

**Fishery Management Report No. 05-58**

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**Annual Management Report for the Groundfish  
Fisheries in the Kodiak, Chignik, and South Alaska  
Peninsula Management Areas, 2004**

by

**Nicholas H. Sagalkin**

and

**Kally Spalinger**

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October 2005

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries





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October 2005

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## ABSTRACT

This report summarizes state managed, state-waters, and parallel commercial groundfish fisheries in the Kodiak, Chignik, and South Alaska Peninsula Areas during 2004. In state waters, Pacific cod (*Gadus macrocephalus*) fisheries in the Westward Region, harvested 28.2 million pounds (12,792 mt) with 297 vessels, for an estimated exvessel fishery value of \$6.7 million during 2004. Black rockfish (*Sebastes melanops*) were harvested by 74 vessels in the three management areas during 2004. The total harvest was 0.23 million pounds (104 mt) for an estimated exvessel value of \$0.07 million.

During 2003, a fishery for various skates (*Raja* and *Bathyraja* spp.) developed in the Kodiak Area. Little effort occurred in 2004. There were 21 permits issued to allow directed skate fishing in state-waters. A total of 0.19 million pounds (80 mt), down from 1.2 million pounds harvested in 2003, were harvested in state-waters. The exvessel value was \$0.02 million.

Minor harvests of lingcod (*Ophidion elongatus*) and sablefish (*Anoplopoma fimbria*) occurred in 2004. This report summarizes the effort and harvest from the parallel Pacific cod and walleye pollock (*Theragra chalcogramma*) fisheries. A general summary of information is provided on other groundfish species harvested in state-waters, as well as an historic summary of non-pelagic trawl closures in the state-waters of the Kodiak, Chignik, and South Alaska Peninsula Areas.

Key words: Westward Region, Kodiak, Chignik, South Alaska Peninsula, groundfish, Pacific cod, walleye pollock, black rockfish, state-waters, parallel, commercial fisheries

## INTRODUCTION

Groundfish harvests in the Exclusive Economic Zone (EEZ) of the Gulf of Alaska (GOA) and Bering Sea/Aleutian Islands (BSAI) are primarily managed by the National Marine Fisheries Service (NMFS) under guidelines developed by the North Pacific Fishery Management Council (NPFMC). The NPFMC establishes Acceptable Biological Catch (ABC) specifications for each species. The ABC may be reduced due to biological, economic, and social considerations to the level available for directed fishing, incidental harvest, and discards, which is termed the Total Allowable Catch (TAC); the TAC is set by the NPFMC. Appendix A contains frequently used acronyms and key words.

Authorization for federal control of resources in the EEZ from 3-200 nautical miles offshore comes from the Fishery Conservation and Management Act, now known as the Magnuson-Stevens Act, originally passed by the United States Congress in 1976 (MSFCMA 1996). Areas used for federal groundfish fisheries management are different than those used by the state (Figures 1 and 2). Many of the species managed by NMFS also occur in state-waters (0-3 nautical miles offshore).

The State of Alaska has management authority for groundfish resources within state-waters. State areas include the Eastern Gulf of Alaska, Prince William Sound, Cook Inlet, Kodiak, Chignik, South Alaska Peninsula, Bering Sea-Aleutian Islands, and Chukchi-Beaufort Sea Areas (Figure 2). These registration areas extend to the most seaward boundary of the EEZ. The Alaska Department of Fish & Game (ADF&G) offices in Southeastern Alaska, primarily the office in Sitka, manage fisheries in the Eastern Gulf of Alaska. The Prince William Sound and Cook Inlet Areas are managed by offices in Cordova and Homer and are part of the ADF&G Central Region. The other five areas are part of the ADF&G Westward Region. The office in Kodiak manages the Kodiak, Chignik, and South Alaska Peninsula Areas. The office in Dutch Harbor manages the Bering Sea-Aleutian Islands fisheries. Historically, little to no groundfish harvest has occurred in the Chukchi-Beaufort Sea Areas.

For groundfish fisheries that are not actively managed inseason by the State, ADF&G issues an emergency order (EO) at the beginning of each year, creating what are referred to as parallel fishing seasons. During parallel seasons, NMFS management, allowable gear, bycatch levels, and fishing season actions are promulgated in state-waters by authority of the annually issued global EO.

Exceptions to the parallel fishing seasons occur where the state has established separate harvest quotas, seasons, or regulations for state-waters. In the Westward Region, these are fisheries for sablefish *Anoplopoma fimbria*, Pacific cod *Gadus macrocephalus*, and black rockfish *Sebastes melanops*. These fisheries are actively managed by ADF&G and are referred to as state-waters fisheries. For lingcod *Ophidion elongatus* and rockfish *Sebastes sp.*, the state has full management authority from shore to the 200 nautical mile boundary of the EEZ. In contrast, state-waters seasons for sablefish and Pacific cod only occur within three nautical miles of shore. The fishery for skates *Raja* and *Bathyraja sp.* in state-waters is a parallel season with additional regulatory requirements imposed on participants via a commissioner's permit.

Pacific cod and walleye pollock *Theragra chalcogramma*, comprise the largest volume of groundfish harvested from Kodiak, Chignik, and South Alaska Peninsula Areas state-waters (Table 1). All directed walleye pollock harvest occurs during parallel seasons while Pacific cod is harvested in both the parallel and state-waters seasons. In 2004, 16 emergency orders were issued to affect inseason regulatory changes to the groundfish fisheries in the Kodiak, Chignik, and South Alaska Peninsula Areas (Table 2).

## STATE-WATERS FISHERIES

### PACIFIC COD

#### Historic Background

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

State-waters Pacific cod fisheries do not require participation in the license limitation program (LLP). However, the state management plans do specify fishing season, allowable gear, and harvest allocation.

State-waters Pacific cod seasons generally occur after the parallel season, which typically close in late winter/early spring. State management plans restrict gear to pots, hand troll, and mechanical jig gear. Management plans also restrict each vessel to either 60 pots or 5 jig machines.

State management plans restrict vessel length to 58-feet in the Chignik and South Alaska Peninsula Areas. Harvest was allocated between pot and jig gear types in the Kodiak Area. There was some concern that these restrictions would prevent harvest of the total guideline harvest level (GHL) while the fisheries were developing. To accommodate this concern, regulations were also adopted that removed exclusive area registration and vessel size and gear limits to allow harvest opportunity if the season GHL was not expected to be attained before the December 31 regulatory closure date

In 1998, the BOF added a regulation allocating 85% of the harvest to the pot fleet in the South Alaska Peninsula with no specified jig allocation.

In 1999, the BOF restricted pot vessels greater than 58 feet in length to 25% of the total Kodiak Area GHL before September 1, and the Chignik Area was designated as a superexclusive registration area. Also in 1999, the BOF established a 15% allocation for jig gear in the Chignik Area and an April 15 fishery opening date to both pots and jigs. After August 15 in the Chignik Area, unharvested quota was rolled-over to be available to both pot and jig gear. Clarification was added to the gear definitions of hand troll and jig gears: jig gear was limited to no more than five lines with a maximum of 30 hooks per line or no more than 150 hooks on one line used in a continuous loop.

In 2001, the BOF recognized federally listed Stellar sea lion (SSL) haul out zones surrounding them. The state had more liberal restrictions on designated SSL haul out locations, allowing fishing within these locations. These measures were adopted as an interim measure for 2001 and were retained for 2002 and 2003. The Chignik Area opening was also moved back to March 1.

In 2002, the BOF implemented regulations that required vessel-monitoring systems (VMS) in state-waters during parallel seasons, except for jig gear. VMS is not required by the state during state-waters seasons. In 2002, the BOF also liberalized the pot tag and storage requirements in the first seven days of the state-waters season in Kodiak and Chignik Areas. Vessels are allowed to have untagged pots onboard or in shallow water storage during the first week of the fishery; a similar proposal was adopted in early 2004 for the South Alaska Peninsula Area.

GHLs for each area are set as a percentage of the estimated ABC of Pacific cod as established by the NPFMC. Initial GHLs were set at 15% of the Western Gulf ABC for the South Alaska Peninsula Area, and 15% of the Central Gulf ABC apportioned between the Kodiak, Chignik, and Cook Inlet Areas. GHLs from the Central and Western Gulf were scheduled to increase incrementally to 20% and 25% of the area ABCs if annual harvest was within 10% of the established state-waters GHl.

### **2004 Westward Region State-waters Pacific Cod Fisheries**

The 2004 season was the eighth state-waters Pacific cod season in the Westward Region. Over 28.2 million pounds (12,803 mt) of Pacific cod was harvested from Kodiak, Chignik, and the South Alaska Peninsula Management Areas combined by 297 vessels (Table 4 and Figure 3). The total exvessel fishery value was approximately \$6.7 million.

#### **Kodiak Area**

The 2004 Kodiak Area GHl was based on 12.5% of the 2004 Central Gulf of Alaska (CGOA) ABC because the final step-up increment occurred after the 1999 fishery. The resulting GHl was 9.9 million pounds (4,491 mt), which was announced by news release on January 13, 2004. This GHl was higher than the previous two years, but lower than the GHls from 1999-2001. The state-waters fishery began February 7, 2004, seven days after the closure of the parallel CGOA Pacific cod fishery. This was the earliest opening in the 8-year history of the state-waters fishery in Kodiak (Table 5).

The number of participants and the rate of harvest have been increasing in the state-waters fishery. Prior to 2004, the fishery was managed using the average rate of harvest obtained from fish tickets. Rapid harvest rates in 2003 led to over-harvest of the pot fleet quota. The fast pace of the fishery was expected to continue in 2004 because harvest rates were strong during the CGOA parallel 'A' season preceding the state-waters season.

During 2004, in an effort to gather more timely information, ADF&G staff contacted participating (volunteers) vessels using pot gear to obtain on-the-grounds information on fishing rate, pounds onboard, and expected delivery date. This approach permitted staff to track effort for a portion of the fleet.

The total 2004 harvest of Pacific cod from the Kodiak Area state-waters fishery was slightly more than 10.0 million pounds (4,551 mt) taken with 171 unique vessels (Table 4). There were 5.8 million pounds (2,641 mt) taken with 47 pot vessels and 4.2 million pounds (1,909 mt) taken by 124 jig vessels (Table 6). Both gear types were used by 17 vessels used over the course of the season. The estimated exvessel fishery value was \$2.5 million. Fishers harvested Pacific cod from 43 separate statistical areas during the 2004 state-waters season (Table 7). Similar to last year, the largest harvests came from Marmot Bay (515801), Ugak Bay (525701), Chiniak Bay (525733), and Alitak Bay (545632; Table 7).

### ***Kodiak Pot Gear Season.***

Vessels using pot gear were allocated 50% of the total GHF or 4.95 million pounds (2,245 mt). Within that allocation, vessels longer than 58 feet in overall length were restricted to 25% of the total GHF, or 2.475 million pounds (1,123 mt), before September 1.

The fishery opened on a Saturday (February 7), so the first full fishery week was February 8 to 14. Approximately 1.2 million pounds were landed in the first full week of the state-waters season (Figure 4). This was similar to the record weekly harvest set in 2003 (1.7 million pounds).

After the first week, processors receiving state-waters Pacific cod were requested to submit daily landing reports. The report for landings through February 16 indicated the cumulative landed harvest was approximately 1.8 million pounds, and the average delivery per vessel had increased to 31,500 pounds. On February 19, updates indicated that the cumulative harvest was approximately 3.0 million pounds. The average delivery size continued to increase to 42,000 pounds per landing in the second week of the fishery.

Based on inseason management data, the Pacific cod pot fishery closed at 2:00 PM on February 22, 2004. A little more than two days notice (52 hours) was given to the fleet of the closure. The final pot harvest was 5,823,605 pounds (2,642 mt), 17% above the pot allocation of 4.95 million pounds (2,245 mt). The pot allocation was exceeded because favorable weather allowed higher harvest rates and the estimate of harvested pounds onboard at the time of the closure was too low. Post-closure analysis indicated that the estimate used to project the closure (9,500 pounds per day) was too low of an estimate. Actual harvest was slightly above 17,000 pounds per vessel per day in the last two days of the season.

Within the final pot harvest, vessels less than or equal to 58 feet in overall length harvested 3,518,478 pounds (1,596 mt). Vessels greater than 58 feet in overall length harvested 2,305,128 pounds (1,046 mt). The 2004 pot season lasted slightly more than two weeks.

### ***Kodiak Jig Gear Season.***

The 2004 allocation for the Kodiak Area jig fishery was 4.95 million pounds (2,245 mt). However, when the pot gear allocation was exceeded by more than 800,000 pounds (408 mt), the jig GHF was reduced to 4.1 million pounds (1,406 mt), keeping the total GHF at 9.9 million

pound (3,629 mt). This was the second consecutive year that the jig allocation was reduced due to harvest by the pot gear exceeding their allocation.

Prior to 2002, it was uncommon for jig fishers to begin fishing until after the pot season had closed. In 2002, very minor harvest and participation occurred concurrently to the pot season. Fishing practices in 2003 changed distinctly because jig fishers (up to 20) were active from the start of the fishery. This trend continued in 2004.

Jig fishers began fishing when the season opened on February 7. Weekly harvest averaged slightly more than 60,000 pounds (27 mt) per week while the pot fishery was ongoing (Figure 4). After the close of the pot season, participation and harvest increased. By April 1 the cumulative harvest was slightly more than 2.0 million pounds (907 mt) with 57 vessels registered. Weather temporarily slowed fishing, but in the last week of April, 91 vessels landed more than 800,000 pounds (363 mt). This level of weekly harvest had not previously occurred in the Kodiak Area jig season.

Estimating the number of participating vessels was difficult because it was common for participants to quit the fishery or stop during marginal weather and then resume fishing later. In mid-April, it was estimated that between 45 and 70 vessels were still fishing.

Processor reports from April 19 indicated that approximately 222,000 pounds remained to attain the 4.1 million pounds. Weather forecasts indicated winds of 15 knots or less and the very large spring tides that occurred in mid-April were beginning to subside. ADF&G staff projected that 60 vessels would deliver an average of 5,800 pounds per vessel once the fishery was closed.

The fishery closed on April 20 at 10:00 PM with 34 hours advance notice given to the fleet. The final harvest for the Kodiak jig fishery was 4,210,284 pounds. Preliminary analysis of fish ticket data indicate that 69 unique vessels made landings between April 17 and April 20, nine more vessels than the number used in the closure projection. However, the average delivery was smaller than anticipated at 5,620 pounds instead of the projected 5,800 pounds.

There were several reasons for the increase in harvest above levels previously seen: cod abundance appeared to be higher than recent years and fishers were finding dense aggregations of fish, and weather and tides were both favorable for long periods of time. In addition, jig fishers had been participating in the fishery for several years and have become more efficient in harvesting Pacific cod with jig gear.

### **Chignik Area.**

The Chignik Area attained the final GHL step-up increment as a result of attaining the 2003 GHL; therefore, the 2004 Chignik Area GHL was based on 8.75% of the 2004 CGOA ABC. This resulted in a GHL of 6.9 million pounds (3,130 mt) for the 2004 season. The fishery opened by regulation on March 1 (Table 8), and was announced by news release on January 13, 2004. Vessels using pot gear were allocated 85% of the GHL or 5.8 million pounds (1,724 mt). Jig season participants were allocated 15% or 1.1 million pounds (306 mt; Table 9).

The total 2004 harvest of Pacific cod in the Chignik Area from the state-waters fishery was 5,733,609 pounds (2,600 mt) taken with 30 unique vessels (Table 4). Three vessels used both gear types over the course of the season. The estimated exvessel fishery value was \$1.3 million. Fishers harvested Pacific cod from six separate statistical areas during the 2004 state-waters season. The largest harvests came from Chignik Bay (575603 and 585601; Table 10; Appendix C).

### ***Chignik Pot Gear Season.***

No local processors were available to take Pacific cod deliveries. Instead, harvest was delivered to a processor in Sand Point either by direct landing or by tender. In the first full week of fishing, 10 vessels landed 271,731 pounds (123 mt) (Figure 4). Landings throughout the season averaged over 500,000 pounds (227 mt) per week.

By May 12, conservative daily harvest rates, calculated from landing data, indicated the pot allocation would be harvested by May 13; therefore, an announcement was made on May 12 for a May 13 closure. Approximately 33 hours notice was given for the closure. Most of the fleet began pulling gear shortly after the closure announcement and did not fish during the entire time allotted. The total harvest, 5.6 million pounds (2,540 mt), was 4% under the GHL (Table 9).

This was the third time that the Chignik Area pot season closed because the GHL had been met; the others occurred in 1998 and 2003. In most years, the GHL is not attained before salmon fisheries begin in June and the fleet dissipates. The 2004 fishery was similar to the 2003 fishery in that catch rates were strong, a processor was available for the duration of the pot season, and participation levels remained consistent through the season. All these factors resulted in attaining the pot allocation.

### ***Chignik Jig Gear Season.***

The jig fishery in the Chignik Area has been slow to develop. In 2004, minor effort occurred in the later stages of the pot season. During the season, 13 vessels recorded landings but did not harvest the entire GHL. Jig harvest in 2004 was about 25% less than in 2003, averaging about 20,000 pounds per week. The total harvest was 0.1 million pounds (45 mt) out of the 1.1 million pound GHL (Table 9).

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

The South Alaska Peninsula Area fishery achieved the final GHL step-up increment in 2001, 25% of the Western Gulf ABC for Pacific cod. The 2004 South Alaska Peninsula Pacific cod GHL was 12.5 million pounds (5,670 mt) and was announced by news release on January 13. The state-waters Pacific cod fishery opened on March 2, seven days following the closure of the Western Gulf of Alaska (WGOA) parallel Pacific cod season (Table 11). Vessels using pot gear were allocated 85% of the GHL or 10.6 million pounds (4,808 mt). The jig season did not have a specified allocation; in recent years, the jig season has harvested whatever pounds remain following the closure of the pot season to attain the total GHL (Table 12).

Total harvest for both gear types for the South Alaska Peninsula Pacific cod fishery was 12,458,408 pounds (5,651 mt) from 595 landings by 96 vessels. Six vessels were used in both the pot and jig seasons. The approximate exvessel fishery value was \$3.0 million. Landings were reported from 19 statistical areas with major catches harvested near the Ikatan Peninsula, Sanak Island, and dispersed around the Shumagin Islands near Sand Point (Table 13, Appendix D).

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

The South Alaska Peninsula Area state-waters Pacific cod season attained the pot allocation very quickly during 2000-2003. The 2004 season was no exception, lasting only 22 days. Harvest averaged 2.5 million pounds per week, and individual landings averaged slightly less than 40,000

pounds (18 mt) over the season. Some individual vessels had single landings greater than 120,000 pounds (54 mt).

Processors in Sand Point and King Cove used tender vessels over the course of the pot fishery. This gave participating vessels the ability to maximize their fishing time by not having to travel to and from port for deliveries, fuel, ice, and groceries. Inseason estimates indicated that the 10.6 million pounds allocated to pot gear would be attained by midnight, March 24. Twenty-seven hours notice was given to the fleet of the closure. The final pot harvest was 10,786,947 pounds (4,893 mt). This was 188,947 pounds (85 mt) above the pot gear allocation (2%).

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

The South Alaska Peninsula Area jig season opened concurrently with pot gear on March 2. Jig landings began in the first week following the opening. Harvest per week increased throughout the season until the last week.

By the close of the pot season, jig fishers had harvested approximately 410,000 pounds. This was the largest jig harvest on record while the pot season was concurrently open. Immediately following the closure of the pot season, effort and harvest increased quickly. A closure was announced effective for noon on April 14. The final harvest was 1,671,461 pounds.

### **Harvest Monitoring**

ADF&G monitored the state-waters Pacific cod harvest during 2004 in the same manner as previous years. Dockside sampling occurred in the port of King Cove during the first few months of the season when fishing effort and harvest rates were highest and in Kodiak and Sand Point during the entire 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, reproductive status, and average weight. Otoliths were removed for later analysis in the aging laboratory. ADF&G personnel were also opportunistically placed on commercial vessels as observers to collect biological data and bycatch information.

Length frequency data has been collected every year during the state-waters fisheries. Data collected in 2004 did not differ greatly from data collected in previous years. In the Kodiak Area, sampled Pacific cod averaged 67.6 centimeters (cm) in length, while fish sampled from the Chignik Area averaged 62.7 cm in length (Figure 5). The average length for Pacific cod that were sampled in the 2004 South Alaska Peninsula Area was 63.4 cm. Pacific cod lengths sampled within all three management areas from jig gear averaged 64.9 cm in length while fish sampled from pot gear averaged 64.7 cm in length (Figure 6).

Average fish weights were calculated from data collected by dockside samplers. The average weight for the Kodiak Area harvest were 8.5 pounds for pot gear and 7.6 pounds for jig gear. Chignik Area fish averaged 5.8 pounds from both gear types. Sampled Pacific cod harvested with pot gear in the South Alaska Peninsula averaged 7.8 pounds; the average weight for jig gear was 5.9 pounds.

Otoliths were collected from 2,883 Pacific cod for aging from the Kodiak, Chignik, and South Alaska Peninsula Areas during the 2004 state-waters Pacific cod seasons. Analysis of the 2004 otolith age data has not been completed. Preliminary analysis of otolith data from the 2002 state-waters fishery shows that ages for Pacific cod ranged from 2 to 8 years with average ages of 5.0 for Kodiak, 5.6 for the South Alaska Peninsula, and 5.5 for Chignik. The 4 and 5-year old age

classes were the predominant age classes sampled from Kodiak, while in the South Alaska Peninsula and Chignik Area age 6.0 was predominant. Age analysis of subsequent collections is ongoing.

Reproductive condition of Pacific cod has been assessed during each state-waters fishery since 1997 by ADF&G dockside samplers. The peak of the 2004 Kodiak Area spawning period appeared to be early in the year and was similar to the period seen in 2000 and 2003 (Figure 7). Spawning in the Chignik Area was similar to that seen in the South Alaska Peninsula. Only 4% of fish caught in the Kodiak Area during the pot gear season were in spawning condition with ripe milt and eggs. The South Alaska Peninsula pot fishery, which took place one month later than the Kodiak fishery, was conducted when approximately 16% of the fish sampled were in spawning condition.

## **BLACK ROCKFISH**

### **Historic Background**

Black rockfish were of low market value and not generally harvested commercially in the Kodiak Area until 1990. The catch increased to 868,560 pounds (394 mt) in 1991 as operators fished previously unexploited populations (Table 14). Fishers 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 along the Alaska Peninsula were initially targeted in 1995. Fishers worked in areas near the port of Sand Point and east to Mitrofanina Island. The highest catch occurred in 1996 from the Chignik Area and the Eastern District of the South Alaska Peninsula Areas (Tables 15 and 16).

Black rockfish fisheries were managed by NMFS prior to 1997 as part of the pelagic shelf rockfish group that included dusky *Sebastes ciliatus*, yellowtail *S. flavidus*, and widow rockfish *S. entomelas* (Table 17). The dusky rockfish is the most abundant species in the group and predominated 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. ADF&G was concerned that localized depletion could easily occur on this long-lived, low-fecundity species; in some cases ADF&G closed state-waters by emergency order, but adjacent federal waters did not close in these instances. Although the majority of the black rockfish resource is in state-waters, enforcement of closures became a problem. Landings continued with federal statistical areas reported on fish tickets. Those reports were not always considered credible.

ADF&G submitted a Fisheries Management Plan amendment to the NPFMC in 1997 requesting that NMFS relinquish black rockfish management within the EEZ of the GOA to the state. 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 (260 mt) ABC on black rockfish in the CGOA. The ABC was based on the council'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.

ADF&G fishery managers applied this limit to fisheries in 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 (260 mt) total. Assigning GHGs to areas within the CGOA was aimed at distributing effort and avoiding intense localized fishing that could lead to long-term harm to the stocks. The 1997 GHG for the Kodiak Area was set at 170,000 pounds (77 mt). The GHG was further divided into four sections; three that encompassed the areas of historic harvest and one additional section for the rest of the area with a low GHG to allow for exploratory fishing. The Chignik Area and the South Alaska Peninsula Area Eastern District GHGs were set at 100,000 pounds (45 mt). The Dutch Harbor office of ADF&G manages 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.

In 1998, the Kodiak Area was further subdivided into seven sections with separate GHGs. The areas were loosely based on existing Tanner crab management sections to divide the area into sections that equally divided the highest historic effort (Figure 8).

In 2001, the BOF adopted several measures for the black rockfish fisheries in the Kodiak and Chignik Areas that became effective for the first time in the 2003 fisheries. In the 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, allow ADF&G to more effectively manage the small GHGs for the sections in the Kodiak Area. The descriptions of the black rockfish fishing districts, previously called sections, were also formally adopted in regulation as groundfish registration districts. Likewise, a superexclusive registration was adopted for the Chignik Area, and the area was subdivided into three districts for management purposes.

Prior to 2003, processors often neglected to sort black rockfish from dusky rockfish. Species identification can be difficult, and fishermen often lacked incentive because they were often offered a higher price for black rockfish than dusky rockfish. ADF&G increased information to the processors about species identification, which helped correct the problem beginning in 2003.

### **2004 Black Rockfish Fisheries**

The 2004 season was the seventh year of fishing under state management, including the partial year of 1998. A total of 76 vessels harvested 231,555 pounds (105 mt) of black rockfish from the Kodiak and Chignik Areas and the Eastern District of the South Alaska Peninsula Area combined (Tables 14, 15, and 16). Compared to the 2003 fishery, this was a similar level of participation, with just slightly less than double the harvest. Of those participating, 31 vessels directed harvest of black rockfish using jig gear, and the remainder of the vessels landed black rockfish as bycatch in other fisheries.

GHGs were attained in the Chignik Area and four of seven districts in the Kodiak Area. However, the GHG was not met in the Eastern District of the South Alaska Peninsula Area. The

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

pattern of effort in the black rockfish fisheries shifted back to smaller landings in 2003, and this pattern continued in 2004. Most of these landings were paired with Pacific cod in the Chignik and South Alaska Peninsula Areas, which is similar to how the fisheries were prosecuted in the mid to late 1990s.

The majority of the harvest in the Kodiak Area was by vessels registered for directed black rockfish fishing (Table 18). In the Chignik Area, most of the harvest occurred as allowable bycatch during the state-waters Pacific cod season. Only minimal harvest occurred in the South Alaska Peninsula Area. The largest catches came from Chignik Bay in the Chignik Area and Chiniak, Kaguyak, and Marmot Bays in the Kodiak Area (Figure 9).

### **2004 Kodiak Area Fishery**

ADF&G issued a news release on December 28, 2003 specifying a directed fishing GHL of 175,000 pounds (83 mt) for the Kodiak Area. The fishery opened on January 1, 2004, and sporadic effort and harvest occurred from January through March. Participation increased and remained high for the months of April and May. By late June, the 20,000 pound (9 mt) GHLs for the Northeast and Afognak Districts had been attained. These districts were closed to directed fishing for the remainder of the year with 5% bycatch permitted in non-directed fisheries. The Eastside GHL was attained in July and the Southeast GHL was attained the end of August. Very little effort occurred in the Southwest, Westside, or Mainland Districts (Table 18).

The 2003 and 2004 fisheries were different than the preceding recent years. In the 1998-2002 fisheries, several vessel operators had become very efficient at harvesting black rockfish. Landings that exceeded 10,000 pounds (5 mt) were common. As a result of the increased harvest proficiency, several of the small district GHLs were significantly exceeded. Most of the district GHLs were attained annually and the fishery was prosecuted more rapidly each year.

The single-species registration and trip limit requirements (both implemented in 2003) paired with lower exvessel prices resulted in the third lowest total harvest since the fishery began in 1990. A total of 123,231 pounds (56 mt) were harvested from the Kodiak Area in 2004, 38,000 pounds higher than the harvest in 2003 (Table 14). Harvest came from 23 statistical areas (Table 19).

The number of participants in the fishery has increased from 26 vessels in 2002 to 50 vessels in 2003 and to 52 vessels in 2004 fishery. Although, only 25 of the vessels that made black rockfish landings were registered for the directed fishery; the remaining vessels retained black rockfish as permissible incidental catch in other fisheries. Much of the increase in participation can be attributed to the large number of vessel operators that registered for black rockfish following the closure of the state-waters Pacific cod season.

In 2004 23 of the 133 individual deliveries exceeded 2,000 pounds (<1 mt), and 3 landings exceeded 5,000 pounds 2 (mt). This is an increase from 5 out of 108 landings exceeding 2,000 pounds observed in 2003. In the 2002 season, 38 of the 121 deliveries were greater than 2,000 pounds (<1 mt) including seven greater than 5,000 pounds (2 mt).

### **2004 Chignik Area Fishery**

ADF&G issued a news release on December 28, 2003 specifying a directed fishing GHL of 100,000 pounds (45 mt) for the Chignik Area, and harvest was capped at 45,000 pounds (20 mt) per district. This was implemented 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, 2004.

In 2004, 8 vessels made 28 landings from the Chignik Area (Table 15). Most made small landings of black rockfish while delivering much larger amounts of Pacific cod during the state-waters fishery. These were essentially bycatch deliveries. Landings were predominantly between 1,000 and 5,000 pounds. The largest landing of the year was slightly more than 12,000 pounds (5 mt).

The total harvest for the 2004 fishery was 99,025 pounds (45 mt; Table 15). Harvest came from eight statistical areas, with the majority of the harvest from the Chignik Bay District (Table 19). Unlike 2003 when none of the districts closed, all three district GHLs were attained in 2004. The Mitrofanina District closed July 27, and the other two districts closed August 4.

### **2004 South Alaska Peninsula Area Eastern District Fishery**

ADF&G issued a news release on December 28, 2003 specifying a directed fishing GHL of 100,000 pounds (45 mt) for the South Alaska Peninsula Area's Eastern District. The fishery opened on January 1, 2004.

In 2004, 26 vessels made 39 landings from the Eastern District (Table 16). Similar to 2003, the majority of the landings were small, and only two deliveries exceeded 1,000 pounds (< 1 mt). In the 2004 fishery, 16 statistical areas were fished (Table 19). Many of these areas had very minor catches reported, primarily as bycatch occurring in the state-waters Pacific cod fishery.

The total harvest for the 2004 fishery was 9,299 pounds (4 mt; Table 16). The majority of the harvest was taken in August, but the fishery remained open until the regulatory closure date of December 31.

### **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 as well as fish length, sex, reproductive maturity, and otoliths for aging. Mean size of black rockfish sampled from landings in the region was 46.8 cm. The largest fish were harvested in the Chignik area (Figure 10).

## **MISCELLANEOUS SKATE SPECIES**

### **Historic Background**

Skates are incidentally harvested in longline and trawl fisheries occurring in the Kodiak Area. On occasion, some of these skates were retained and processed. In many years, much of the skate catch from the Kodiak Area was 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 harvest has occurred in federal waters in the CGOA (Table 20). Except in 2003, little directed effort for skates has occurred. Little directed effort occurred in 2004.

NMFS has managed skates under the "other species" assemblage that also includes sharks, sculpins, squid, and octopi. This category is designed to monitor and protect species that have not traditionally been economically important but may have an important ecological role and have potential for economic development (Gaichas et al. 2003). The other species category has an annual TAC based on 5% of the sum of all other GOA FMP target species TACs each year.

Skates have been managed in state-waters under parallel seasons since the late 1980s. In 1998, the BOF adopted in regulation a requirement for a commissioner's permit to target skates in state-waters. The regulation gave ADF&G the authority to restrict fishing depth, specify season dates, 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 still prosecuted under the global emergency order and are still considered parallel seasons with the additional requirements of the commissioner's permit in place. The State of Alaska does not set a separate quota for state-waters, nor does the state administer a separate season for skates in state-waters. When the other species assemblage close in federal waters, that closure is also effective in state-waters. Should a particular gear type, such as longlines, be closed for directed fisheries because of bycatch constraints, that closure is also effective in state-waters under the parallel structure of the global EO.

In 2003, several markets for skate products, primarily in the 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, fishers targeting skates were able to retain Pacific cod up to 20% of their retained skate weight. Pacific cod prices remained strong throughout the year, making even relatively small amounts of bycatch lucrative for participants.

Local fishers and fish expeditors had worked at establishing skate markets for several years but had been unable to capitalize on the market for several reasons prior to 2003. Often, more lucrative fisheries remained open throughout a much longer period of the spring and fall. When this occurred, vessel operators often targeted those species exclusively. Once these more lucrative fisheries had been prosecuted, longline and trawl gear types often closed because the amount of Pacific halibut allocated as permitted bycatch (prohibited species cap or PSC) had been attained.

In 2003, many of the lucrative target fisheries closed earlier in the spring and ample amounts of halibut bycatch remained so that both longline and trawl gear remained open to target skates. The parallel Pacific cod fishery in the CGOA closed on February 9, the earliest closure on record since the implementation of an 'A' and 'B' season following the implementation of SSL recovery measures in 2001. The subsequent state-waters Pacific cod season also closed much faster than many previous years, closing on March 2 for pot gear and May 9 for jig gear in the Kodiak Area. Some of these vessels began using longline gear to target skates in the spring as there were few other fisheries in which these vessels could participate, given the short cod seasons.

Initial interest in a directed fishery occurred by longline fishers following the CGOA Pacific cod closure. Prior to this, some harvest had occurred as bycatch in January and February. Most of the initial interest in a directed fishery was for participation in state-waters. In the last weeks of February and first weeks of March, 37 commissioner's permits for directed skate fishing in state-waters were issued. Vessel operators fishing under a state-issued permit were required to keep detailed logbooks on catch location, effort, and composition. In addition, these vessel operators were required to give ADF&G advanced notice of deliveries so that dockside biological sampling could occur on the landed catch.

Over the course of April and May, many of the longline vessel operators learned that they could fish in federal waters if they had an LLP. While fishing in federal waters, no logbook or delivery notification requirements were placed on those participating. Initial reports from the fleet indicated skate abundance outside 3 nm was as strong if not stronger than inside 3 nm. As many of the longline vessels in question had the necessary federal endorsements for the CGOA, most moved the majority of their fishing operations outside of state-waters.

Trawl fishers landed skates in January, February, and March. Because skates are taken primarily with non-pelagic nets and only a small amount of state-waters in the Kodiak Area are open on a seasonal basis no state-waters commissioner permits were issued to trawl vessel operators. All the directed harvest by trawl gear occurred in federal waters. The magnitude of skates harvested with trawl gear increased substantially in April.

The 'other species' TAC for the CGOA was 24.8 million pounds (11,260 mt) in 2003. Any one species in the 'other species' assemblage could be targeted and, in theory, comprise the entire harvest of the 24.8 million pound (11,260 mt) TAC. It is highly unlikely that 24.8 million pounds (11,260 mt) of skates could be harvested over the course of the year because the PSC for halibut would typically close both the longline and trawl gear types before the 'other species' TAC was attained. Other gear types could remain open to harvest the 'other species' category but no other gears would be as effective for harvesting skates.

### **2003 Kodiak Area skate fishery**

In 2003, fishers targeted big *Raja binoculata* and longnose skates *R. rhina* with longline and trawl gear. Some minor harvest of skates of the *Bathyraja* species also occurred. In the NMFS Central Region, 167 vessels harvested over 7.4 million pounds (3,361 mt) of skates and in NMFS Western Region, 66 vessels harvested 390,000 pounds of skates (Table 20). The majority of the harvest occurred as directed harvest from the Kodiak Area. Over 1.0 million pounds (540 mt) were harvested from state-waters. The majority of the harvest in state-waters occurred with longlines in the Kodiak Area.

### **2004 Kodiak Area skate fishery**

In 2004, 178 vessels harvested over 3.6 million pounds (1632 mt) of skates from state and federal waters. Unlike 2003, very little harvest occurred from directed fisheries, and only 230,000 pounds (104 mt) were harvested from state-waters.

### **Harvest Monitoring**

ADF&G dockside samplers identified skates to species and collected length and sex frequencies, as well as age structures during the 2004 fishery. Length measurements were taken from the snout to the base of the pectoral fin. Vertebra sections were sent to the NMFS age determination lab in Seattle, WA for examination. Confidential logbooks were also required from those fishers targeting skates in state waters.

The majority of skates sampled were big skates *Raja binoculata* (599) followed by longnose skates *Raja rhina* (186), and were taken with longline gear. The three species of *Bathyraja*, Aleutian skate *B. aleutica* (39), Bering skate *B. interrupta* (34), and Alaska skate *B. parmifera* (14) were sampled mostly from non-pelagic trawl deliveries. Out of all the skates sampled in 2004, 63% were females.

The skate species that were specifically targeted during the fishery were big and longnose skates. Big skates ranged in size from 32 to 107 cm in length (Figure 11). Female big skates tended to be larger than the males, with average lengths of 77 cm for females and 67 cm for males. Longnose skates had a similar pattern of larger females and smaller males (71 cm and 62 cm); however, there was less overlap between the males and females at small sizes than there was with the big skates (Figure 12).

## **SABLEFISH**

Sablefish in state-waters are managed separately from the federal sablefish individual fisherman's quota (IFQ) program. Habitat for mature sablefish is extremely limited in much of the Westward Region state-waters. Sablefish stocks are not abundant in state-waters east of Unimak Pass in the Westward Region. Most state-waters are relatively shallow and contain a high percentage of juvenile sablefish. Mature fish are found in deeper waters such as those at edge of the continental shelf.

In 2002, the BOF adopted language prohibiting directed sablefish fisheries in the state-waters of the Kodiak and Chignik Areas. In 2003, the BOF adopted language to close the directed sablefish fishery in the South Alaska Peninsula Area, Eastern District. 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 emergency order that establishes parallel seasons. The 2004 harvest of sablefish taken as bycatch from state-waters in the three areas, excluding the South Alaska Peninsula Western District directed fishery, totaled 25,802 pounds (12 mt).

## **LINGCOD**

Current commercial regulations in the Kodiak and Chignik Areas restrict 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 are designed to eliminate fishing during the nest-guarding period and to ensure that only mature fish that have had at least one spawning opportunity are harvested. There are no similar regulations in the South Alaska Peninsula Area 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 commercial gear types are legal to use in the take of lingcod. 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 an important species to sport fisheries in the Kodiak Area and annual sport harvest is approximately 1,500 fish (Len Schwartz, ADF&G, Division of Sportfish, personal communication).

Lingcod have generally not been the target of directed fishing in the Westward Region. Most of the harvest occurs as bycatch in other fisheries, although directed harvest with jig gear has occurred sporadically in the past. The total 2004 harvest was 25,378 pounds (12 mt) from the Kodiak Area. Harvest from the Chignik Area is confidential, and no harvest occurred in the South Alaska Peninsula Area. Lingcod catch occurs in jig, pot, longline, and trawl gear. The highest historic harvest of 136,294 pounds (60 mt) was taken in 1988 in the Kodiak Area (Tables 21 and 22).

# PARALLEL PACIFIC COD FISHERIES

## INTRODUCTION

State-waters were opened for a parallel Pacific cod fishing season concurrent with the federal season managed by NMFS. Pot, longline, and jig gears were legal gear types beginning January 1, and trawl gear beginning January 20. Most state-waters in the Westward Region are closed to non-pelagic trawling, the trawl type used to direct effort on Pacific cod. During directed 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 (Beardon 1999). During directed fishery closures, maximum allowable Pacific cod and walleye pollock bycatch percentages must be retained under a prohibited species designation by NMFS, typically set at 20% by target species weight.

During the parallel season, vessels that are not LLP eligible may participate inside state-waters. However, to participate beyond three nautical miles, vessels must have a specific species, gear, and area endorsement from NMFS.

Several actions were taken by NMFS and the NPFMC during 2001 in response to the SSL Biological Opinion and Incidental Take Statement (BiOp) issued in November of 2001. Actions taken to mitigate the effect of commercial fishing effort on SSL changed widely over the course of the year and are best understood by referencing the appropriate federal documents. The State of Alaska sought to minimize the impact of the SSL measures in the parallel fishery by endorsing all sea lion rookery closures but not recognizing all haul out listings. Federal fisheries were split into two seasons, designated “A” and “B” seasons. NMFS released 60% of the federal ABC 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 ABC. If a sufficient amount of ABC remains for a commercial harvest to occur following these deductions through late spring and summer, that amount is made available on September 1. Both state and federal regulations for 2004 were the same as those in place during the later portion of 2001 and all of 2002 and 2003.

Fishery statistics compiled by NMFS show Pacific cod landings from the GOA beginning in 1964. The highest harvests occurring during the early 1990s. Catches since 1977 have averaged approximately 97.5 million pounds (44,223 mt) per year. Harvest figures for 2004 show a Central and Western GOA catch of approximately 116.7 million pounds (52,973 mt) with 61% coming from the CGOA and 39% from the WGOA (Table 23, Figure 13).

The harvest of Pacific cod from state-waters during parallel seasons within the CGOA and WGOA has ranged from 13.0 million pounds (5,897 mt) in 1989 to 49.7 million pounds (22,543 mt) in 1999. The 2004 state-waters harvest was 52.3 million pounds (19,550 mt) from the Central and Western GOA areas (Table 23). The 2004 ABC for Pacific cod in the Gulf of Alaska was up 15% from the previous year (Thompson et al, 2003).

## 2004 Kodiak Area Fishery

The waters of the Kodiak Area, part of the CGOA, closed to directed fishing for the inshore processing component on January 31, 2004. This was the fastest that the federal “A” season had been prosecuted. 2003 had previously been the quickest season, and the 2004 fishery was more than one week shorter. The federal CGOA reopened to Pacific cod fishing on September 1, 2004.

Because the state-water season GHL had been attained, state-waters reopened to Pacific cod fishing under parallel season rules. The harvest of Pacific cod from state-waters of the Kodiak Area in the 2004 parallel fishery totaled 6.5 million pounds (2,948 mt; Table 24). The majority of harvest in the Kodiak fishery came from longline gear (3.9 million pounds or 1,723 mt) and pot gear (2.3 million pounds or 1,043 mt). The trawl harvest of Pacific cod was well below levels taken prior to the implementation of SSL measures. In addition to SSL restrictions, additional areas of state-waters were closed to non-pelagic trawling beginning in 1999 by the BOF. The majority of Pacific cod harvest with trawls occurred as bycatch during directed flatfish fisheries on the westside of Kodiak Island where there are two seasonal non-pelagic trawl areas. Some bycatch also occurs in the pelagic trawl walleye pollock fishery.

#### **2004 Chignik Area Fishery**

The majority of the productive Pacific cod fishing grounds in the Chignik Area are closed to all fishing during federal fisheries. These closures include state and federal waters. The closures were implemented in 2001 as part of the SSL actions and remained in effect for the 2004 fisheries. The parallel season in the Chignik Area closed to directed fishing for the inshore processing component on January 31, 2004. As was the case in the Kodiak Area, the Chignik Area state-waters GHL had been fully attained when the scheduled federal reopening of the CGOA occurred on September 1. Therefore, state-waters opened under parallel rules in those waters not closed for SSL conservation reasons. The 2004 parallel fishery catch from state-waters of the Chignik Area was 0.2 million pounds (96 mt; Table 25). Pot gear accounted for the majority of harvest in the Chignik Area.

#### **2004 South Alaska Peninsula Area Fishery**

The inshore processing component of the “A” season directed Pacific cod fishery in the federal WGOA, which includes the South Alaska Peninsula Area, closed on February 24, 2004. The state-waters fishery GHL was fully attained by September 1, so state-waters reopened to a parallel fishery on that date. The total 2004 harvest of Pacific cod from state-waters during the parallel fishery was 14.2 million pounds (6,474 mt; Table 26). The reduction in Pacific cod harvest with trawl gear reversed in 2004. The 2001 harvest by trawls was 1.8 million pounds (816 mt); this dropped to 0.5 million pounds (227 mt) in 2002, and 0.1 million pounds (45 mt) in 2003, and increased to 0.9 million pounds in 2004 (415 mt). Pot gear harvested approximately 90% of the cod taken in state-waters during parallel fisheries. The majority of vessels in the South Alaska Peninsula parallel fishery were 58 feet overall length or smaller.

### **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 2004 and were designated A, B, C and D seasons (Table 27). The catch was primarily retained with pelagic trawl gear, although other types of gear are legal.

Harvest of walleye pollock in 2004 was 87.5 million pounds from the CGOA and 51.3 million pounds from the WGOA (Table 28). 2004 harvest levels in the CGOA and WGOA increased from 2003 and 2002 levels. Similarly, the amount of harvest from state-waters in 2004 was higher than in 2003 and 2002. Over 60% of the WGOA walleye pollock harvest occurred from state-waters and 36% of the harvest from CGOA occurred from state-waters.

## MISCELLANEOUS GROUND FISH

Other species of groundfish totaled 1.0 million pounds (453 mt) in state-waters of the Kodiak, Chignik, and South Alaska Peninsula Areas during 2004 parallel fisheries. Species harvested include arrowtooth flounder, flathead sole, rock sole, butter sole, yellowfin sole and Alaska plaice (Table 1).

Exploitation for flatfish was limited primarily because non-pelagic trawls are prohibited in most state-waters. Other harvest methods have not proven economically effective to capture flatfish.

Some incidental catch of other species occurred during pot, longline, and jig fisheries. In most instances, fish with a high market value, such as rockfish or lingcod, are retained when possible and sold along with the target species. Those that are less marketable, such as sculpins and arrowtooth flounder, are released at sea. Some prohibited species are delivered in unsorted catches then recorded as dockside discards or are processed into fishmeal. Many fish discarded at sea are not reported on fish tickets.

## NON-PELAGIC TRAWL CLOSURES

There is a patchwork of time and area closures to non-pelagic trawl gear around Kodiak Island and along the Alaska Peninsula. Generally, bays have been closed year round since 1986 (Figure 14). Modifications occurred in 1993, when the BOF created a non-pelagic trawl fishery that required 100% observer coverage in Marmot Bay and South Sitkalidak Strait. Crab bycatch limits were established and vessels were required to report to ADF&G daily. Additional changes occurred in 1994 and 1995 when the BOF opened state-waters near Castle Rock and Sanak Island.

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 a strip along the westside of Kodiak Island, which was left open seasonally. This seasonal opening of state-waters was left in place to allow non-pelagic trawls access to flatfish resources during parallel seasons. Additional closure areas in 1999 included all state-waters in the Chignik Area and the state-waters of the Kodiak Area along the 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 2004 fisheries.

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## **TABLE AND FIGURES**

**Table 1.**—State-waters harvest by total weight (including discards) of the top 30, groundfish species in Kodiak, Chignik, and South Alaska Peninsula Areas as reported on fish tickets, 2004.

Species	Kodiak	Chignik	South Alaska	Total
			Peninsula	
Walleye pollock	30,229,551	1,054,781	31,313,441	62,597,773
Pacific cod	17,032,516	5,948,052	26,810,067	49,790,635
Arrowtooth Flounder	1,133,731	4,210	150,609	1,288,550
Flathead Sole	299,117	1,041	111,058	411,216
Black Rockfish	122,828	99,122	9,693	231,643
Pacific Herring	221,571	5	2,361	223,937
Rock Sole	187,946	35	2,224	190,205
Octopus	11,816	75	138,446	150,337
Pacific Sleeper Shark	84,704	17,020	15,252	116,976
Capelin	97,970	0	7	97,977
Skate Unidentified	85,110	7,169	4,499	96,779
Dusky Rockfish	91,754	3,505	245	95,504
Eulachon	74,242	0	0	74,242
Big Skate	64,236	527	865	65,628
Longnose Skate	47,058	348	244	47,650
Majestic Squid	32,752	284	6	33,043
Sablefish	4,271	761	22,063	27,094
Sculpin Unidentified	3,730	1,159	21,908	26,796
Starry Flounder	26,562	0	48	26,610
Rex Sole	18,483	9	1,845	20,337
Chinook Salmon	10,226	864	8,618	19,708
greenling, atka mackerel	0	0	18,769	18,769
Shark Unidentified	8,459	1,438	8,319	18,217
Salmon Shark	13,476	0	2,918	16,394
Butter Sole	11,732	0	84	11,816
Yellowfin Sole	0	0	8,061	8,061
Yelloweye Rockfish	4,711	1,892	1,453	8,056
Lingcod	5,911	225	0	6,136
Alaska Plaice	388	0	5,171	5,559
Spiny Dogfish	4,236	436	731	5,403

**Table 2.**—Groundfish emergency orders issued for the Kodiak, Chignik, and South Alaska Peninsula Areas, 2004.

Emergency Order	Effective Date	Explanation
4-GF-01-04	January 1, 2004	Established commercial groundfish fishing seasons and bycatch limits for species managed by the state of Alaska in the Kodiak, Chignik, South Alaska Peninsula, Bering Sea-Aleutian Islands and Chukchi-Beaufort Areas.
4-GF-02-04	February 7, 2004	Opened the Kodiak Area state-waters Pacific cod season.
4-GF-03-04	February 2, 2004	Closed the Kodiak Area state-waters Pacific cod fishery to pot gear.
4-GF-04-04	March 2, 2004	Opened the South Alaska Peninsula Area state-waters Pacific cod season.
4-GF-05-04	March 24, 2004	Closed the South Alaska Peninsula Area state-waters Pacific cod fishery to pot gear.
4-GF-06-04	April 14, 2003	Closed the South Alaska Peninsula Area state-waters Pacific cod fishery to jig gear.
4-GF-07-04	April 20, 2004	Closed the Kodiak Area state-waters Pacific cod fishery to jig gear.
4-GF-08-04	May 13, 2004	Closed the Chignik Area state-waters Pacific cod fishery to pot gear.
4-GF-09-04	June 24, 2004	Closed the black rockfish fishery in the Afognak District of the Kodiak Area.
4-GF-10-04	June 28, 2004	Closed the black rockfish fishery in the Northeast District of the Kodiak Area.
4-GF-11-04	July 10, 2004	Closed the black rockfish fishery in the Eastside District of the Kodiak Area.
4-GF-12-04	July 27, 2004	Closed the black rockfish fishery in the Mitrofanina District of the Chignik Area.
4-GF-13-04	August 4, 2004	Closed the black rockfish fishery in the Chignik Area.
4-GF-14-04	August 15, 2004	Removed gear restrictions for the Chignik Area Pacific cod season.
4-GF-15-04	August 31, 2004	Closed the black rockfish fishery in the Southeast District of the Kodiak Area.
4-GF-16-04	October 30, 2004	Removed gear and vessel size restrictions for the Chignik Area Pacific cod season.

**Table 3.**—Regulations and development of the state-waters Pacific cod fishery in the Westward Region.

YEAR	REGULATION
1996	<p>Adoption of Pacific cod management plans:            All areas established as Exclusive Registration.            Gear restricted to jig (5 machines) or pot (60 pots).            Seasons: Kodiak and SAP open 14 days after federal closure; Chignik opens April 15.            Vessel size restricted to 58' in Chignik and SAP.            Jig/pot allocation (50:50) in Kodiak; no gear allocation in Chignik or SAP.            Gear allocation rollover September 1 in Kodiak.            Gear limits and exclusive registration lifted October 31 in all areas; vessel limits lifted October 31 for SAP and Chignik.</p>
1997	<p>Prosecution of the first Pacific cod state-waters fishery in Kodiak, Chignik, and the SAP Areas</p>
1998	<p>Seasons: Kodiak and SAP open 7 days after federal closure; Chignik open April 1            Gear allocation rollover September 1 in SAP            Pots capped at 85% of GHF in the SAP Area</p>
1999	<p>Chignik opens April 15            Jig/pot allocation (15:85) in Chignik.            Gear allocation rollover August 15 in Chignik.            Chignik Area established as superexclusive Registration.            Vessels &gt; 58' capped at 25% of GHF prior to September 1 in Kodiak Area</p>
2001	<p>State recognition of SSL haulouts.</p>
2002	<p>VMS rules implemented during parallel seasons.            Pot storage requirement liberalized in Kodiak and Chignik Areas for transition between federal and state seasons            Opening date for Chignik Area set for March 1.</p>

**Table 4.**—Catch, effort, value and average weight from the Westward Region state-waters Pacific cod fisheries, 1997-2004.

Year	Vessels <sup>a</sup>	Landings	GHL <sup>b</sup>	Pounds harvested	Ave. Price/Pound	Fishery value	Avg. Weight (lbs.)
<b><u>Kodiak Area</u></b>							
1997	113	712	8.5	7,563,236	\$0.25	\$1,890,809	9.1
1998	143	980	8.1	8,499,902	\$0.21	\$1,827,682	8.5
1999	200	1,259	11.7	10,733,782	\$0.37	\$3,787,178	8.1
2000	215	1,709	12.0	8,563,298	\$0.39	\$3,310,348	7.5
2001	106	672	10.6	4,911,612	\$0.32	\$1,523,680	7.0
2002	84	552	8.7	8,825,851	\$0.41	\$3,618,599	7.8
2003	144	838	8.0	8,155,332	\$0.30	\$2,449,902	7.8
2004	171	1,122	9.9	10,033,889	\$0.25	\$2,508,472	7.9
<b><u>Chignik Area</u></b>							
1997	14	74	5.9	1,133,972	\$0.18	\$204,114	7.5
1998	44	289	5.7	5,297,679	\$0.20	\$960,273	6.3
1999	44	453	8.2	6,435,687	\$0.32	\$1,939,442	6.4
2000	24	162	6.7	1,794,758	\$0.31	\$556,375	6.1
2001	31	180	6.0	2,619,851	\$0.26	\$678,289	7.9
2002	26	199	4.9	4,227,547	\$0.20	\$844,717	6.9
2003	31	257	4.5	4,467,571	\$0.27	\$1,206,244	7.0
2004	30	294	5.8	5,733,609	\$0.23	\$1,318,730	7.0
<b><u>South Alaska Peninsula Area</u></b>							
1997	101	673	9.4	9,524,706	\$0.19	\$1,809,694	7.0
1998	79	433	9.0	8,630,512	\$0.17	\$1,462,810	7.3
1999	80	554	13.0	11,821,979	\$0.29	\$3,421,304	11.3
2000	95	650	15.1	15,044,104	\$0.40	\$4,935,386	6.8
2001	124	727	13.4	13,455,619	\$0.27	\$3,559,141	7.2
2002	116	596	12.4	12,736,791	\$0.23	\$2,849,600	6.7
2003	106	604	11.4	11,560,663	\$0.23	\$2,616,006	6.9
2004	96	595	12.5	12,458,408	\$0.23	\$2,865,434	6.7
<b><u>Westward Region Total</u></b>							
1997	228	1,459	23.8	18,221,914	\$0.21	\$3,904,617	
1998	266	1,702	22.8	22,428,092	\$0.19	\$4,250,765	
1999	324	2,266	32.9	28,991,448	\$0.32	\$9,147,924	
2000	334	2,521	33.8	25,402,159	\$0.35	\$8,802,109	
2001	261	1,579	30.0	20,987,081	\$0.27	\$5,761,110	
2002	226	1,347	26.0	25,790,189	\$0.28	\$7,312,916	
2003	253	1,699	23.9	24,183,566	\$0.26	\$6,272,152	
2004	297	2,011	28.2	28,225,907	\$0.24	\$6,692,636	

<sup>a</sup>Some vessels used both gear types.

<sup>b</sup>Guideline harvest level in millions of pounds.

**Table 5.**—Kodiak Area state-waters Pacific cod fishery openings, 1997-2004.

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

**Table 6.**—Catch and effort by gear type from the Kodiak Area state-waters Pacific cod fishery, 1997-2004

Year	Gear	GHL (millions)	Vessels	Landings	Pounds	Price per pound
<b>1997</b>	Jig	4.25	73	481	1,978,772	\$0.26
	Pot	4.25	40	231	5,584,464	\$0.24
<b>1998</b>	Jig	4.05	91	663	2,114,833	\$0.20
	Pot	4.05	52	317	6,385,069	\$0.22
<b>1999<sup>a</sup></b>	Jig	5.85	119	794	2,294,870	\$0.40
	Pot	5.85	81	465	8,438,912	\$0.34
<b>2000</b>	Jig	6.00	146	1,227	2,814,748	\$0.40
	Pot	6.00	69	482	5,748,549	\$0.38
<b>2001</b>	Jig	5.30	70	433	1,254,910	\$0.34
	Pot	5.30	36	239	3,656,702	\$0.30
<b>2002</b>	Jig	4.35	51	340	1,389,838	\$0.38
	Pot	4.35	33	212	7,436,013	\$0.44
<b>2003</b>	Jig	4.00	102	689	3,196,069	\$0.27
	Pot	4.00	42	149	4,959,262	\$0.32
<b>2004</b>	Jig	4.95	124	961	4,210,284	\$0.26
	Pot	4.95	47	161	5,823,605	\$0.31

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

**Table 7.**—Catch by statistical area from the state-waters Pacific cod fishery in the Kodiak Area, 2004.

Statistical Area	Pounds	Vessels	Landings <sup>b</sup>
515801	896,328	40	120
525701	1,103,435	42	89
525703	371,291	17	24
525731	686,975	62	178
525733	1,764,989	110	496
525802	45,337	4	4
525803	76,649	5	9
525805	22,160	4	4
525806	663,445	44	97
535631	183,423	4	19
535633	145,607	5	7
535634	312,861	5	8
535703	172,144	3	18
535705	154,435	4	5
535732	404,022	13	25
535734	76,035	6	11
535803	302,955	17	30
545632	1,151,710	8	27
545633	97,883	4	5
545733	351,976	4	10
Other <sup>a</sup>	1,050,228	18	33
<b>Total</b>	<b>10,033,889</b>		

<sup>a</sup>Total of 23 statistical areas, combined due to confidentiality.

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

**Table 8.**—Chignik Area state-waters Pacific cod fishery openings, 1997-2004.

	Pot Gear	Jig Gear
	<i>Fishery Dates:</i>	
<b>1997</b>	April 15 - June 15 August 1 - September 30 October 28- December 31	April 15 - June 15 August 1 - September 30 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 October 5 - December 31	April 21 - September 1 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 GHIL allocations were attained.	
	<i>Fishery Dates:</i>	
<b>2004</b>	March 1 - May 13	March 1 - December 31
	<i>Management Actions:</i> August 15 - jig GHIL rollover; jig quota harvestable by either jig or pot gear October 31 - limits on number of pots, jigs, and vessel size removed.	

**Table 9.**—Catch and effort by gear type from the Chignik Area state-waters Pacific cod fishery, 1997-2004.

Year	Gear	GHL (millions)	Vessels	Landings	Pounds	Price per pound
<b>1997</b>	Jig	2.95	4	14	35,002	\$0.18
	Pot	2.95	10	60	1,098,970	\$0.18
<b>1998</b>	Jig	2.85	11	59	167,283	\$0.22
	Pot	2.85	33	230	5,130,396	\$0.18
<b>1999</b>	Jig	4.10	11	56	218,408	\$0.34
	Pot	4.10	33	397	6,217,279	\$0.30
<b>2000</b>	Jig	1.01	5	12	38,453	\$0.31
	Pot	5.70	19	150	1,756,305	\$0.30
<b>2001</b>	Jig	0.90	15	57	287,106	\$0.25
	Pot	5.10	16	123	2,332,744	\$0.26
<b>2002</b>	Jig	0.74	14	60	324,227	\$0.20
	Pot	4.17	12	139	3,903,320	\$0.20
<b>2003</b>	Jig	0.68	16	106	433,067	\$0.27
	Pot	3.83	15	151	4,034,504	\$0.27
<b>2004</b>	Jig	1.10	13	51	140,813	\$0.24
	Pot	5.80	17	243	5,592,797	\$0.24

**Table 10.**—Catch by statistical area from the state-waters Pacific cod fishery in the Chignik Area, 2004.

Statistical Area	Pounds	Vessels	Landings <sup>b</sup>
575603	467,611	7	21
585531	1,397,555	11	45
585601	1,897,937	23	136
595531	1,305,511	14	84
Other <sup>a</sup>	664,996	3	15
<b>Total</b>	<b>5,733,610</b>		

<sup>a</sup>Total of 2 statistical areas, combined due to confidentiality.

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

**Table 11.**—South Alaska Peninsula Area state-waters Pacific cod fishery openings, 1997-2004.

	Pot Gear	Jig Gear
<b>1997</b>	<i>Fishery Dates:</i>	
	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.	
<b>1998</b>	<i>Fishery Dates:</i>	
	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.	
<b>1999</b>	<i>Fishery Dates:</i>	
	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.	
<b>2000</b>	<i>Fishery Dates:</i>	
	March 11 - April 8	March 11 - September 19
	<i>Management Actions:</i> Fishery closed when GHL allocations were attained.	
<b>2001</b>	<i>Fishery Dates:</i>	
	March 6 - April 13	March 6 - June 12
	<i>Management Actions:</i> Fishery closed when GHL allocations were attained.	
<b>2002</b>	<i>Fishery Dates:</i>	
	March 5 - March 24	March 5 - April 26
	<i>Management Actions:</i> Fishery closed when GHL allocations were attained.	
<b>2003</b>	<i>Fishery Dates:</i>	
	February 24 - March 11	February 24 - April 22
	<i>Management Actions:</i> Fishery closed when GHL allocations were attained.	
<b>2004</b>	<i>Fishery Dates:</i>	
	March 2 - March 24	March 2 - April 14
	<i>Management Actions:</i> Fishery closed when GHL allocations were attained.	

**Table 12.**—Catch and effort by gear type from the South Alaska Peninsula Area state-waters Pacific cod fishery, 1997-2004.

Year	Gear	GHL	Vessels	Landings	Pounds	Price per pound
<b>1997</b>	Jig	4.70	45	179	349,119	\$0.18
	Pot	4.70	56	494	9,175,587	\$0.20
<b>1998</b>	Jig	1.35	28	124	437,708	\$0.16
	Pot	7.65	51	309	8,192,803	\$0.17
<b>1999</b>	Jig	1.95	27	166	706,951	\$0.28
	Pot	11.05	53	388	11,115,028	\$0.29
<b>2000</b>	Jig	2.28	28	145	757,953	\$0.48
	Pot	12.90	67	505	14,286,151	\$0.32
<b>2001</b>	Jig	2.01	69	416	3,034,026	\$0.28
	Pot	11.39	55	311	10,421,593	\$0.26
<b>2002</b>	Jig	1.86	66	319	2,046,711	\$0.24
	Pot	10.5	50	277	10,699,395	\$0.22
<b>2003</b>	Jig	1.8	65	413	3,633,007	\$0.24
	Pot	11.4	41	191	7,927,656	\$0.22
<b>2004</b>	Jig	1.9	51	317	1,671,461	\$0.37
	Pot	10.6	45	278	10,786,947	\$0.31

**Table 13.**—Catch by statistical area from the state-waters Pacific cod fishery in the South Alaska Peninsula Area, 2004.

Statistical Area	Pounds	Vessels	Landings <sup>b</sup>
595432	1,451,426	24	90
595434	501,771	22	62
595502	649,596	5	10
595503	494,299	4	13
605432	1,197,093	19	44
605501	290,868	20	41
605502	388,674	12	23
605504	917,903	39	122
605507	261,387	6	15
625401	3,119,730	11	62
635432	117,463	6	7
635434	2,357,060	15	93
Other <sup>a</sup>	711,138	12	35
<b>Total</b>	<b>12,458,408</b>		

<sup>a</sup>Total of 7 statistical areas combined due to confidentiality.

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

**Table 14.**—Catch and effort, excluding discards, for the Kodiak Area black rockfish fishery, 1990-2004.

Year <sup>a</sup>	Vessels <sup>b</sup>	Landings <sup>b</sup>	Directed GHL	Total Harvest <sup>c</sup>	Price per pound
1990	12	NA	NA	66,703	\$0.22
1991	58	NA	NA	868,560	\$0.29
1992	45	NA	NA	487,251	\$0.25
1993	18	NA	NA	107,831	\$0.22
1994	19	NA	NA	128,508	\$0.25
1995	41	NA	NA	315,682	\$0.36
1996	52	NA	NA	312,035	\$0.32
1997	65	NA	NA	224,050	\$0.27
1998	76	355	190,000	195,623	\$0.32
1999	84	316	185,000	131,986	\$0.40
2000	92	282	185,000	255,044	\$0.41
2001	55	194	185,000	220,825	\$0.40
2002	41	143	185,000	204,547	\$0.43
2003	49	106	185,000	85,362	\$0.36
2004	52	140	185,000	123,231	\$0.36

<sup>a</sup> From 1990-1997 black rockfish were federally managed. After 1997, only mechanical and hand jigs were legal gear types for directed fishing; however, substantial incidental harvest still occurred.

<sup>b</sup> The number of vessels and number of landings references directed and incidental harvest.

<sup>c</sup> Total harvest includes directed and incidental harvest.

NA = Not Available

**Table 15.**—Catch and effort, excluding discards, for the Chignik Area black rockfish fishery, 1990-2004.

Year <sup>a</sup>	Vessels <sup>b</sup>	Landings <sup>b</sup>	Directed GHL	Total Harvest <sup>c</sup>	Price per pound
1990	0	0	NA	0	NA
1991	0	0	NA	0	NA
1992	0	0	NA	0	NA
1993	4	NA	NA	312	\$0.26
1994	0	0	NA	0	NA
1995	12	NA	NA	28,665	NA
1996	12	NA	NA	201,825	NA
1997	10	NA	NA	80,742	NA
1998	14	34	100,000	87,774	\$0.23
1999	16	41	100,000	11,437	\$0.25
2000	10	17	100,000	92,596	\$0.41
2001	14	35	100,000	100,484	\$0.35
2002	10	18	100,000	81,043	\$0.41
2003	14	45	100,000	46,941	\$0.39
2004	8	28	100,000	99,025	\$0.32

<sup>a</sup> From 1990-1997 black rockfish were federally managed. After 1997, only mechanical and hand jigs were legal gear types for directed fishing; however, substantial incidental harvest still occurred.

<sup>b</sup> The number of vessels and number of landings references directed and incidental harvest.

<sup>c</sup> Total harvest includes directed and incidental harvest.

NA = Not Available

**Table 16.**—Catch and effort, excluding discards, for the South Alaska Peninsula Area black rockfish fishery, 1990-2004.

Year <sup>a</sup>	Vessels <sup>b</sup>	Landings <sup>b</sup>	Directed GHL	Total Harvest <sup>c</sup>	Price per pound
1990	NA <sup>d</sup>	NA	NA	NA <sup>d</sup>	NA
1991	6 <sup>d</sup>	NA	NA	145 <sup>d</sup>	NA
1992	0	0	NA	0	NA
1993	NA <sup>e</sup>	NA	NA	NA <sup>e</sup>	NA
1994	NA <sup>e</sup>	NA	NA	2,118 <sup>e</sup>	NA
1995	14	NA	NA	120,974	NA
1996	26	NA	NA	164,051	NA
1997	15	NA	NA	110,912	NA
1998	17	36	100,000	90,126	\$0.23
1999	18	50	100,000	55,441	\$0.37
2000	24	78	100,000	94,856	\$0.35
2001	31	82	100,000	96,441	\$0.35
2002	12	36	100,000	103,938	\$0.32
2003	7	9	100,000	8,838	\$0.24
2004	26	39	100,000	9,299	\$0.26

<sup>a</sup> From 1990-1997 black rockfish were federally managed. After 1997, only mechanical and hand jigs were legal gear types for directed fishing; however, substantial incidental harvest still occurred.

<sup>b</sup> The number of vessels and number of landings references directed and incidental harvest.

<sup>c</sup> Total harvest includes directed and incidental harvest.

<sup>d</sup> South Alaska Peninsula data from 1990 and 1991 combined to maintain confidentiality.

<sup>e</sup> South Alaska Peninsula data from 1993 and 1994 combined to maintain confidentiality.

NA = Not Available

**Table 17.**—Regulations and development of the state-waters black rockfish fishery in the Westward Region.

YEAR	REGULATION
Pre-1997	Black Rockfish managed by NMFS
1997	NPFMC splits black rockfish from Pelagic Rockfish Group State-waters managed separately: Kodiak Area managed for 170,000 pounds Chignik Area managed for 100,000 pounds South Alaska Peninsula Eastern District managed for 100,000 pounds
1998	Full management authority of black rockfish 3 – EEZ given to the state. Kodiak and Chignik Areas and the South Alaska Peninsula Eastern District established as non-exclusive registration. Kodiak Area divided into 7 districts based on Tanner crab management areas.
1999	The GHL for the Northeast District reduced from 25,000 pounds to 20,000 pounds.
2003	Kodiak Area requires specific black rockfish registration Kodiak Area sets 5,000 pound trip limit per 5 days. Chignik Area established as superexclusive registration Chignik Area divided into 3 management districts.
2004	The GHL for the Westside District reduced from 30,000 pounds to 20,000 pounds.

**Table 18.**—Black rockfish harvest from the Kodiak, Chignik, and South Alaska Peninsula Areas, 2004.

Area/District	Guideline	Total Harvest <sup>a</sup>	Directed Fishery Closure Date	Pounds	
	Harvest Level			Directed Harvest <sup>b</sup>	Incidental Harvest
<b>Kodiak Area</b>					
Afognak	35,000	37,847	June 24	34,837	3,010
Northeast	20,000	22,502	June 28	20,830	1,672
Eastside	30,000	30,842	July 10	30,825	17
Southeast	30,000	32,011	August 31	31,947	64
Southwest	20,000	21	December 31	0	21
Westside	30,000	8	December 31	0	8
Mainland	20,000	0	December 31	0	0
Total (Kodiak Area)	185,000	123,231	December 31	118,439	4,792
<b>Chignik Area</b>					
Sutwik Island	45,000 <sup>c</sup>	22,890	August 4	22,890	0
Chignik Bay	45,000 <sup>c</sup>	31,385	August 4	28,453	2,932
Mitrofanina	45,000 <sup>c</sup>	44,750	July 27	44,638	112
Total (Chignik Area)	100,000	99,025	August 4	95,981	3,044
<b>South Alaska Peninsula Area</b>	100,000	9,299	December 31	4,850	4,449

<sup>a</sup>Includes incidental harvest.

<sup>b</sup>Based on vessel being registered for directed fishing, not actual pounds landed.

<sup>c</sup> Each district in the Chignik Area is capped at  $\leq$  to 45,000 pounds; the total GHIL is 100,000 pounds for the area.

**Table 19.**—Harvest, vessels, and landings by statistical area from the black rockfish fisheries in the Kodiak, Chignik, and South Alaska Peninsula Areas, 2004.

**Kodiak Area**

Stat area	Pounds	Vessels	Landings
515801	2,674	11	12
525701	14,762	6	6
525703	16,012	4	6
525731	12,448	13	28
525733	10,028	17	40
525803	11,339	7	11
525805	4,626	4	5
525806	15,493	11	17
535631	20,704	3	7
535705	7,066	3	3
Other <sup>a</sup>	8,079	17	21
<b>Total</b>	<b>123,231</b>	<b>96</b>	

<sup>a</sup>Total of 13 statistical areas combined due to confidentiality.

**Chignik Area**

Stat area	Pounds	Vessels	Landings
585601	26,330	4	14
Other <sup>b</sup>	72,695	8	16
<b>Total</b>	<b>99,025</b>	<b>125</b>	

<sup>b</sup>Total of 7 statistical areas combined due to confidentiality.

**South Alaska Peninsula Area**

Stat area	Pounds	Vessels	Landings
605432	3,853	12	14
605503	30	3	3
605504	766	4	4
605507	36	5	6
Other <sup>c</sup>	4,614	16	21
<b>Total</b>	<b>9,299</b>		

<sup>c</sup>Total of 12 statistical areas combined due to confidentiality.

Note- some vessels were used in multiple statistical areas, each statistical area fished is considered as a 'landing' in this table.

**Table 20.**—All skate species harvest, including discards, in hundred thousand pounds from the Central and Western Gulf of Alaska, 1990 - 2004.

Year	NMFS Area	Vessels	Landings	Pounds	State Waters	
					Pounds <sup>a</sup>	%
1990	Central	41	113	3.0	<0.1	<1%
	Western	7	30	0.2	0.0	0%
1991	Central	121	262	4.9	<0.1	<1%
	Western	42	87	0.3	<0.1	<1%
1992	Central	200	493	6.0	0.7	12%
	Western	63	144	0.9	0.2	20%
1993	Central	168	507	5.9	0.5	8%
	Western	26	70	0.0	<0.1	<1%
1994	Central	190	483	5.9	0.5	8%
	Western	30	78	0.0	<0.1	<1%
1995	Central	188	857	17.2	2.4	14%
	Western	40	62	0.0	<0.1	<1%
1996	Central	166	963	31.7	5.3	17%
	Western	38	62	1.0	<0.1	<1%
1997	Central	179	1,274	40.4	7.4	18%
	Western	26	41	0.7	<0.1	<1%
1998	Central	130	677	16.2	1.7	10%
	Western	36	53	0.6	<0.1	<1%
1999	Central	94	477	9.4	0.2	2%
	Western	34	72	0.9	<0.1	<1%
2000	Central	102	852	20.3	0.9	4%
	Western	45	101	2.3	<0.1	<1%
2001	Central	133	805	17.4	1.3	7%
	Western	45	81	0.6	<0.1	<1%
2002	Central	97	611	15.9	0.7	4%
	Western	46	91	2.1	<0.1	<1%
2003	Central	167	959	74.1	11.9	16%
	Western	66	181	3.9	0.1	3%
2004	Central	178	691	35.7	2.2	6%
	Western	36	70	1.7	0.1	4%

<sup>a</sup>Total for all gear types.

**Table 21.**—Lingcod harvest by gear type from the Kodiak, Chignik, and South Alaska Peninsula Areas, 1988-2004.

Year	Gear type <sup>a</sup>				Total <sup>b</sup>
	Jig	Longline	Pot	Trawl	
1988	Confidential	43	0	Confidential	136,294
1989	Confidential	0	0	14,324	N/A
1990	1,418	Confidential	Confidential	8,839	11,846
1991	8,375	501	Confidential	739	N/A
1992	5,569	4,269	Confidential	10,959	N/A
1993	Confidential	Confidential	0	4,778	N/A
1994	4,820	803	0	Confidential	N/A
1995	34,573	3,567	Confidential	1,996	N/A
1996	43,403	7,898	0	10,929	N/A
1997	12,637	6,499	Confidential	5,267	N/A
1998	5,756	1,771	200	3,514	11,241
1999	1,358	4,294	11,216	5,003	21,870
2000	3,400	8,993	3,280	4,511	20,184
2001	527	6,753	Confidential	7,272	N/A
2002	6,132	7,645	2,856	7,750	18,281
2003	Confidential	10,973	0	11,269	N/A
2004	2,464	6,851	Confidential	15,407	N/A

<sup>a</sup>Some confidential harvest occurred in 1992 with sunken gill net gear.

<sup>b</sup>Some totals not available (N/A) due to confidentiality restrictions.

**Table 22.**—Lingcod harvest from the Kodiak, Chignik, and South Alaska Peninsula Areas, 1988-2004.

Year	Kodiak	Chignik	South Alaska	Total <sup>a</sup>
			Peninsula	Pounds
1988	136,294	0	0	136,294
1989	13,888	Confidential	Confidential	N/A
1990	10,735	0	0	10,735
1991	8,520	Confidential	0	N/A
1992	18,653	Confidential	Confidential	N/A
1993	3,800	Confidential	Confidential	N/A
1994	5,444	0	0	N/A
1995	31,464	2,813	4,640	N/A
1996	51,133	7,106	Confidential	N/A
1997	26,092	Confidential	0	N/A
1998	10,985	Confidential	Confidential	N/A
1999	13,927	Confidential	Confidential	N/A
2000	11,873	Confidential	Confidential	N/A
2001	13,737	Confidential	Confidential	N/A
2002	14,261	0	0	14,261
2003	14,069	969	0	15,038
2004	25,378	Confidential	0	N/A

<sup>a</sup> Some totals not available (N/A) due to confidentiality restrictions.

**Table 23.**—Pacific cod harvest in millions of pounds from the Central and Western Gulf of Alaska, 1989 - 2004.

Year	NMFS Area	Vessels	Landings	Pounds	State Waters	
					Pounds <sup>a</sup>	%
1989	Central	220	1,424	60.0	4.4	7%
	Western	141	607	32.1	8.6	27%
1990	Central	476	2,983	90.9	11.5	13%
	Western	162	989	86.0	13.1	15%
1991	Central	627	3,314	92.2	17.6	19%
	Western	280	1,379	76.5	4.2	5%
1992	Central	693	3,378	77.3	11.0	14%
	Western	288	1,448	73.6	13.2	18%
1993	Central	465	2,446	62.7	7.9	13%
	Western	166	989	39.9	1.9	5%
1994	Central	430	2,091	56.4	10.2	18%
	Western	209	1,149	32.3	7.4	23%
1995	Central	604	3,109	79.8	17.4	22%
	Western	272	1,141	44.9	9.0	20%
1996	Central	453	2,857	75.5	12.3	16%
	Western	237	1,380	48.9	12.8	26%
1997	Central	695	4,242	86.7	20.4	24%
	Western	284	1,805	67.3	19.5	29%
1998	Central	804	4,776	88.3	21.3	24%
	Western	271	1,702	58.1	17.9	31%
1999	Central	865	5,026	93.9	28.7	31%
	Western	271	1,887	60.9	21.0	34%
2000	Central	860	5,553	70.8	18.9	27%
	Western	282	2,023	61.7	27.9	45%
2001	Central	750	3,983	58.5	12.6	22%
	Western	298	1,973	43.0	19.9	46%
2002	Central	623	3,155	56.8	15.6	27%
	Western	293	1,841	46.6	21.3	46%
2003	Central	652	3,141	60.3	18.2	30%
	Western	280	1,745	43.5	24.9	57%
2004	Central	582	4,209	71.4	24.2	34%
	Western	202	1,848	45.3	28.1	62%

<sup>a</sup>Total for all gear types, state-managed and parallel fisheries occurring in state waters.

**Table 24.**—Pacific cod harvest in state waters by gear type from the Kodiak Area during parallel seasons, 1997-2004<sup>a</sup>.

Year	Gear Type				Total
	Pots	Longline	Trawl	Jig	
1997	8,686,489	1,894,314	826,568	6,660	11,414,031
1998	5,161,618	2,166,479	661,217	27,246	8,016,560
1999	8,345,293	2,580,282	1,038,009	27,930	11,991,514
2000	4,470,404	3,574,901	242,707	79,365	8,367,377
2001	2,984,716	2,284,404	38,605	22,414	5,330,139
2002	2,528,109	1,312,460	91,794	5,926	3,938,289
2003	3,491,359	2,703,121	43,828	15,580	6,253,888
2004	2,329,223	3,897,071	63,585	224,496	6,514,375

<sup>a</sup> Harvest is from state-waters, excluding discards.

**Table 25.**—Pacific cod harvest in state waters by gear type from the Chignik Area during parallel seasons, 1997-2004<sup>a</sup>.

Year	Gear Type				Total <sup>b</sup>
	Pots	Longline	Trawl	Jig	
1997	645,898	3,941	Confidential	0	649,839
1998	477,135	5,197	Confidential	0	482,332
1999	847,858	3,626	Confidential	0	851,484
2000	353,474	46,807	Confidential	0	400,281
2001	163,976	4,063	Confidential	0	168,039
2002	287,238	9,631	0	0	296,869
2003	282,636	14,742	0	0	297,378
2004	204,787	3,457	0	Confidential	208,244

<sup>a</sup> Harvest is from state-waters, excluding discards.

<sup>b</sup> Does not include confidential harvest information.

**Table 26.**—Pacific cod harvest in state waters by gear type from the South Alaska Peninsula Area during the parallel seasons, 1997-2004<sup>a</sup>.

Year	Gear Type				Total <sup>b</sup>
	Pots	Longline	Trawl	Jig	
1997	2,239,130	33,360	7,582,194	8,884	9,863,568
1998	4,334,329	522,328	3,738,842	Confidential	8,595,499
1999	3,488,539	36,101	5,121,501	0	8,646,141
2000	6,149,248	242,233	6,248,703	11,499	12,651,683
2001	3,848,344	57,055	1,847,888	340,386	6,093,673
2002	6,307,594	9,225	492,888	418,696	7,228,403
2003	13,163,108	60,629	113,248	92,528	13,429,513
2004	12,815,772	29,004	915,220	409,107	14,169,103

<sup>a</sup> Harvest is from state-waters, excluding discards.

<sup>b</sup> Does not include confidential harvest information.

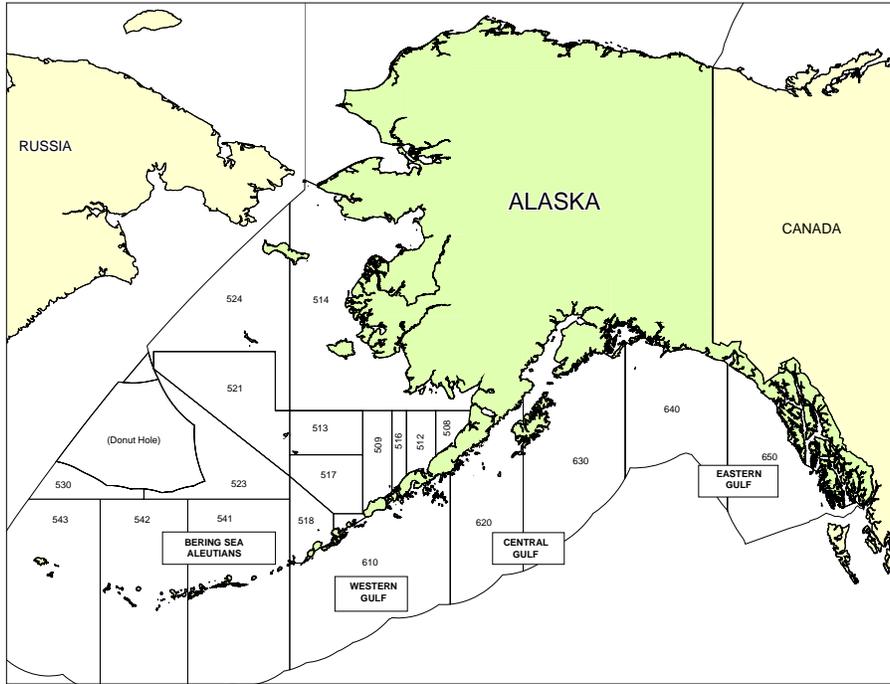
**Table 27.**—Central and Western Gulf of Alaska walleye pollock fishery openings, 2000-2004.

2000	2001	2002	2003	2004
Area 630	Area 630	Area 630	Area 630	Area 630
Jan 20 - Jan 25	Jan 20 - Feb 14	Jan 20 - Jan 21	Jan 20 - Jan 21	Jan 20 - Jan 21
Mar 15 - Mar 17	Mar 15 - Mar 17	Jan 29 - Jan 30	Feb 13 -Feb 14	Feb 4 -Feb 4
Aug 20 - Aug 29	Aug 20 - Sep 10	Mar 10 - Mar 11	Mar 10 - Mar 10	Feb 24 - Feb 24
Oct 01 - Nov 01	Oct 01 - Nov 01	Mar 19 - Mar 20	Mar 20 -Mar 20	Mar 10 - Mar 10
		Aug 25 - Sep 04	Aug 25 - Aug 27	Aug 25 - Aug 29
		Oct 01 - Oct 02	Oct 1 - Oct 2	Sep 12 - Sep 15
				Oct 1 - Oct 2
				Oct 7 - Oct 9
Area 620	Area 620	Area 620	Area 620	Area 620
Jan 20 - Jan 27	Jan 20 - Bycatch status only	Jan 20 - Feb 25	Jan 20 - Feb 25	Jan 20 - Feb 25
Mar 15 - Mar 15	Mar 15 - Bycatch status only	Mar 10 - Mar 26	Mar 10 - Apr 3	Mar 10 - Mar 21
Aug 20 - Sep 15	Aug 20 - Sep 15	Aug 25 - Sep 15	Aug 25 - Aug 30	Aug 25 - Aug 29
Oct 01 - Nov 01	Oct 01 - Nov 01	Oct 01 - Nov 01	Oct 1 - Oct 3	Sep 11 - Sep 15
				Oct 1 - Nov 1
Area 610	Area 610	Area 610	Area 610	Area 610
Jan 20 - Jan 31	Jan 20 - Jan 29	Jan 20 - Jan 23	Jan 20 - Jan 23	Jan 20 - Jan 22
Mar 15 - Mar 18	Mar 15 - Mar 16	Mar 10 - Mar 12	Mar 10 - Mar 11	Mar 10 - Mar 13
Aug 20 - Sep 15	Mar 21 - Mar 21 ( <i>12 hour opening</i> )	Aug 25 - Aug 30	Mar 18 - Mar 19	Aug 25 - Aug 30
Oct 01 - Nov 01	Aug 20 - Sep 07	Oct 01 - Oct 05	Mar 26 - Mar 27	Oct 1 - Oct 6
	Oct 01 - Oct 13		Aug 25 - Aug 30	Oct 10 - Oct 11
			Oct 1 - Oct 4	
Shelikof Strait Harvest Area	Shelikof Strait Harvest Area			
Jan 20 - Feb 10	Jan 20 - Mar 01			
Mar 15 - Mar 25	Mar 15 - Mar 31			

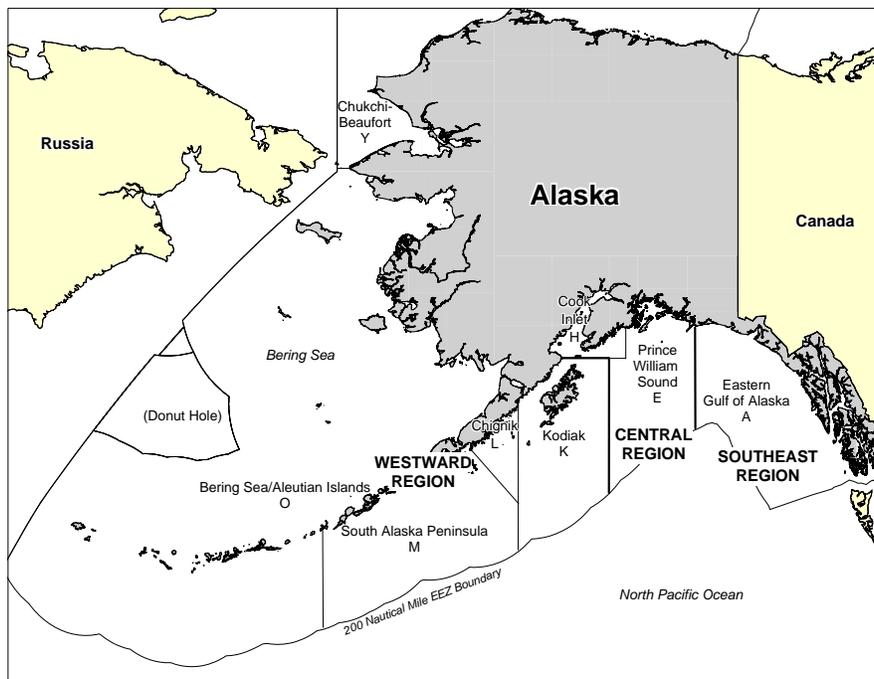
**Table 28.**—Walleye pollock harvest in millions of pounds, whole weight, from the Central and Western Gulf of Alaska, 1989-2004.

Year	NMFS Area	Vessels	Landings	Pounds <sup>a</sup>	State Waters	
					Pounds <sup>a</sup>	%
1989	Central	108	660	105.8	14.9	14%
	Western	306	65	30.0	2.9	10%
1990	Central	172	1,371	152.7	6.6	4%
	Western	71	227	22.4	0.9	4%
1991	Central	200	1,282	111.4	14.3	13%
	Western	102	340	70.7	1.1	2%
1992	Central	320	1,739	145.4	7.8	5%
	Western	148	523	39.4	5.9	15%
1993	Central	220	1,576	179.9	28.1	16%
	Western	89	510	45.2	11.5	25%
1994	Central	259	1,515	175.5	66.6	38%
	Western	97	451	47.8	15.0	31%
1995	Central	271	1,079	75.3	9.1	12%
	Western	152	499	66.5	22.6	34%
1996	Central	237	1,145	50.1	12.5	25%
	Western	94	420	53.0	31.3	59%
1997	Central	337	1,867	115.2	34.3	30%
	Western	125	389	63.2	20.0	32%
1998	Central	327	1,954	191.4	60.9	32%
	Western	131	398	65.8	38.4	58%
1999	Central	310	1,559	145.4	37.4	26%
	Western	124	484	53.1	28.1	53%
2000	Central	198	1,426	110.9	4.5	4%
	Western	79	489	47.5	37.4	79%
2001	Central	234	1,526	92.9	18.0	19%
	Western	70	590	67.4	49.8	74%
2002	Central	192	1,162	75.0	30.8	41%
	Western	55	343	39.3	18.7	48%
2003	Central	175	1,003	74.1	16.6	22%
	Western	55	290	37.2	20.2	54%
2004	Central	159	984	87.5	31.6	36%
	Western	63	222	51.3	31.3	61%

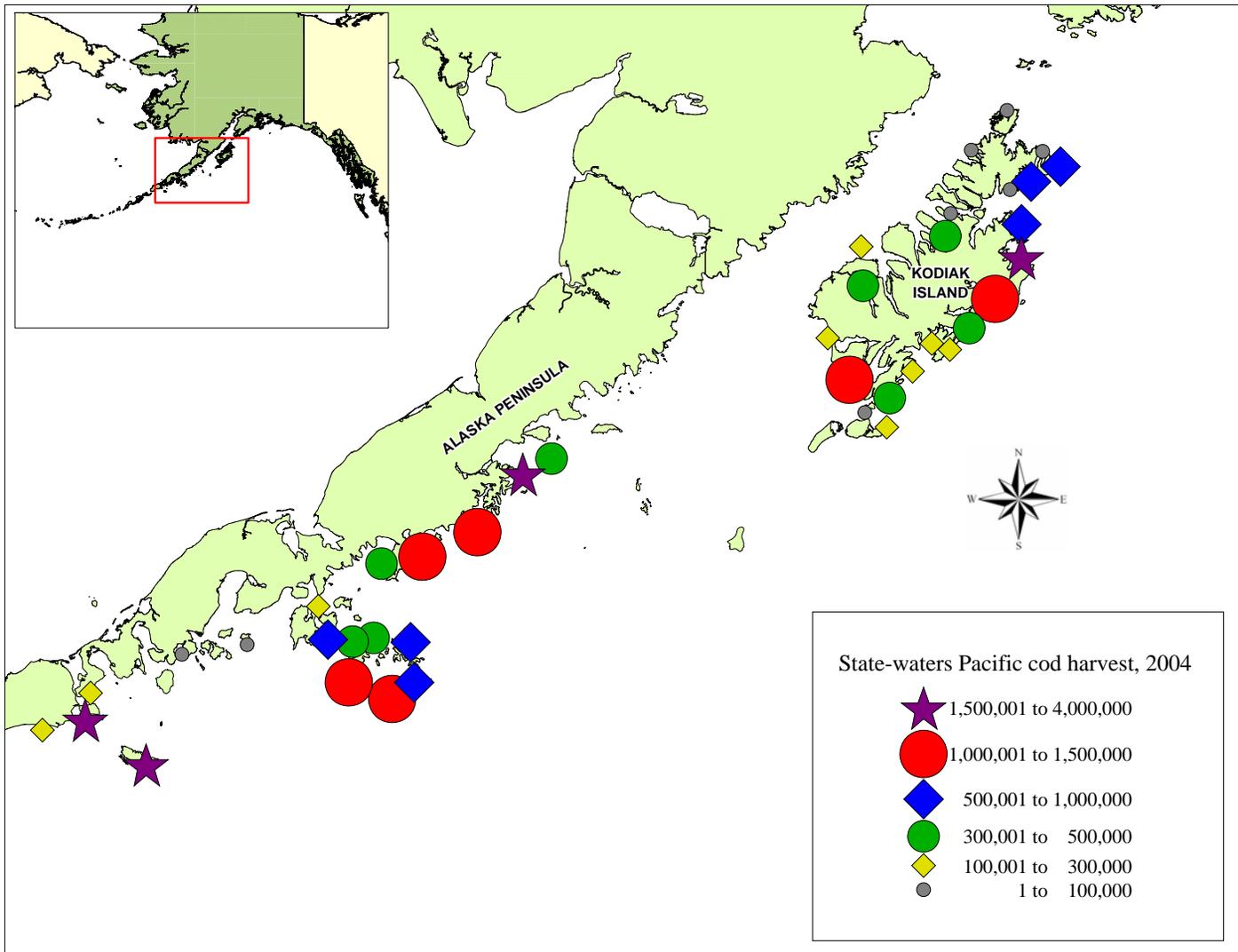
<sup>a</sup>Total weight, including discards, for all gear types.



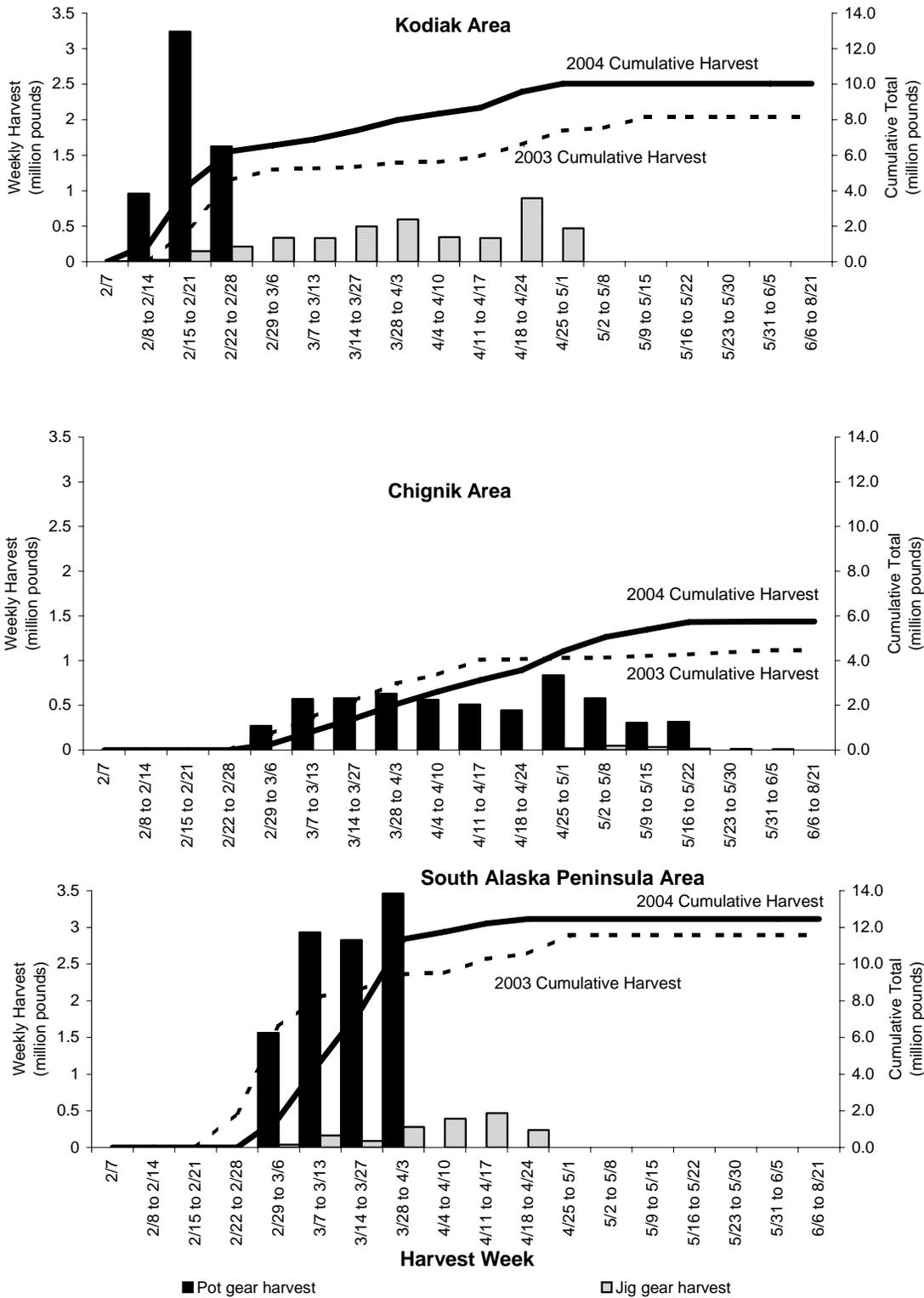
**Figure 1.**—National Marine Fisheries Service statistical and reporting areas.



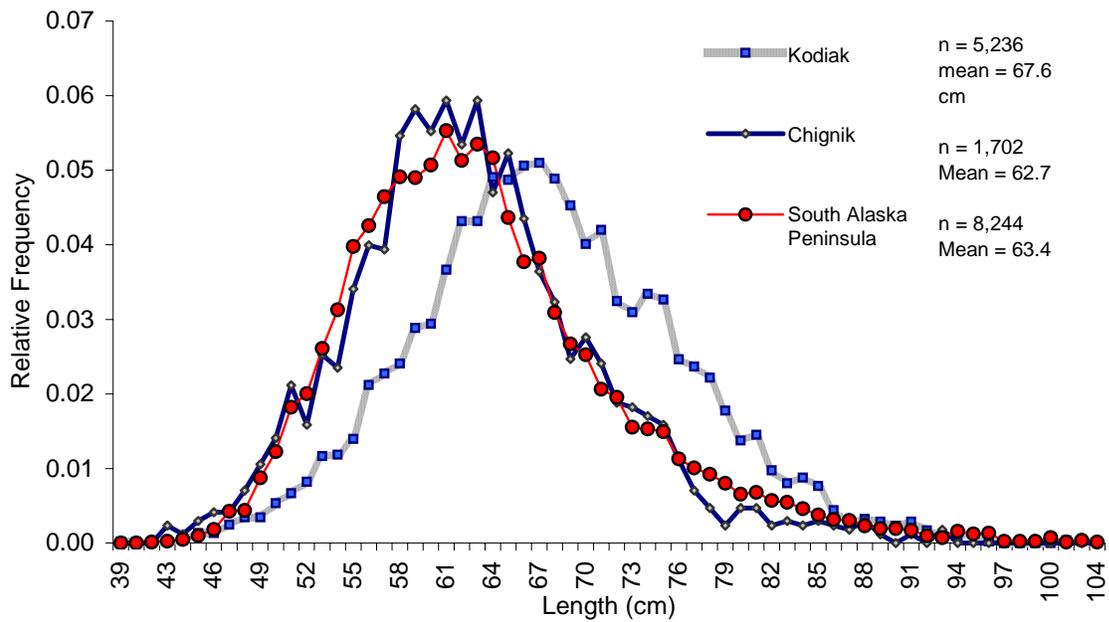
**Figure 2.**—Alaska Department of Fish and Game groundfish registration areas and regions.



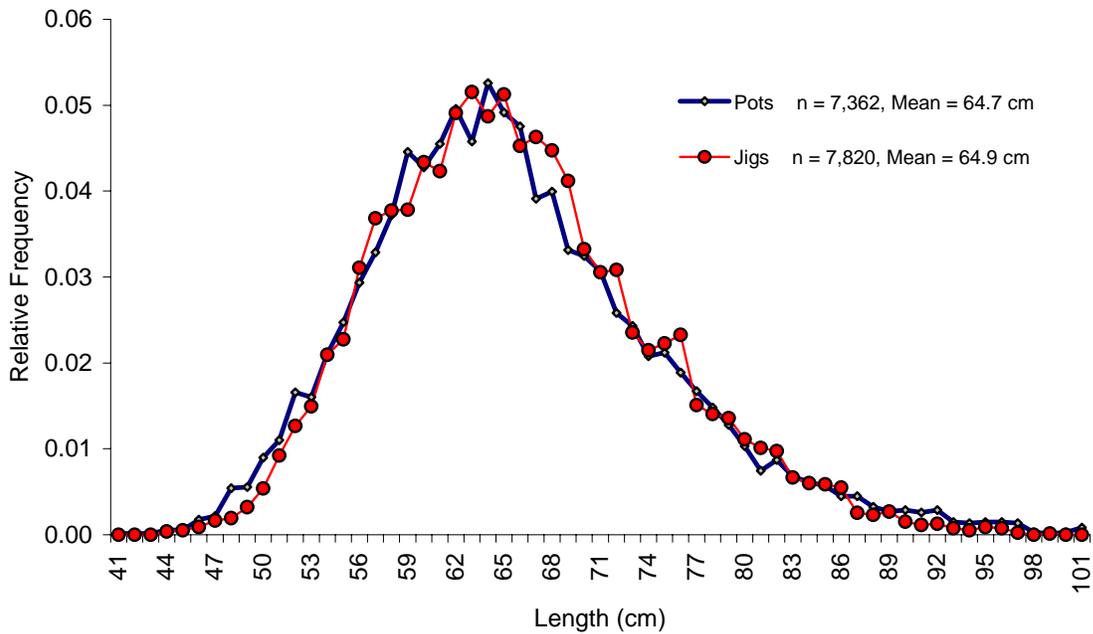
**Figure 3.**—Pacific cod harvest by statistical area from the Kodiak, Chignik, and South Alaska Peninsula Areas state-waters fisheries, 2004.



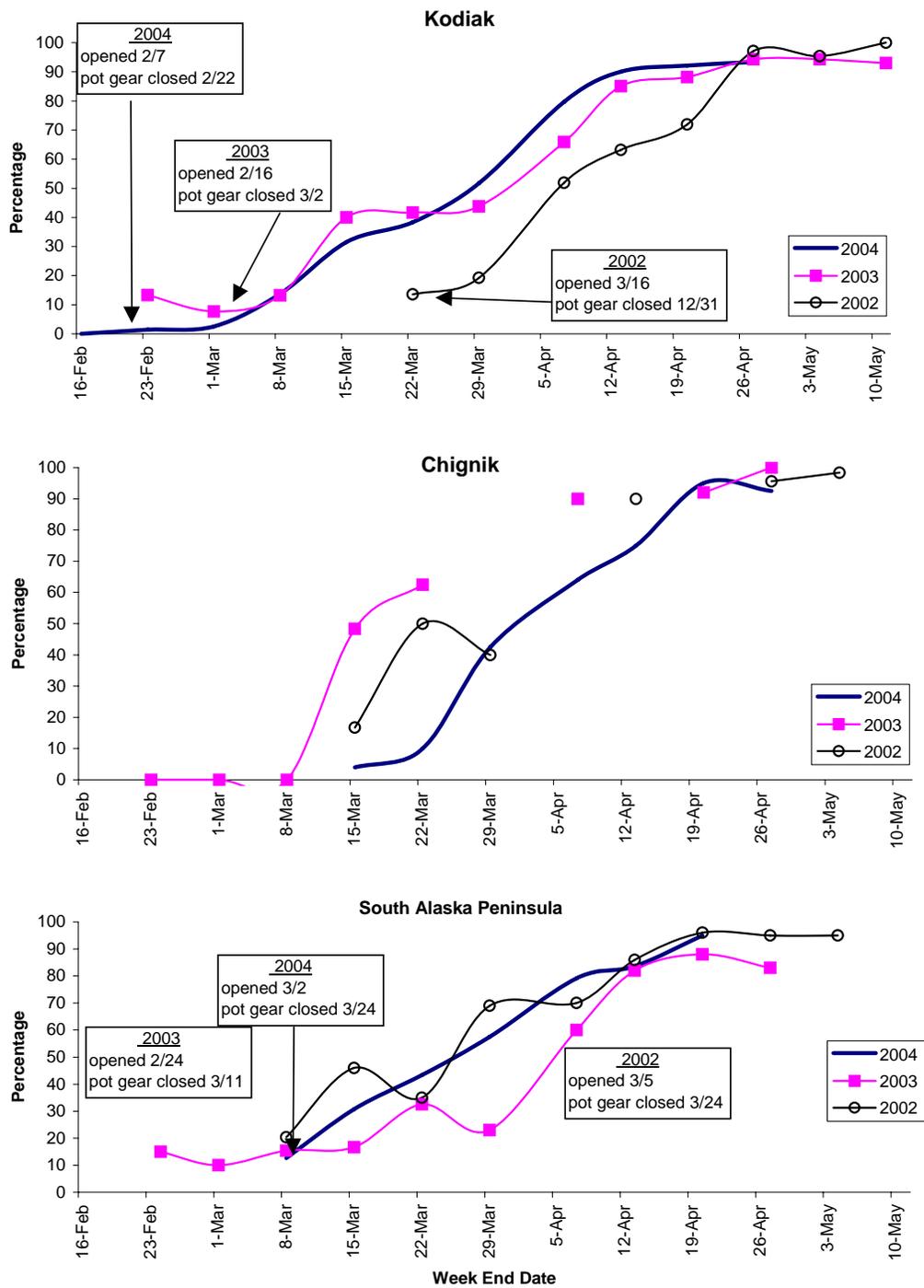
**Figure 4.**—Pacific cod harvest by week and gear type for the Kodiak, Chignik, and South Alaska Peninsula state-waters fisheries, 2004 and cumulative harvest for 2003 and 2004.



**Figure 5.**—Pacific cod lengths by area collected from the 2004 state-waters fisheries in the Westward Region.



**Figure 6.**—Pacific cod lengths by gear type collected from the 2004 state-waters fisheries in the Westward Region.



**Figure 7.**—Estimated percentage of spawned Pacific cod from the Kodiak, Chignik, and South Alaska Peninsula Areas, 2000-2004.

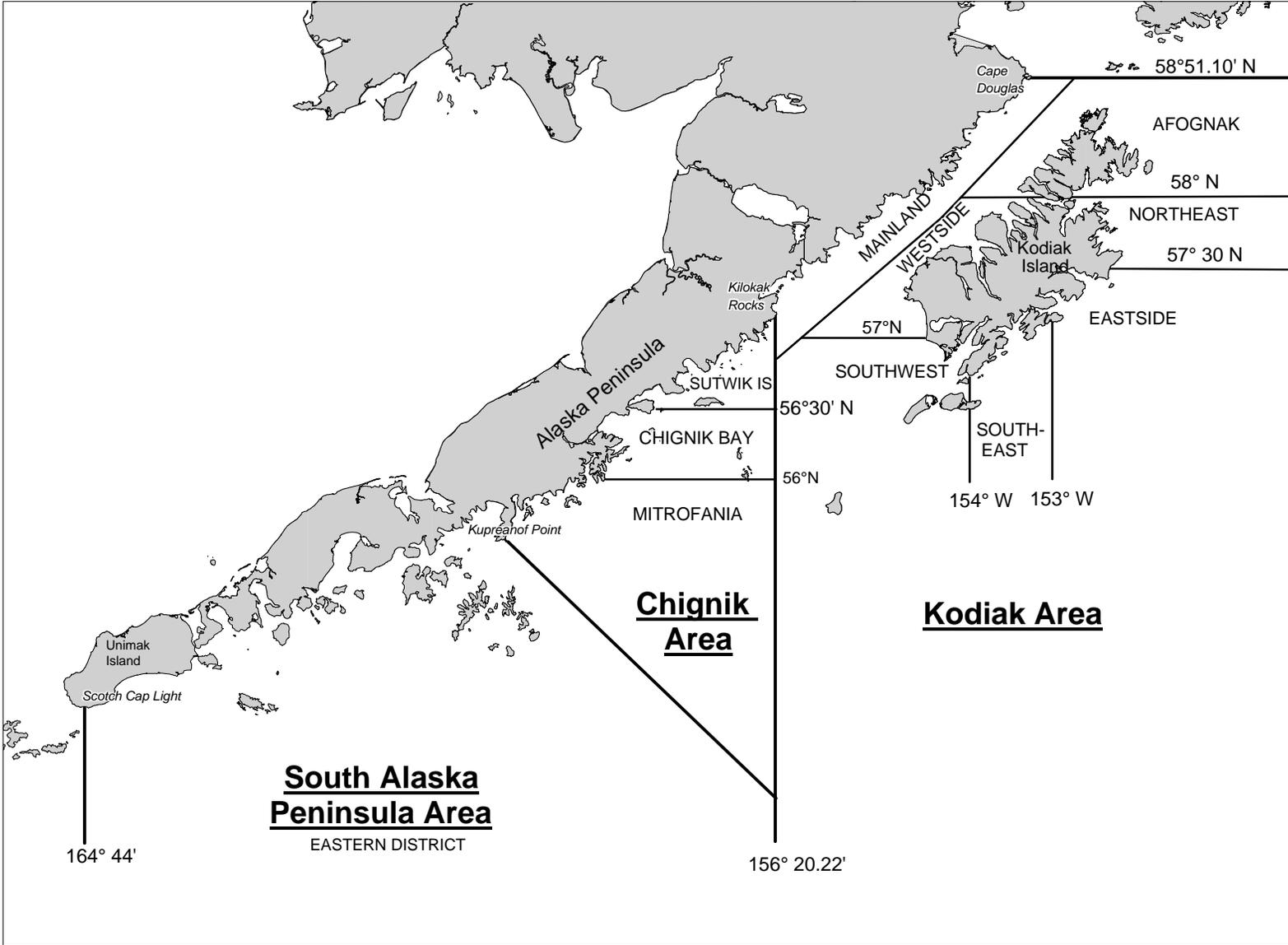
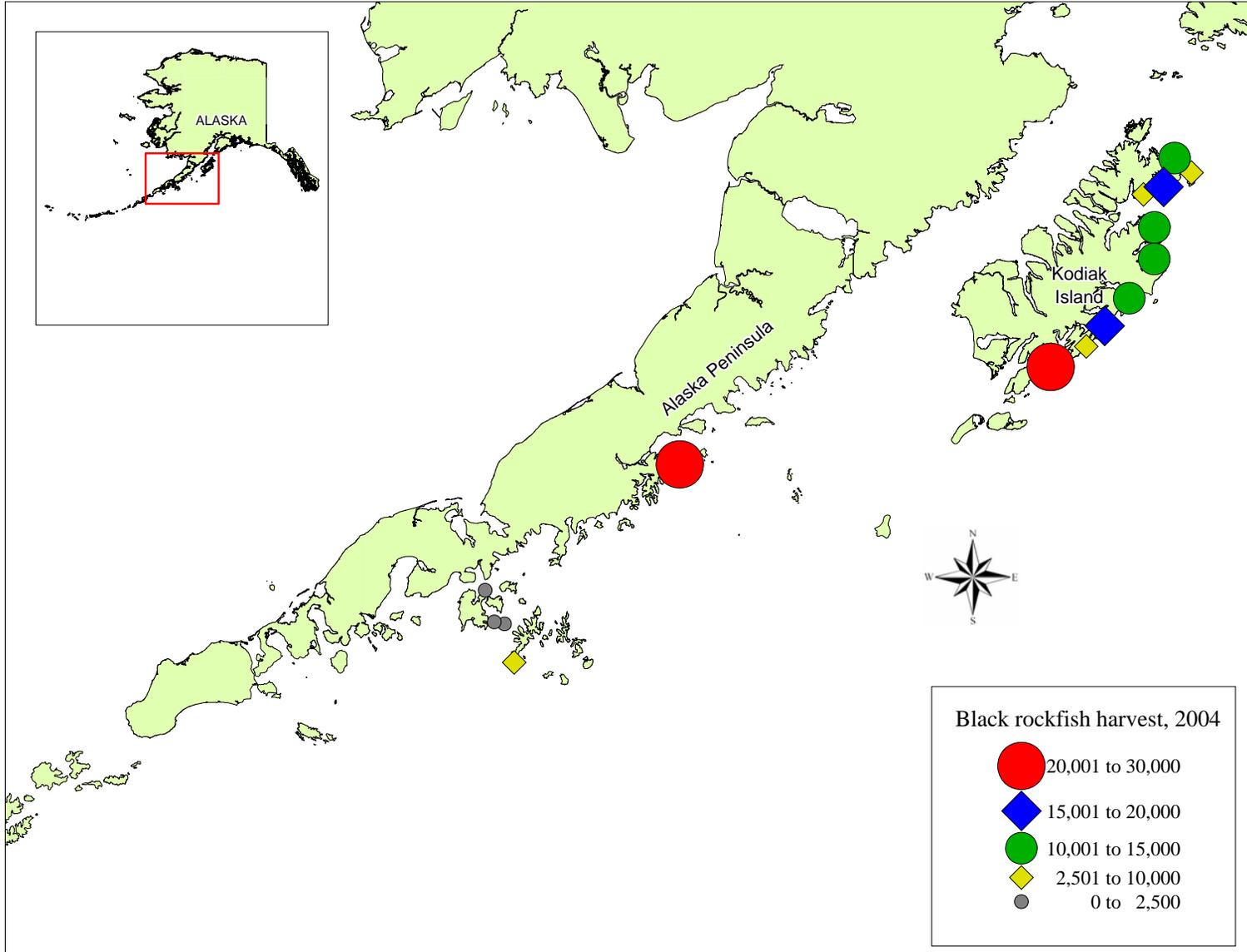
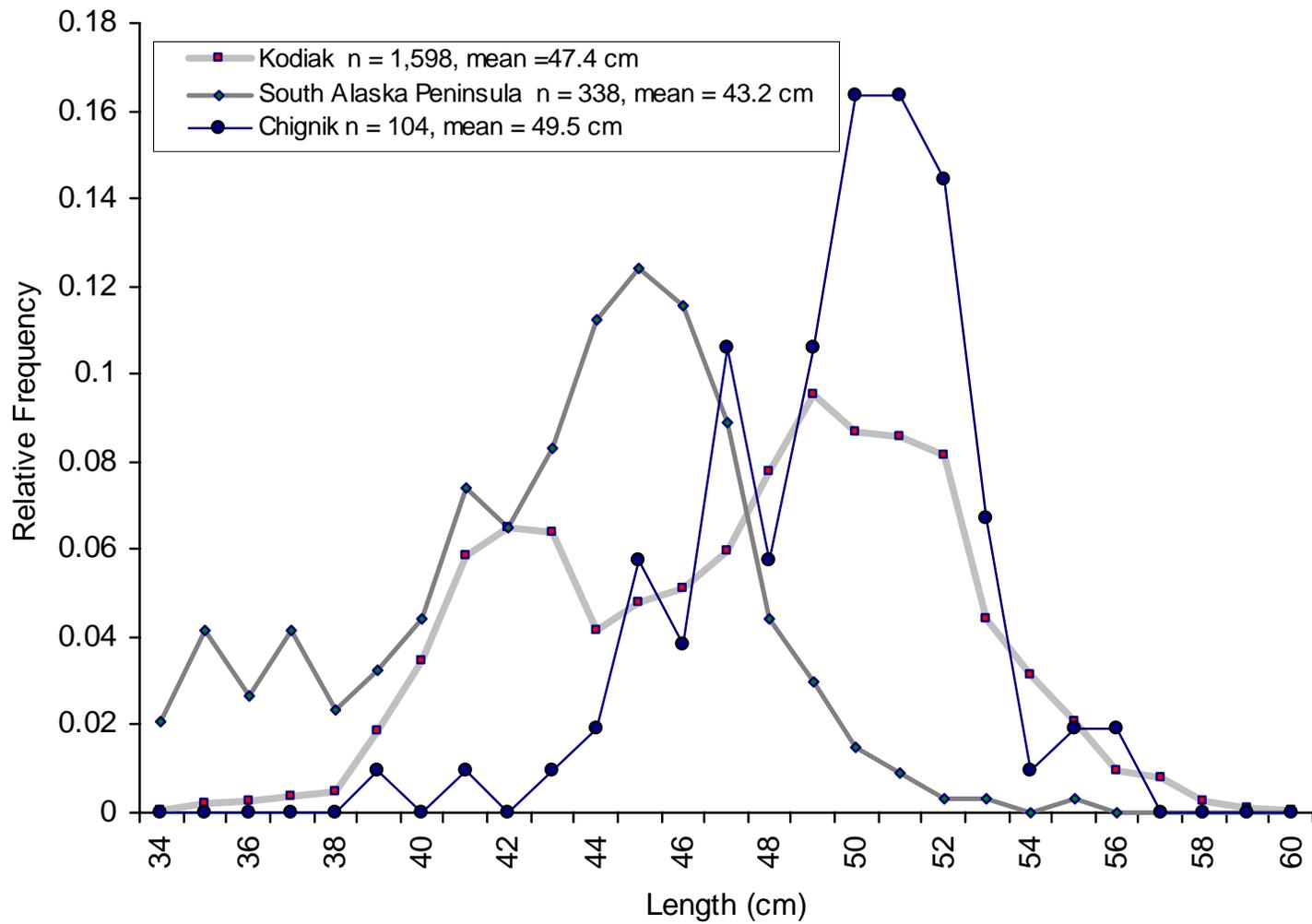


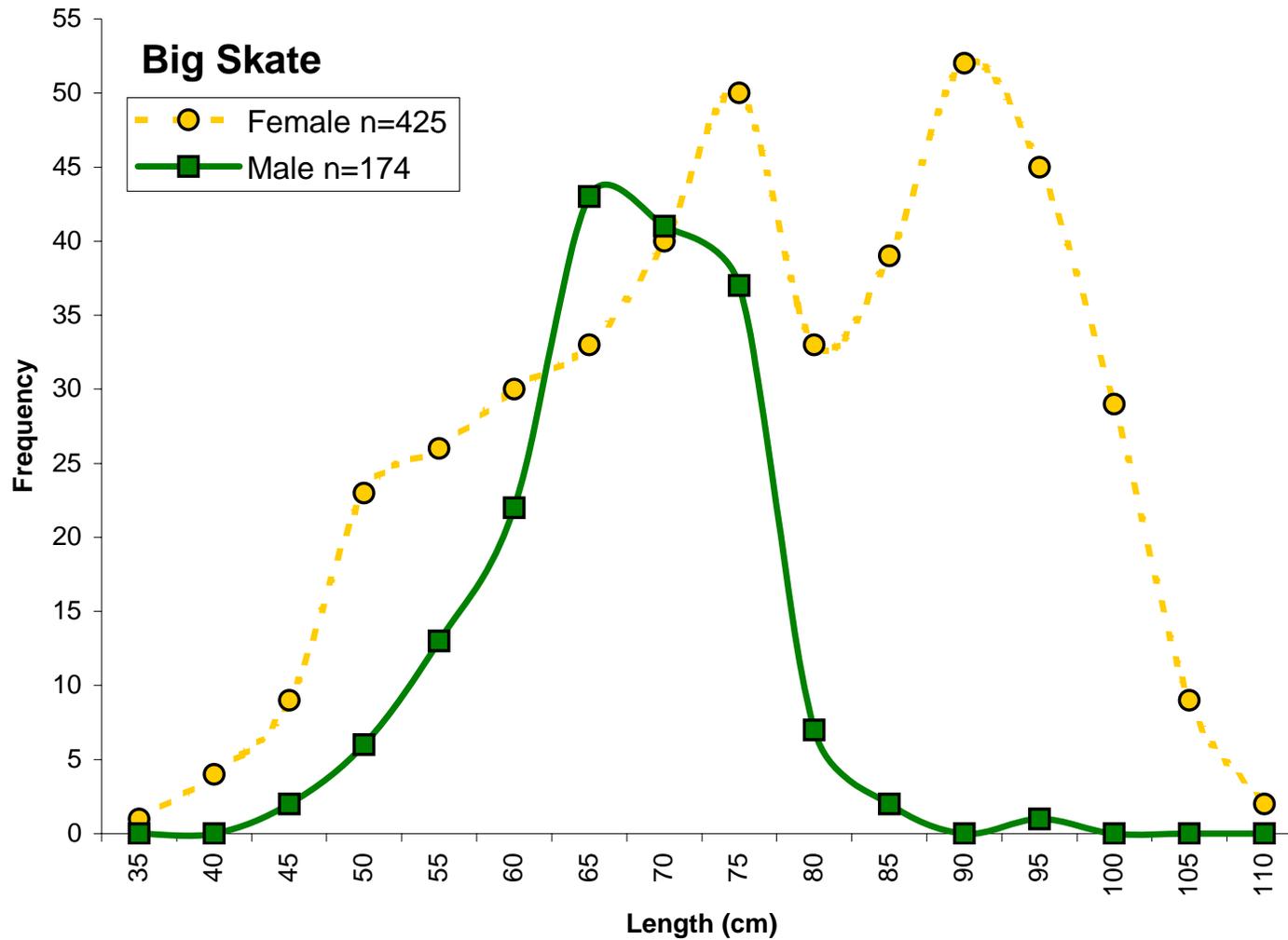
Figure 8.—Kodiak, Chignik, and South Alaska Peninsula black rockfish management areas and districts, 2004.



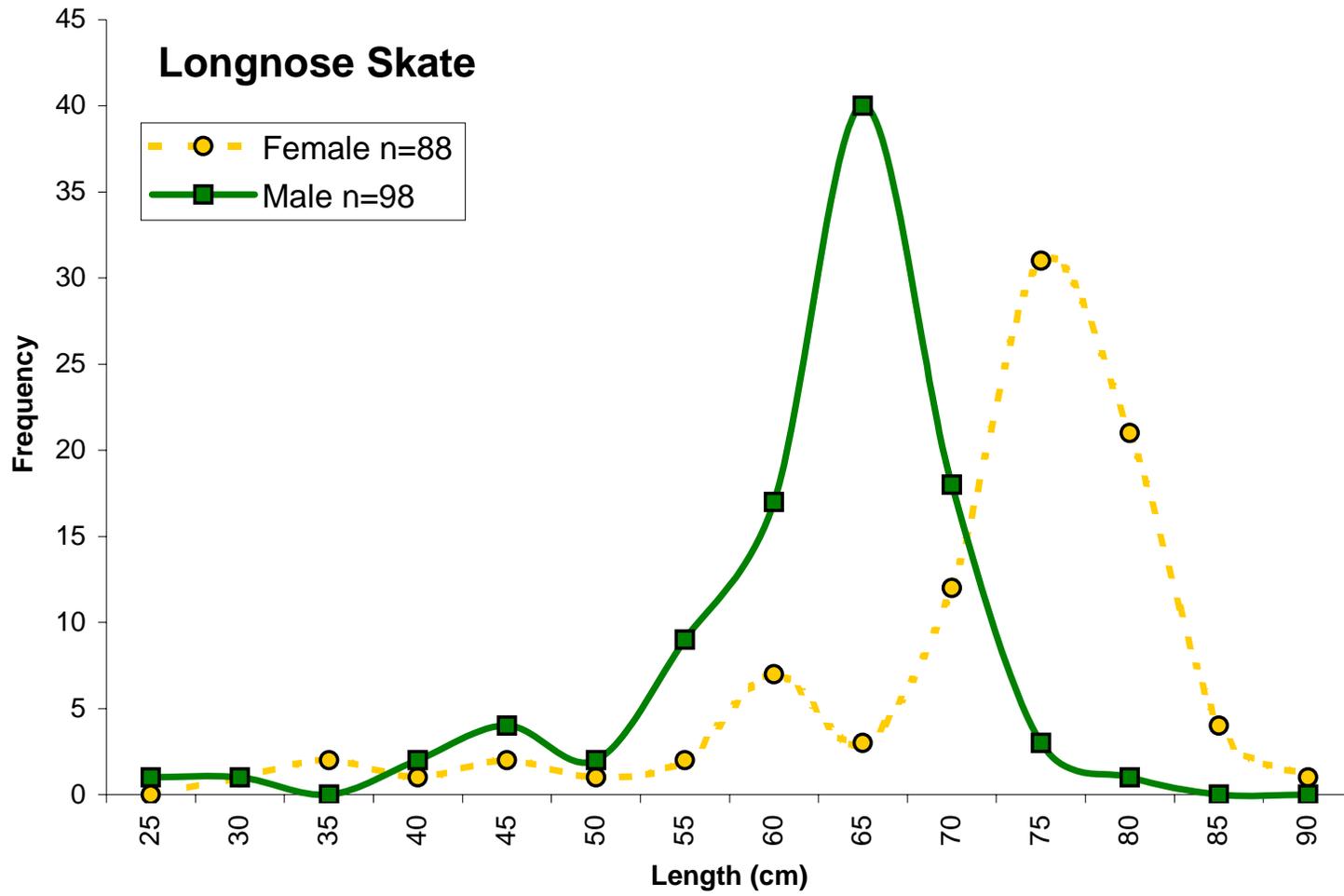
**Figure 9.**—Black rockfish harvest by statistical area from the Kodiak, Chignik, and South Alaska Peninsula Areas, 2004.



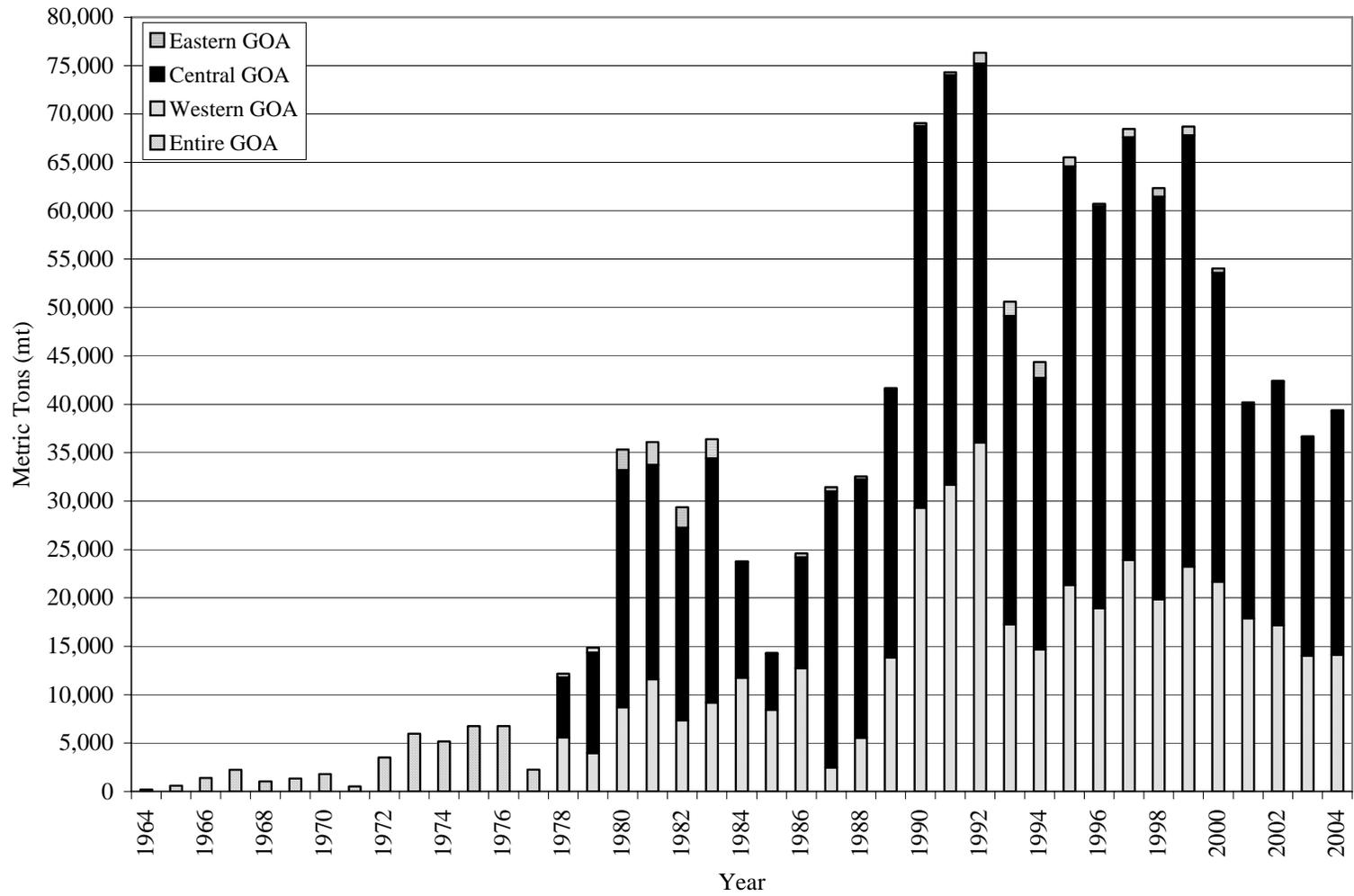
**Figure 10.**—Size composition of black rockfish sampled from the 2004 fishery in the Kodiak, Chignik, and South Alaska Peninsula Areas.



**Figure 11.**—Big skate lengths by sex collected from the 2004 skate fishery in both state and federal waters around Kodiak Island.

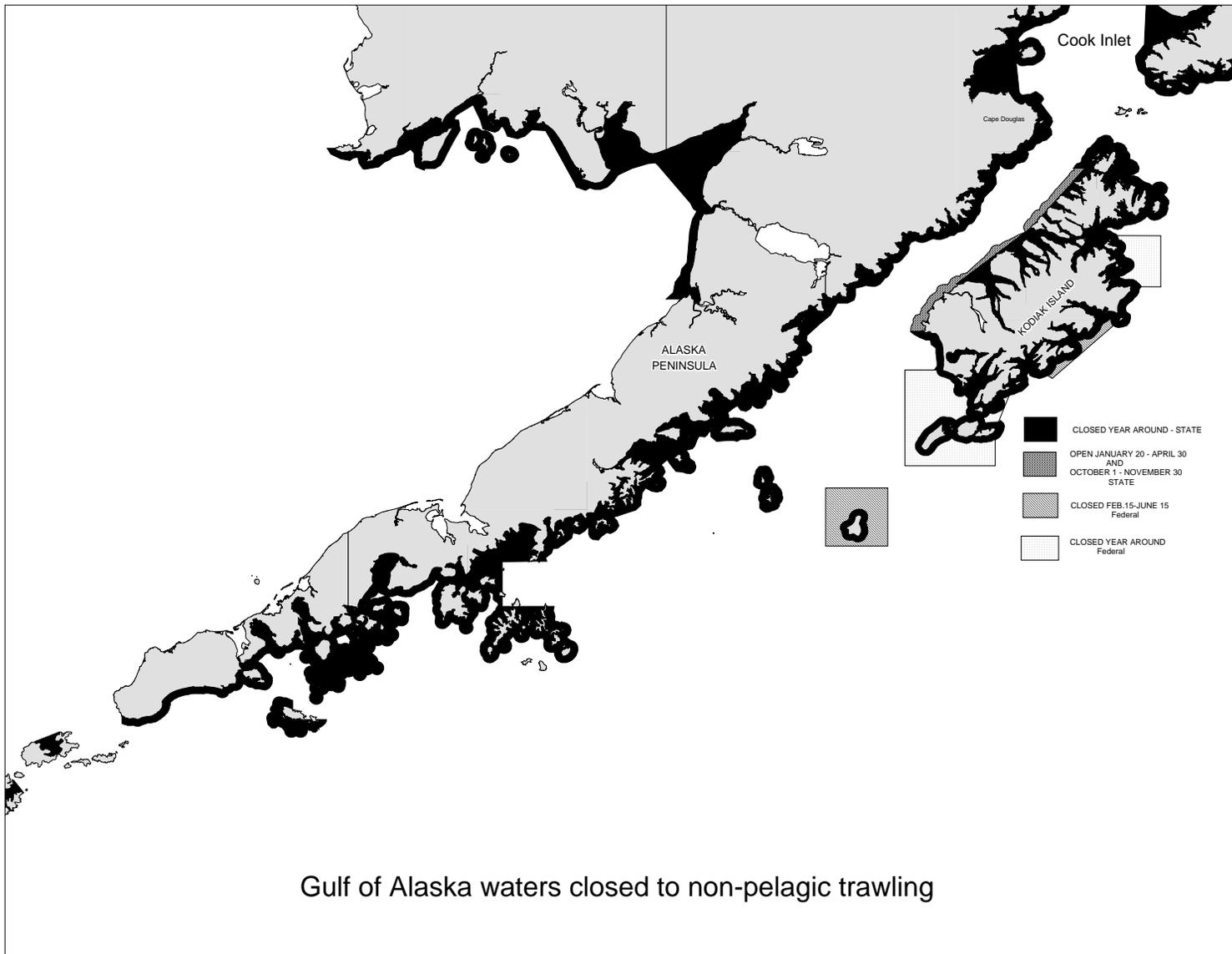


**Figure 12.**—Longnose skate lengths by sex collected from the 2004 skate fishery in both state and federal waters around Kodiak Island.



**Figure 13.**—Pacific cod harvest from the Gulf of Alaska, 1964-2004.

Source: National Marine Fisheries Service Alaska Region home page (<http://fakr.noaa.gov>)



**Figure 14.**–Westward Region non-pelagic trawl gear closures, 2004.



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

**Appendix A1.**—Frequently used acronyms and key words.

Acronym	Definition
ABC	Acceptable Biological Catch, stock specification as set by the NPFMC on an annual basis
ADF&G	Alaska Department of Fish and Game
BOF	The Alaska Board of Fisheries
BSAI	Bering Sea/Aleutian Islands Areas, state management area and federal management area composed of several sub areas.
CGOA	Central Gulf of Alaska, federal management areas 620 and 630
EEZ	Exclusive Economic Zone, from 3 to 200 nautical miles offshore
EGOA	Eastern Gulf of Alaska, 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 tons (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
State waters	Territorial sea from shore to three nautical miles
State-waters fishery	Fishery occurring from shore to 3 nautical miles open under state rules and managed exclusively by the Alaska Department of Fish and Game
State managed fishery	Fishery occurring from shore to 200 nautical miles and managed exclusively by the Alaska Department of Fish and Game
TAC	Total Allowable Catch, final federal harvest specification for directed fishing as recommended by the NPFMC and set by NMFS
WGOA	Western Gulf of Alaska, federal management area 610
Kodiak Area Chignik Area South Alaska Peninsula Area	Westward Region groundfish areas with specific state-waters Pacific cod, sablefish, and state managed black and blue rockfish management plans in the Alaska Administrative Code (AAC)

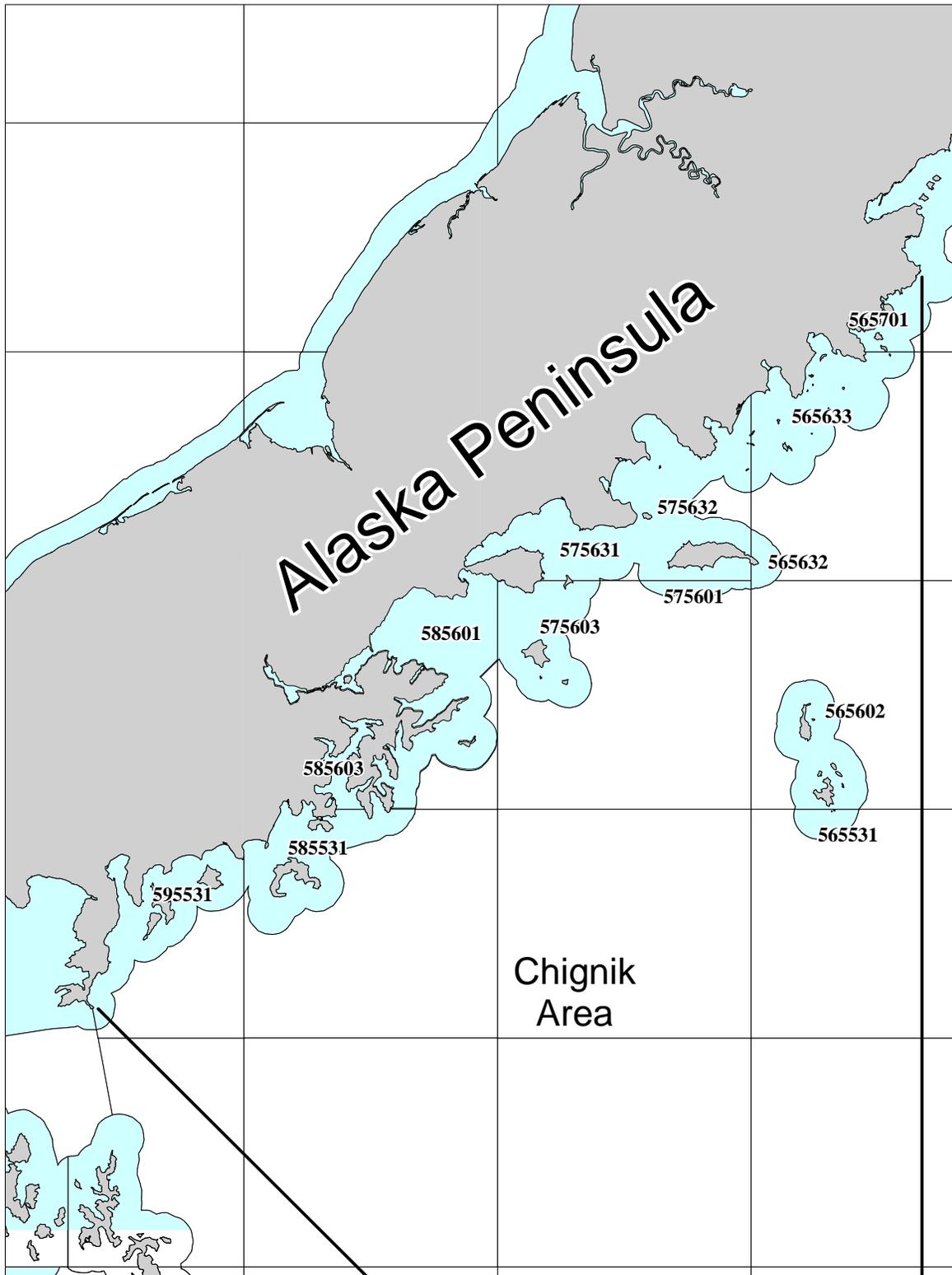
**APPENDIX B. KODIAK MANAGEMENT AREA STATE WATER  
STATISTICAL AREAS FOR GROUND FISH**

**Appendix B1.**—Kodiak Management Area state water statistical areas for groundfish.



**APPENDIX C. CHIGNIK MANAGEMENT AREA STATE WATER  
STATISTICAL AREAS FOR GROUND FISH**

**Appendix C1.**—Chignik Management Area state water statistical areas for groundfish.



**APPENDIX D. SOUTH ALASKA PENINSULA AREA STATE  
WATER STATISTICAL AREAS FOR GROUND FISH**

