

**Fishery Management Report No. 10-33**

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**Annual Management Report for Groundfish Fisheries  
in the Kodiak, Chignik, and South Alaska Peninsula  
Management Areas, 2009**

by

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and

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September 2010

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Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



## Symbols and Abbreviations

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<b>Weights and measures (metric)</b>		<b>General</b>	<b>Mathematics, statistics</b>
centimeter	cm	Alaska Administrative Code	<i>all standard mathematical signs, symbols and abbreviations</i>
deciliter	dL	all commonly accepted abbreviations	alternate hypothesis $H_A$
gram	g		base of natural logarithm $e$
hectare	ha		catch per unit effort CPUE
kilogram	kg	all commonly accepted professional titles	coefficient of variation CV
kilometer	km		common test statistics (F, t, $\chi^2$ , etc.)
liter	L	at	confidence interval CI
meter	m	compass directions:	correlation coefficient (multiple) R
milliliter	mL	east	correlation coefficient (simple) r
millimeter	mm	north	covariance cov
		south	degree (angular) °
<b>Weights and measures (English)</b>		west	degrees of freedom df
cubic feet per second	ft <sup>3</sup> /s	copyright	expected value $E$
foot	ft	corporate suffixes:	greater than >
gallon	gal	Company	greater than or equal to ≥
inch	in	Corporation	harvest per unit effort HPUE
mile	mi	Incorporated	less than <
nautical mile	nmi	Limited	less than or equal to ≤
ounce	oz	District of Columbia	logarithm (natural) ln
pound	lb	et alii (and others)	logarithm (base 10) log
quart	qt	et cetera (and so forth)	logarithm (specify base) log <sub>2</sub> , etc.
yard	yd	exempli gratia (for example)	minute (angular) ' "
		Federal Information Code	not significant NS
<b>Time and temperature</b>		id est (that is)	null hypothesis $H_0$
day	d	latitude or longitude	percent %
degrees Celsius	°C	monetary symbols (U.S.)	probability P
degrees Fahrenheit	°F	months (tables and figures): first three letters	probability of a type I error (rejection of the null hypothesis when true) $\alpha$
degrees kelvin	K	registered trademark	probability of a type II error (acceptance of the null hypothesis when false) $\beta$
hour	h	trademark	second (angular) "
minute	min	United States (adjective)	standard deviation SD
second	s	United States of America (noun)	standard error SE
		U.S.C.	variance
<b>Physics and chemistry</b>		U.S. state	population Var
all atomic symbols			sample var
alternating current	AC		
ampere	A		
calorie	cal		
direct current	DC		
hertz	Hz		
horsepower	hp		
hydrogen ion activity (negative log of)	pH		
parts per million	ppm		
parts per thousand	ppt, ‰		
volts	V		
watts	W		

***FISHERY MANAGEMENT REPORT NO. 10-33***

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AND SOUTH ALASKA PENINSULA MANAGEMENT AREAS, 2009**

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## ABSTRACT

This report summarizes effort and harvest from state waters and parallel commercial groundfish fisheries in Kodiak, Chignik, and South Alaska Peninsula areas during 2009. Over 90 million pounds of groundfish were harvested from state waters in 2009. Harvest of Pacific cod *Gadus macrocephalus* in state-waters fisheries totaled 25.87 million pounds from 213 vessels, for an estimated exvessel fishery value of \$7.1 million during 2009. Black rockfish *Sebastes melanops* were harvested by 18 vessels in Kodiak Management Area. Total black rockfish harvest from Kodiak Area was 122,249 pounds for an estimated exvessel value of approximately \$50,000. Black rockfish harvest in Chignik Management Area remains confidential (fewer than 3 vessels participated) and there was minimal effort in South Alaska Peninsula.

A general summary of fishery information is provided on other groundfish species harvested in state waters, as well as a historical summary of non-pelagic trawl closures in state waters of the Kodiak, Chignik, and South Alaska Peninsula areas.

Key words: Westward Region, Kodiak, Chignik, South Alaska Peninsula, groundfish, Pacific cod, black rockfish, state-waters, parallel, commercial fisheries, exvessel, trawl, Annual Management Report, AMR

## INTRODUCTION

The Alaska Department of Fish and Game's (ADF&G) mission is to manage, protect, maintain, and improve the fish, game, and aquatic plant resources of Alaska. It is the intent of ADF&G Commercial Fisheries Division to sustain groundfish and shellfish resources of the state to allow subsistence and commercial harvest of groundfish and shellfish surplus to spawning biomass. This report provides an overview of groundfish resources, a brief history of the commercial fisheries, and harvest strategies. Appendix A defines frequently used acronyms and key words associated with Westward Region groundfish fisheries.

Within the Exclusive Economic Zone (EEZ), the state of Alaska has management authority for groundfish resources within state waters (also called the territorial sea), which are defined from shore to 3 nm (MSFCMA 1997). State groundfish management areas include the Eastern Gulf of Alaska (GOA), Prince William Sound, Cook Inlet, Kodiak, Chignik, South Alaska Peninsula, Bering Sea-Aleutian Islands (BSAI), and Chukchi-Beaufort areas (Figure 2). These management areas extend to the most seaward boundary of the EEZ.

Groundfish stocks in the EEZ of the Gulf of Alaska (GOA) and BSAI outside of state waters are managed by National Marine Fisheries Service (NMFS) under guidelines developed by the North Pacific Fishery Management Council (NPFMC). Areas used for federal groundfish fisheries management are different than those used by the State of Alaska (Figures 1 and 2). For groundfish fisheries in state waters (0–3 nm) that are not actively managed inseason by the state, ADF&G issues an emergency order (EO) at the beginning of each year, creating parallel fishing seasons, which are concurrent to the federal seasons. During parallel seasons, the State of Alaska adopts NMFS' allowable gear, bycatch levels, and fishing season actions in state waters by authority of the annually issued global EO.

Exceptions to a parallel fishing season occur when the state establishes separate harvest quotas, seasons, or regulations for state waters. In the Westward Region, these include fisheries for lingcod *Ophiodon elongates*, sablefish *Anoplopoma fimbria*, Pacific cod *Gadus macrocephalus*, black rockfish *Sebastes melanops*, and dark rockfish *Sebastes ciliatus*. For lingcod, dark rockfish, and black rockfish, the state has full management authority from shore to the 200 nautical mile boundary of the EEZ.

Pacific cod and walleye pollock *Theragra chalcogramma*, comprise the largest volume of groundfish harvested from state waters in Kodiak, Chignik, and South Alaska Peninsula areas (Table 1). All walleye pollock directed harvest occurs during parallel seasons, while Pacific cod are harvested in both parallel and state-waters seasons. In 2009, 13 emergency orders were issued to enact inseason regulatory changes to groundfish fisheries in the Kodiak, Chignik, and South Alaska Peninsula management areas (Table 2).

## **PACIFIC COD**

NMFS has managed Pacific cod fisheries in the GOA since at least 1976 (Thompson et al. 2009). Pacific cod is managed by NMFS as a single GOA-wide stock because Pacific cod are considered a transoceanic species (Shimada and Kimura 1994; Thompson et al. 2009). The GOA Total Allowable Catch (TAC) is apportioned among the Eastern (EGOA), Central (CGOA), and Western GOA (WGOA) federal management areas. The TAC limits catch in the federal and parallel waters fisheries and apportionments among management areas are designed to spread out fishing effort.

Coincident with the NMFS GOA Pacific cod season, the State of Alaska opens a concurrent “parallel” season inside state waters (Sagalkin 2009). Harvest from federal and concurrent parallel seasons are subtracted from the same federal TAC.

In addition to federal and parallel Pacific cod seasons, there are state-waters seasons for Pacific cod. State-waters seasons are managed separately from federal and parallel seasons, and have separate harvest guidelines and separate management measures; however, NMFS accounts for state-waters fishery removals when establishing the federal/parallel TAC.

The 2009 federal Acceptable Biological Catch (ABC) was 121,915,486 pounds (Thompson et al. 2009), and was apportioned 57% (69.5 million pounds) to the CGOA, 39% (47.5 million pounds) to the WGOA, and 4% (4.9 million pounds) to the EGOA federal management areas (Thompson et al. 2009). Total Pacific cod harvest from CGOA, including federal, parallel, and state-waters fisheries, bycatch, and discards at the dock, was 58.8 million pounds (Table 3), or 15% under the ABC (the CGOA ABC is referenced instead of the CGOA TAC because the state-waters guideline harvest level is derived from the ABC). Approximately 40% of CGOA total harvest came from state waters (Table 3). Total Pacific cod harvest from the WGOA, including federal, parallel, and state-waters fisheries, bycatch, and discards at the dock, was 38.6 million pounds (Table 3), or 19% under the ABC. Approximately 60% of the WGOA total harvest came from state waters.

## **PARALLEL SEASON**

### **Background**

To participate beyond 3 nautical miles in the federal Pacific cod season, vessels must have a federal License Limitation Program (LLP) permit from NMFS. However, during the concurrent parallel season, vessels do not need an LLP to participate.

Most state waters in the Westward Region are closed to non-pelagic trawling. During directed Pacific cod fishery openings, 100% of Pacific cod and walleye pollock must be retained under state regulation 5 AAC 28.075 *Utilization Of Pollock And Pacific Cod Taken In A Commercial Fishery*. Federal regulation, 50 CFR 679.B.27 *Increased Retention/Increased Utilization Program*, contains similar language requiring full retention of these species during directed

fisheries occurring in federal waters (Beardon 1999). During directed fishery closures, maximum allowable percentages of Pacific cod and walleye pollock retained as bycatch are typically set at 20% by target species weight as designated by NMFS.

Several actions were taken by NMFS and NPFMC during 2001 in response to the Steller sea lion (SSL) Biological Opinion and Incidental Take Statement (BiOp) issued in November of 2001. Actions taken to mitigate the effect of commercial fishing effort on SSLs changed widely over the course of the year and are best understood by referencing the appropriate federal documents. In general, federal fisheries were split into 2 seasons, designated “A” and “B” seasons. NMFS allocates 60% of the federal TAC for the “A” season on January 1. Incidental harvest of Pacific cod that occurs after the closure of the “A” season comes out of the remaining 40% of the annual TAC. If a sufficient amount of TAC remains for a commercial fishery to occur following these deductions, that amount is made available for the “B” season on September 1.

### ***2009 Central Gulf of Alaska Parallel Season***

The CGOA “A” season closed on January 27, 2009, about one month earlier than the 2007 and 2008 seasons. The parallel Pacific cod season was reopened in state waters concurrent with the federal CGOA “B” season on September 1. The CGOA “B” season closed October 1.

Harvest of Pacific cod from Kodiak Area state waters during the 2009 parallel season totaled 5.7 million pounds (Table 4). The majority of Pacific cod were harvested using pot gear (2.7 million pounds) and longline gear (2.8 million pounds).

The Chignik Management Area (defined by using ADF&G boundaries) crosses both CGOA and WGOA federal management boundaries. Most of the Chignik Management Area is within the CGOA, and the majority of productive Pacific cod fishing grounds in the Chignik Area are closed to all fishing during federal and parallel fisheries. These closures include state and federal waters. The closures were implemented in 2001 as part of the SSL BiOp and remained in effect for the 2009 fisheries. Since 2003, parallel season harvests in the Chignik Area have been minimal and confidential; however, in 2009, approximately 285,000 pounds were harvested (Table 5).

### ***2009 Western Gulf of Alaska Parallel Season***

While the WGOA “A” season closed on February 19, 2009, similar to the closure timing in 2007 and 2008, the WGOA “B” season remained open until the end of the year. Harvest of Pacific cod from South Alaska Peninsula Area during the 2009 parallel season totaled 11.09 million pounds (Table 6). The majority of Pacific cod were harvested using pot gear (8.05 million pounds).

## **STATE-WATERS SEASON**

### **Background**

In 1996, the Alaska Board of Fisheries (BOF) adopted state-waters Pacific cod management plans for fisheries in 3 groundfish areas in the Westward Region: Kodiak, Chignik, and SAP. The first state-waters Pacific cod seasons occurred in 1997 (Table 7).

The Kodiak Management Area opens 7 days after the closure of the federal CGOA Pacific cod “A” season. The Chignik Management Area opens on March 1. The SAP opens 7 days after the closure of the WGOA federal Pacific cod “A” season. State-waters seasons remain open until December 31 by regulation unless closed earlier by EO.

State Pacific cod management plans restrict vessel length to 58 feet in Chignik and SAP areas. Harvests are allocated between pot and jig gear types in all three management areas. Management plans restrict each vessel to either 60 pots or 5 jig machines. There was some concern that these restrictions would prevent achieving the total guideline harvest level (GHL) while fisheries were developing. To accommodate this concern, regulations were adopted that would remove exclusive area registration, vessel size limitations, and gear limits to allow harvest opportunities if the season GHL was not expected to be attained before the December 31 regulatory closure date.

GHLs for each area are set as a percentage of estimated ABC of Pacific cod as established by the NPFMC ([www.fakr.noaa.gov/sustainablefisheries/catchstats.htm](http://www.fakr.noaa.gov/sustainablefisheries/catchstats.htm)). Initial GHLs were set at 15% of the Western Gulf ABC for the SAP Area, and 15% of the Central Gulf ABC apportioned between Kodiak, Chignik, and Cook Inlet Areas. GHLs derived from Central and Western Gulf of Alaska areas were scheduled to increase incrementally to 20% and 25% of federal area ABCs if harvest in any year is within 10% of the established state-waters GHL. All areas have increased to their maximum allowable percentages: 25% for SAP, 12.5% for the Kodiak Area, 8.75% for the Chignik Area, and 3.75% for the Cook Inlet Area.

### **2009 State-Waters Pacific Cod Season Overview**

Over 25 million pounds of Pacific cod were harvested from Kodiak, Chignik, and SAP areas by 213 vessels (Table 8). Total exvessel fishery value was approximately \$7.14 million. The 2009 harvest was 5 million pounds less than the 2008 harvest, and total fishery value declined by 60% (Table 8).

#### ***Kodiak Area***

The 2009 Kodiak Area GHL was based on 12.5% of the 2009 CGOA ABC. The resulting GHL was 8.69 million pounds, which was announced by news release on January 26, 2009. The state-waters season began February 3, 2009, seven days after the closure of the parallel CGOA Pacific cod “A” season (Table 9). Vessels using pot gear were allocated 50% of the total GHL or 4.35 million pounds. Within that allocation, vessels longer than 58 feet in overall length were restricted to 25% of the total GHL, or 2.17 million pounds, before September 1.

To track daily catch rates and forecast harvests, processors were requested to report landings daily. Additionally, daily volunteer harvest reports were also requested from pot gear vessel operators. Vessels registering for pot gear were provided a worksheet that described department information needs (number of pots pulled, pounds harvested during the previous 24-hours, and fishing location) and the time interval for the report (8 AM to 8 AM). On average, 65% of the pot fleet reported daily.

The total 2009 harvest of Pacific cod from the Kodiak Area state-waters season was approximately 8.59 million pounds taken by 130 vessels (Table 8). By gear type, 4.14 million pounds were taken by 38 pot vessels and 4.45 million pounds were taken by 94 jig vessels (Table 10). Estimated exvessel fishery value was \$2.23 million (Table 8). Fishermen harvested Pacific cod from 31 separate statistical areas during the 2009 state-waters season (Table 11). The largest harvests came from Chiniak Bay (525733) and Ugak Bay (525701; Table 11).

### **Kodiak Pot Gear Season**

At the beginning of the season, weather was favorable and harvest rates were strong. Daily average harvest rate for the pot fleet remained strong through the end of the fishery, which was close to 10,000 pounds per vessel per day. Weather toward the end of the season slowed the rate of harvest. The pot closure was announced February 17 for February 18 at midnight.

The pot fleet harvested 4.14 million pounds, which was under the pot gear GHL by approximately 4% (Table 10). In contrast to 2008, pot gear did not reopen in the fall after the CGOA Pacific cod “B” season.

### **Kodiak Jig Gear Season**

Weekly harvest rates for the jig fleet in 2009 were stronger than 2008, and effort was slightly higher (Table 10). Peak weekly harvest occurred in early May. The jig fleet harvested approximately 4.30 million pounds through September 1. After the CGOA Pacific cod “B” season closed, there were approximately 37,000 pounds of jig quota remaining and 200,000 pounds of pot quota remaining. Because the total amount of Pacific cod available for harvest was low, the department could not manage the pot fishery and decided not to reopen the season to pot gear. The season reopened to only jig gear. Jig gear harvested approximately an additional 140,000 pounds, for a total of 4.45 million pounds (Table 10).

### **Allocation Rollover**

The entire jig allocation was not harvested by August 31, 2009. By regulation, the season closes and immediately reopens to both pot and jig gear to harvest the remaining quota on September 1. September 1 is also the date when NMFS reopens the Pacific cod ‘B’ season and parallel rules would normally apply inside state waters if the state-waters Pacific cod season was closed. Starting in 2006, the state has opted to close the state-waters season to allow the parallel season to open because it allows for more gear types, and simplified catch accounting. In 2009, the state again opted to close the state-waters season to allow the parallel season to open. Because the parallel B-season closed October 1, 2009, the state-waters season reopened on October 3, 2009 (Table 9). The state-waters season reopened to only jig gear. The season remained open through the end of the year.

### ***Chignik Area***

The 2009 Chignik Area GHL was based on 8.75% of the 2009 CGOA ABC resulting in a GHL of 6.08 million pounds. The season opened by regulation on March 1 (Table 7). Vessels using pot gear were allocated 90% of the GHL or 5.47 million pounds. Jig season participants were allocated 10% or 610 thousand pounds (Table 12).

The 2009 Pacific cod harvest in the Chignik Area from the state-waters fishery was approximately 5.68 million pounds taken by 12 vessels (Table 8); jig harvest is not reported due to confidentiality requirements. Estimated exvessel fishery value was \$1.36 million. Fishermen harvested Pacific cod from eight separate statistical areas during the 2009 state-waters season. The largest harvest came from Chiginagak Bay (statistical area 565633; Table 13).

### **Chignik Pot Gear Season**

The pot season was managed primarily by reviewing daily processor reports and using e-landings; although some vessels voluntarily called in daily harvests. Fishing effort began the first day after the season opening and deliveries began on March 3. Weather conditions strongly influenced the

pace of the fishery through the midpoint of the season. During this time, strong winds and freezing spray limited production to a weekly average harvest of approximately 654,000 pounds. By March 22, weather conditions and harvest rates improved considerably and harvests increased to a weekly average of approximately 1.2 million pounds for the remainder of the season. The pot season closed by emergency order at 6:00 p.m. April 6, 2009. The total harvest by pot vessels was 5,679,676 pounds from 122 landings made by 11 vessels. The 2009 pot vessel harvest exceeded the pot vessel allocation of 5.47 million pounds by less than 4% (Table 12).

### **Chignik Jig Gear Season**

There was minimal jig effort in 2009. Generally, weather conditions in the Chignik Area make it difficult for smaller vessels to participate in Pacific cod seasons in Chignik. Likewise, lack of a local processor makes it difficult for smaller vessels to operate. For the past 4 years, fewer than 3 jig vessels have participated.

### **Allocation Rollover**

Several provisions in the *Chignik Area Pacific Cod Management Plan* (5 AAC 28.537) provide more harvest opportunity in the event GHGs are not likely to be attained. Specifically, an allocation rollover between the pot and jig GHGs may occur on August 15. Additionally, gear limitations and vessel size restrictions may be relaxed after October 30.

Under these provisions, a news release was issued on August 13, 2009 that allowed Pacific cod remaining on the jig-gear GHG to be taken on or after August 15, by either pot or jig gear (Table 14). Despite this rollover, there continued to be no effort in the Chignik Area.

On August 21, 2009 a news release was issued that closed the state-waters season at 11:59 AM on September 1, 2009 and reopened state waters to the parallel season concurrent to the federal B-season that began at 12:01 PM on September 1, 2009. Because the parallel season closed October 1, 2009, the state-waters season reopened on October 3, 2009. No effort occurred, and the season remained open until the end of the year (Table 14).

### ***South Alaska Peninsula Area***

The 2009 SAP Area GHG was based on 25% of the 2009 WGOA ABC. The resulting GHG was 11.89 million pounds, which was announced by news release on January 26, 2009. The state-waters season began March 4, 2009, seven days after the closure of the parallel WGOA Pacific cod season (Table 15). Vessels using pot gear were capped at 85% of the total GHG or 10.11 million pounds (Table 16).

The total 2009 harvest of Pacific cod from the SAP Area state-waters season was approximately 11.59 million pounds taken by 72 vessels (Table 8). By gear type, 10.50 million pounds were taken by 47 pot vessels and 1.09 million pounds were taken by 26 jig vessels (Table 16). The estimated exvessel fishery value was \$3.01 million (Table 8). Fishermen harvested Pacific cod from 31 separate statistical areas during the 2009 state-waters season (Table 17). The largest harvests came from Sanak Island (625401) and around the Shumagin Islands (605502; Table 17).

### **South Alaska Peninsula Pot Gear Season**

Given the remote location and difficulty of collecting catch information, ADF&G initiated a volunteer catch reporting program for the SAP state-waters Pacific cod season in 2006 in an attempt to gain accurate and timely inseason harvest reporting. Upon registering for the season, vessel operators were provided worksheets describing the desired information. Despite this effort,

few vessels consistently participated. During the 2007 BOF meeting, a regulation was adopted that required vessel operators using pot gear to report effort and harvest to ADF&G on a daily basis.

The SAP state-waters Pacific cod season was open for 31 days in 2009. The season opened March 4 at noon, but walleye pollock openings in the area limited early effort during the state-waters Pacific cod season.

Similar to other commercial fisheries on the Alaska Peninsula during the winter of 2009, weather conditions and concurrent groundfish fisheries influenced the dynamics of the state-waters Pacific cod fishery. A news release was issued at 10:00 AM April 3 for a pot fishery closure on Saturday, April 4 at 12:00 NOON. The pot fleet harvested 10.50 million pounds (Table 16).

### **South Alaska Peninsula Jig Gear Season**

The SAP jig season opened concurrently with pot gear on March 4; however, effort did not occur until after the pot season closure. Effort and harvest rates remained steady through mid July, and some effort occurred throughout the summer.

The jig season was closed on September 1 to allow the state waters to open during the federal parallel "B" season for Pacific cod in the WGOA, which remained open through December 31. The final SAP state-waters Pacific cod jig harvest was 1.09 million pounds (Table 16).

### **Pacific Cod Harvest Monitoring**

ADF&G monitored the state-waters Pacific cod harvest during 2009 in the same manner as previous years. Dockside sampling occurred in the ports of Sand Point and King Cove the first few months of the season when fishing effort and harvest rates were highest, and in the port of Kodiak throughout the season. Port samplers conducted confidential interviews with vessel operators to obtain information on catch location, catch per unit effort, bycatch, and fishing effort. Samplers recorded data on fish length, individual fish weights, sex, reproductive status, and average weight. Otoliths were removed for age analysis.

In 2009, the Alaska Department of Fish and Game port samplers in Kodiak, King Cove, and Sand Point conducted 244 skipper interviews from Pacific cod deliveries and collected biological samples from 167 deliveries from the Kodiak, SAP, and Chignik management areas (Figure 3). They collected 9,495 lengths, 3,248 individual weights, 136 average weights, 3,275 maturities, and 3,283 otoliths from cod that were harvested in these three management areas.

In the Kodiak Area, Pacific cod lengths sampled from jig gear averaged 64 cm in length, while fish sampled from pot gear averaged 65 cm in length (Figure 4). Due to the limited number of jig landings in Chignik and South Alaska Peninsula areas during 2009, biological samples were not available.

Preliminary analysis shows that ages of harvested Pacific cod ranged from 3 to 10 years. Pacific cod in the Kodiak area were predominantly ages 4 and 5, Pacific cod in the Chignik Area were predominantly age 5, and Pacific cod in the South Alaska Peninsula Area were predominantly ages 4, 5, and 6 (Figure 5).

## **BLACK ROCKFISH**

### **Historic Background**

Black rockfish had limited market value and generally were not harvested commercially in the Kodiak Area until 1990. Harvests increased dramatically in 1991 as markets emerged and

operators fished previously unexploited populations (Table 18). Fishermen primarily targeted black rockfish with jig gear, but some bycatch occurred in longline and trawl fisheries. Effort was concentrated in areas easily accessible from the city of Kodiak. Fishery production fell sharply following 1991, presumably due to lower abundance in areas that were previously exploited. Lower prices and alternative fisheries may have been additional factors that limited production after 1991.

Stocks were targeted along the Alaska Peninsula and adjacent to Chignik in 1995 (Tables 19 and 20). Fishermen worked in areas near the port of Sand Point and east to Mitrofanina Island.

Black rockfish fisheries were managed by NMFS prior to 1997 as part of the pelagic shelf rockfish group that included dusky *Sebastes variabilis* (previously *S. ciliates*), yellowtail *S. flavidus*, and widow *S. entomelas* rockfish. Dusky rockfish is the most abundant species in the pelagic shelf rockfish group and dominated the NMFS survey catches in the GOA. An annual ABC, largely supported by dusky rockfish biomass estimates, was assigned to the entire group, placing few restrictions on the take of individual species within the group. Under this management strategy, ADF&G was concerned about localized depletion because black rockfish are long-lived and slow-growing. In some cases ADF&G closed state waters by emergency order. Adjacent federal waters did not close in these instances. Landings of black rockfish continued with federal statistical areas reported on fish tickets. Those reports were not always considered credible because the majority of the black rockfish population is in state waters.

ADF&G submitted a fisheries management plan amendment to the NPFMC in 1997 requesting that NMFS relinquish black rockfish management within the EEZ of GOA to the state (Table 21). This amendment was passed and implemented effective April 5, 1998. In 1997 and until the amendment was implemented in 1998, the NPFMC separated black rockfish from the pelagic shelf group. This enabled federal fishery managers to place a 573,201 pound ABC on black rockfish in the CGOA. The ABC was based on NPFMC's Tier 6 guidelines, which apply to fisheries with little stock assessment information. Harvest limits were set at 75% of average production from 1978–1995 (Table 21).

ADF&G fishery managers applied this 75% limit to fisheries in the Cook Inlet, Kodiak, and Chignik areas when setting preseason guidelines in 1997. The NPFMC was in the process of delegating authority to the state, so these limits were set as an interim measure and were only enforceable in state waters. Harvest levels were set low enough to accommodate potential black rockfish bycatch<sup>1</sup> in other fisheries and not exceed the 573,201 pound total. Assigning GHLS to areas within the CGOA was aimed at distributing effort and avoiding intense localized fishing effort that could lead to long-term depletion of the stocks. As a result, the 1997 GHLS for the Kodiak Area was set at 170,000 pounds. The GHLS was further divided into 4 sections: 3 that encompassed the areas of historical average harvest and 1 additional section with a low GHLS for the rest of the area to allow for exploratory fishing. Chignik Area and South Alaska Peninsula Area Eastern District GHLS were set at 100,000 pounds each. ADF&G Dutch Harbor personnel manage the Western District of the South Alaska Peninsula Area; information regarding the history and most recent black rockfish fisheries in the Western District are available in separate annual management reports (e.g., Milani 2008).

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<sup>1</sup> Black rockfish bycatch is allowed at 5% of the target species weight in all fisheries.



In 1998, the Kodiak Area was further subdivided into 7 sections with separate GHGs. The areas were loosely based on existing Tanner crab management sections (Figure 6).

The BOF adopted several measures for black rockfish fisheries in the Kodiak and Chignik areas that became effective for the first time in the 2003 fisheries (Table 21). In Kodiak Area, vessel operators were required to register specifically for the black rockfish fishery. This prevented vessel operators from participating in Pacific cod and black rockfish fisheries simultaneously. It had been difficult to assess which vessel operators were harvesting black rockfish because they could target Pacific cod and rockfish under a general groundfish registration. Also in the Kodiak Area fishery, a 5,000-pound per 5-day harvest and landing trip limit was implemented. This, paired with registration requirements, allows ADF&G to more effectively manage the small GHGs for individual sections within Kodiak Area. Descriptions of black rockfish fishing districts, previously called sections, were also formally adopted in regulation as groundfish registration districts. Likewise, superexclusive registration was adopted for the Chignik Area, and the area was subdivided into 3 districts for management purposes.

Prior to 2003, processors often neglected to sort black rockfish from dark and dusky rockfish. Species identification can be difficult, and fishermen generally lacked incentive because they were often offered a higher price for black rockfish than dark or dusky rockfish. Starting in 2003, ADF&G provided information to processors to improve species identification.

In 2005, the South Alaska Peninsula Eastern District was divided into 3 management sections in an effort to distribute harvest throughout the district. Harvest was limited to no more than 45,000 pounds from any section. In 2005, the BOF adopted a regulation for the Kodiak Management Area allowing vessels registered for directed jig groundfish fisheries, other than black rockfish, to register for incidental black rockfish harvest of up to 2,500 pounds per trip in the Kodiak Area, with a 5-day landing limit of 5,000 pounds (Table 21).

In 2006 and 2007, over 30,000 pounds of black rockfish were reported annually on fish tickets as bycatch in non-jig fisheries (Table 22). Most of these harvests occurred in federal fisheries in offshore waters. ADF&G personnel believe that most black rockfish harvest reported in 2006 and 2007 in these offshore areas were misidentified because it was difficult to properly identify some of these rockfish, and it would be unusual for black rockfish to be found in the locations they were reported on the fish tickets. ADF&G began monitoring rockfish harvested from federal fisheries in 2008, and most fish sorted as black rockfish by the processing plants were, in fact, dark rockfish. Further speciation results are pending.

## **2009 Black Rockfish Overview**

GHGs were attained in three of seven districts in Kodiak Area. The GHG was not met in the Eastern District of South Alaska Peninsula Area or any of the districts of the Chignik Area.

### ***Kodiak Area Fishery***

ADF&G issued a news release on December 30, 2008 specifying a directed fishing GHG of 175,000 pounds for the Kodiak Area. The fishery opened on January 1, 2009. Effort and harvest was highest March through June. Very little effort occurred in Southwest, Westside, or Mainland districts, as in previous years (Table 23).

The number of participants in the 2009 fishery (18) was similar to 2008 (17) (Table 18). Harvest from the fishery in 2009 (122,249 pounds) was slightly less than the previous two years (Table 18).

### ***Chignik Area Fishery***

ADF&G issued a news release on December 30, 2008 specifying a Chignik Area directed fishing GHL of 100,000 pounds. Harvest was capped at 45,000 pounds per district to distribute harvest throughout the management area. Prior to 2003, the majority of the harvest (usually the entire GHL) had come from one of the three individual districts. The fishery opened on January 1, 2009. Only 1 vessel made directed black rockfish landings from the Chignik Area; thus, directed harvest information is confidential.

### ***South Alaska Peninsula Area Eastern District Fishery***

ADF&G issued a news release on December 30, 2008 specifying a directed fishing GHL of 75,000 pounds for the South Alaska Peninsula Area Eastern District. The section GHLS implemented in 2005 were removed for the 2007 fishery and the total district GHL was lowered to 75,000 pounds.

The fishery opened on January 1, 2009. Three vessels landed less than 1,000 pounds from the Eastern District (Table 20).

### ***Black Rockfish Harvest Monitoring***

Black rockfish harvests are monitored through fish ticket records and dockside sampling of commercial catches. Information collected by dockside samplers includes fishing location and effort (days fished) as well as fish length, weight, sex, and reproductive maturity. Additionally, otoliths are collected for age determination. Dockside data were only collected for black rockfish in 2009 from the Kodiak Area.

Mean size of black rockfish sampled from landings in the Kodiak Area during 2009 was 48 cm in length (Figure 7). Otoliths were collected from 966 black rockfish for aging during the 2009 state-waters black rockfish season. Ages for black rockfish in 2009 ranged from 5 to 42 years, with an average age of 15 (Figure 8).

## **SKATES**

### **Historical Background**

Skates are incidentally harvested in longline and trawl fisheries in the Kodiak Area. On occasion, skates are retained and processed. Traditionally, most skates harvested in the Kodiak Area are discarded at sea, ground into fishmeal, or discarded onshore once delivered to shore-based processors in unsorted catches from trawl fisheries. The majority of historic harvests have occurred in federal waters (Table 24).

Skates were managed by NMFS under the “other species” assemblage that also includes sharks, sculpins, squid, and octopi until 2003 (Gaichas et al. 2003). The other species assemblage has an annual TAC based on 5% of the sum of all other GOA fishery management plan (FMP) target species TACs. In 2004, skates were separated from the ‘other species’ assemblage, and all skate *spp.* managed as one complex.

Skates have been managed in state waters under parallel seasons since the late 1980s. In 1998, the BOF mandated a commissioner’s permit to target skates in state waters. This regulation gave ADF&G the authority to restrict fishing depth, define seasons, specify fishing areas, establish minimum sizes, specify legal gear, require completed logbooks, and require other conditions determined to be necessary for conservation and management purposes. Skate seasons in state

waters are prosecuted under the annual global EO and are defined as parallel seasons, with the additional requirement of the commissioner's permit. The State of Alaska does not set a separate skate quota for state waters, nor does the state administer a separate season for skates in state waters. When the skate assemblage closes in federal waters, that closure is also in effect for state waters. Should a particular gear type, such as longline, be closed for directed fisheries because of bycatch constraints, that closure is additionally in effect for state waters under the parallel structure of the global EO.

Starting in 2003, several markets for skate products, primarily in Republic of Korea, were willing to purchase skates for as much as \$0.25 per pound. At this price, skates were more valuable than some species of salmon and several other species of groundfish. In addition, fishermen targeting skates were able to retain Pacific cod up to 20% of their retained skate weight, making even relatively small amounts of bycatch lucrative for participants. As a result, the skate harvest increased significantly in the CGOA (Table 24). Prior to 2003, most skates were taken as bycatch, typically early in the season during Pacific cod fisheries.

In 2006, NMFS placed skates in bycatch status and disallowed directed fishing. This was done due to concerns of overfishing and the lack of information on skate biology or population size, and ADF&G discontinued issuing commissioner's permits for skates.

### ***2009 Kodiak Area Skate Fishery***

The 2009 skate fishery was bycatch only in both state and federal waters. A total of 161 vessels harvested 4.2 million pounds of skates in the CGOA. Approximately 13% of the harvest came from state waters of the CGOA (Table 24). A total of 47 vessels harvested 151,272 pounds of skates in the WGOA. Approximately 51% of the harvest came from state waters of the WGOA (Table 24).

### **SABLEFISH**

Sablefish in state waters are managed separately from the federal sablefish individual fishing quota (IFQ) program. Known habitat for mature sablefish is limited in much of the Westward Region's state waters. Mature fish are typically found in deeper waters such as those at edge of the continental shelf. Most state waters are relatively shallow and typically do not support sizeable populations of mature sablefish. Overall, sablefish stocks are not abundant in state waters east of Unimak Pass in the WGOA.

In 2002, the BOF prohibited directed sablefish fisheries in the state waters of the Kodiak and Chignik areas. In 2003, the BOF closed the directed sablefish fishery in the Eastern District of SAP Area. A 1% bycatch allowance with certain restrictions on gear types has been allowed in other fisheries; this allocation is managed by NMFS and is adopted for state waters through the global EO that establishes parallel seasons. The 2009 sablefish harvest taken as bycatch in Kodiak, Chignik, and South Peninsula state waters totaled 19,441 pounds excluding the SAP Western District directed fishery (Table 1).

### **LINGCOD**

Commercial regulations in the Kodiak and Chignik areas restrict all lingcod harvest to the period from July 1 to December 31 and require fish to be a minimum of 35 inches in total length. These regulations were designated to eliminate commercial exploitation during the nest-guarding period and ensure that only mature fish that have had at least one spawning opportunity are

harvested. There are no similar regulations in the SAP as the abundance of lingcod appears significantly lower in that area and is along the western boundary of the species range (Mecklenburg et al. 2002). Currently, all legal commercial gear types can be used to harvest lingcod, although regional registration is required for vessels intending to target lingcod. Harvest primarily occurs in rocky, reef areas, although large catches are periodically taken in offshore trawl fisheries.

Lingcod are generally not harvested during directed fisheries in the Westward Region. Most harvest occurs as bycatch in other fisheries, although directed harvest with jig gear has occurred. The 2008 harvest (521,257 pounds) was the highest recorded, and the majority was harvested as bycatch by the trawl fleet (Table 25). As a result of the high 2008 harvest, bycatch rate of lingcod was lowered from 20% to 5% at the beginning of the 2009 season. Total harvest in 2009 was 97,281 pounds (Table 25).

## **PARALLEL WALLEYE POLLOCK FISHERIES**

State waters opened for a parallel walleye pollock season concurrent with federal seasons managed by NMFS. Harvest quotas were released in four openings during 2009 and were designated A, B, C, and D seasons (Table 26). Additional openings were allowed after the initial closures when pollock and bycatch quota remained. Walleye pollock were primarily harvested with pelagic trawl gear, although other gear types are legal.

Harvest of walleye pollock in 2009 was 53.8 million pounds from the CGOA and 30.7 million pounds from the WGOA (Table 27). Approximately 68% of the total WGOA walleye pollock harvest occurred in state waters, while 35% of total the CGOA harvest occurred in state waters (Table 27).

## **NON-PELAGIC TRAWL CLOSURES**

The history of time and area closures to non-pelagic trawl gear around Kodiak Island and along the Alaska Peninsula is variable. Generally, bays have been closed year-round since 1986 (Figure 9). Additional changes occurred in 1994 and 1995 when the BOF opened state waters to non-pelagic trawling near Castle Rock and Sanak Island in the SAP.

Non-pelagic trawling was considered again during 1999 with public proposals to close all state waters in the Kodiak and Chignik areas. The BOF adopted those proposals with the exception of an area along the west side of Kodiak Island, which remains open on a seasonal basis. Seasonal openings of state waters were left in place to allow non-pelagic trawls access to flatfish resources during parallel fisheries. Additional closure areas in 1999 included all state waters in the Chignik Area and state waters of the Kodiak Area along Alaska Peninsula from Cape Kumlik to Cape Douglas, Marmot Bay and South Sitkalidak on Kodiak Island, and areas off Sitkinak and Ugak Islands. No additional closures were implemented for the 2009 fisheries.

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## **TABLES AND FIGURES**

Table 1.—Harvest of the top 30 species, by total weight, from state waters of Kodiak, Chignik, and South Alaska Peninsula areas, as reported on groundfish fish tickets, 2009.

Species	Kodiak	Chignik	South Alaska	
			Peninsula	Total
Pacific Cod	14,452,546	5,984,365	23,049,986	43,486,897
Walleye Pollock	18,815,135	0	20,940,571	39,755,707
Pacific Halibut	3,125,202	712,422	1,672,682	5,510,306
Arrowtooth Flounder	477,670	408	260,995	739,073
Octopus, unidentified	91,483	5,798	237,140	334,421
Flathead Sole	126,725	0	192,441	319,166
Big Skate	247,927	3,059	3,509	254,494
Longnose Skate	133,761	2,896	39,487	176,145
Black Rockfish	122,386	11,598	716	134,700
Rock Sole	80,809	0	12,669	93,478
Eulachon Smelt	45,020	0	1,252	46,271
Squid	44,343	0	565	44,908
Skate, unidentified	7,988	57	32,840	40,885
Pacific Herring	25,293	0	7	25,300
Rex Sole	15,640	0	3,839	19,479
Sablefish	18,964	0	477	19,441
Capelin Smelt	10,411	0	5,373	15,784
Dusky Rockfish	13,952	435	74	14,460
Starry Flounder	14,048	0	161	14,209
Lingcod	10,709	648	20	11,378
Dark Rockfish	10,978	0	0	10,978
Yelloweye Rockfish	5,628	2,414	2,811	10,853
Lumpsucker	3,387	0	6,398	9,785
Butter Sole	8,958	0	0	8,958
Pacific Sleeper Shark	0	0	8,793	8,793
Sculpin, unidentified	4,457	0	1,602	6,059
Jellyfish	4,393	0	1,047	5,440
Chinook Salmon	3,025	0	1,555	4,580
Rougeye Rockfish	2,349	242	43	2,634
Spiny Dogfish Shark	2,057	0	303	2,359

*Note:* Weights are reported in whole pounds. Discards at sea are excluded.



Table 2.—Groundfish emergency orders issued for the Kodiak, Chignik, and South Alaska Peninsula Areas, 2009.

Emergency Order	Effective Date	Explanation
4-GF-01-09	January 1, 2009	Established parallel commercial groundfish fishing seasons and bycatch limits in the Kodiak, Chignik, and South Alaska Peninsula, Bering Sea-Aleutian Islands, and Chukchi-Beaufort Areas.
4-GF-02-09	February 3, 2009	Opened Kodiak Area state-waters Pacific cod season.
4-GF-03-09	February 12, 2009	Closed the black rockfish fishery in the Northeast District of Kodiak Area.
4-GF-04-09	February 18, 2009	Closed Kodiak Area state-waters Pacific cod season to pot gear.
4-GF-05-09	March 4, 2009	Opened South Alaska Peninsula Area state-waters Pacific cod season to pot gear.
4-GF-08-09	April 4, 2009	Closed South Alaska Peninsula Area state-waters Pacific cod season to pot gear.
4-GF-10-09	April 8, 2009	Closed Chignik Area state-waters Pacific cod season to pot gear.
4-GF-12-09	July 1, 2009	Lowered the lingcod bycatch rate in directed groundfish fisheries in Kodiak Area from 20 to 5 percent.
4-GF-13-09	June 30, 2009	Closed the black rockfish fishery in the Eastside District of Kodiak Area.
4-GF-14-09	September 14, 2009	Closed the black rockfish fishery in the Afognak District of Kodiak Area.
4-GF-15-09	August 15, 2009	Closed Chignik Area state-waters Pacific cod season to jig gear, immediately reopened the Chignik Area state-waters Pacific cod season to pot and jig gear.
4-GF-17-09	September 1, 2009	Closed the Kodiak, Chignik, and South Alaska Peninsula areas state-waters Pacific cod seasons and reopened under parallel rules.
4-GF-18-09	October 3, 2009	Reopen Kodiak and Chignik state-waters Pacific cod seasons.

*Note:* Omitted emergency orders (e.g., 4-GF-06-09) are for different management areas.

Table 3.–Pacific cod harvest, in millions of pounds, from Central and Western Gulf of Alaska Management areas, 1990–2009.

NMFS Area	Year	Federal Waters		State Waters		Total		Discards at Sea
		Harvest	% of total	Harvest	% of total	Harvest	ABC	
Central GOA	1990	79.8	87%	11.8	13%	91.6	131.0	0.6
	1991	81.2	81%	19.5	19%	100.8	106.5	0.5
	1992	73.1	82%	16.5	18%	89.6	85.4	0.5
	1993	60.3	84%	11.6	16%	71.9	77.5	0.7
	1994	50.3	80%	12.9	20%	63.2	68.9	0.8
	1995	72.8	77%	21.8	23%	94.6	100.7	0.8
	1996	71.9	81%	16.8	19%	88.7	94.6	3.2
	1997	76.6	76%	24.6	24%	101.2	113.2	1.8
	1998	72.6	74%	24.9	26%	97.5	108.2	0.4
	1999	71.0	68%	34.1	32%	105.1	117.2	0.2
	2000	56.3	72%	21.7	28%	78.0	96.0	0.5
	2001	50.0	78%	14.1	22%	64.1	85.2	0.8
	2002	42.4	70%	18.2	30%	60.6	69.8	1.1
	2003	42.0	68%	20.1	32%	62.1	64.0	1.0
	2004	47.3	66%	24.2	34%	71.4	78.9	0.5
	2005	38.9	62%	24.0	38%	62.9	73.0	0.2
	2006	37.2	63%	22.3	37%	59.5	83.5	0.1
	2007	43.5	65%	23.0	35%	66.6	83.5	0.4
	2008	45.2	64%	25.8	36%	71.0	83.6	1.2
	2009	35.2	60%	23.7	40%	58.8	69.5	1.2

NMFS Area	Year	Federal Waters		State Waters		Total		Discards at Sea
		Harvest	% of total	Harvest	% of total	Harvest	ABC	
Western GOA	1990	72.2	85%	13.1	15%	85.3	65.5	0.7
	1991	71.9	94%	4.3	6%	76.2	56.7	0.3
	1992	59.7	82%	13.1	18%	72.9	51.8	0.7
	1993	37.9	95%	1.9	5%	39.8	41.3	0.2
	1994	24.9	77%	7.3	23%	32.2	36.7	0.1
	1995	35.7	80%	9.0	20%	44.7	44.2	0.2
	1996	35.3	73%	12.9	27%	48.2	41.6	0.3
	1997	47.3	71%	19.5	29%	66.9	62.9	0.4
	1998	40.0	69%	18.1	31%	58.0	60.1	0.1
	1999	39.7	65%	21.2	35%	60.9	65.1	0.0
	2000	33.7	55%	27.9	45%	61.6	60.6	0.1
	2001	23.0	54%	20.0	46%	43.0	53.8	0.0
	2002	26.3	55%	21.2	45%	47.5	49.5	0.1
	2003	17.5	40%	25.9	60%	43.5	45.4	0.1
	2004	17.1	38%	28.2	62%	45.3	49.8	0.0
	2005	16.5	43%	22.3	57%	38.8	46.1	0.1
	2006	11.2	29%	27.7	71%	39.0	59.2	0.1
	2007	15.8	42%	22.3	58%	38.1	59.2	0.1
	2008	21.6	50%	21.5	50%	43.1	57.2	0.1
	2009	15.4	40%	23.3	60%	38.6	47.5	0.1

Notes: Weights are reported in whole pounds. Discards at sea are excluded from all column except the “Discards at Sea” column. State and federal harvests may not add to total due to rounding.

GOA = Gulf of Alaska, ABC= Acceptable Biological Catch, NMFS = National Marine Fisheries Service.

Table 4.–Kodiak Area state-waters Pacific cod harvest during parallel Pacific cod seasons, by gear type, 1997–2009.

Year	Gear Type				Total
	Pot	Longline	Trawl	Jig	
1997	8,496,557	1,849,832	571,786	526	10,918,701
1998	4,998,323	2,113,533	500,663	27,246	7,639,765
1999	8,093,984	2,474,068	1,158,941	27,963	11,754,956
2000	4,463,886	3,512,904	198,805	79,365	8,254,960
2001	2,800,868	2,235,004	140,043	22,414	5,198,329
2002	2,324,281	1,275,408	14,173	5,926	3,619,788
2003	3,104,572	2,580,771	21,051	13,737	5,720,131
2004	2,329,223	3,767,088	12,433	237,555	6,346,299
2005	3,890,960	3,488,159	305,997	292,559	7,977,675
2006	4,430,232	5,377,684	137,566	190,037	10,135,519
2007	5,013,162	3,361,989	95,449	63,432	8,534,032
2008	3,317,365	1,897,939	31,460	38,267	5,285,031
2009	2,741,107	2,831,913	19,641	71,071	5,663,732

*Note:* Weights are reported in whole pounds. Discards at sea are excluded.

Table 5.—Chignik Area state-waters Pacific cod harvest during parallel Pacific cod seasons, by gear type, 1997–2009.

Year	Gear Type				Total
	Pot	Longline	Trawl	Jig	
1997		confidential			555,718
1998		confidential			409,669
1999		confidential			852,408
2000		confidential			426,788
2001		confidential			135,999
2002		confidential			264,836
2003		confidential			211,531
2004		confidential			157,008
2005		confidential			62,891
2006		confidential			62,324
2007		confidential			38,500
2008		confidential			175,908
2009	239,584	45,136	0	0	284,720

*Note:* Weights are in reported whole pounds. Discards at sea are excluded. Data are confidential in cases where fewer than 3 vessels participated.

Table 6.—South Alaska Peninsula Area state-waters Pacific cod harvest during parallel Pacific cod seasons, by gear type, 1997–2009.

Year	Gear Type				Total <sup>a</sup>
	Pot	Longline	Trawl	Jig	
1997	1,998,742	21,268	6,275,699	Confidential	8,295,709
1998	3,974,919	511,388	3,536,321	Confidential	8,022,628
1999	2,841,596	Confidential	5,145,488	0	7,987,084
2000	5,699,112	219,195	6,342,383	Confidential	12,260,690
2001	3,272,010	44,507	2,289,085	339,940	5,945,543
2002	6,051,920	Confidential	643,287	398,623	7,093,830
2003	12,966,344	46,165	160,705	92,528	13,265,743
2004	12,882,834	15,069	919,244	397,702	14,214,849
2005	6,128,240	536,983	2,826,290	100,691	9,595,204
2006	9,319,648	216,514	6,252,940	Confidential	15,789,102
2007	6,370,559	399,170	2,462,186	Confidential	9,235,215
2008	6,387,463	555,457	744,439	114,599	7,846,360
2009	8,054,281	2,280,326	333,954	417,515	11,086,076

*Note:* Weights are reported in whole pounds. Discards at sea are excluded. Data are confidential in cases where fewer than 3 vessels participated.

<sup>a</sup> Totals exclude confidential harvest.

Table 7.–Regulatory development of the state-waters Pacific cod seasons in the Kodiak, Chignik, and South Alaska Peninsula Areas.

YEAR	REGULATION
1996	<ul style="list-style-type: none"> <li>Alaska Board of Fisheries adopts state-waters Pacific cod management plans for Kodiak, Chignik, and South Alaska Peninsula (SAP) areas.</li> <li>All areas established as exclusive registration.</li> <li>Gear in all areas restricted to jig machines (5) or pots (60).</li> <li>Kodiak and SAP open 14 days after federal closure; Chignik opens April 15.</li> <li>Vessel size restricted to 58' in Chignik and SAP.</li> <li>Jig/pot allocation (50/50) in Kodiak; no allocation by gear type in Chignik or SAP</li> <li>Gear allocation rollover September 1 in Kodiak. Gear limits and exclusive registration lifted October 31 in all areas; vessel size limits lifted October 31 in SAP and Chignik.</li> </ul>
1997	<ul style="list-style-type: none"> <li>First state-waters Pacific cod fishery in Kodiak, Chignik, and SAP areas.</li> </ul>
1998	<ul style="list-style-type: none"> <li>Kodiak and SAP change opening date to 7 days after federal closure.</li> <li>Chignik opening date changed to April 1.</li> <li>SAP adopts pot allocation cap of 85% and gear allocation rollover on September 1.</li> </ul>
1999	<ul style="list-style-type: none"> <li>Chignik opening date changed to April 15</li> <li>Chignik adopts(jig/pot) allocation to 15/85 and gear allocation rollover on August 15.</li> <li>Chignik adopts superexclusive registration..</li> <li>Kodiak adopts large vessel (&gt;58') cap of 25% of GHF prior to September 1.</li> </ul>
2001	<ul style="list-style-type: none"> <li>State recognizes Steller sea lion haulout closures during parallel Pacific cod, walleye pollock and Atka mackerel seasons.</li> </ul>
2002	<ul style="list-style-type: none"> <li>Vessel monitoring system (VMS) rules adopted for parallel Pacific cod, walleye pollock, and Atka mackerel seasons.</li> <li>Pot storage requirements liberalized in Kodiak Area for transition between parallel and state-waters season.</li> <li>Chignik opening date changed to March 1.</li> </ul>
2004	<ul style="list-style-type: none"> <li>Pot storage requirement liberalized in SAP for transition between parallel and state-waters season.</li> </ul>
2005	<ul style="list-style-type: none"> <li>Chignik allocation (jig/pot) changed to 10/90.</li> </ul>
2007	<ul style="list-style-type: none"> <li>SAP adopts 24-hour weather delay prior to fishery opening</li> <li>SAP adopts mandatory inseason catch reporting by pot vessels</li> <li>SAP registration changed prohibiting fishing in another groundfish fishery outside of SAP area.</li> </ul>

Table 8.—Harvest, effort, and value from Kodiak, Chignik, and South Alaska Peninsula Area state-waters Pacific cod seasons, 2000–2009.

Year	Vessels	Landings	GHL <sup>a</sup>	Pounds Harvested <sup>b</sup>	Price Per Pound <sup>c</sup>	Fishery Value <sup>d</sup>
<b>Kodiak Area</b>						
2000	204	1,707	12.0	8,562,816	\$0.39	\$3,335,844
2001	103	669	10.6	4,843,741	\$0.34	\$1,638,642
2002	82	552	8.7	8,825,851	\$0.29	\$2,556,887
2003	128	837	8.0	8,154,867	\$0.33	\$2,685,922
2004	156	1,122	9.9	10,033,889	\$0.31	\$3,102,824
2005	158	1,011	9.1	8,548,163	\$0.32	\$2,734,882
2006	113	646	10.4	6,330,518	\$0.42	\$2,657,285
2007	95	643	10.4	6,439,757	\$0.51	\$3,278,695
2008	111	988	10.4	10,548,875	\$0.59	\$6,217,710
2009	130	971	8.7	8,591,477	\$0.32	\$2,233,575
<b>Chignik Area</b>						
2000	25	163	6.7	1,794,759	\$0.30	\$538,414
2001	26	179	6.0	2,648,655	\$0.26	\$688,645
2002	25	199	4.9	4,227,547	\$0.20	\$832,946
2003	28	257	4.5	4,467,571	\$0.27	\$1,206,244
2004	28	297	5.8	5,750,461	\$0.23	\$1,322,156
2005	22	248	6.4	5,787,467	\$0.25	\$1,446,687
2006	12	202	7.3	3,439,521	\$0.34	\$1,169,437
2007	16	242	7.3	5,699,461	\$0.45	\$2,564,576
2008	23	262	7.3	6,838,934	\$0.56	\$3,829,803
2009	12	123	6.1	5,681,230	\$0.24	\$1,363,034
<b>South Alaska Peninsula Area</b>						
2000	90	650	15.1	15,044,104	\$0.30	\$4,476,218
2001	121	727	13.4	13,464,020	\$0.25	\$3,362,729
2002	107	598	12.4	12,716,258	\$0.22	\$2,792,697
2003	92	604	11.4	11,560,663	\$0.27	\$3,117,330
2004	88	595	12.5	12,514,240	\$0.23	\$2,869,261
2005	73	528	11.5	11,436,172	\$0.25	\$2,846,795
2006	54	386	14.8	11,739,736	\$0.36	\$4,215,888
2007	60	465	14.8	12,678,151	\$0.47	\$5,940,742
2008	97	700	14.3	13,302,050	\$0.57	\$7,547,258
2009	72	514	11.9	11,594,124	\$0.26	\$3,011,443
<b>Total</b>						
2000	314	2,519	33.8	25,401,678	\$0.33	\$8,338,732
2001	246	1,574	30.0	20,956,415	\$0.27	\$5,648,153
2002	209	1,348	26.0	25,769,656	\$0.23	\$5,905,402
2003	248	1,698	23.9	24,183,101	\$0.28	\$6,764,929
2004	272	2,014	28.2	28,298,589	\$0.26	\$7,340,492
2005	253	1,787	27.0	25,771,801	\$0.27	\$6,944,517
2006	180	1,234	32.5	21,509,775	\$0.37	\$7,946,561
2007	232	1,348	32.5	24,817,369	\$0.47	\$11,640,842
2008	230	1,939	32.0	30,671,115	\$0.57	\$17,452,389
2009	213	1,608	26.7	25,866,831	\$0.27	\$7,145,614

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*Note:* Weights are in whole pounds. Discards at sea are excluded. Totals by area may not match number of vessels by gear type in Tables 10, 12, and 16 because a vessel may have used more than one gear type.

<sup>a</sup> GHL = guideline harvest level (millions of pounds).

<sup>b</sup> Pounds harvested for Chignik exclude jig harvest in 2006 and 2008 due to confidentiality; jig vessel numbers and jig landing data are also excluded for these years.

<sup>c</sup> Price per pound calculated from whole pounds sold excluding bait and meal.

<sup>d</sup> Value calculated by multiplying pounds of sold product (not pounds harvested) by price per pound.



Table 9.–Kodiak Area state-waters Pacific cod season openings, 1997–2009.

	Pot Gear	Jig Gear
<b>1997</b>	<p><i>Fishery Dates:</i>                      April 4 - May 4                      September 1 - September 30                      October 28 - December 31</p> <p><i>Management Actions:</i>                      September 1 - reopened to pot gear.                      October 31 - allocation rollover, gear limits, exclusive registration area lifted.</p>	<p>April 4 - December 31                      October 28- December 31</p>
<b>1998</b>	<p><i>Fishery Dates:</i>                      March 17 - April 27                      September 1 - December 31</p> <p><i>Management Actions:</i>                      September 1 - reopened to pot gear.                      October 31 - vessel size limit gear limits, exclusive registration area lifted.</p>	<p>March 17 - December 31</p>
<b>1999</b>	<p><i>Fishery Dates:</i>                      March 21 - April 29                      October 5 - December 31</p> <p><i>Management Actions:</i>                      October 6 - reopen to pot gear (following CGOA opening).                      October 31 - gear limits lifted, exclusive registration area lifted.</p>	<p>March 21 - August 31                      October 6 - December 31</p>
<b>2000</b>	<p><i>Fishery Dates:</i>                      March 11 - December 31</p> <p><i>Management Actions:</i>                      October 31 - limits on pots, jigs, and vessel size removed, exclusive registration area lifted.</p>	<p>March 11 - December 31</p>
<b>2001</b>	<p><i>Fishery Dates:</i>                      March 11 - December 31</p> <p><i>Management Actions:</i>                      September 1 - reopen to pot gear.                      October 31 - limits on pots, jigs, and vessel size removed, exclusive registration area lifted.</p>	<p>March 11 - December 31</p>
<b>2002</b>	<p><i>Fishery Dates:</i>                      March 16 - May 4                      September 1 - December 31</p> <p><i>Management Actions:</i>                      September 1 - reopen to pot gear.                      October 31 - limits on pots, jigs, and vessel size removed, exclusive registration area lifted.</p>	<p>March 16 - December 31</p>
<b>2003</b>	<p><i>Fishery Dates:</i>                      February 16 - March 2</p> <p><i>Management Actions:</i>                      Fishery closed when GHL allocations were attained.</p>	<p>February 16 - May 9</p>
<b>2004</b>	<p><i>Fishery Dates:</i>                      February 7 - February 22</p> <p><i>Management Actions:</i>                      Fishery closed when GHL allocations were attained.</p>	<p>February 7 - April 20</p>

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	Pot Gear	Jig Gear
	<i>Fishery Dates:</i>	
<b>2005</b>	February 2 - February 13	February 2 - April 21
	<i>Management Actions:</i>	
	Fishery closed when GHIL allocations were attained.	
	<i>Fishery Dates:</i>	
<b>2006</b>	March 7 - March 29	March 7 - September 1
	<i>Management Actions:</i>	
	Pot gear closed when GHIL was attained. Jig season closed on 9/1 for parallel season (B-season).	
	<i>Fishery Dates:</i>	
<b>2007</b>	March 6 - April 8	March 6 - September 1
	<i>Management Actions:</i>	
	Pot gear closed when GHIL was attained. Jig season closed on 9/1 for parallel season (B-season).	
	<i>Fishery Dates:</i>	
<b>2008</b>	February 27 - March 26	February 27 - September 1
	October 5 - November 22	October 5 - November 22
	<i>Management Actions:</i>	
	Pot gear closed when GHIL was attained. Jig season closed on 9/1 for parallel season (B-season). October 5 - reopen to pot and jig gear (following federal CGOA closure).	
	<i>Fishery Dates:</i>	
<b>2009</b>	February 3 - February 18	February 3 - September 1
		October 3 - December 31
	<i>Management Actions:</i>	
	Pot gear closed when GHIL was attained. Jig season closed on 9/1 for parallel season (B-season). October 3 - reopen to jig gear (following federal CGOA closure).	

Table 10.—Kodiak Area state-waters Pacific cod harvest and effort by gear type, 1997–2009.

Year	Gear	GHL <sup>a</sup> (millions)	Vessels	Landings	Pounds	Price Per Pound <sup>b</sup>
1997	Jig	4.25	73	482	1,978,772	\$0.23
	Pot	4.25	40	232	5,580,372	\$0.22
1998	Jig	4.05	91	661	2,112,817	\$0.23
	Pot	4.05	49	310	6,070,140	\$0.22
1999 <sup>c</sup>	Jig	5.85	118	793	2,294,837	\$0.38
	Pot	5.85	79	462	8,400,138	\$0.32
2000	Jig	6.00	143	1226	2,814,481	\$0.40
	Pot	6.00	69	481	5,748,334	\$0.39
2001	Jig	5.30	69	433	1,252,692	\$0.36
	Pot	5.30	34	236	3,591,049	\$0.33
2002	Jig	4.35	51	340	1,389,838	\$0.28
	Pot	4.35	33	212	7,436,013	\$0.29
2003	Jig	4.00	102	688	3,195,605	\$0.35
	Pot	4.00	42	149	4,959,262	\$0.32
2004	Jig	4.95	124	961	4,210,284	\$0.34
	Pot	4.95	47	161	5,823,605	\$0.29
2005	Jig	4.56	122	849	4,570,327	\$0.33
	Pot	4.56	51	162	3,977,835	\$0.30
2006	Jig	5.21	79	477	1,446,881	\$0.43
	Pot	5.21	41	169	4,883,637	\$0.41
2007	Jig	5.21	63	459	1,256,212	\$0.52
	Pot	5.21	34	184	5,183,545	\$0.50
2008	Jig	5.22	76	647	2,042,082 <sup>d</sup>	\$0.61
	Pot	5.22	37	341	8,506,792 <sup>d</sup>	\$0.59
2009	Jig	4.35	94	833	4,450,423	\$0.32
	Pot	4.35	38	138	4,141,054	\$0.32

Note: Weights are reported in whole pounds. Discards at sea are excluded.

<sup>a</sup> GHL = guideline harvest level.

<sup>b</sup> Price per pound calculated from whole pounds sold excluding bait and meal.

<sup>c</sup> Beginning in 1999, vessels > 58' using pot gear were capped at 25% of the total GHL.

<sup>d</sup> Pot harvest prior to the allocation rollover (September 1) was 5.42 million pounds. Jig harvest prior to the allocation rollover was 1.98 million pounds.

Table 11.—Pacific cod harvest from the Kodiak Area state-waters season by statistical area, 2009.

Statistical Area	Pounds	Vessels	Landings <sup>a</sup>
515801	353,936	11	26
525701	1,609,214	55	202
525703	743,871	18	44
525731	402,186	47	133
525733	1,133,343	65	318
525802	20,846	4	5
525805	66,220	13	22
525806	491,445	26	59
535631	515,345	19	53
535634	105,785	8	11
535703	210,332	9	18
535705	109,886	6	8
535732	343,661	18	38
535733	285,376	5	11
535734	87,317	18	26
535803	356,916	17	39
545633	77,785	4	7
545701	222,138	4	8
545734	106,564	4	7
545802	85,985	3	6
545803	205,663	6	10
Other <sup>b</sup>	1,057,663	12	31
<b>Total</b>	<b>8,591,477</b>		

*Note:* Weights are reported in whole pounds. Discards at sea are excluded.

<sup>a</sup> Some landings involve multiple statistical areas.

<sup>b</sup> A total of 10 statistical areas were combined due to confidentiality.

Table 12.—Chignik Area state-waters Pacific cod harvest and effort by gear type, 1997–2009.

Year	Gear	GHL <sup>a</sup> (millions)	Vessels	Landings	Pounds	Price Per Pound <sup>b</sup>
1997	Jig	2.95	4	14	35,002	\$0.18
	Pot	2.95	10	60	1,098,970	\$0.18
1998	Jig	2.85	11	59	167,283	\$0.18
	Pot	2.85	44	236	5,440,796	\$0.17
1999	Jig	4.10	11	56	218,408	\$0.32
	Pot	4.10	32	396	6,207,176	\$0.29
2000	Jig	1.01	5	12	38,453	\$0.35
	Pot	5.70	20	151	1,756,305	\$0.30
2001	Jig	0.90	13	55	277,411	\$0.27
	Pot	5.10	15	124	2,371,243	\$0.26
2002	Jig	0.74	14	60	324,227	\$0.20
	Pot	4.17	12	139	3,903,320	\$0.20
2003	Jig	0.68	16	106	433,067	\$0.28
	Pot	3.83	15	151	4,034,504	\$0.26
2004	Jig	1.10	14	53	141,697	\$0.24
	Pot	5.80	17	244	5,608,763	\$0.23
2005	Jig	0.63	8	42	136,872	\$0.24
	Pot	5.75	15	206	5,650,595	\$0.25
2006	Jig	0.73	1	2	Confidential	Confidential
	Pot	6.57	12	202	3,439,521	\$0.34
2007	Jig	0.73	0	0	0	ND
	Pot	6.57	16	242	5,699,461	\$0.45
2008	Jig	0.73	2	3	Confidential	Confidential
	Pot	6.58	23	262	6,838,934 <sup>c</sup>	\$0.56
2009	Jig	0.61	1	1	Confidential	Confidential
	Pot	5.47	11	122	Confidential	\$0.24

*Note:* Weights are in whole pounds. Discards at sea are excluded. Data are confidential in cases where fewer than 3 vessels participated.

<sup>a</sup> GHL = guideline harvest level.

<sup>b</sup> Price per pound calculated from whole pounds sold excluding bait and meal.

<sup>c</sup> Pot harvest prior to the allocation rollover (September 1) was 6.69 million pounds.

Table 13.—Pacific cod harvest from the Chignik Area state-waters season by statistical area, 2009.

Statistical Area	Pounds	Vessels	Landings <sup>a</sup>
565632	887,239	4	22
565633	2,253,844	7	54
Other <sup>b</sup>	2,540,147	8	49
Total	5,681,230		

*Note:* Weights are in whole pounds. Discards at sea are excluded.

<sup>a</sup> Some landings involve multiple statistical areas.

<sup>b</sup> Total of 6 statistical area combined due to confidentiality.

Table 14.–Chignik Area state-waters Pacific cod season openings, 1997–2009.

	Pot Gear	Jig Gear
	<i>Fishery Dates:</i>	
<b>1997</b>	April 15 - June 15	April 15 - June 15
	August 1 - September 30	August 1 - September 30
	October 28- December 31	October 28- December 31
	<i>Management Actions:</i>	
	October 31 allocation rollover - vessel size limit, gear limits, exclusive registration area lifted.	
	<i>Fishery Dates:</i>	
<b>1998</b>	April 1 - April 26	April 1- April 26
		May 20 - December 31
	<i>Management Actions:</i>	
	May 20 reopened to jig gear.	
	October 31 allocation rollover - gear limits lifted.	
	<i>Fishery Dates:</i>	
<b>1999</b>	April 15 - September 1	April 21 - September 1
	October 5 - December 31	October 5 - December 31
	<i>Management Actions:</i>	
	October 31 allocation rollover - limits on number of pots, jigs, and vessel size removed, exclusive area designation lifted.	
	<i>Fishery Dates:</i>	
<b>2000</b>	April 15 - December 31	April 15 - December 31
	<i>Management Actions:</i>	
	October 31 - limits on number of pots, jigs, and vessel size removed.	
	<i>Fishery Dates:</i>	
<b>2001</b>	March 11 - December 31	March 11 - December 31
	<i>Management Actions:</i>	
	October 31 - limits on number of pots, jigs, and vessel size removed.	
	<i>Fishery Dates:</i>	
<b>2002</b>	March 1 - December 31	March 1 - December 31
	<i>Management Actions:</i>	
	October 31 - limits on number of pots, jigs, and vessel size removed.	
	<i>Fishery Dates:</i>	
<b>2003</b>	March 1 - April 11	March 1 - June 4
	<i>Management Actions:</i>	
	Fishery closed when GHF allocations were attained.	

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	Pot Gear	Jig Gear
	<i>Fishery Dates:</i>	
<b>2004</b>	March 1 - May 13	March 1 - December 31
	<i>Management Actions:</i>	
	August 15 - jig GHJ rollover; jig quota harvestable by either jig or pot gear	
	October 31 - limits on number of pots, jigs, and vessel size removed.	
	<i>Fishery Dates:</i>	
<b>2005</b>	March 1 - May 10	March 1 - December 31
	<i>Management Actions:</i>	
	August 15 - jig GHJ rollover; jig quota harvestable by either jig or pot gear	
	October 31 - limits on number of pots, jigs, and vessel size removed.	
	<i>Fishery Dates:</i>	
<b>2006</b>	March 1 - September 1	March 1 - September 1
	<i>Management Actions:</i>	
	August 15 - jig GHJ rollover; jig quota harvestable by either jig or pot gear	
	September 1 - state-waters season (jig and pot) closed and parallel season opened.	
	<i>Fishery Dates:</i>	
<b>2007</b>	March 1 - September 1	March 1 - September 1
	<i>Management Actions:</i>	
	August 15 - jig GHJ rollover; jig quota harvestable by either jig or pot gear	
	September 1 - state-waters season (jig and pot) closed and parallel season opened.	
	<i>Fishery Dates:</i>	
<b>2008</b>	March 1 - September 1	March 1 - September 1
	October 5 - December 31	October 5 - December 31
	<i>Management Actions:</i>	
	August 15 - jig GHJ rollover; jig quota harvestable by either jig or pot gear	
	September 1 - state-waters season (jig and pot) closed and parallel season opened.	
	October 5 - reopen to pot and jig gear after federal CGOA closure	
	November 4 - Vessel size limits and gear limits removed.	
	<i>Fishery Dates:</i>	
<b>2009</b>	March 1 - April 8	March 1 - September 1
	October 3 - December 31	October 3 - December 31
	<i>Management Actions:</i>	
	August 15 - jig GHJ rollover; jig quota harvestable by either jig or pot gear	
	September 1 - state-waters season (jig and pot) closed and parallel season opened.	
	October 3 - reopen to pot and jig gear after federal CGOA closure	



Table 15.–South Alaska Peninsula Area state-waters Pacific cod season openings, 1997–2009.

	<b>Pot Gear</b>	<b>Jig Gear</b>
	<i>Fishery Dates:</i>	
<b>1997</b>	April 4 -December 22	April 4 -December 22
	<i>Management Actions:</i>	
	October 31 allocation rollover - vessel size limit, gear limits, exclusive registration area lifted.	
	<i>Fishery Dates:</i>	
<b>1998</b>	March 10 - April 14	March 10 - October 9
	<i>Management Actions:</i>	
	October 31 allocation rollover - no action taken; federal WGOA reopened Oct. 9 - Dec 31.	
	<i>Fishery Dates:</i>	
<b>1999</b>	March 15 - April 11 October 31- December 31	March 15 - December 31
	<i>Management Actions:</i>	
	October 31 allocation rollover - reopened to pot gear. November 10 - number of pots and jig machine limits lifted.	
	<i>Fishery Dates:</i>	
<b>2000</b>	March 11 - April 8	March 11 - September 19
	<i>Management Actions:</i>	
	Fishery closed when GHIL allocations were attained.	
	<i>Fishery Dates:</i>	
<b>2001</b>	March 6 - April 13	March 6 - June 12
	<i>Management Actions:</i>	
	Fishery closed when GHIL allocations were attained.	
	<i>Fishery Dates:</i>	
<b>2002</b>	March 5 - March 24	March 5 - April 26
	<i>Management Actions:</i>	
	Fishery closed when GHIL allocations were attained.	
	<i>Fishery Dates:</i>	
<b>2003</b>	February 24 - March 11	February 24 - April 22
	<i>Management Actions:</i>	
	Fishery closed when GHIL allocations were attained.	
	<i>Fishery Dates:</i>	
<b>2004</b>	March 2 - March 24	March 2 - April 14
	<i>Management Actions:</i>	
	Fishery closed when GHIL allocations were attained.	

-continued-

Table 15.–Page 2 of 2.

	<b>Pot Gear</b>	<b>Jig Gear</b>
	<i>Fishery Dates:</i>	
<b>2005</b>	March 3 - March 24	March 3 - August 31
	<i>Management Actions:</i>	
	Pot fishery closed when GHJ allocation was attained.	
	Jig fishery closed August 31, parallel portion of WGOA reopened Sept 1-Dec 31.	
	<i>Fishery Dates:</i>	
<b>2006</b>	March 9 - March 29 April 4 - April 8	March 9 - September 1
	<i>Management Actions:</i>	
	Pot fishery closed when GHJ allocation was attained.	
	Jig fishery closed September 1, parallel portion of WGOA reopened Sept 1-Dec 31.	
	<i>Fishery Dates:</i>	
<b>2007</b>	March 15 - April 17	March 15 - September 1
	<i>Management Actions:</i>	
	Pot fishery closed when GHJ allocation was attained.	
	Jig fishery closed September 1, parallel portion of WGOA reopened Sept 1-Dec 31.	
	<i>Fishery Dates:</i>	
<b>2008</b>	March 7 - April 1	March 7 - September 1
	<i>Management Actions:</i>	
	Pot fishery closed when GHJ allocation was attained.	
	Jig fishery closed September 1, parallel portion of WGOA reopened Sept 1-Dec 31.	
	<i>Fishery Dates:</i>	
<b>2009</b>	March 4 - April 4	March 4 - September 1
	<i>Management Actions:</i>	
	Pot fishery closed when GHJ allocation was attained.	
	Jig fishery closed September 1, parallel portion of WGOA reopened Sept 1-Dec 31.	

Table 16.–South Alaska Peninsula Area state-waters Pacific cod harvest and effort by gear type, 1997–2009.

Year	Gear	GHL <sup>a</sup>	Vessels	Landings	Pounds	Price Per Pound <sup>b</sup>
1997	Jig	4.70	45	178	349,468	\$0.17
	Pot	4.70	55	477	9,132,055	\$0.18
1998	Jig	1.35	28	124	437,708	\$0.16
	Pot	7.65	51	309	8,192,804	\$0.17
1999	Jig	1.95	27	166	706,952	\$0.29
	Pot	11.05	53	388	11,115,028	\$0.26
2000	Jig	2.28	28	145	757,953	\$0.28
	Pot	12.90	65	505	14,286,151	\$0.30
2001	Jig	2.01	69	417	3,402,427	\$0.24
	Pot	11.39	55	311	10,421,593	\$0.25
2002	Jig	1.86	66	322	2,046,686	\$0.24
	Pot	10.50	50	276	10,669,572	\$0.21
2003	Jig	1.80	65	413	3,633,007	\$0.27
	Pot	9.69	41	191	7,927,656	\$0.27
2004	Jig	1.90	51	317	1,671,461	\$0.24
	Pot	10.60	44	278	10,842,778	\$0.23
2005	Jig	1.73	39	261	1,229,832	\$0.25
	Pot	9.80	39	267	10,206,340	\$0.25
2006	Jig	2.22	12	36	99,552	\$0.36
	Pot	12.58	43	350	11,640,183	\$0.36
2007	Jig	2.22	14	59	254,178	\$0.47
	Pot	12.58	46	406	12,423,973	\$0.47
2008	Jig	2.14	51	299	1,382,268	\$0.57
	Pot	12.15	48	390	11,901,039	\$0.57
2009	Jig	1.78	26	185	1,093,382	\$0.23
	Pot	10.11	47	329	10,500,742	\$0.26

Note: Weights are reported in whole pounds. Discards at sea are excluded.

<sup>a</sup> GHL = guideline harvest level (millions of pounds).

<sup>b</sup> Price per pound calculated from whole pounds sold excluding bait and meal.

Table 17.—Pacific cod harvest from the South Alaska Peninsula Area state-waters season by statistical area, 2009.

Statistical Area	Pounds	Vessels	Landings <sup>a</sup>
595503	307,517	4	9
605501	204,467	9	27
605502	1,483,128	12	49
605504	1,332,513	27	120
605507	377,902	13	45
625401	3,506,045	14	101
625403	127,713	5	5
625431	151,547	4	14
625434	623,712	14	28
635432	125,619	5	9
635434	524,876	6	22
645403	896,431	4	18
655405	230,604	4	37
665333	183,159	3	6
Other <sup>b</sup>	1,518,891	15	42
<b>Total</b>	<b>11,594,124</b>		

*Note:* Weights are reported in whole pounds. Discards at sea are excluded.

<sup>a</sup> Some landings involve multiple statistical areas.

<sup>b</sup> Total of 17 statistical area combined due to confidentiality.

Table 18.—Kodiak Area harvest and effort from the black rockfish jig season, 1990–2009.

Year <sup>a</sup>	Vessels	Landings	Directed GHL <sup>b</sup>	Pounds	Price Per Pound <sup>c</sup>
1990	2	8	-	confidential	confidential
1991	55	317	-	782,133	\$0.25
1992	34	167	-	476,623	\$0.24
1993	14	58	-	105,244	\$0.24
1994	23	126	-	116,724	\$0.37
1995	33	183	-	311,455	\$0.44
1996	43	167	-	301,798	\$0.46
1997	51	297	-	221,167	\$0.38
1998	64	348	190,000	196,548	\$0.33
1999	70	300	185,000	128,008	\$0.42
2000	72	260	185,000	245,891	\$0.44
2001	36	168	185,000	213,629	\$0.50
2002	25	123	185,000	196,166	\$0.43
2003	33	90	185,000	84,237	\$0.36
2004	37	124	185,000	122,180	\$0.39
2005	23	85	175,000	116,726	\$0.40
2006	25	97	175,000	123,443	\$0.42
2007	21	96	175,000	135,386	\$0.41
2008	17	91	175,000	132,325	\$0.53
2009	18	90	175,000	122,249	\$0.41

*Note:* Weights are reported in whole pounds. Discards at sea are excluded. Data are confidential in 1990 because fewer than 3 vessels participated. A GHL was not established prior to 1998 because black rockfish were managed with the federal pelagic shelf rockfish complex.

<sup>a</sup> From 1990 to 1997 black rockfish were federally managed. After 1997, the State of Alaska assumed management responsibility from 0–200 nmi and only mechanical jig and hand jig gear were legal gear types for directed fishing.

<sup>b</sup> GHL = guideline harvest level.

<sup>c</sup> Price per pound calculated from whole pounds sold excluding bait and meal.

Table 19.–Chignik Area harvest and effort from the black rockfish jig season, 1990–2009.

Year <sup>a</sup>	Vessels	Landings	Directed GHL <sup>b</sup>	Pounds	Price Per Pound <sup>c</sup>
1990	0	0	-	0	na
1991	0	0	-	0	na
1992	0	0	-	0	na
1993	0	0	-	0	na
1994	0	0	-	0	na
1995	5	6	-	25,125	\$0.49
1996	11	25	-	201,825	\$0.36
1997	9	39	-	80,741	\$0.23
1998	10	30	100,000	87,712	\$0.28
1999	10	30	100,000	11,305	\$0.25
2000	7	14	100,000	95,572	\$0.43
2001	13	33	100,000	102,316	\$0.41
2002	7	15	100,000	81,015	\$0.41
2003	10	40	100,000	46,598	\$0.42
2004	6	26	100,000	99,122	\$0.27
2005	7	16	100,000	49,721	\$0.40
2006	2	4	100,000	Confidential	Confidential
2007	2	7	100,000	Confidential	Confidential
2008	1	4	100,000	Confidential	Confidential
2009	2	2	100,000	Confidential	Confidential

*Note:* Weights are reported in whole pounds. A GHL was not established prior to 1998 because black rockfish were managed with the federal pelagic shelf rockfish complex. Data from 2006 to 2008 is confidential because there were fewer than 3 participants.

<sup>a</sup> From 1990 to 1997, black rockfish were federally managed. After 1997, the State of Alaska assumed management responsibility from 0–200 nmi and only mechanical jig and hand jig gear were legal gear types for directed fishing.

<sup>b</sup> GHL = guideline harvest level.

<sup>c</sup> Price per pound calculated from whole pounds sold excluding bait and meal.

Table 20.—South Alaska Peninsula Area harvest and effort from the black rockfish jig season, 1990–2009.

Year <sup>a</sup>	Vessels	Landings	Directed GH L <sup>b</sup>	Pounds	Price Per Pound <sup>c</sup>
1990	0	0	-	0	na
1991	1	1	-	Confidential	Confidential
1992	0	0	-	0	na
1993	0	0	-	0	na
1994	0	0	-	0	na
1995	8	49	-	120,745	\$0.33
1996	19	79	-	151,633	\$0.25
1997	11	43	-	182,862	\$0.34
1998	10	43	100,000	105,135	\$0.29
1999	13	68	100,000	71,100	\$0.40
2000	21	75	100,000	95,520	\$0.37
2001	30	83	100,000	105,863	\$0.38
2002	12	49	100,000	116,721	\$0.32
2003	6	9	100,000	6,638	\$0.21
2004	17	29	100,000	9,329	\$0.26
2005	12	27	100,000	60,359	\$0.36
2006	3	8	75,000	7,015	\$0.37
2007	2	9	75,000	Confidential	Confidential
2008	0	0	75,000	0	na
2009	3	3	75,000	705	\$0.25

*Note:* Weights are reported in whole pounds. A GH L was not established prior to 1998 because black rockfish were managed with the federal pelagic shelf rockfish complex. Data in 1991 and 2007 are confidential because there were fewer than 3 participants.

<sup>a</sup> From 1990 to 1997, black rockfish were federally managed. After 1997, the State of Alaska assumed management responsibility from 0–200 nmi and only mechanical jig and hand jig gear were legal gear types for directed fishing.

<sup>b</sup> GH L = guideline harvest level.

<sup>c</sup> Price per pound calculated from whole pounds sold excluding bait and meal.

Table 21.–Regulations and development of the black rockfish fishery in the Westward Region.

YEAR	REGULATION
Pre-1997	<ul style="list-style-type: none"> <li>● Black rockfish managed by NMFS.</li> </ul>
1997	<ul style="list-style-type: none"> <li>● NPFMC splits black rockfish from Pelagic Shelf Rockfish Group.</li> <li>● State-waters managed separately: <ul style="list-style-type: none"> <li>○ Kodiak Area managed for 170,000 pounds.</li> <li>○ Chignik Area managed for 100,000 pounds.</li> <li>○ South Alaska Peninsula Eastern District managed for 100,000 pounds.</li> </ul> </li> </ul>
1998	<ul style="list-style-type: none"> <li>● State receives management authority from NMFS for black rockfish in the Exclusive Economic Zone.</li> <li>● Kodiak and Chignik areas and South Alaska Peninsula Eastern District established as non-exclusive registration.</li> <li>● Kodiak Area divided into 7 districts based on Tanner crab management sections and each district assigned a guideline harvest level (GHL).</li> </ul>
1999	<ul style="list-style-type: none"> <li>● ADF&amp;G reduces the GHL for Northeast District of Kodiak Area from 25,000 pounds to 20,000 pounds.</li> </ul>
2003	<ul style="list-style-type: none"> <li>● Kodiak Area requires specific black rockfish registration.</li> <li>● Kodiak Area trip limit of 5,000 pounds per 5 days.</li> <li>● Chignik Area designated superexclusive registration.</li> <li>● Chignik Area divided into 3 management districts; ADF&amp;G establishes an inseason GHL cap of 45,000 pounds from any one district.</li> </ul>
2004	<ul style="list-style-type: none"> <li>● ADF&amp;G reduces the GHL for Westside District of Kodiak Area from 30,000 pounds to 20,000 pounds.</li> </ul>
2005	<ul style="list-style-type: none"> <li>● South Alaska Peninsula Eastern District divided into 3 management sections, ADF&amp;G establishes an inseason GHL cap of 45,000 pounds from any one section.</li> <li>● Board of Fisheries (BOF) implements 2,500 pounds "incidental" harvest during other direct jig groundfish fisheries in Kodiak Area.</li> <li>● Logbook made mandatory for Kodiak Area black rockfish</li> </ul>
2006	<ul style="list-style-type: none"> <li>● ADF&amp;G reduces the GHL in the South Alaska Peninsula Eastern District to 75,000 pounds and section caps removed.</li> </ul>
2007	<ul style="list-style-type: none"> <li>● BOF reduces "incidental" harvest trip limit in Northeast, Afognak, and Southeast Districts of Kodiak Area from 2,500 pounds to 1,000 pounds.</li> </ul>



Table 22.—Jig and non-jig harvest of black rockfish from the Kodiak, Chignik, and South Alaska Peninsula Areas, 1990–2009.

Year	Jig			Non-Jig			Total Pounds	Discard at sea
	Vessels	Landings	Pounds	Vessels	Landings	Pounds		
1990	2	8	confidential	10	36	69,390	confidential	889
1991	56	318	confidential	11	24	86,464	confidential	66
1992	34	167	476,623	13	16	10,528	487,151	100
1993	14	58	105,244	12	22	2,767	108,011	332
1994	23	126	116,724	8	10	2,767	119,491	10,980
1995	40	238	457,325	15	17	4,336	461,661	3,660
1996	62	271	655,256	18	20	7,483	662,738	13,027
1997	66	377	484,770	20	22	3,970	488,740	750
1998	82	421	389,395	24	33	9,771	399,166	5
1999	93	398	210,413	25	40	4,252	214,664	3,615
2000	93	348	436,983	26	30	9,386	446,369	1,250
2001	68	279	421,807	20	29	7,862	429,669	5,005
2002	35	183	393,902	22	27	9,251	403,153	0
2003	49	139	137,473	24	25	5,788	143,261	44
2004	57	179	230,631	31	41	1,982	232,613	942
2005	40	128	226,806	22	25	1,326	228,133	492
2006	28	109	confidential	29	37	29,410	confidential	607
2007	22	112	243,172	63	139	34,758	277,930	995
2008	17	95	confidential	31	53	5,130	confidential	7,078
2009	21	95	136,272	23	30	1,033	137,305	319

*Note:* Weights are reported in whole pounds. Discards at sea are excluded from all but the “Discard at sea” column. Prior to 1998, there was not a GHL for black rockfish; they were managed as part of the federal Pelagic Shelf complex. Data in some years are confidential to keep data confidential in the individual area tables (Tables 18, 19, and 20).

Table 23.—Jig harvest of black rockfish from Kodiak, Chignik, and South Alaska Peninsula areas by district, 2009.

Area/District	Guideline	Pounds <sup>a</sup>	Directed Fishery	Pounds	
	Harvest Level		Closure Date	Directed <sup>b</sup>	Other <sup>c</sup>
<b>Kodiak Area</b>					
Afognak	35,000	35,251	September 14	30,475	4,776
Northeast	20,000	19,064	February 12	18,093	971
Eastside	30,000	34,213	June 30	20,804	13,409
Southeast	30,000	16,768	December 31	10,203	6,566
Southwest	20,000	Confidential	December 31	0	Confidential
Westside	20,000	4,875	December 31	Confidential	Confidential
Mainland	20,000	Confidential	December 31	Confidential	Confidential
Total (Kodiak Area)	175,000	122,249		Confidential	Confidential
<b>Chignik Area</b>					
Sutwik Island	45,000 <sup>d</sup>	Confidential	December 31	Confidential	0
Chignik Bay	45,000 <sup>d</sup>	Confidential	December 31	Confidential	0
Mitrofanina	45,000 <sup>d</sup>	Confidential	December 31	Confidential	0
Total (Chignik Area)	100,000	Confidential		Confidential	0
<b>South Alaska Peninsula Area</b>					
Total (South Peninsula Area)	75,000	705	December 31	Confidential	Confidential

Note: Weights are in whole pounds. Discards at sea are excluded.

<sup>a</sup> Total pounds of black rockfish harvested by jig gear.

<sup>b</sup> Total pounds of black rockfish harvested by jig gear in the directed black rockfish fishery.

<sup>c</sup> Total pounds of black rockfish harvested by jig gear as bycatch or as incidental harvest.

<sup>d</sup> No more than 45,000 pounds may be taken out of any one Chignik Area District with the total Chignik Area capped at 100,000 pounds.

Table 24.—All skate species harvest from the Central and Western Gulf of Alaska, 1995–2009.

NMFS Area	Year	Vessels	Landings	Pounds	State Waters	Discards at Sea
					% of total	
Central GOA	1995	73	315	839,907	21%	884,503
	1996	143	696	2,221,465	20%	952,429
	1997	159	1085	3,372,641	21%	664,707
	1998	104	342	843,694	16%	779,203
	1999	65	152	210,579	4%	734,344
	2000	77	505	1,304,898	3%	722,677
	2001	107	486	968,027	13%	775,142
	2002	68	369	1,285,419	4%	309,661
	2003	136	755	7,040,060	17%	367,715
	2004	102	501	3,260,089	6%	311,868
	2005	96	554	2,644,925	8%	462,275
	2006	98	1,111	2,784,218	14%	726,444
	2007	116	1,305	2,585,795	11%	654,771
2008	184	1,534	3,193,782	11%	680,498	
2009	161	1,296	4,243,774	13%	1,257,932	

NMFS Area	Year	Vessels	Landings	Pounds	State Waters	Discards at Sea
					% of total	
Western GOA	1995	17	23	975	71%	9,214
	1996	9	13	343	59%	104,237
	1997	6	6	110	42%	66,276
	1998	16	17	840	38%	55,505
	1999	20	30	1,397	49%	93,235
	2000	15	22	11,826	5%	217,239
	2001	14	23	6,665	22%	52,760
	2002	13	24	182,071	0%	34,360
	2003	30	92	318,171	3%	77,368
	2004	22	34	130,139	0%	36,294
	2005	17	24	17,386	3%	44,792
	2006	16	25	77,212	0%	37,804
	2007	23	103	69,970	3%	53,312
2008	43	89	132,175	5%	59,028	
2009	47	132	151,272	51%	235,706	

Notes: Weights are reported in whole pounds. Discards at sea are excluded from all but the “Discards at Sea” column.

GOA = Gulf of Alaska, ABC = Acceptable Biological Catch, NMFS = National Marine Fisheries Service.

Table 25.—Lingcod harvest from Kodiak, Chignik, and South Alaska Peninsula Areas, 1988–2009.

Year	Jig	Longline	Pot	Trawl	Total
1988	59	43	0	136,191	136,294
1989	69	0	0	14,324	14,394
1990	1,418	158	402	8,839	10,816
1991	8,375	501	386	663	9,925
1992	5,569	4,261	72	10,897	20,799
1993	0	511	0	4,778	5,289
1994	4,820	803	0	229	5,852
1995	34,574	3,467	79	1,191	39,311
1996	43,403	7,878	0	10,929	62,209
1997	12,637	6,499	4,251	5,267	28,654
1998	5,756	1,771	0	3,514	11,041
1999	1,358	3,802	4,189	4,593	13,941
2000	3,400	6,734	2,676	2,127	14,938
2001	527	4,063	3,597	5,688	13,875
2002	29	6,131	2,749	5,380	14,290
2003	229	9,740	0	5,069	15,037
2004	2,990	6,865	205	16,731	26,791
2005	772	18,831	7,983	14,078	41,663
2006	289	16,028	20,127	12,670	49,114
2007	35	28,163	32,024	45,419	105,641
2008	1,518	31,637	21,278	466,824	521,257
2009	373	28,112	3,614	65,182	97,281

*Note:* Weights are reported in whole pounds. Discards at sea are excluded.

Table 26.–Central and Western Gulf of Alaska walleye pollock fishery openings, 2005–2009.

NMFS Area	2005	2006	2007	2008	2009
Area 630	Jan 20- Jan 29	Jan 20 - Feb 15	Jan 20 - Jan 22	Jan 20 - Jan 22	Jan 20 - Jan 22
	Feb 6- Feb 14	Mar 10 ( <i>12 hrs</i> )	Feb 6 - Feb 8	Mar 3 - Mar 4	Feb 11 - Feb 11
	Mar 10 ( <i>12 hrs</i> )	Aug 25 - Sep 27	Feb 12 - Feb 14	Mar 7 - May 31	Mar 9 - Mar 11
	Aug 25- Aug 27	Oct 1 - Nov 1	Feb 20 -Feb 22	Aug 25 - Sep 4	Aug 25 - Aug 26
	Sep 8- Sep 10		Mar 1 - Mar 2	Oct 1 - Oct 6	Sep 29 - Oct 1
	Sep 15- Sep 16		Mar 10 - Mar 11	Oct 12 -Oct 14	
	Sep 22- Sep 23		Aug 25 - Aug 28		
	Oct 1- Oct 8		Sept 15 - Sep 18		
	Oct 17- Oct 19		Sep 21 - Sep 23		
	Oct 27- Oct 28		Sep 25 - Nov 1		
Area 620	Jan 20- Mar 2	Jan 20 - March 21	Jan 20 - Mar 27	Jan 20 - Mar 26	Jan 20 - Mar 6
	Mar 10- Mar 20	Aug 25- Aug 28	Aug 25 - Sep 10	Aug 25 - Sep 6	Mar 10 - Mar 14
	Aug 25- Aug 29	Aug 31 - Sep 3	Sep 21 - Sep 28	Oct 1 - Nov 1	Aug 25- Aug 26
	Sep 8- Sep 12	Sep 6 - Nov 1	Oct 1 - Nov 1		Sep 29 - Oct 4
	Sep 15- Sep 19				
	Sep 22- Nov 1				
Area 610	Jan 20- Jan 23	Jan 20 - Jan 22	Jan 20 - Jan 22	Jan 20 - Jan 22	Jan 20 - Jan 22
	Mar 10- Mar 12	Jan 26 - Jan 27	Feb 5 - Feb 7	Mar 3 - Mar 4	Mar 1 - Mar 3
	Aug 25- Sep 3	Mar 10 - Mar 14	Feb 8 - Feb 10	Mar 7 - Mar 31	Mar 10 - Mar 12
	Oct 1- Oct 14	Aug 25 - Aug 28	Mar 10 - Mar 13	Aug 25 - Sep 4	Aug 25 - Aug 31
		Sep 6 - Sep 27	Mar 16 - Mar 18	Oct 1 - Oct 6	Oct 1 - Oct 6
		Oct 1 - Nov 1	Mar 21 - Mar 23	Oct 12 - Oct 14	
			Aug 25 - Nov 1		

Table 27.—Walleye pollock harvest in millions of pounds from the Central and Western Gulf of Alaska, 1995–2009.

NMFS Area	Year	Vessels	Landings	Harvest	State Waters	Discards at Sea
					% of total	
Central GOA	1995	162	934	74.0	12%	1.3
	1996	134	1,035	50.4	28%	1.6
	1997	190	1,782	121.4	31%	1.9
	1998	166	1,847	206.8	34%	0.4
	1999	164	1,484	148.2	27%	0.5
	2000	137	1,328	106.2	4%	0.5
	2001	157	1,421	87.0	21%	0.3
	2002	135	1,095	71.0	43%	0.2
	2003	120	945	71.8	23%	0.2
	2004	108	895	86.7	37%	0.4
	2005	105	937	102.9	23%	0.3
	2006	123	1,388	96.9	29%	0.2
	2007	165	1,635	73.0	26%	0.3
2008	175	1,578	71.5	31%	1.0	
2009	167	1,351	53.8	35%	0.6	
Average 1999-2008		139	1,271	91.5	26%	0.4

NMFS Area	Year	Vessels	Landings	Harvest	State Waters	Discards at Sea
					% of total	
Western GOA	1995	101	361	65.7	34%	0.8
	1996	59	322	52.2	60%	0.8
	1997	85	334	62.5	32%	0.7
	1998	94	381	65.7	58%	0.1
	1999	90	454	52.8	53%	0.3
	2000	74	474	47.3	79%	0.1
	2001	68	582	67.5	74%	0.1
	2002	53	334	38.2	49%	0.2
	2003	55	280	37.1	54%	0.1
	2004	59	415	50.9	61%	0.1
	2005	60	584	67.9	49%	0.1
	2006	64	664	53.8	62%	0.2
	2007	62	633	38.2	53%	0.1
2008	57	491	32.8	34%	0.0	
2009	64	416	30.7	68%	0.1	
Average 1999-2008		74	529	55.2	58%	0.1

*Notes:* Weights are reported in whole pounds. Discards at sea are excluded from all but the “Discards at Sea” column.

GOA = Gulf of Alaska, ABC = Acceptable Biological Catch, NMFS = National Marine Fisheries Service.

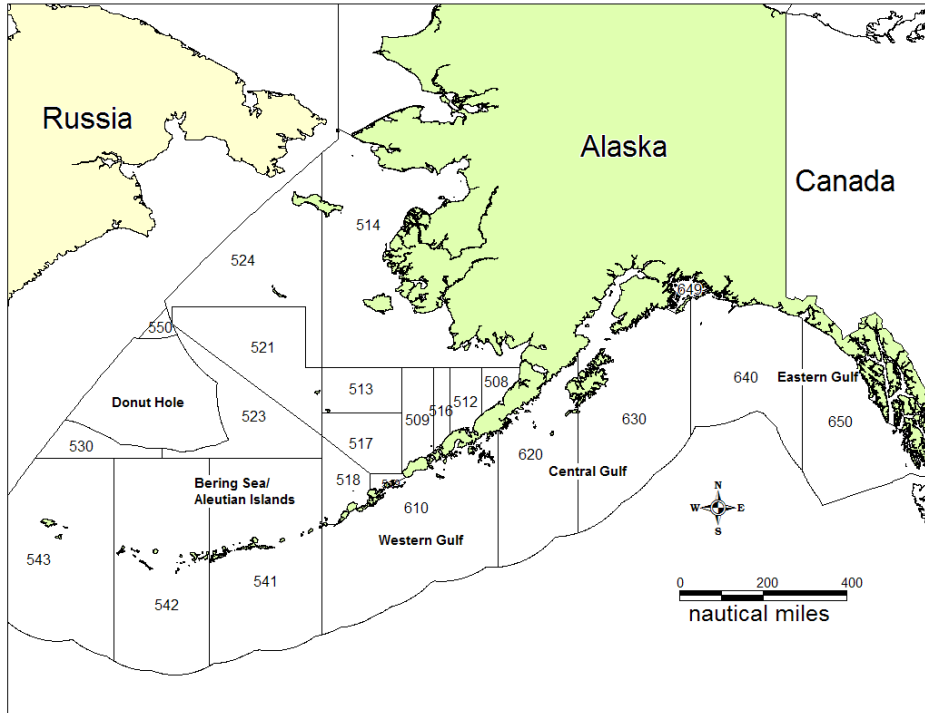


Figure 1.—National Marine Fisheries Service statistical and reporting areas.

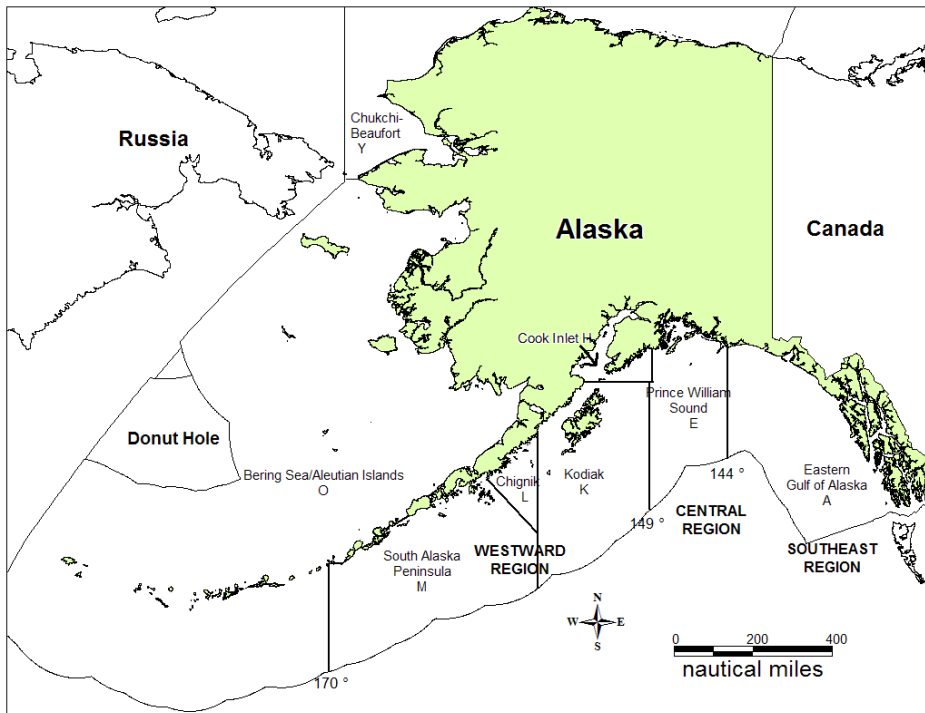


Figure 2.—Alaska Department of Fish and Game groundfish registration areas and regions.

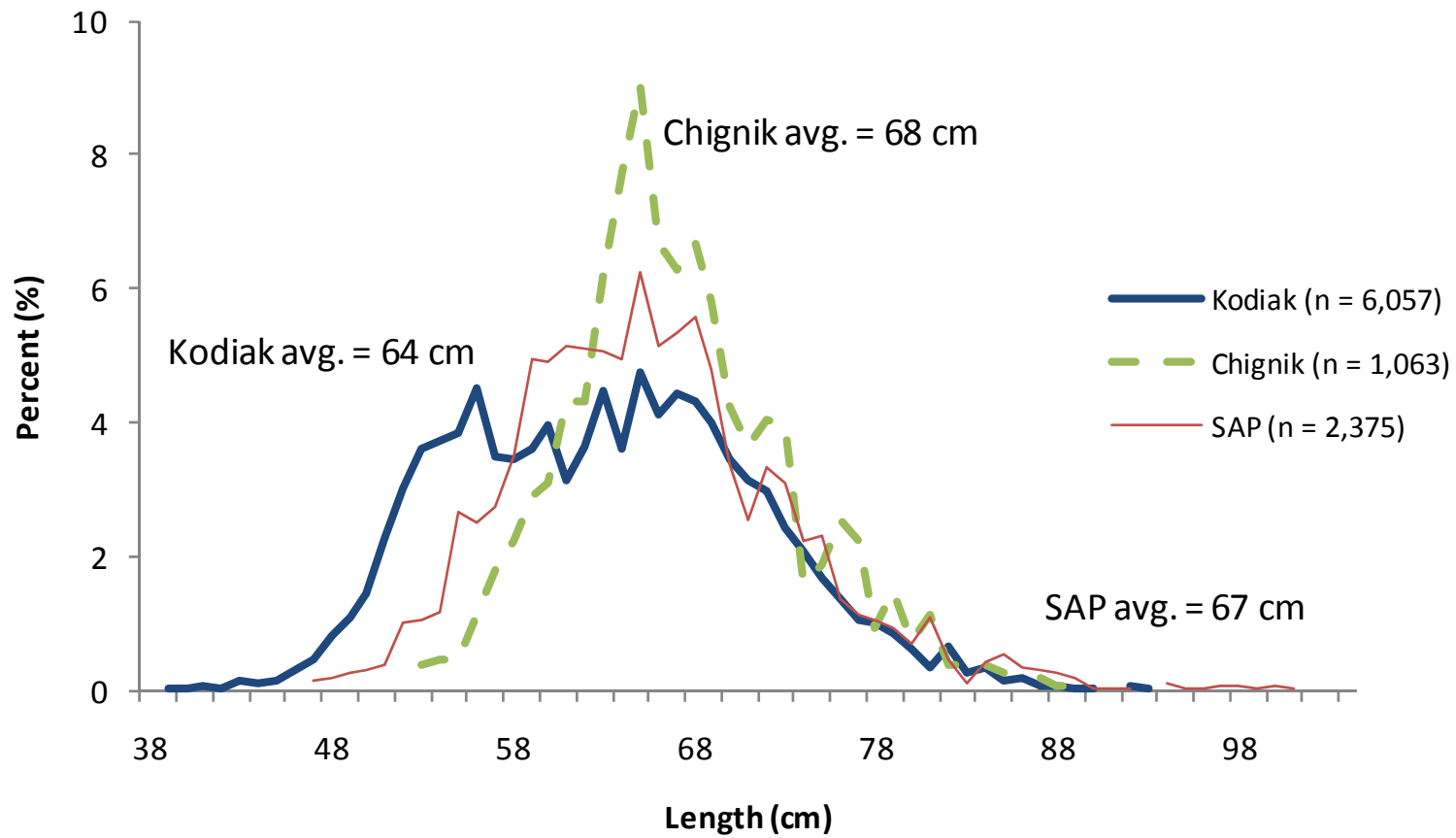


Figure 3.—Pacific cod lengths by area from the 2009 state-waters fisheries in Kodiak (pot and jig), Chignik (pot only), and South Alaska Peninsula (SAP; pot only) areas.



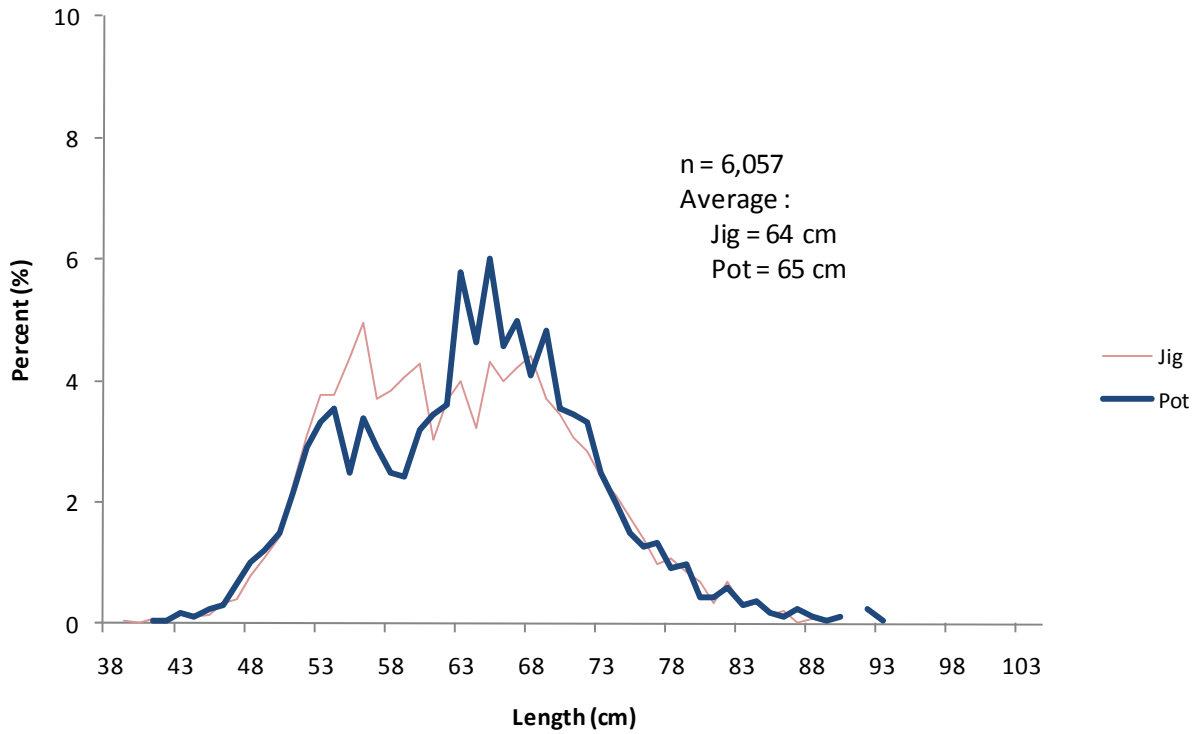


Figure 4.—Pacific cod lengths by gear type from the 2009 state-waters fisheries in the Kodiak Area.

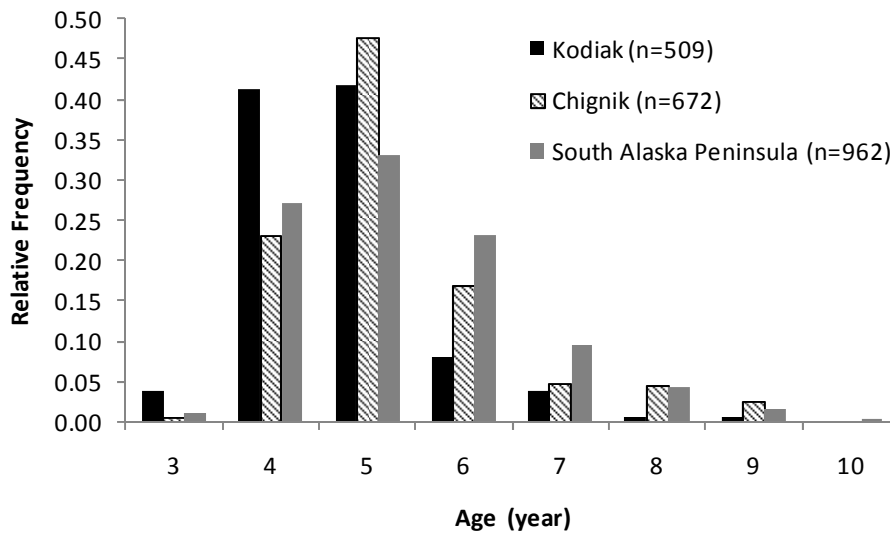


Figure 5.—Age composition of Pacific cod sampled from the 2009 state-waters fishery in Kodiak (pot and jig), Chignik (pot only), and South Alaska Peninsula (pot only) areas.

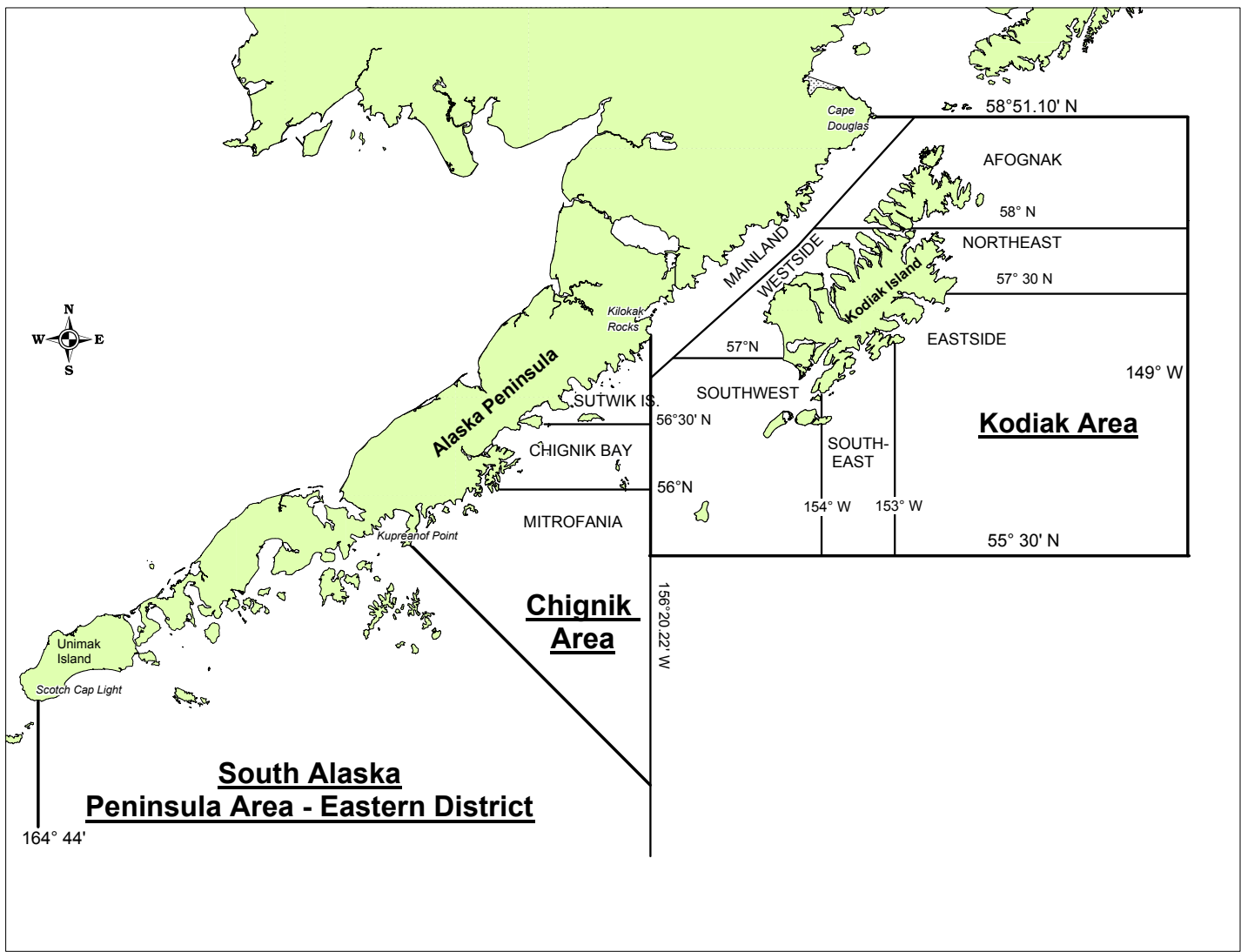


Figure 6.—Kodiak, Chignik, and South Alaska Peninsula black rockfish management areas and districts, 2009.

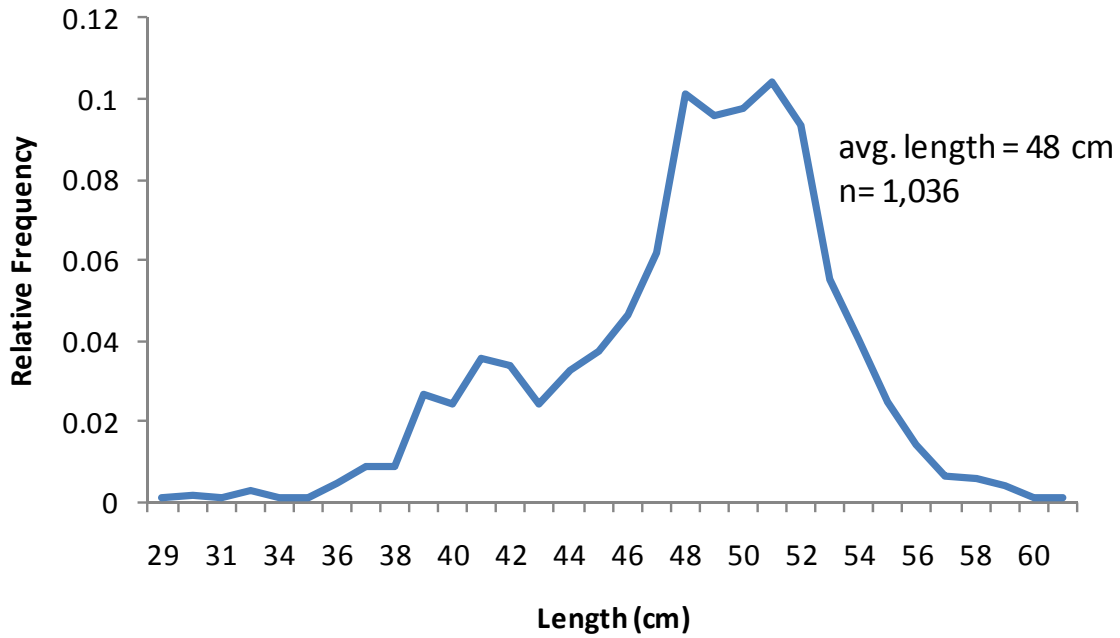


Figure 7.—Size composition of black rockfish sampled from the 2009 fishery in the Kodiak Area.

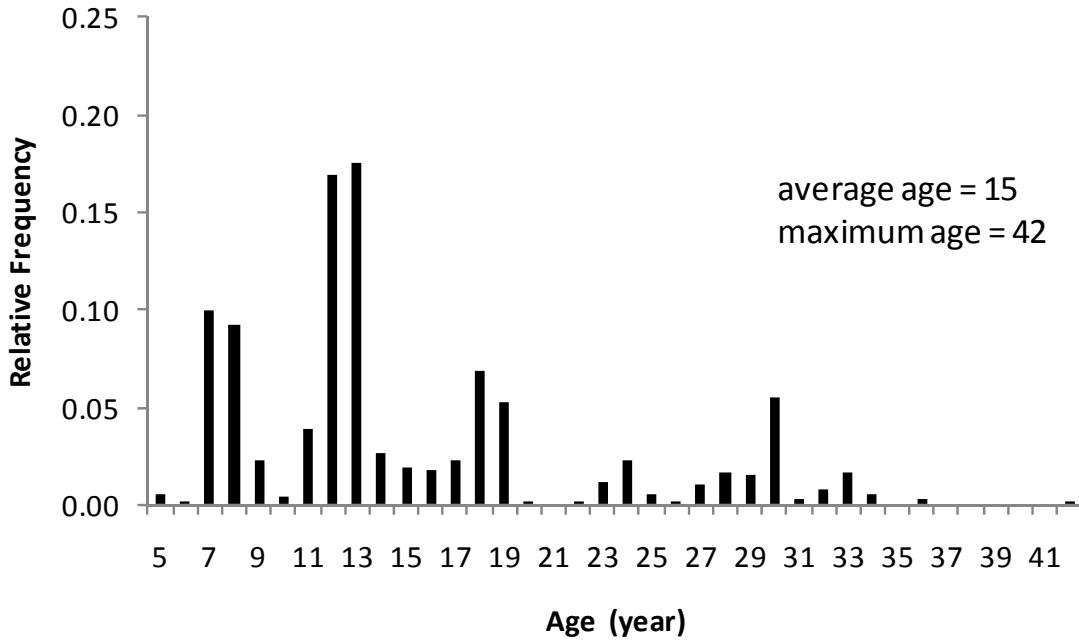


Figure 8.—Age composition of black rockfish sampled from the 2009 fishery in the Kodiak Area.

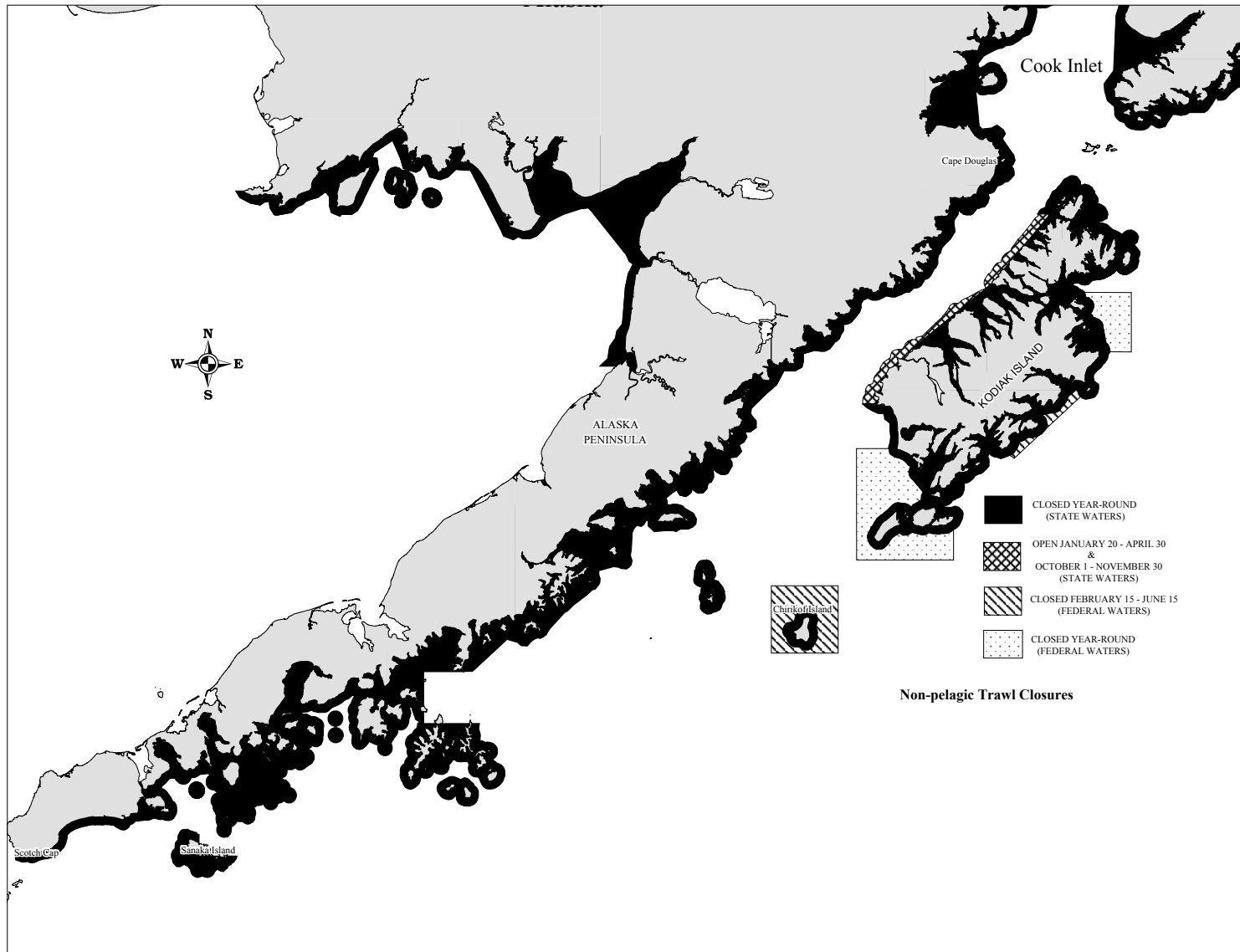


Figure 9.—Westward Region non-pelagic trawl gear closures, 2009.

**APPENDIX A. FREQUENTLY USED ACRONYMS  
AND KEY WORDS**

Appendix A1.–Frequently used acronyms and key words.

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Acronym	Definition
ABC	Acceptable Biological Catch, stock specification as set by NPFMC on an annual basis
BOF	Alaska Board of Fisheries
BSAI	Bering Sea/Aleutian Islands Area, state management area or federal management area
CGOA	Central Gulf of Alaska, comprised of federal management areas 620 and 630
EEZ	Exclusive Economic Zone, federal waters from 3 to 200 nautical miles offshore
EGOA	Eastern Gulf of Alaska, comprised of federal management areas 640 and 650
EO	Emergency order, management action taken by ADF&G to effect regulatory change
GOA	Gulf of Alaska
LLP	Federal License Limitation Program
mt	metric ton (equal to 2,204.62 pounds)
NMFS	National Marine Fisheries Service
NPFMC	North Pacific Fishery Management Council
Parallel fishery	State waters from 0 to 3 nautical miles opened by the state under federal rules while a federal fishery is ongoing from 3 to 200 nautical miles
SSL	Steller Sea Lion
State waters	Territorial sea from shore to three nautical miles
State-waters fishery	Fishery occurring from shore to 3 nautical miles open under Alaska Board of Fisheries regulations and managed exclusively by Alaska Department of Fish and Game
State-managed fishery	Fishery occurring from shore to 200 nautical miles and managed exclusively by Alaska Department of Fish and Game
TAC	Total Allowable Catch, final federal harvest specification for directed fishing as recommended by NPFMC and set by NMFS
WGOA	Western Gulf of Alaska, federal management area 610

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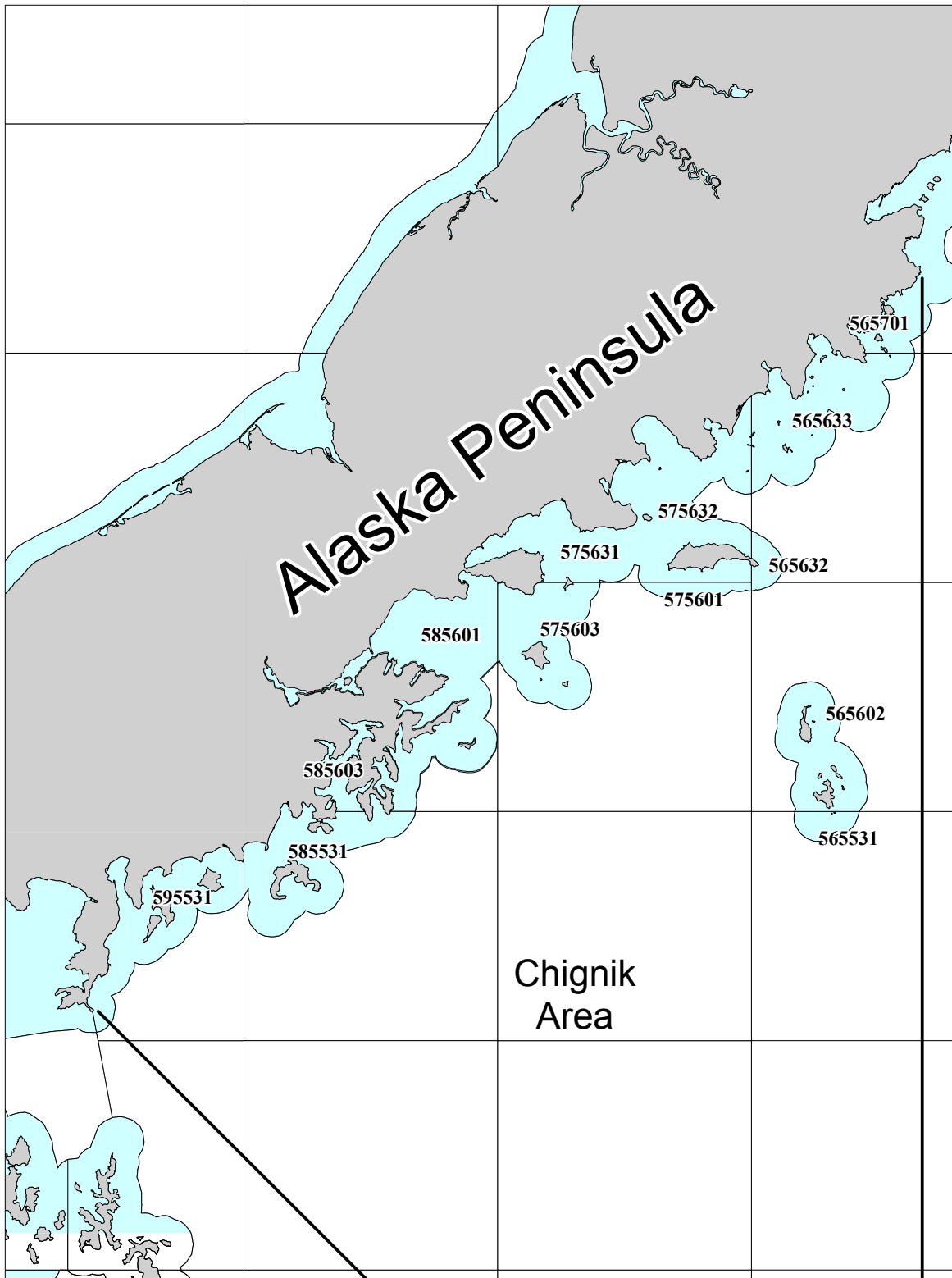
**APPENDIX B. KODIAK, CHIGNIK, AND SOUTH ALASKA  
PENINSULA MANAGEMENT AREAS STATE-WATER  
STATISTICAL AREAS FOR GROUND FISH**

Appendix B1.–Kodiak Management Area state-water statistical areas for groundfish.





Appendix B2.—Chignik Management Area state-water statistical areas for groundfish.



Appendix B3.—South Alaska Peninsula Area state-water statistical areas for groundfish.

