish gear types could be used to harvest sablefish in state waters. Effective 2001, longline, pot, jig, and hand troll became the only legal gear types. Vessel operators are required to register for the sablefish fishery and complete logbooks.

Harvest in the 1995 state-waters fishery was 269,220 pounds, and has ranged from a low of 177,935 pounds in 2006 to a high of 477,970 pounds in 2002 (Table 1). From 1995 to 2005 over 150 vessels harvested 4.1 million pounds, for an estimated exvessel fishery value of approximately \$7.1 million (Table 2).

Since the 1995 fishery, most of the harvest has occurred west of 170° W long. Reports of orca *Orcinus orca* predation on the fishers' catch east of 170° W long., and the establishment of a new processor on Adak Island in 1999 may help to explain the increased effort in western areas.

The Aleutian Islands state-waters sablefish fishery is open to all fishers with a valid CFEC interim use permit for statewide sablefish. There has been a misconception by some Community Development Quota (CDQ) and IFQ fishers who believe the federal permit allows them to fish in state waters without registration and regardless of closures of state waters. Documentation of all violations has been provided to the Department of Public Safety, Bureau of Wildlife Enforcement (ABWE) for further action. ADF&G and NMFS have continued to educate the fishing fleet about state registration requirements.

## **2006 FISHERY**

ADF&G announced a GHL of 640,000 pounds on April 5 (Table 1). This GHL represents nearly a 16% increase from the 2005 fishery GHL and was based on five percent of the federal TAC.

The 2006 harvest of sablefish in state waters was 177,935 pounds and was the lowest harvest in the history of the fishery. The fishery opened May 15, and was managed by reviewing weekly processor catch reports and fish tickets, monitoring the average size of each delivery and by plotting logbook data to verify harvest location. Fishing effort began in May and deliveries occurred within a week of the opening. Harvest peaked in July and was variable throughout the season. Effort throughout the fishery was sporadic ranging from zero to five vessels participating during any week. The fishery closed by regulation November 15. This was the sixth season and the fourth consecutive year that the fishery closed by regulation since the inception of the fishery (Table 2). During the 2006 fishery, 16 vessels landed 177,935 pounds of sablefish. Longline gear accounted for 128,764 pounds (73%) of the total harvest, pot-gear accounted for 47,964 pounds (27%), and 1,207 pounds (less than 1%) was landed as bycatch by trawl vessels (Table 3). Two catcher-processors (CPs) registered for the fishery and made landings. Of the 23 vessels registered for the fishery, 10 did not fish in state waters. Three non-IFQ vessels made 20

landings of state-waters sablefish, delivering 72,243 pounds, or 41% of the harvest (Table 4). Ten IFQ vessels made 30 landings totaling 89,360 pounds, or 50% of the harvest. In addition, three unregistered vessels made four IFQ landings during the fishery totaling 16,332 pounds or 9% of the harvest. Documentation of these violations has been provided to ABWE.

The average exvessel price for the 2006 fishery was \$3.50 per pound (Table 2). The estimated fishery value was approximately \$296,000.

Most of the fishery occurred in waters west of 170° W long., which is consistent with previous years (Figure 3).

## **STATUS OF STOCK**

NMFS has conducted annual longline surveys covering portions of the Aleutian Islands sablefish fishery area since 1978. Initially, the survey was a cooperative effort with Japan and covered the Gulf of Alaska. The survey was expanded to include the Aleutian Islands in 1980 and the eastern Bering Sea in 1982.

In 1987, NMFS began conducting an independent annual longline survey in the Gulf of Alaska. The survey was expanded to include biennial sampling of the eastern Aleutian Islands beginning in 1996 and the eastern Bering Sea beginning in 1997. The survey, which covers a portion of the state-waters fishery area, shows that relative to 1986 and 1987 sablefish abundance appears low but stable (Hanselman et al. 2006). Abundance is expected to remain relatively stable until 2008 at which time it is projected to decrease.

# **ALEUTIAN ISLANDS BLACK ROCKFISH FISHERY**

## **HISTORIC BACKGROUND**

ADF&G established a directed fishery for nearshore pelagic shelf rockfish in state waters of the eastern Aleutian Islands in December 1994. The pelagic shelf rockfish group includes black *Sebastes melanops*, blue *S. mystinus*, widow *S. entomelas*, yellowtail *S. flavidus* and dusky *S. ciliatus* rockfish. In the eastern Aleutian Islands, black and dusky rockfish are the only species present due to the limited distribution of the other species.

This fishery was established in response to local public inquiries regarding the possibility of a state-managed black rockfish fishery. Under federal management black and other pelagic shelf rockfish were included in the “other rockfish” assemblage. This assemblage includes all rockfish species in the Bering Sea and Aleutian Islands except shortraker *S. borealis*, rougheye *S. aleutianus*, sharpchin *S. zacentrus*, northern *S. polyspinis* rockfish and Pacific ocean perch *S. alutus*.

Directed fisheries in both state and federal waters for the “other rockfish” assemblage occurred prior to 1994, but were of progressively shorter duration. The fisheries were open to all gear types; however, they were managed as trawl fisheries since the harvest was predominantly by trawl vessels. Black and other pelagic shelf rockfish were available to the local fleet primarily as bycatch in jig and longline fisheries for other groundfish.

The “other rockfish” assemblage was managed as bycatch-only by NMFS through November of 1994, at which time only 43% of the allowable catch of this assemblage had been taken. According to ADF&G fish ticket data, approximately 4% of that harvest was pelagic shelf rockfish, of which less than 1% was black rockfish. ADF&G, with notification to NMFS and the

North Pacific Fishery Management Council (NPFMC), assumed management authority of nearshore pelagic shelf rockfish for a state-waters fishery by EO on December 21, 1994.

In 1994, 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 GHL of 100,000 pounds was established, with 50,000 pounds for each area (Tables 5 & 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.

Registration for the black rockfish fishery is similar to other groundfish fisheries, except vessels are registered for only one month at a time. The short duration of the registration is to allow ADF&G greater control of the fishery and to be able to track actual participation each month. Handlines and mechanical jigging machines are stipulated by the ADF&G registration as the only legal gear types. These gear types have a low harvest potential compared to most gear types, reducing incidental harvest of other species so as not to exceed the federal TAC in the “other rockfish” category.

The 1994 fishery opened at noon on December 21; only one vessel registered for the fishery. No harvest of pelagic shelf rockfish occurred in 1994 subsequent to the establishment of the directed fishery. In 1995, all harvest was incidental to the parallel Pacific cod jig fishery. Fishing effort was minimal and sporadic throughout 1995. In 1996, landings increased in the Unalaska, Sedanka, and Unalga islands area. The principle area of harvest was from the waters just north of Unalaska Island. The primary species of harvest was black rockfish, although dusky rockfish was also harvested. No effort was reported from the Akutan and Akun islands area in 1996 (Table 6).

Fishing effort, in terms of number of landings and amount harvested, increased during 1997, but the number of participating vessels decreased. The majority of effort took place along the outer coast of Akutan Island and along the southern Unalaska Island coast. Both black and dusky rockfish were landed. Logbook data submitted by one operator showed that dusky rockfish made up 28% of their harvest, however fish ticket data reflected that dusky rockfish made up a small percentage of the total rockfish landings. Area processors were notified of the possible misidentification and were asked to provide positive identification of rockfish purchased. In addition, ADF&G provided identification information to processing personnel.

The nearshore black rockfish fishery changed with the 1998 season when the area ADF&G was actively managing 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). In addition, the public expressed interest in a black rockfish fishery in the vicinity of Atka Island, and GHLS were established which provided 40,000 pounds for both the Akutan and Unalaska sections, and 20,000 pounds for the area west of 168° W long. Concurrently, ADF&G also assumed management responsibility for black and blue rockfish in the 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 not well addressed by existing federal 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 (widow, yellowtail, and dusky rockfish) in federal waters.

In 1998 fleet composition changed and vessel operators began to make short day trips and small deliveries. The average delivery in 1998 was smaller compared to previous years, the average vessel length decreased from 36 feet to 23 feet, and the average trip length was less than one day compared to approximately two days in prior years. All fishing effort occurred in the Akutan Area.

ADF&G reduced the 1999 GHL from 40,000 pounds to 35,000 pounds in the Akutan and Unalaska sections (Table 6). This reduction was due to concern over possible 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% of the black rockfish harvested came 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% of the harvest came from the area just south of Akutan Island. In 1999, 62% of the harvest came from just south of Akutan Island, and most of it was from the 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.

## **2006 FISHERY**

ADF&G announced the 2006 GHL by news release on January 4, with 35,000 pounds available in each, the Akutan and Unalaska sections and 20,000 pounds available in the Western Section, the same as the 2000 through 2005 fisheries. The waters from the south end of Green Bight to Talus Point remained closed for the 2006 fishery.

The 2006 fishery was managed by reviewing weekly processor reports and fish tickets, plotting logbook data and maintaining contact with processors. One vessel registered for the 2006 fishery, a decrease from four vessels in 2005. No directed black rockfish landings were made for the 2006 season. Fishers may retain up to 5% black rockfish as incidental harvest to other fisheries. Three vessels made landings of black rockfish as incidental harvest. Harvest information is confidential due to a limited number of participating processors. No subsection GHLs were attained during the 2006 fishery.

## **STATUS OF STOCK**

Black rockfish have not been surveyed by ADF&G in the Aleutian Islands. ADF&G established a dockside-sampling program in 1999. Information obtained through this program is providing ADF&G with basic biological data that may assist in future management decisions and stock status determinations. Sampling efforts to obtain average length of black rockfish and average age through otolith analysis took place during 1997, 1999, 2000, 2002, 2004, 2005 and 2006 (Table 8). The groundfish port sampler position was vacant during 2001; therefore, sampling did not occur during that season. Due to low fishing effort, no sampling occurred during the 2003 season.

In 2004 and 2005 ADF&G conducted several surveys of black rockfish as a continuation of previous Nearshore Marine Fisheries Research grants which attempted 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 5 years old and also comparing the fish densities 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.

During August of 2006, a population age structure study was 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 dusky rockfish. A summary of age information from otoliths collected are included in Table 8. The black rockfish stock in the Aleutian Islands is managed conservatively as there is no survey and because the species is long lived and slow growing.

## **2006 ALEUTIAN ISLANDS DISTRICT STATE-WATERS PACIFIC COD FISHERY**

In February of 2006 the BOF approved regulations for a nonexclusive Aleutian Islands District, west of 170° W longitude, state-waters Pacific cod fishery (Figure 6). The fishery was established in response to the community of Adak's desire for a fishery which would provide economic opportunities to the community.

The 2006 fishery GHL was set by regulation at three percent of the federal BSAI TAC with a maximum of 70% of the GHL available before June 10. By regulation the fishery opened on or after March 15, at the conclusion of the initial parallel catcher-vessel trawl fishery for Pacific cod in the federal BSAI Area. Non-pelagic trawl, longline, jig and pot gear were all permissible in the 2006 fishery. Trawl and longline gear could not be used from May 1 – September 15, unless operating in the 60 ft. and under vessel size limitation zones near Adak Island. The fishery management plan stipulated a daily harvest limit of 150,000 pounds and a 300,000 pound trip limit. All Pacific cod was required to be retained and any overage was required to be immediately reported to the department, with proceeds from the overage forfeited to the state. In addition all fishers were required to report daily to the department the pounds of Pacific cod taken by the vessel.

The 2006 state-waters Pacific cod GHL for the Aleutian Islands west of 170° W long. was 12,830,772 pounds (Table 9). The GHL was apportioned so that a maximum of 70% (8,981,540 pounds) was available before June 10, and 30% (3,849,232 pounds) plus any rollover (up to a maximum of 70% of the overall) after June 10.

The fishery opened at noon on March 15 and closed at 8:00 p.m. March 24 (Table 10). The fishery was managed inseason using a combination of mandatory daily catch reports from vessel operators and daily production reports from processors. Twenty-six vessels participated in the fishery including nineteen trawl catcher-vessels (CVs), one trawl CP, five longline CPs and one pot CV. In addition two floating processors and two shorebased processors participated. During the nine day fishery 68 deliveries were made and 8,502,781 pounds of Pacific cod were harvested, predominately by trawl vessels (Table 11). Three vessels exceeded the trip limit of 300,000 pounds. The average exvessel price for the March season was \$0.23 per pound (Table 10) and the estimated fishery value for the March season was approximately \$1.9 million.

The state-waters Pacific cod fishery reopened on June 10 with a GHL of 4,327,991 (30% of the initial GHL plus the rollover from the March season). Seven vessels registered but only five participated. However, three additional unregistered vessels also made deliveries and one vessel discarded Pacific cod at sea but did not make a delivery. The season was managed using weekly harvester catch reports and fish ticket information provided by processors through the Interagency Electronic Reporting System.

Due to low participation in the June - August season, the state-waters Pacific cod GHL was not expected to be achieved by December 31. Therefore, in order to maximize harvest opportunities, ADF&G made 3.5 million pounds of unharvested Pacific cod available to NMFS effective September 1 as provided for in regulation. The state-waters fishery closed on September 1 and immediately reopened under parallel rules with the federal BSAI Pacific cod season. ADF&G retained a small GHL (approximately 0.5 million pounds) in reserve allowing for the ability to reopen the state-waters fishery later in the year if the parallel season closed, however it was never reopened. Due to a limited number of participating processors all harvest information is confidential for the June - August season.

## **EXEMPTED FISHING PERMIT WALLEYE POLLOCK FISHERY**

Historical walleye pollock harvest in the Aleutian Islands was located primarily inside designated Steller sea lion critical habitat. Walleye pollock is an essential prey species for sea lions and in 1999 NMFS closed the Aleutian Islands to fishing for walleye pollock as a Steller sea lion conservation measure. In 2004 the U.S. Congress passed a law requiring that any directed fishing allowance of pollock in the Aleutian Islands subarea be allocated to the Aleut Corporation (71 *Fed. Reg.* 14, 23 January 2006). In 2005, NMFS established a 19,000 metric ton TAC for a directed pollock harvest in the Aleutian Islands which was allocated to the Aleut Enterprise Corporation (AEC). The TAC was only available to be taken outside of Steller sea lion critical habitat. The fleet reported difficulties in finding pollock outside of critical habitat and very little harvest occurred in 2005.

In 2006, NMFS issued an exempted fishing permit (EFP) to AEC which allowed harvesting of Aleutian Islands walleye pollock inside critical habitat. Participating vessels were required to conduct acoustic surveys of walleye pollock in the area. The purpose of the EFP was to assess the feasibility of collecting acoustic data of sufficient quality using commercial fishing vessels and to apply that data to management practices. The 2006 Aleutian Islands walleye pollock EFP was for 1,000 metric tons with a harvest of 965 metric tons, most of which occurred in federal waters.

The state issued one Commissioner's permit allowing a vessel to fish inside of state waters during the EFP federal fishery. The permit was valid in state waters of the central Aleutian Islands near Atka Island (173° 30' W long. to 175° 15' W long.) and near Kanaga Island (176° 45' W long. to 178° 15' W long.) in the Aleutian Islands District of the BSAI Area (Figure 7). The permit stated the vessel may harvest inside of state waters March 12 until April 30 with a 1,000 metric ton limit of walleye pollock. In addition the permit stipulated that no more than 10 metric tons of groundfish were allowed to be harvested in a tow within 3 nmi of a sea lion haulout. The vessel harvested 9,381 pounds of pollock from state waters, accounting for less than 1% of the total federal EFP harvest.

## **ADAK VESSEL LENGTH AND GEAR RESTRICTION ZONES**

In March of 2000, BOF established gear and vessel length restrictions for Pacific cod and rockfish fisheries in the central Aleutian Islands. The areas affected by these regulations are part of the nonexclusive BSAI Area. BOF defined two zones, each with different restrictions (Figure 8). 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 the following regulations are in effect year-round; only vessels less than or equal to 60 feet in length overall may be used 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' and 177° W longitude exclusive of all waters defined in Zone 1. In this zone, only vessels less than or equal to 60 feet in overall length 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.

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.

ADF&G manages state-waters fisheries for black rockfish and Aleutian Islands, west of 170° W longitude, Pacific cod; all vessels targeting these species must be registered with the department for these fisheries. All other fisheries are managed as parallel fisheries, and vessels participating in those fisheries must be registered under a parallel registration to fish in state waters of the Westward Region. During parallel fishing the state mirrors the seasons, bycatch limits and gear types in adjacent federal waters.

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. The majority of the Pacific cod harvest occurred from January 1 through May 14 when the restrictions of Zone 2 were not in effect. Approximately 95% of the 34,403,067 lbs of Pacific cod harvested from 2001-2006 was taken by trawl gear (Table 12). Longline fishermen harvested nearly 3% of the overall harvest of Pacific cod in the area during 2001-2006. In 2006, the first year for an Aleutian Islands state-waters Pacific cod fishery, fishers participating in the state-waters fishery harvested 2,070,734 pounds from the Adak Vessel Length and Gear Restriction Zones. The remaining 1,913,226 pounds of Pacific cod were harvested during the parallel fisheries. The majority of the rockfish harvested in the area between 2001 and 2006 was harvested by trawl gear, predominantly in the area of 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 remaining rockfish harvest occurred during longline fisheries.

## **GROUND FISH HARVEST FROM PARALLEL SEASONS IN THE BERING SEA-ALEUTIAN ISLANDS AREA**

Other groundfish fisheries that occur in state waters are managed as parallel fisheries, where the state generally mirrors the seasons, bycatch and legal gear types of the adjacent federal waters.

However, legal gear types in the “Adak Vessel Length and Gear Restriction Zones” have been modified by the BOF. Several state-waters areas remain closed to non-pelagic trawling (5 AAC 39.164 (4)-(7)). Parallel fisheries occur for Pacific cod, walleye pollock, Atka mackerel *Pleurogrammus monopterygius*, Pacific ocean perch, red rockfish (shortraker, rougheye, sharpchin and northern rockfish), Greenland turbot *Reinhardtius hippoglossoides*, arrowtooth flounder *Atheresthes stomias*, flathead sole *Hippoglossoides elassodon*, yellowfin sole *Pleuronectes asper*, rock sole *P. bilineatus*, an aggregated rockfish species complex, and an aggregated flatfish species complex. Although these fisheries take place primarily in waters of the EEZ, some of the harvest occurs in waters under the jurisdiction of the State of Alaska. The term “discarded” in the following discussion refers to harvested fish discarded at sea or at the dock; utilized fish are those retained for any product including fish meal, bait, personal use, or by an observer for biological sampling.

Harvest of Pacific cod from the parallel fishery in state waters of the BSAI Area during 2006 was 6.9 million pounds taken by 105 vessels with most of the harvest taken by pot vessels (Tables 13 and 14). 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. In addition, in 2006 there was a state-waters Pacific cod fishery in the Aleutian Islands District during which time the Aleutian Islands parallel fishery was closed west of 170° W long. and may have contributed to the decreased 2006 parallel harvest. The 2006 harvest distribution of Pacific cod from state waters was predominately from the Aleutian Islands District of the BSAI Area. Virtually all of the Pacific cod harvested was utilized.

Walleye pollock harvest from state waters of the BSAI Area in 2006 was 2.9 million pounds and was taken by 42 vessels (Tables 13 and 14). Walleye pollock harvest was primarily in directed fisheries. Virtually all of the pollock harvested was utilized. The 2006 harvest distribution of walleye pollock taken from state waters of the BSAI Area was predominantly from the waters of the Aleutian Islands District.

Atka mackerel harvest in state waters of the BSAI in 2006 was 211,432 pounds (Tables 13 and 14). All harvest of Atka mackerel occurred in the Aleutian Islands District of the BSAI Area. Most of the harvest was incidental to other fisheries, and 41% of the harvest was utilized.

There are 34 species of rockfish in Alaskan waters, of which 13 occur in the BSAI Area (Kramer and O’Connell, 1988). For management purposes these species are divided into five groups. One group is Pacific ocean perch. In the Aleutian Islands, shortraker and rougheye rockfish are considered as a group, while sharpchin and northern rockfish form another group. In the Bering Sea shortraker, rougheye, sharpchin and northern rockfish are combined to form the “other red rockfish” group. All remaining rockfish species comprise the “other rockfish” group.

Harvest of Pacific ocean perch from state waters during 2006 occurred entirely in the Aleutian Islands District. Sixteen vessels harvested 44,509 pounds from state waters (Tables 13 and 14). All harvest was incidental to other fisheries, 87% of which was utilized.

Sixteen vessels harvested 5,065 pounds of shortraker and rougheye rockfish in state waters during 2006 (Tables 13 and 14). Almost all of the state-waters harvest was in the Aleutian Islands District and was incidental harvest to other fisheries. Seventy-one percent of the harvest was utilized.

Nine vessels harvested 4,791 pounds of sharpchin and northern rockfish in 2006 (Tables 13 and 14). All state-waters harvest was in the Aleutian Islands District. Over 98% of this harvest was discarded.

Harvest of the “other” rockfish group has varied over the last seven years. Although the number of vessels remained relatively constant, the number of deliveries has not. Thirty-four vessels harvested 19,858 pounds in state-waters during 2006 (Tables 13 and 14), most of which was caught in the Aleutian Islands District incidental to other fisheries. Eighty-three percent taken from state waters was utilized. Harvest included the following species of rockfish: dusky, yelloweye *S. ruberrimus*, thornyhead *Sebastobius sp* and copper rockfish *S. caurinus*. Redbanded *Sebastes babcocki*, and darkblotched *S. crameri* rockfish were also harvested in this area from 1995 through 1999. ADF&G fish ticket database also contains records of harvest for yellowmouth *Sebastes reedi*, greenstripe *S. elongatus*, rosethorn *S. helvomaculatus*, and tiger rockfish *S. nigrocinctus*, although their occurrence in the BSAI Area is questionable, and could have been misidentified at the dock.

There are 30 species of flatfish in Alaskan waters, 26 of which occur in the BSAI Area (Kramer *et. al.* 1995). For management purposes these species are split into five fisheries. 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”.

Twenty-three vessels harvested 21,948 pounds of Greenland turbot from the BSAI Area in 2006 (Tables 14 and 15). Approximately ninety percent of the harvest was utilized. Eighty-six percent of the harvest came from the Aleutian Islands District. The harvest of Greenland turbot in state waters has varied in recent years.

State-waters harvest of arrowtooth flounder in 2006 was 32,223 pounds taken by forty-eight vessels (Tables 14 and 15). Ninety-seven percent of the harvest was from Aleutian Islands District. All harvest was incidental to other fisheries, and 35% of the harvest was utilized, primarily as fish meal.

Twenty-nine vessels harvested 99,238 pounds of rock sole in 2006 (Tables 14 and 15). Twelve percent of the harvest was utilized and 86% came from the Aleutian Islands District.

State-waters harvest of yellowfin sole in 2006 was 1,038 pounds taken by eleven vessels (Tables 14 and 15). Eighty-six percent of the harvest occurred in the Bering Sea District. All harvest was incidental to other fisheries and over 92% was discarded at-sea or onshore.

Twenty-seven vessels harvested 13,996 pounds of flathead sole in 2006 (Tables 14 and 15). Fifty-six percent of the state-waters harvest, which occurred incidental to other fisheries, came from the Bering Sea District, and the remainder from the Aleutian Islands District. Only 42% of the harvest in 2006 was utilized, most of which was processed into fishmeal.

Harvest of fish in the “other flatfish” group has varied greatly from 1995 through 2006. In 2006, 22 vessels harvested 15,227 pounds (Tables 14 and 15), of which 45% of the state-waters harvest came from the Aleutian Islands District. All harvest was incidental to other fisheries, and only 15% of the harvest was utilized. Harvest included rex sole *Errex zachirus*, English sole *Parophrys vetulus*, and starry flounder *Platichthys stellatus*. In previous years Dover sole *Microstomus pacificus*, butter sole *Isopsetta isolepsis*, and Alaska plaice *Pleuronectes quadrituberculatus*, was also harvested.

Harvest of groundfish from the state waters of the BSAI area of Alaska, during parallel fisheries, from 1995 through 2006 has averaged approximately 29 million pounds per year and totaled more than 328 million pounds. The total harvest for that period included 143 million pounds of walleye pollock, 176 million pounds of Pacific cod, 1.9 million pounds of Atka mackerel, and approximately 1.2 million pounds of all rockfish species, including Pacific ocean perch. Greenland turbot harvest during the twelve-year period was 1.4 million pounds, arrowtooth flounder was approximately 1.2 million pounds and rock sole was approximately 1.6 million pounds. The remaining flatfish species harvest totaled just over 944,000 pounds. The harvest of walleye pollock from state waters generally varies according to the available Federal TAC. Other groundfish harvest in state waters is generally independent of the Federal TAC, and is probably due more to species distribution, prey distribution, weather, and other environmental factors.

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## **TABLES AND FIGURES**

**Table 1.**—Aleutian Islands state-waters sablefish fishery GHGs compared to the federal TAC, state-waters harvest, and number of vessels and deliveries, 1995–2006.

Year	Federal TAC <sup>a,b</sup>	GHL as Percent of Federal TAC	State-waters GHL <sup>a</sup>	Harvest <sup>a</sup>	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

<sup>a</sup> In whole pounds.

<sup>b</sup> 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, 1995–2006.

Year	Fishery Value	Average Price per Pound <sup>a</sup>	Season Length <sup>b</sup>	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

<sup>a</sup> Per pound dressed weight.

<sup>b</sup> In days.

**Table 3.**—Aleutian Islands state-waters directed and incidental sablefish harvest in whole pounds by gear type, 1995–2006.

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
Total	3,820,444	52,797	216,959	4,090,200

**Table 4.**—Aleutian Islands state-waters sablefish fishery percentage of vessels, deliveries and harvest attributed to quota and non-quota vessels, 1995–2006.

Year	Non-IFQ <sup>a</sup>			IFQ <sup>b</sup>		
	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%

<sup>a</sup> Vessels without federal individual fishing quota or community development quota.

<sup>b</sup> Vessels with federal individual fishing quota or community development quota.

**Table 5.**—Aleutian Islands state-waters black rockfish fishery harvest statistics and economic performance, 1994–2006.

Year	Guideline Harvest Level <sup>a</sup>	Number of		Harvest <sup>a</sup>	Exvessel Value <sup>b</sup>	Fishery Value
		Vessels	Deliveries			
1994 <sup>c</sup>	100,000	NO COMMERCIAL HARVEST				
1995 <sup>c</sup>	100,000	CONFIDENTIAL				
1996 <sup>c</sup>	100,000	CONFIDENTIAL				
1997 <sup>c</sup>	100,000	3	18	102,746	\$0.34	\$35,000
1998	100,000	CONFIDENTIAL				
1999	90,000	8	41	20,889	\$0.35	\$7,200
2000	90,000	CONFIDENTIAL				
2001	90,000	CONFIDENTIAL				
2002	90,000	CONFIDENTIAL				
2003	90,000	CONFIDENTIAL				
2004 <sup>d</sup>	90,000	15	33	2,801	\$0.19	\$530
2005 <sup>d</sup>	90,000	CONFIDENTIAL				
2006 <sup>e</sup>	90,000	CONFIDENTIAL				

*Note:* Black rockfish only from 1998–2006.

<sup>a</sup> In whole pounds.

<sup>b</sup> Per pound whole weight.

<sup>c</sup> 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.

<sup>d</sup> Includes incidental bycatch allowance harvest taken during trawl operations.

<sup>e</sup> All black rockfish harvest was taken as bycatch allowance to other directed groundfish fisheries.

**Table 6.**—Aleutian Islands state-waters black rockfish fishery harvest by section, 1994–2006.

Year	Akutan Section		Unalaska Section		Western Section	
	GHL <sup>a</sup>	Harvest <sup>b</sup>	GHL <sup>a</sup>	Harvest <sup>b</sup>	GHL <sup>a</sup>	Harvest <sup>b</sup>
1994 <sup>c</sup>	50,000	0	50,000	0	NA	0
1995 <sup>c</sup>	50,000	0	50,000	Confidential	NA	0
1996 <sup>c</sup>	50,000	0	50,000	Confidential	NA	0
1997 <sup>c</sup>	50,000	Confidential	50,000	Confidential	NA	0
1998	40,000	Confidential	40,000	0	20,000	0
1999	35,000	13,465	35,000	Confidential	20,000	Confidential
2000	35,000	Confidential	35,000	Confidential	20,000	Confidential
2001	35,000	Confidential	35,000	Confidential	20,000	Confidential
2002	35,000	Confidential	35,000	Confidential	20,000	Confidential
2003	35,000	Confidential	35,000	0	20,000	Confidential
2004	35,000	Confidential	35,000	Confidential	20,000	0
2005	35,000	Confidential	35,000	Confidential	20,000	0
2006	35,000	Confidential	35,000	Confidential	20,000	Confidential

*Note:* Black rockfish only from 1998 to 2006.

NA = Not Applicable

<sup>a</sup> Guideline harvest level in whole pounds.

<sup>b</sup> In whole pounds.

<sup>c</sup> Harvest 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.

**Table 7.**—Aleutian Islands state-waters black rockfish fishery GHL in whole pounds, by section and subsection for the 2006 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, 1997–2006.

Year	Sample Location	Sample Size	Age <sup>a</sup>		Length <sup>b</sup>	
			Average	Range	Average	Range
1997	Unalaska Island	9	17.1	11 to 32	43.9	35 to 49
1998			NO DATA COLLECTED			
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			NO DATA COLLECTED			
2002	Akutan Island	531	16.5	4 to 52	45.8	26 to 54
2003			NO DATA COLLECTED			
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

<sup>a</sup> In years (from otoliths).

<sup>b</sup> In centimeters.

**Table 9.**—Aleutian Islands state-waters Pacific cod fishery GHL and harvest apportionment, 2006.

Year	Season	Initial GHL <sup>a</sup>	Harvest <sup>a</sup>	Number of	
				Vessels <sup>c</sup>	Deliveries
2006	03/15 - 03/24	8,981,540	8,502,781	26	68
	06/10 - 09/01	3,849,232 <sup>b</sup>	Confidential	9	Confidential
	TOTAL	12,830,772	Confidential	33	Confidential

<sup>a</sup> In whole pounds.

<sup>b</sup> ADF&G made 3.5 million pounds of the GHL available to National Marine Fisheries Service effective on September 1, 2006.

<sup>c</sup> Some vessels participated in both seasons.

*Note:* Confidential information is due to a limited number of processors.

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

Year	Season Dates		Season Length <sup>b</sup>	Fishery Value	Average Price per Pound <sup>a</sup>
	Opened	Closed			
2006	15-March	24-March	9	\$1,943,134	\$0.23
	10-June	1-Sep	84	Confidential	

a Per pound dressed weight.

b In days.

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

Year		Longline	Trawl	Pot	Jig	Total
2006	03/15-03/24	Confidential	7,053,035	Confidential	0	8,502,781
	06/10-09/01	Confidential	0	Confidential	0	Confidential

**Table 12.**—"Adak Vessel Length and Gear Restriction Zones" harvest of Pacific cod and rockfish by gear type, 2001–2006.

Year	Zone	Vessels	Pacific Cod <sup>a</sup>						Total	Vessels	Rockfish <sup>a,b</sup>					Total
			Trawl <sup>c</sup>	Longline	Pot	Jig	Hand Troll	Trawl			Longline	Pot	Jig	Hand Troll		
2001	1 <sup>d</sup>	10	131,412	36,400	0	15,483	526	183,822	3	0	219	0	0	0	219	
	2 <sup>e</sup>	7	0	17,893	0	18,806	0	36,699	6	0	5,978	5	0	0	5,982	
	2 <sup>f</sup>	24	4,378,165	55,460	51,165	29,698	0	4,514,488	11	31,432	5,978	5	234	0	37,649	
	Total <sup>g</sup>							4,698,310							37,867	
2002	1 <sup>d</sup>	5	253,151	97,841	0	0	100	351,092	3		Confidential				956	
	2 <sup>e</sup>			Confidential				Confidential	3	0	2,616	0	0	0	2,616	
	2 <sup>f</sup>	17	8,054,430	585	0	0	0	8,055,015	8	5,946	2,616	0	0	0	8,562	
	Total <sup>g</sup>							8,406,107							9,518	
2003	1 <sup>d</sup>	3	412,132	0	0	0	0	412,132	3		Confidential				7,612	
	2 <sup>e</sup>	3		Confidential				265	9	0	8,865	131	0	0	8,996	
	2 <sup>f</sup>	22	8,547,369	116	0	149	0	8,547,634	20	15,496	8,865	131	0	0	24,492	
	Total <sup>g</sup>							8,959,766							32,104	
2004	1 <sup>d</sup>	6	268,421	6,318	0	4,271	0	279,011	3		Confidential				6,251	
	2 <sup>e</sup>	2		Confidential				Confidential	6	0	2,815	0	0	0	2,815	
	2 <sup>f</sup>	20	4,890,615	24,481	0	0	0	4,915,096	18	7,873	3,602	0	0	0	11,475	
	Total <sup>g</sup>							5,194,107							17,726	
2005	1 <sup>d</sup>	6		Confidential				435,149	3		Confidential				Confidential	
	2 <sup>e</sup>	3		Confidential				Confidential	4		Confidential				Confidential	
	2 <sup>f</sup>	14	1,896,825	828,842	0	0	0	2,725,668	7		Confidential				Confidential	
	Total <sup>g</sup>							3,160,817							24,867	
2006	1 <sup>d</sup>	11		Confidential				401,624	2		Confidential				Confidential	
	2 <sup>e</sup>	4	0	51,047	0	0	0	51,047	4	0	1,372	0	0	0	1,372	
	2 <sup>f</sup>	24		Confidential				3,582,336	10	6,513	1,688	0	0	0	8,201	
	Total <sup>g</sup>							3,983,960							Confidential	

<sup>a</sup> In pounds.

<sup>b</sup> Includes all species of rockfish commercially harvested.

<sup>c</sup> From 2001 – 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.

<sup>d</sup> 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.

<sup>e</sup> 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. longitude and 177° W. longitude surrounding Zone 1 waters.

<sup>f</sup> Includes harvest for the entire year within waters encompassed by Zone 2.

<sup>g</sup> Includes harvest for the entire year within waters encompassed by Zone 1 and Zone 2.

**Table 13.**—Bering Sea-Aleutian Islands Area harvest, number of vessels and deliveries from state waters in the parallel seasons for Pacific cod, walleye pollock, Atka mackerel, Pacific Ocean perch, shortraker/rougheye rockfish, sharpchin/northern rockfish and other rockfish fisheries, 1995–2006.

Year		Pacific Cod	Walleye Pollock	Atka Mackerel	Pacific Ocean Perch	Shortraker and Rougheye Rockfish	Sharpchin and Northern Rockfish	Other Rockfish <sup>a</sup>
1995	Harvest	20,539,276	28,412,682	440,476	33,883	14,080	2,186	27,128
	Vessels	155	46	36	18	19	5	38
	Deliveries	955	91	84	30	22	5	96
1996	Harvest	18,257,947	21,318,035	103,040	68,784	10,765	57,767	43,909
	Vessels	162	55	13	24	22	9	33
	Deliveries	893	103	22	37	27	12	59
1997	Harvest	4,574,911	18,739,072	17,710	10,532	8,325	0	21,198
	Vessels	108	36	7	17	23	0	32
	Deliveries	386	70	8	24	26	0	59
1998	Harvest	11,939,929	13,547,679	11,276	95,113	5,238	9,658	31,203
	Vessels	111	48	11	22	6	6	35
	Deliveries	374	93	15	36	11	8	105
1999	Harvest	18,307,994	1,509,911	534,477	44,082	11,299	23,128	26,013
	Vessels	136	24	14	13	9	14	31
	Deliveries	545	40	18	21	20	20	49
2000	Harvest	15,617,783	3,661,579	170,830	4,730	15,542	23,741	51,961
	Vessels	164	36	17	8	22	15	35
	Deliveries	580	53	26	10	28	25	77
2001	Harvest	15,234,235	5,541,310	96,915	8,894	8,730	33,500	65,809
	Vessels	132	49	16	7	24	7	42
	Deliveries	415	75	25	11	40	10	116
2002	Harvest	16,503,559	11,240,922	26,326	6,666	1,169	8,460	57,678
	Vessels	113	36	16	14	12	14	41
	Deliveries	375	63	30	22	15	20	89
2003	Harvest	19,385,195	10,946,365	41,033	19,377	3,708	26,337	62,716
	Vessels	116	41	34	21	13	19	47
	Deliveries	459	92	94	48	24	32	126
2004	Harvest	19,205,950	20,220,871	175,879	8,555	3,858	36,892	39,114
	Vessels	121	55	42	28	16	29	51
	Deliveries	578	147	131	72	29	62	140
2005	Harvest	9,945,055	5,309,503	78,602	57,498	1,355	18,955	26,798
	Vessels	95	31	16	11	10	9	41
	Deliveries	389	54	38	28	14	16	94
2006	Harvest	6,907,898	2,937,559	211,432	44,509	5,065	4,791	19,858
	Vessels	105	42	15	16	16	9	34
	Deliveries	346	67	37	31	22	20	85

Note: All harvests are in whole pounds and include discards at sea.

<sup>a</sup> Other rockfish species include: dusky, yelloweye *S. ruberrimus*, thornyhead *Sebastobius spp.*, redbanded *Sebastes babcocki*, and darkblotched *S. crameri* rockfish.

**Table 14.**—Bering Sea-Aleutian Islands Area harvest in whole pounds by gear type from state waters in the parallel seasons for Pacific cod, walleye pollock, Atka mackerel, Pacific Ocean perch, shortraker/rougheye rockfish, sharpchin/northern rockfish, other rockfish, Greenland turbot, arrowtooth flounder, rock sole, yellowfin sole, flathead sole and other flatfish fisheries, 1995–2006.

Fishery	Year	Trawl	Longline	Pot	Mechanical Jig	Hand Troll
<b>Pacific Cod</b>						
	1995	12,265,060	2,003,742	5,496,569	769,828	4,077
	1996	5,857,109	446,532	11,546,495	393,159	*
	1997	814,481	1,476,499	2,073,538	208,215	*
	1998	3,975,800	4,128,820	3,624,994	209,937	*
	1999	8,963,778	1,447,771	7,542,991	353,454	0
	2000	5,378,628	3,612,076	6,524,176	102,063	*
	2001	7,940,213	3,974,965	3,146,501	172,030	*
	2002	13,768,587	484,612	1,887,114	363,146	*
	2003	13,456,640	855,270	4,928,807	144,478	0
	2004	12,272,028	1,852,962	4,616,764	464,196	0
	2005	4,056,394	2,538,128	3,116,586	233,947	0
	2006	2,500,127	1,267,485	2,997,594	142,692	0
<b>Pollock</b>						
	1995	28,411,848	*	171	648	0
	1996	21,220,981	0	97,055	0	0
	1997	18,736,861	*	*	2,165	0
	1998	13,540,291	6,114	1,274	0	0
	1999	1,508,674	918	319	0	0
	2000	3,650,800	5,825	4,954	0	0
	2001	5,512,961	27,487	862	0	0
	2002	11,240,481	*	*	*	0
	2003	10,943,622	2,722	*	0	0
	2004	20,211,288	9,463	*	0	0
	2005	5,307,986	69	*	0	0
	2006	2,927,421	702	*	0	0
<b>Atka Mackerel</b>						
	1995	434,834	*	4,447	1,193	0
	1996	102,296	0	744	0	0
	1997	*	*	43	0	0
	1998	11,161	0	*	0	0
	1999	533,652	*	150	0	0
	2000	164,118	5,930	782	0	0
	2001	91,093	5,058	*	0	0
	2002	26,325	*	0	0	0
	2003	32,941	*	7,976	0	0
	2004	174,701	0	*	0	0
	2005	78,600	*	0	0	0
	2006	208,352	0	3,080	0	0

-continued-

**Table 14.**—Page 2 of 5

Fishery	Year	Trawl	Longline	Pot	Mechanical Jig	Hand Troll
<b>Pacific Ocean Perch</b>						
	1995	33,728	0	*	*	0
	1996	68,784	0	0	0	0
	1997	6,838	*	0	0	0
	1998	95,113	0	0	0	0
	1999	43,177	*	*	0	0
	2000	4,290	440	0	0	0
	2001	8,894	0	0	0	0
	2002	6,666	0	0	0	0
	2003	19,377	0	0	0	0
	2004	8,555	0	0	0	0
	2005	57,498	0	0	0	0
	2006	44,503	*	0	0	0
<b>Shortraker-Rougheye Rockfish</b>						
	1995	241	13,645	0	*	0
	1996	519	10,246	0	0	0
	1997	1,078	7,247	0	0	0
	1998	*	3,506	0	0	0
	1999	*	10,092	0	0	0
	2000	*	12,976	0	0	0
	2001	0	8,592	*	*	0
	2002	*	1,163	0	0	0
	2003	*	3,208	452	0	0
	2004	246	3,509	*	0	0
	2005	*	1,321	0	0	0
	2006	353	3,909	*	0	0
<b>Sharpchin-Northern Rockfish</b>						
	1995	2,186	0	0	0	0
	1996	57,746	0	*	0	0
	1997	0	0	0	0	0
	1998	9,658	0	0	0	0
	1999	22,682	*	*	0	0
	2000	16,065	7,592	*	*	0
	2001	29,011	4,489	0	0	0
	2002	8,382	*	0	0	0
	2003	26,241	*	0	0	0
	2004	36,460	*	0	0	0
	2005	18,955	0	0	0	0
	2006	4,791	0	0	0	0

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**Table 14.**—Page 3 of 5

Fishery	Year	Trawl	Longline	Pot	Mechanical Jig	Hand Troll
Other Rockfish <sup>a</sup>						
	1995	1,376	25,402	*	330	0
	1996	125	43,613	*	*	0
	1997	757	20,115	*	*	0
	1998	5,455	25,590	*	0	0
	1999	9,308	16,525	180	0	0
	2000	*	50,780	24	*	0
	2001	7,056	58,461	292	0	0
	2002	985	56,354	0	339	0
	2003	1,214	60,928	574	0	0
	2004	3,512	35,428	174	0	0
	2005	459	26,314	*	0	0
	2006	3,479	15,621	758	0	0
Greenland Turbot						
	1995	174,281	111,906	*	*	0
	1996	760	175,618	0	0	0
	1997	1,417	93,250	0	0	0
	1998	1,022	338,314	0	0	0
	1999	11,138	74,419	*	0	0
	2000	*	124,187	*	0	0
	2001	*	150,332	2,179	0	0
	2002	*	45,849	*	0	0
	2003	*	53,083	1,216	0	0
	2004	107	16,891	*	0	0
	2005	*	6,889	*	0	0
	2006	2,112	18,521	1,315	0	0
Arrowtooth Flounder						
	1995	11,484	9,009	*	*	0
	1996	33,038	1,451	27	0	0
	1997	16,035	4,882	*	0	0
	1998	30,340	832	0	0	0
	1999	749,169	3,458	0	0	0
	2000	11,520	14,905	*	0	0
	2001	19,152	18,889	2,797	0	0
	2002	35,546	2,058	*	*	0
	2003	41,647	4,370	70	0	0
	2004	124,363	3,627	*	0	0
	2005	35,766	2,483	*	0	0
	2006	23,301	7,799	1,123	0	0

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**Table 14.**—Page 4 of 5

Fishery	Year	Trawl	Longline	Pot	Mechanical Jig	Hand Troll
<b>Rock Sole</b>						
	1995	52,460	0	*	0	0
	1996	121,696	0	*	0	0
	1997	63,863	0	*	0	0
	1998	135,519	0	*	0	0
	1999	210,956	*	0	0	0
	2000	94,228	*	24	0	0
	2001	178,694	*	75	0	0
	2002	161,290	0	0	0	0
	2003	206,561	0	0	0	0
	2004	290,436	*	0	0	0
	2005	50,446	*	*	0	0
	2006	98,964	*	0	0	0
<b>Yellowfin Sole</b>						
	1995	*	0	2,887	0	0
	1996	87,333	0	*	0	0
	1997	*	0	83	0	0
	1998	9,694	0	*	0	0
	1999	55,521	*	1,164	0	0
	2000	*	*	*	0	0
	2001	61,307	0	*	0	0
	2002	27,144	0	0	0	0
	2003	24,569	0	*	0	0
	2004	1,233	*	*	0	0
	2005	4,620	*	*	0	0
	2006	282	*	741	0	0
<b>Flathead Sole</b>						
	1995	2,064	0	*	0	0
	1996	70,285	0	*	0	0
	1997	27,332	0	0	0	0
	1998	39,119	0	*	0	0
	1999	77,466	*	*	0	0
	2000	10,895	*	*	0	0
	2001	20,837	747	11	0	0
	2002	70,209	0	*	0	0
	2003	34,952	*	36	0	0
	2004	28,410	352	*	0	0
	2005	9,620	0	*	0	0
	2006	13,769	*	*	*	*

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**Table 14.**–Page 5 of 5

Fishery	Year	Trawl	Longline	Pot	Mechanical Jig	Hand Troll
Other Flatfish <sup>b</sup>						
	1995	854	0	357	0	0
	1996	39,658	*	*	0	0
	1997	30,836	0	*	0	0
	1998	59,618	*	1,017	0	0
	1999	46,405	0	0	0	0
	2000	3,011	*	*	0	0
	2001	21,236	0	*	0	0
	2002	5,504	0	0	0	0
	2003	4,805	0	35	0	0
	2004	14,344	0	*	0	0
	2005	11,492	0	0	0	0
	2006	15,153	*	*	0	0

Note: All harvests are in whole pounds and include discards at sea.

\* Confidential information.

<sup>a</sup> Other rockfish species include: dusky, yelloweye *S. ruberrimus* and thornyhead rockfish *Sebastolobus spp.*, Redbanded *Sebastes babcocki*, and darkblotched *S. crameri* rockfish.

<sup>b</sup> Other Flatfish species include: rex sole *Errex zachirus*, butter sole *Isopsetta isolepsis*, Alaska plaice *Pleuronectes quadrituberculatus*, English sole *Parophrys vetulus*, and starry flounder *Platichthys stellatus*.

**Table 15.**—Bering Sea-Aleutian Islands Area harvest, number of vessels and deliveries from state waters in the parallel seasons for Greenland turbot, arrowtooth flounder, rock sole, yellowfin sole, flathead sole and other flatfish fisheries, 1995–2006.

Year		Greenland Turbot	Arrowtooth Flounder	Rock Sole	Yellowfin Sole	Flathead Sole	Other Flatfish <sup>a</sup>
1995	Harvest	286,209	20,802	52,570	3,057	2,119	1,211
	Vessels	24	31	12	7	10	10
	Deliveries	40	61	23	14	17	17
1996	Harvest	176,378	34,516	121,708	88,002	70,290	39,670
	Vessels	33	29	24	17	22	26
	Deliveries	49	43	41	24	36	37
1997	Harvest	94,667	20,947	63,913	93	27,332	30,917
	Vessels	26	18	12	5	9	12
	Deliveries	47	31	21	7	20	26
1998	Harvest	339,336	31,172	135,536	9,771	41,887	60,640
	Vessels	26	17	25	12	19	29
	Deliveries	81	31	48	15	37	52
1999	Harvest	86,608	752,627	211,227	56,688	78,197	46,405
	Vessels	17	19	20	9	13	13
	Deliveries	34	39	46	12	28	17
2000	Harvest	125,715	26,510	94,254	1,126	11,216	3,052
	Vessels	22	29	24	5	20	10
	Deliveries	43	45	45	5	26	11
2001	Harvest	152,566	40,838	178,785	61,319	21,595	21,240
	Vessels	31	44	23	8	26	13
	Deliveries	74	73	39	11	29	17
2002	Harvest	46,690	37,721	161,290	27,144	70,223	5,504
	Vessels	19	40	21	4	31	18
	Deliveries	43	77	48	5	44	23

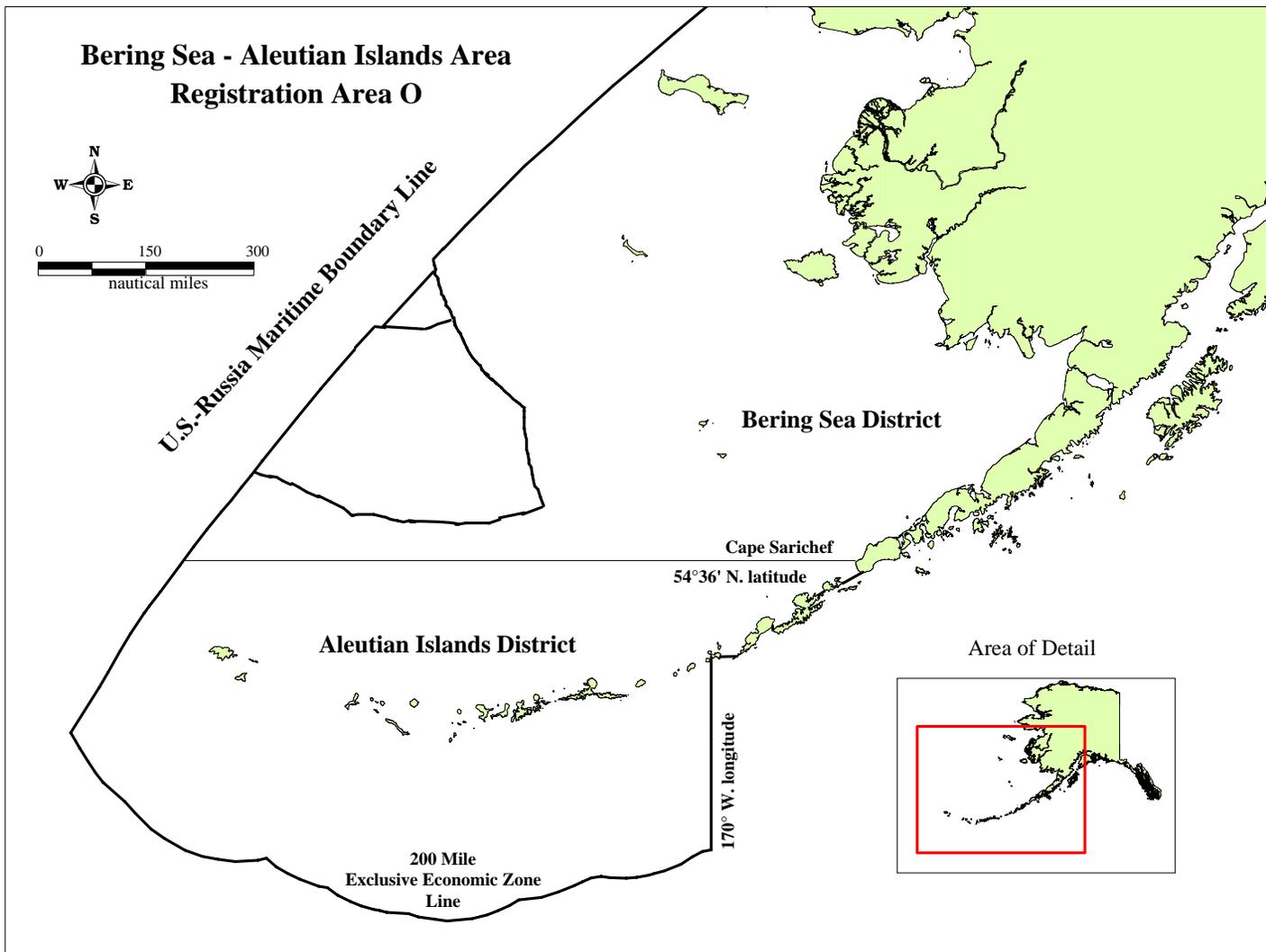
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**Table 15.**—Page 2 of 2

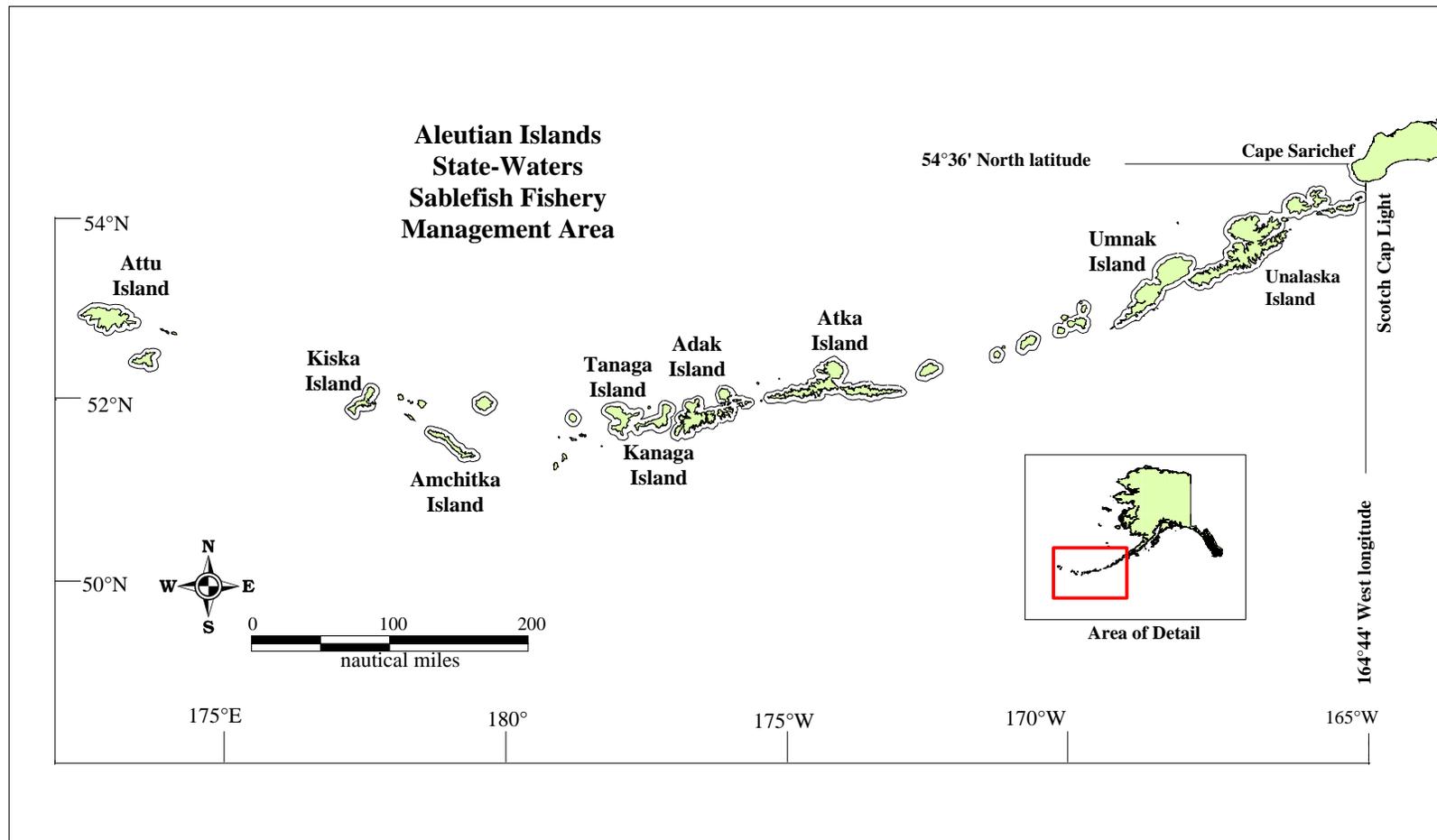
Year		Greenland Turbot	Arrowtooth Flounder	Rock Sole	Yellowfin Sole	Flathead Sole	Other Flatfish <sup>a</sup>
2003	Harvest	54,316	46,087	206,561	25,021	34,994	4,840
	Vessels	20	50	28	9	34	21
	Deliveries	45	110	98	15	57	43
2004	Harvest	18,316	139,853	290,582	1,846	28,784	14,354
	Vessels	23	58	36	8	41	29
	Deliveries	41	159	98	13	106	77
2005	Harvest	8,137	38,398	50,783	4,741	9,667	11,492
	Vessels	10	38	21	10	26	16
	Deliveries	14	70	33	12	42	39
2006	Harvest	21,948	32,223	99,238	1,038	13,996	15,227
	Vessels	23	48	29	11	27	22
	Deliveries	33	86	59	13	41	39

*Note:* All harvests are in whole pounds and include discards at sea.

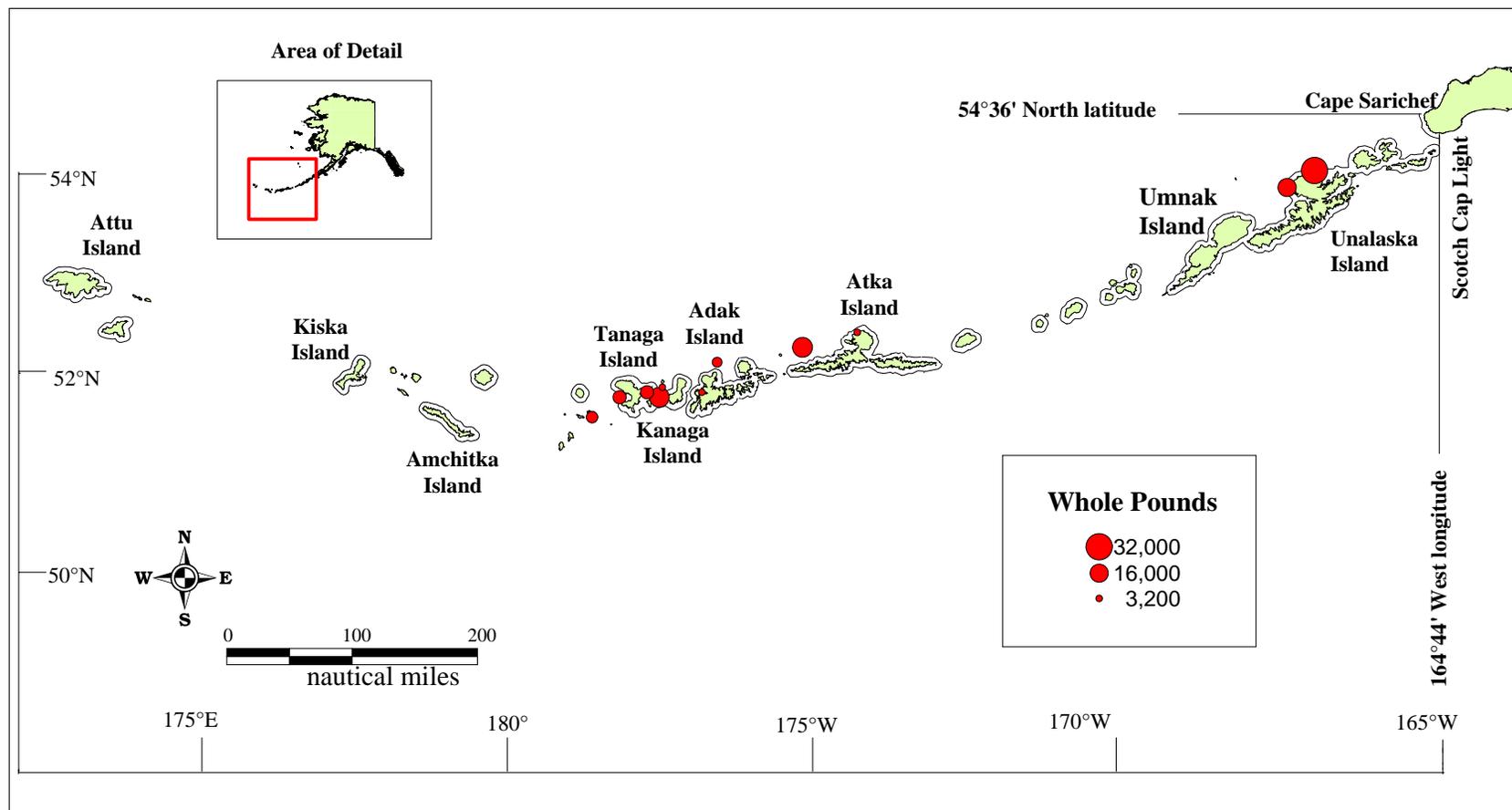
<sup>a</sup> Other Flatfish species include: rex sole *Errex zachirus*, butter sole *Isopsetta isolepsis*, Alaska plaice *Pleuronectes quadrituberculatus*, English sole *Parophrys vetulus*, and starry flounder *Platichthys stellatus*.



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



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



**Figure 3.**—Harvest of Aleutian Islands state-waters sablefish in 2006 showing statistical areas where harvest over 1,000 pounds occurred.

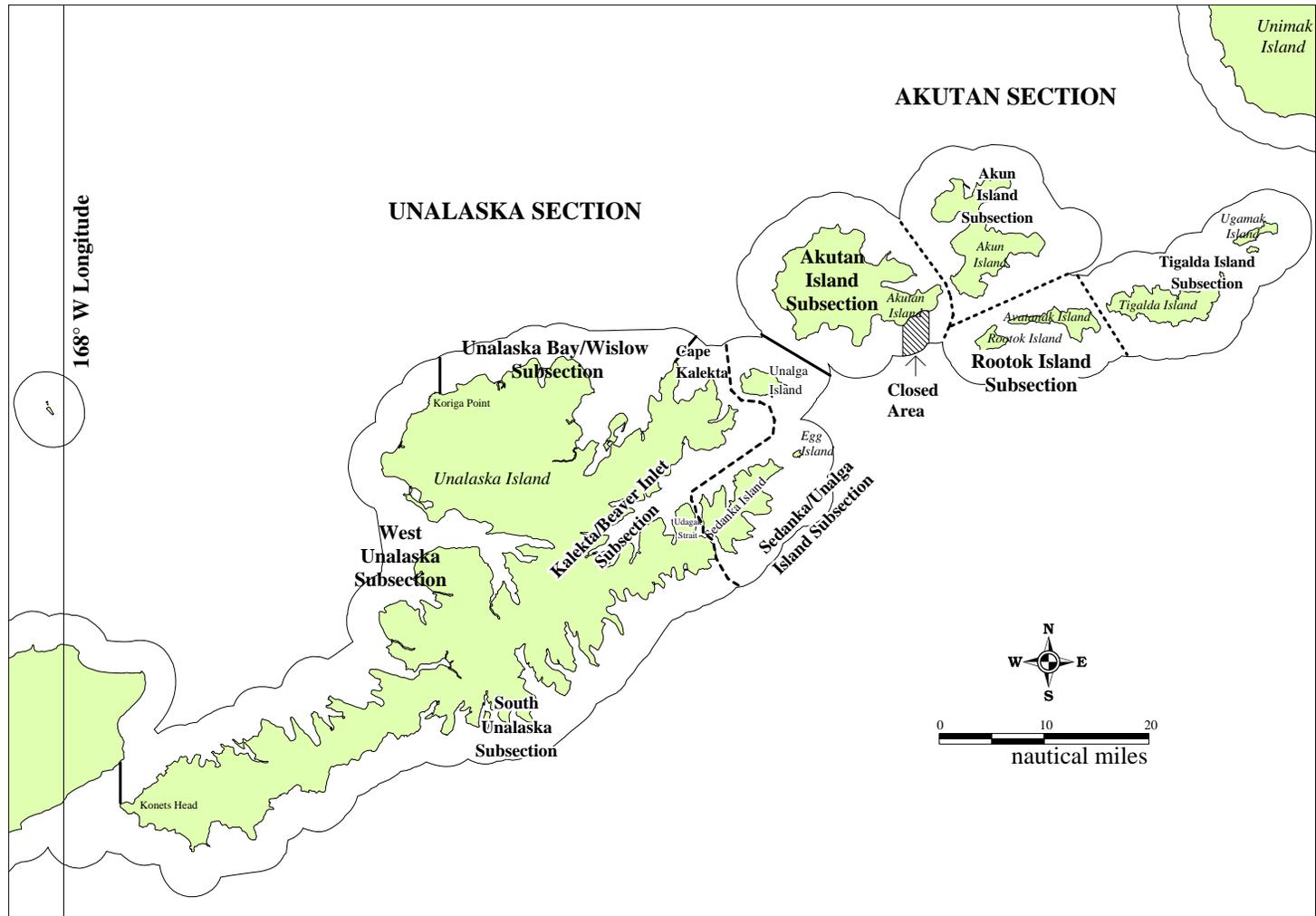
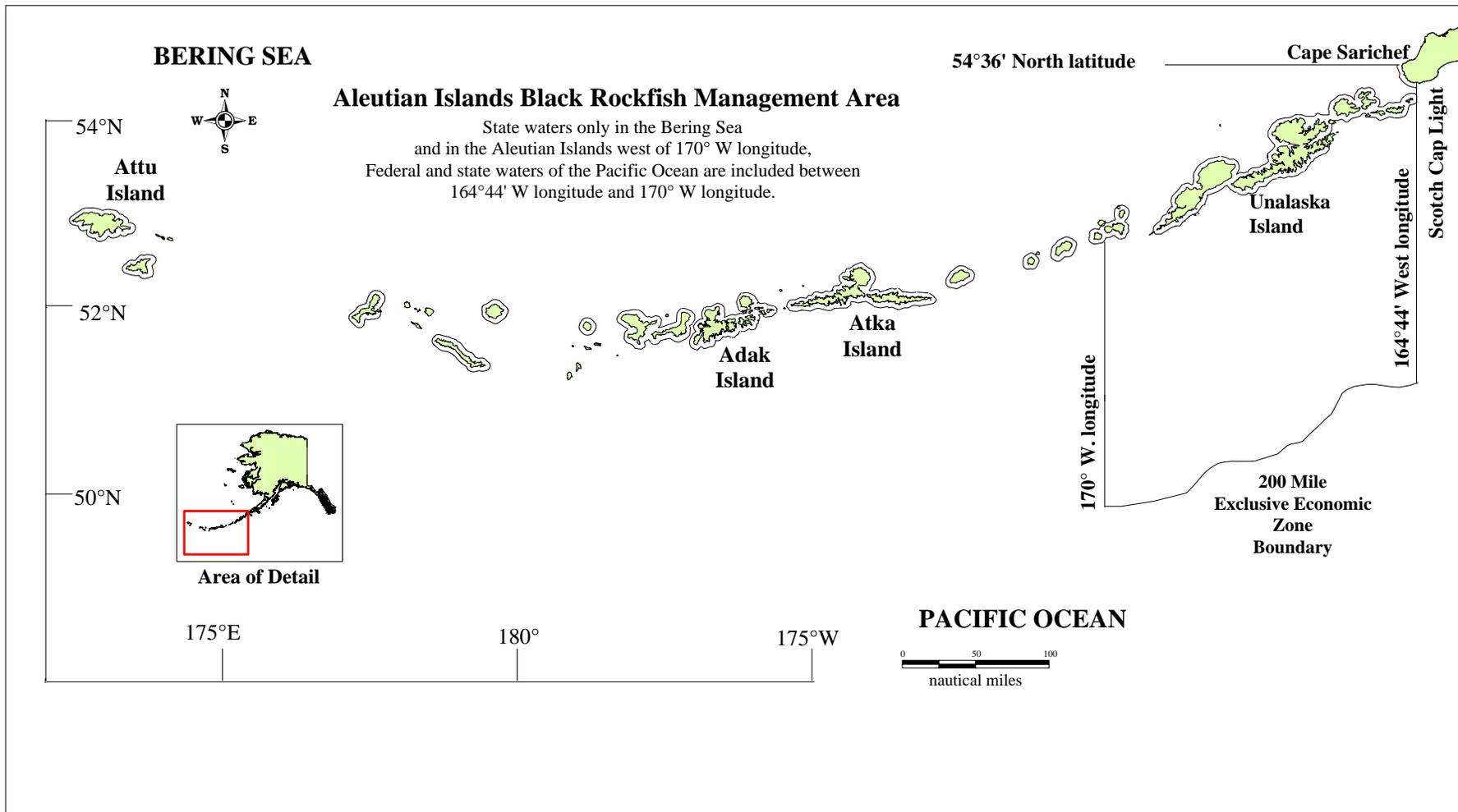
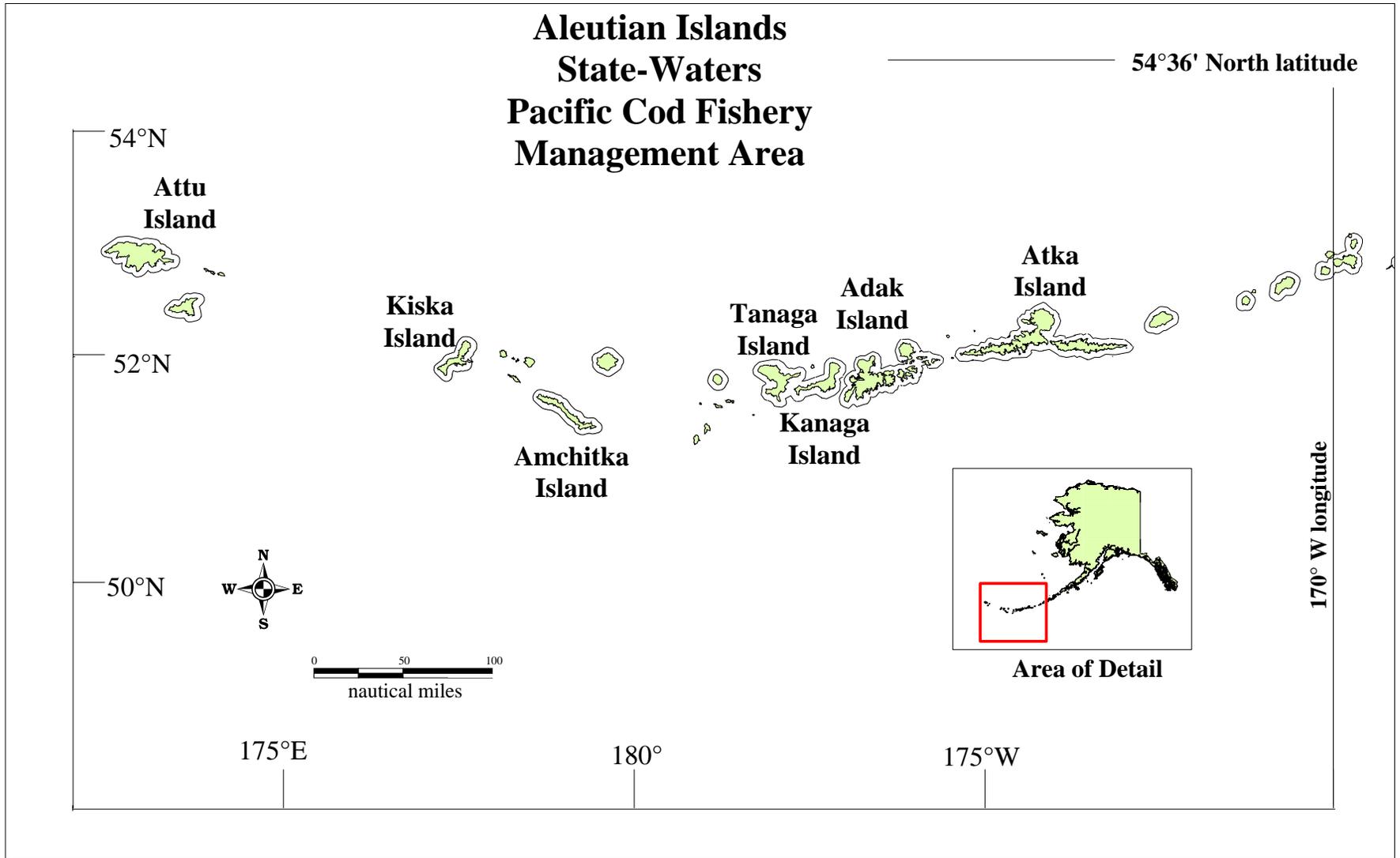


Figure 4.—Subsections of the Unalaska and Akutan Sections of the Aleutian Islands state-waters black rockfish fishery.

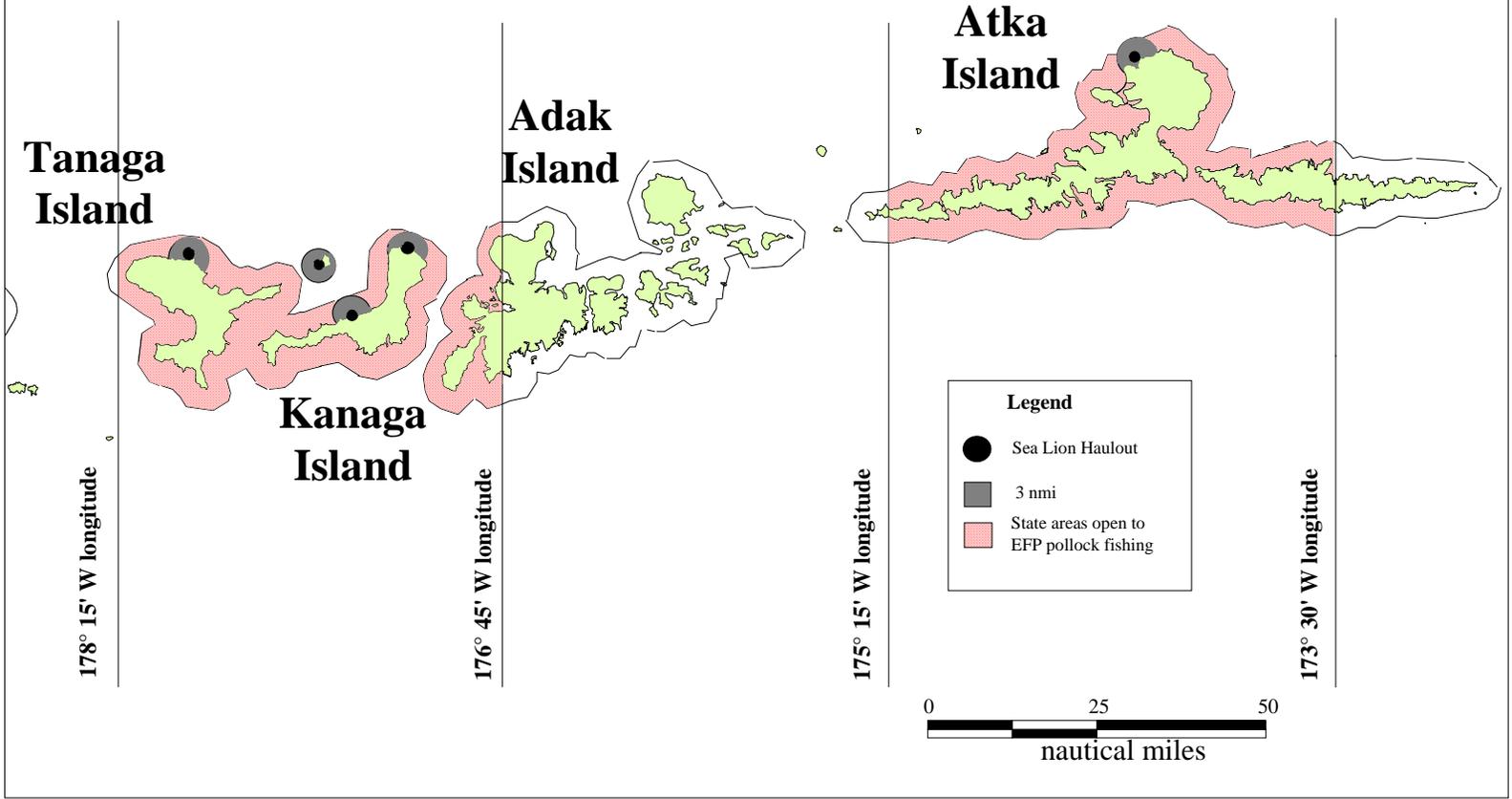


**Figure 5.**—The Aleutian Islands state-waters black rockfish management area.

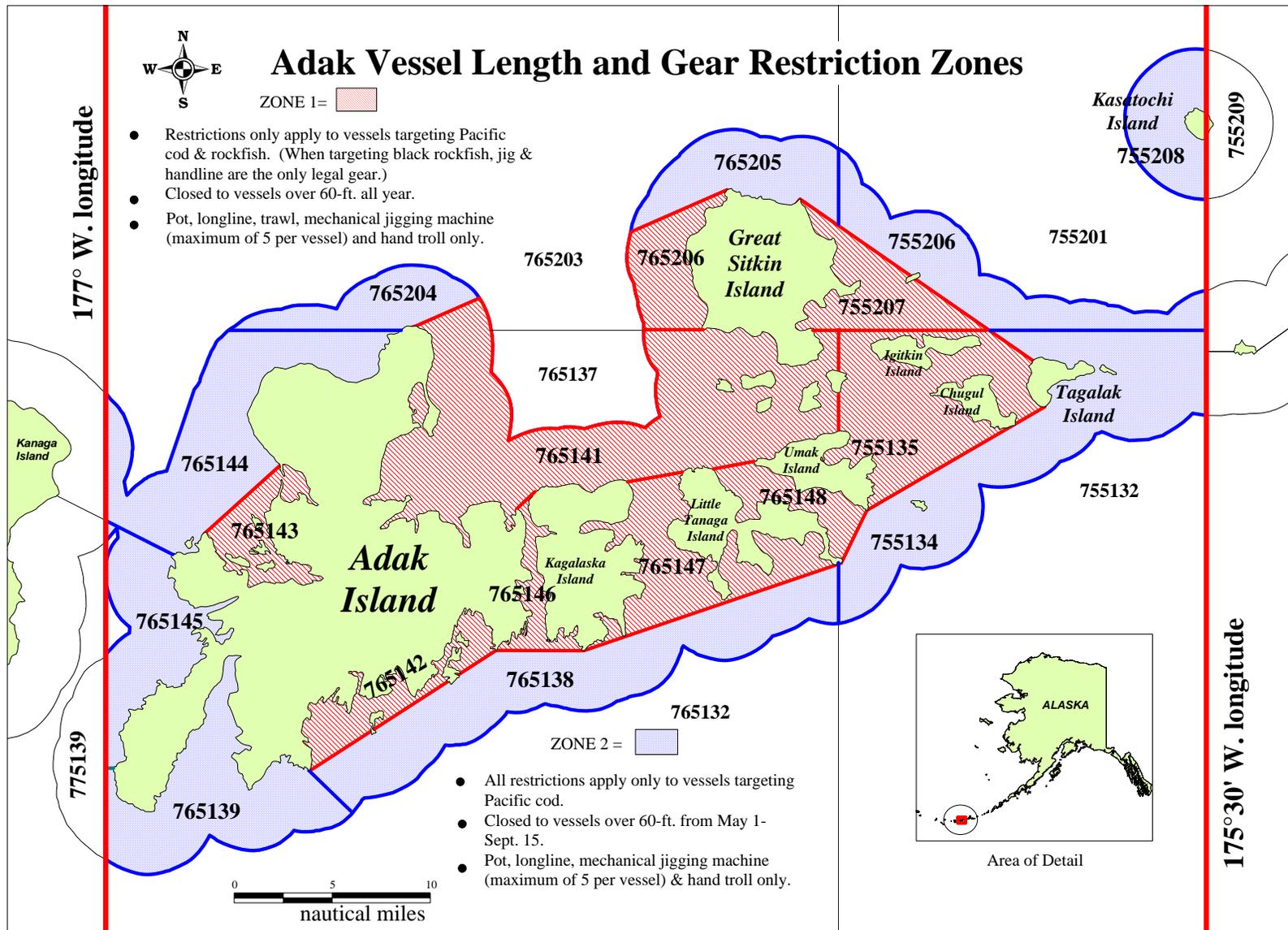


**Figure 6.**—The Aleutian Islands state-waters Pacific cod fishery management area.

# Exempted Fishing Permit Walleye Pollock State-Waters Areas



**Figure 7.**—The Aleutian Islands state-waters areas open to a Commissioner’s permit for walleye pollock to coincide with the Federal Exempted Fishing Permit in adjacent federal waters.



**Figure 8.**—Adak vessel length and gear restriction zones and statistical reporting areas.