

**Fishery Management Report No. 06-73**

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**South Alaska Peninsula Area Pacific Cod Fishery  
Report to the Alaska Board of Fisheries**

by

**Lynn A. Mattes**

and

**Nicholas H. Sagalkin**

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December 2006

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries





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TO THE ALASKA BOARD OF FISHERIES**

by

Lynn A. Mattes and Nicholas H. Sagalkin

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Alaska Department of Fish and Game  
Division of Sport Fish, Research and Technical Services  
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December 2006

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## ABSTRACT

This report provides a summary of the state-waters and parallel Pacific cod *Gadus macrocephalus* fisheries that occur in state waters of the South Alaska Peninsula groundfish registration area. The information is provided in relation to proposals that will be addressed by the Alaska Board of Fisheries in February 2007.

Participation and harvest in the 2006 state-waters Pacific cod fishery in the South Alaska Peninsula Area was similar to previous years. Through October 1, 2006, the harvest in the state-waters Pacific cod fishery in the South Alaska Peninsula Area was 11.9 million pounds harvested by 43 vessels using pot gear and eleven vessels using jig gear for an estimated ex-vessel value of \$4.2 million. Additional information regarding season dates, trends in participation, harvest timing, and biological data collected on Pacific cod during the state-waters fisheries are summarized.

Effort and harvest from the Pacific cod fisheries prosecuted in state waters during the parallel fishery are summarized for the South Alaska Peninsula Area. Information on the size of the vessels participating in the parallel fisheries is listed as well.

Key words: Pacific cod, South Alaska Peninsula, Alaska Board of Fisheries, state-waters, parallel, commercial fisheries.

## INTRODUCTION

Groundfish harvests in the Gulf of Alaska (GOA) are primarily managed by the National Marine Fisheries Service (NMFS) under guidelines developed by the North Pacific Fishery Management Council (NPFMC). The NPFMC establishes the groundfish Acceptable Biological Catch (ABC) specification. The NPFMC may reduce the ABC due to biological, economic, and social considerations to the level available for directed fishing, known as the Total Allowable Catch (TAC). Authorization for federal control of resources in the Exclusive Economic Zone (EEZ) from 3-200 nautical miles (nmi) offshore comes from the Fishery Management and Conservation Act, now known as the Magnuson-Stevens Act, originally passed by the United States Congress in 1976 (MSFMCA 1996).

Commercial groundfish fisheries in the GOA inside of 3 nmi are managed by the Alaska Department of Fish and Game (ADF&G). Many of these state groundfish fisheries are managed concurrent to federal-waters groundfish fisheries, and by adopting federal management actions into state waters from adjacent federal-waters fisheries. When groundfish fisheries are managed by adopting management actions from adjacent federal waters, they are termed “parallel fisheries” and are established by an emergency order (EO) at the beginning of each year. The Alaska Board of Fisheries (BOF) has established separate management measures for specific groundfish fisheries inside of state waters, termed “state-waters fisheries”, including Pacific cod *Gadus macrocephalus*. Pacific cod are harvested from state waters under both parallel fishery rules and state-waters rules.

State-designated registration areas, which differ from the federal management areas, have been established for state-waters fisheries. These areas are 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 1). The latter five registration areas are within the ADF&G Westward Region. The areas used for federal groundfish fisheries management are shown in Figure 2.

# **STATE-WATERS PACIFIC COD FISHERIES**

## **HISTORIC BACKGROUND**

In 1996, the Alaska Board of Fisheries (BOF) adopted state-waters Pacific cod management plans for Pacific cod fisheries in the five state-designated registration areas including the South Alaska Peninsula Area. The management plans are outlined in Chapter 5 of the Alaska Administrative Code (AAC) section 28.081; the South Alaska Peninsula plan is outlined in 5 AAC 28.577. Eligibility for participation is not restricted to vessels qualified under the federal moratorium or license limitation programs (LLP). The state-waters fishing season opening occurs shortly after the federal/parallel fishery closure that has typically been in late winter/early spring. The South Alaska Peninsula Area is exclusive registration and the fishery is limited to pot, hand troll and mechanical jig gear types. A vessel registered in a Pacific cod exclusive registration area during a state-waters season, may not be used to take Pacific cod in any other exclusive registration area or a superexclusive registration area during a state-waters season (5 AAC 28.020 (2)). No more than 60 pots or 5 jig machines per vessel can be used to harvest Pacific cod. The harvest level for the South Alaska Peninsula Area was set as a percentage of the estimated Pacific cod ABC as established by the NPFMC. The initial harvest level for the South Alaska Peninsula Area was set at 15% of the Western Gulf of Alaska (WGOA) ABC. The percentage allocated from the WGOA ABC to the South Alaska Peninsula Area was designed to increase over time to a maximum of 25% of the WGOA ABC. If the 15% GHL was reached in any calendar year, the GHL would increase by 5% beginning the next calendar year. The South Alaska Peninsula Area fishery achieved the final GHL step-up increment to 25% of the WGOA ABC in 2000.

In 1996, the BOF adopted additional regulations for the South Alaska Peninsula Area, including a 58-foot vessel size limit. To increase late-season production, the fishery management plan also provided for removal of exclusive area registration, vessel size restriction, and gear limits after October 31.

Several refinements were made to the original Pacific cod management plan. In 1998, the BOF added a regulation to the South Alaska Peninsula Area management plan allocating 85% of the harvest to the pot fleet, with no specified jig allocation. In 1999, 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.

Since 1997, the earliest opening of the South Alaska Peninsula Area state-waters Pacific cod fishery has been February 24; although most openings have occurred in the first or second week of March (Table 1). Weather delay regulations do not exist for the South Alaska Peninsula Area state-waters fisheries.

## **2001 SOUTH ALASKA PENINSULA AREA STATE-WATERS PACIFIC COD FISHERY**

The 2001 South Alaska Peninsula state-waters Pacific cod fishery opened on March 6 with a GHL of 13.4 million pounds. The 2001 state-waters pot gear fishery was delayed for almost two weeks by a preseason price dispute. Once fishing commenced, daily harvest rates for the fleet ranged widely from 25,000 pounds to over 1 million pounds (Ruccio and Jackson 2002). The pot gear allocation was harvested very quickly, the fishery lasted less than four weeks. The final harvest figure from pot gear was 10.4 million pounds from 310 landings, about one million pounds short of the 85% of the GHL pot gear allocation.

The 2001 South Alaska Peninsula state-waters Pacific cod jig fishery opened concurrent to the pot gear fishery on March 6; however, no vessels registered or participated until the first week of April. The number of vessels participating in the fishery increased from under 30 vessels in previous years to 70 vessels in 2001. Harvest rates began to decline at the end of May as vessels began to prepare for salmon fishing. A strike for salmon price prompted continued but somewhat decreased effort in the jig fishery. By the second week of June, harvest approached the GHL and a closure was announced for June 12. Total harvest for both gear types for the South Alaska Peninsula state-waters Pacific cod fishery was 13.4 million pounds (Ruccio and Jackson 2002).

### **2002 SOUTH ALASKA PENINSULA AREA STATE-WATERS PACIFIC COD FISHERY**

The 2002 South Alaska Peninsula state-waters Pacific cod fishery opened on March 5 with a GHL of 12.4 million pounds. Similar to the 2000 and 2001 seasons, the GHL for both gear types in 2002 was attained very quickly. The pot season lasted 20 days and harvested 10.7 million pounds (Ruccio et al. 2003). As the fishery occurred so quickly, weekly harvest rates were not particularly meaningful to illustrate how the harvest progressed over the course of the pot gear fishery. Individual landings averaged slightly less than 40,000 pounds each, with some individual landings of more than 100,000 pounds. The daily harvest of the pot fleet exceeded 1.0 million pounds per day on several occasions during the 2002 pot gear season (Ruccio et al. 2003).

The South Alaska Peninsula state-waters Pacific cod jig season opened concurrently with pot gear on March 5. Unlike previous seasons, jig effort occurred immediately. Harvest and participation by jig fishers were both relatively low during the pot fishery. Jig fishers harvested approximately 20,000 pounds while the pot fishery was ongoing. In the first week following the closure of the pot fishery, jig harvest increased to approximately 100,000 pounds. Harvest peaked in mid-April when 480,000 pounds were harvested. The jig season closed on April 26, when harvest approached 2.0 million pounds. Total harvest for both gear types for the South Alaska Peninsula Area state-waters Pacific cod fishery was 12.8 million pounds (Ruccio et al. 2003).

### **2003 SOUTH ALASKA PENINSULA AREA STATE-WATERS PACIFIC COD FISHERY**

The 2003 South Alaska Peninsula state-waters Pacific cod fishery opened on February 24, the earliest opening for a state-waters fishery in the South Alaska Peninsula, with a GHL of 11.49 million pounds. The 2003 pot gear season was similar to the 2000-2002 fisheries in length, lasting only 16 days. Similar to 2002, the fishery occurred so quickly that weekly harvest rates were not particularly meaningful to illustrate how the harvest progressed over the course of the pot season. Individual vessel landings averaged 40,000 pounds. Some vessels had single landings greater than 120,000 pounds (Ruccio et al. 2004). The fleet landed approximately 1.0 million pounds on three of the 16 days during the pot season. Participating processors utilized tender vessels over the course of the fishery. This gave participating vessels the ability to maximize their fishing time by not having to travel to and from port to delivery. Inseason estimates from processors and the most recent fishery performance estimates indicated that the 9.69 million pound pot gear allocation would be attained on March 11. After the closure announcement, the marine weather quickly increased to gale force winds with gusts over 50 knots and heavy freezing spray throughout the fishing grounds. The weather effectively stopped the fishery about 36 hours before the scheduled closure (Ruccio et al. 2004). The final pot harvest was 7.93 million pounds; this was 1.76 million pounds (18%) below the pot allocation cap. The 2003 South Alaska Peninsula state-waters Pacific cod pot fishery was the shortest season on record.

The jig fishery opened concurrently with the pot gear fishery on February 24. Jig gear landings began in the first week following the opening, unlike previous seasons when little to no effort occurred until after the pot season closed. Approximately 100,000 pounds were landed in the first full week of fishing. Harvest would remain in the 100,000 pound range until the last week in March, at which point the pot season had closed and the number of jig participants began to increase quickly. Landings in the first week in April set a new record mark with 850,000 pounds being landed (Ruccio et al. 2004). Jig gear harvest of this magnitude had never occurred in a one-week period in any of the South Alaska Peninsula state-waters jig fisheries. The following week, 995,000 pounds were landed, establishing an even higher mark. Over the next two weeks, the fleet size decreased, the remaining boats harvested the remaining 1.0 million pounds and the fishery was closed on April 22. Total harvest for both gear types was 11.56 million pounds, exceeding the total GHF by 70,000 pounds (1%; Ruccio et al. 2004). At 57 days, the 2003 South Alaska Peninsula state-waters Pacific cod jig season was the second shortest on record. Had the pot fishery attained the full allocation, the jig season would have closed during the second week of April.

#### **2004 SOUTH ALASKA PENINSULA AREA STATE-WATERS PACIFIC COD FISHERY**

The 2004 South Alaska Peninsula state-waters Pacific cod fishery opened on March 2 with a GHF of 12.5 million pounds. The 2004 pot gear season followed the trends of the 2000-2003 seasons. The season lasted 22 days. Harvest averaged 2.5 million pounds per week, with individual landings averaging slightly less than 40,000 pounds over the season. Some individual vessels had single landings greater than 120,000 pounds (Sagalkin and Spalinger 2005). As in previous seasons, processors in Sand Point and King Cove used tender vessels during the pot season, to give participating vessels the opportunity to maximize their fishing time. Inseason estimates indicated that the 10.6 million pounds allocated to the pot gear would be attained by March 24. The final pot harvest was 10.77 million pounds, 170,980 pounds or 2% above the pot allocation.

The jig season opened concurrently with the pot season, landings began in the first week following the opening. Harvest per week increased throughout the course of 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 while the pot season was concurrently open. Immediately following the closure of the pot season, effort and harvest increased quickly. The jig fishery was closed on April 14. Total harvest for both gear types for the South Alaska Peninsula Pacific cod fishery was 12.44 million pounds (Sagalkin and Spalinger 2005).

#### **2005 SOUTH ALASKA PENINSULA AREA STATE-WATERS PACIFIC COD FISHERY**

##### **Introduction**

The 2005 South Alaska Peninsula Pacific cod GHF was 11.53 million pounds. The state-waters Pacific cod fishery opened on March 3, seven days following the closure of the WGOA parallel Pacific cod season (Table 1). Vessels using pot gear were capped at 85% of the GHF or 9.80 million pounds (Table 2). The jig season does not have a specified allocation; in recent years, vessels using jig gear have harvested whatever pounds remain following the closure of the pot gear season to attain the total GHF.

Total harvest for both gear types for the South Alaska Peninsula Pacific cod fishery was 11.4 million pounds from 576 landings by 72 vessels. Seven vessels participated in both the pot and jig seasons. The approximate exvessel fishery value was \$3.0 million. Landings were reported from

18 statistical areas with major catches harvested near the Ikatan Peninsula (635434), Sanak Island (625401), and dispersed around the Shumagin Islands (605502 and 605504) near Sand Point (Appendix B).

### **2005 South Alaska Peninsula Pot Gear Season**

The South Alaska Peninsula Area state-waters Pacific cod season attained the allocative cap for pot gear very quickly during 2000-2004. The 2005 season was no exception, lasting only 21 days. Harvest averaged 2.0 million pounds per calendar week, and individual landings averaged slightly more than 35,000 pounds over the season. Some individual vessels had single landings greater than 100,000 pounds.

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 9.8 million pounds pot gear cap would be attained by midnight, March 24. Thirty hours notice was given to the fleet of the closure. The final pot harvest was 10,206,340 pounds. This was 406,365 pounds or 4% above the pot gear allocation.

### **2005 South Alaska Peninsula Jig Gear Season**

The South Alaska Peninsula Area jig season opened concurrently with pot gear on March 3. Jig landings began in the first week following the opening. Harvest per week increased through the month of March, fell off for a week, then increased again through April. By the beginning of May, harvest and effort began to drop off. There was no jig gear effort after May 21, even though GHL remained, due to the lack of a processor purchasing Pacific cod.

The jig season was closed on August 31 to allow state waters to open during the parallel "B" season for Pacific cod in the WGOA. If the South Alaska Peninsula Area state-waters jig fishery had not closed, no harvest could have occurred in state waters during the parallel fishery. The state waters jig fishery was scheduled to reopen after the WGOA parallel fishery closed, however, due to low effort and harvest, this did not occur prior to the regulatory closure of December 31; therefore, the state-waters jig fishery did not reopen. The final jig harvest was 1,229,832 pounds.

## **2006 SOUTH ALASKA PENINSULA AREA STATE-WATERS PACIFIC COD FISHERY**

### **Introduction**

The 2006 South Alaska Peninsula state-waters Pacific cod fishery opened on March 9 with a GHL of 14.8 million pounds. No jig allocation exists for the South Alaska Peninsula Area Pacific cod fishery, but the pot fleet is capped at 85% of the Area GHL, so the jig fleet has an expectation of access to at least 15% of the GHL. The pot fleet cap was set at 12.58 million pounds (Table 2).

The state-waters season opened to both pot and jig gear types at noon on March 9, 2006, seven days following the closure of the WGOA federal/parallel Pacific cod inshore season. The 2006 South Alaska Peninsula Area state-waters Pacific cod season opened about the same time as during 2004 and 2005 (Table 1).

The pot season was initially closed on March 29, 2006 at 6:00 PM based on inseason harvest projections. Processor reports following the initial closure indicated that the pot fleet harvested approximately 10.2 million pounds, roughly 2.5 million pounds under the pot fleet allocative cap. The fleet and processors requested that ADF&G reopen the season. The season was

reopened for three days on April 4, extended for 24 hours due to weather, and closed on April 8, 2006. Forty-three pot vessels made 344 landings, harvesting 11,640,184 pounds. This was 939,816 pounds (7%) under the pot cap.

There was no jig participation in the fishery after June 1, 2006. Eleven jig vessels made 33 landings, harvesting 75,637 pounds. The state-waters Pacific cod fishery remained open to jig gear after the pot closure, however the jig fishery was closed at 11:59 AM on September 1, 2006, and immediately re-opened under the WGOA parallel fishery rules. This allowed state waters to open for all gear types during the WGOA federal fishery.

### **Pot Gear Season**

The season opened on March 9 at noon, but poor weather slowed effort the first three days of the fishery. In the first week of fishing, ending March 11, less than 20,000 pounds were landed. The reports for landings in the second week, ending March 18, indicated the cumulative landed harvest was approximately 3.0 million pounds. The average delivery per vessel was approximately 32,000 pounds. Reports for the third week, ending March 25, indicated the cumulative landed harvest was approximately 6.5 million pounds.

On Tuesday, March 28, a closure was announced for the following day Wednesday, March 29 at 6:00 PM. Harvest was estimated to be approximately 8.2 million pounds through the 27<sup>th</sup>. Most harvest estimates from the South Alaska Peninsula Area are hail weights from tenders to the processor, and exclude harvest onboard fishing vessels. The following assumptions were made to develop a closure projection:

- 1) On average, vessels deliver every two days.
- 2) Based on an average trip length and an average delivery, each vessel could harvest 26,000 pounds per day.
- 3) There were 43 participants, making the daily harvest potential roughly 1 million pounds.
- 4) Vessels were assumed to have been able to catch 26,000 pounds in addition to what they landed on Monday, March 27. Vessels that delivered March 26, but not on March 27 were assumed to have harvest from two days (52,000 pounds) onboard. This assumption, although conservative, was made because it was unknown at what point in time deliveries were made to tenders.
- 5) Based on these assumptions, the fleet was conservatively estimated to have at least 1 million pounds onboard, and be capable of harvesting an additional 2 million pounds on Tuesday and Wednesday.

While final harvest was projected to be within 10% of the pot GHL at the time of closure, actual harvest was 19% below the pot GHL. Fishermen and processors requested ADF&G to reopen the fishery as soon as the closure was announced, prior to all of the landings being completed. The department's decision to close the pot fishery was made based upon the best available inseason information. ADF&G waited for the final fish ticket numbers to make a decision on whether to reopen the fishery. A teleconference was scheduled on Thursday, March 30 with participants from False Pass, King Cove, Sand Point, and Anchorage. While all participants were receptive to reopening the fishery, there was disagreement on how many vessels would participate and how much time would be required to have a fair start. Some individuals indicated the later the better,

while others wanted a reopening as soon as possible. Individuals in King Cove and Sand Point volunteered to provide ADF&G a list of people interested in participating if there was a reopening.

ADF&G staff reanalyzed fish ticket landings to estimate harvest rates to determine a length of time to reopen the fishery without exceeding the GHL. Even after all of the fish ticket data was accumulated it was difficult to estimate a daily harvest rate for the fleet. Through staff discussion, feedback from processors, and feedback from staff in Sand Point, an average rate of 26,000 pounds per vessel was applied to the estimated number of participants (30), or 780,000 pounds per day. With 2.5 million pounds remaining in the pot fleet allocation, the daily harvest potential equated to 3 days of fishing. On Friday March 31, ADF&G announced a 3-day reopening for the pot gear starting April 4, 2006 at noon and closing April 7, 2006 at NOON. The extended weather forecast issued Friday afternoon for area 155 (Figure 4) was favorable.

### **Reopening April 4 to April 7**

Tuesday morning April 4, 2006 the marine weather in area 155 was poor with winds gusting to 55 knots. Several vessel owners called ADF&G requesting a weather delay to provide more opportunity for small vessels. Reports later in the day indicated that the majority of the fleet remained in port. Only one or two vessels in the Shumagin Islands area were able to work gear. Several vessel operators called and requested ADF&G extend the season because of lost opportunity. ADF&G informed the public that an extension was a possibility, but would not be announced until information on inseason harvest rates was received.

During this reopening, several vessels called in harvest reports. Additionally, the processor located in King Cove sent in information on what had been offloaded by the tender and several on-grounds estimates for individual vessels. While information was not as detailed as ADF&G would have preferred, it was a big improvement over the first part of the South Alaska Peninsula Area Pacific cod season.

On Friday morning April 7, 2006 approximately 1.1 million pounds were estimated harvested or onboard vessels. An additional 11 vessels had quit or were in the process of bringing in gear. Based on remaining effort, current harvest rate, and the loss of fishing on April 4 due to weather, ADF&G announced an extension of the fishery through 8:00 PM April 8, 2006.

### **Extension April 7 to April 8 at 8:00 PM**

The morning of April 7, information from processors was analyzed to estimate final harvest. Processors inquired whether there would be an additional extension. The public was informed that no more extensions would be issued. Based on harvest rates and processor reports, total harvest was conservatively estimated to be approximately 12 million pounds. Actual harvest was 11.64 million pounds.

### **Voluntary Catch Reporting**

ADF&G attempted to initiate a volunteer catch reporting program for the South Alaska Peninsula Area state-waters Pacific cod fishery in 2006. Vessel operators registering for the fishery were provided worksheets that described the information staff would request. Only a handful of vessels participated in inseason reporting. Vessels did not consistently report from day to day. Processor landing reports were accurate, but they often lacked information on when vessels delivered. A large portion of the fleet used tenders, therefore the time of day the delivery occurred was important for tracking landings and projecting daily effort.

## **Jig Gear Season**

Harvest by fishers using mechanical jig machines or hand troll gear began as soon as the fishery opened on March 9. Fifteen vessels registered for the jig fishery in the first three weeks of the season. Cumulative jig harvest was approximately 44,000 pounds at the time of the pot closure, and processors switched to weekly reports. In the week that followed, the number of jig registrations increased to 24 vessels.

By the last week of April, the cumulative jig harvest was approximately 55,000 pounds and participation was minimal. Harvest in May was approximately 21,000 pounds giving a cumulative harvest of approximately 76,000 pounds, after which point there was no additional effort or harvest in June, July or August.

The state-waters Pacific cod jig fishery was closed at 11:59 AM on September 1, 2006, and immediately re-opened under the WGOA parallel fishery rules. This allowed state waters to open for pot and jig gears and harvest to occur under the parallel/federal TAC during the WGOA federal fishery. The WGOA federal fishery did not close therefore, the state-waters fishery did not reopen. This was similar to 2005, but in contrast to 2001-2004 when the jig fleet harvested all remaining quota prior to September 1.

## **Management Considerations**

The state-waters Pacific cod pot gear fishery in the South Alaska Peninsula Area is difficult to manage because harvest ability is high and ADF&G needs specific on-grounds information. Tenders are deployed to major fishing grounds allowing vessels to offload and return to fishing very quickly.

Currently the fishing vessel to tender offload amount and other landing data are the primary pieces of information that ADF&G receives for inseason management. It is not known when during the day that an offload occurred, which confounds the estimate of harvest rate and the estimate of how much the vessel has onboard at the end of the day, because ADF&G does not know if the delivery occurred in the morning, afternoon or evening. The onboard estimate is ambiguous because it is unknown whether the vessel is empty (i.e., delivered at the end of the day) or has harvest from that day.

The daily harvest rate is important to project future harvest. Estimates of pounds onboard are important for determining current harvest. Additional difficulties include estimating how many vessels are actively participating because some vessels switch between Pacific cod and other ongoing fisheries, and some vessels are more susceptible to weather than others. As a result of all these factors ADF&G has lacked precision in managing the pot fleet harvest GHL (Table 2; Figure 3).

Improving management precision will require more detailed inseason information. This can be accomplished by implementing a program where vessel operators report their harvest, effort and general location for the previous 24-hour time period. Communication has been difficult on the South Alaska Peninsula, radio reception is inconsistent, and smaller vessels may not possess satellite communication equipment. Furthermore, many vessels register prior to ADF&G staff arriving in the different South Alaska Peninsula ports. Instructions and the importance of the program are either relayed through the processor or communicated after ADF&G staff arrives. To assist with communication, the Kodiak office has purchased a second satellite phone to register with the service provider used in the South Alaska Peninsula. More emphasis will be

made on the inseason reporting and contact will be made with the processors to describe the program.

### **Harvest Monitoring**

ADF&G monitored the state-waters Pacific cod harvest in 2006 in the same manner as in previous years. Dockside samplers were placed in the ports of Sand Point and King Cove during the first months of the season, when fishing effort and harvest rates were at the highest level. Dockside samplers conducted confidential interviews with vessel operators to obtain information on catch location, catch per unit effort, bycatch, and fishing effort. Samplers collected biological data from delivered fish, including fish length, reproductive status, average weights, and otoliths for later analysis in the aging laboratory. Samplers were opportunistically placed onboard tender vessels to collect data from individual vessels. Dockside personnel were also opportunistically placed on board commercial vessels as observers to collect biological data and bycatch information.

Length frequency data has been collected every year of the state-waters fisheries. Figure 5 shows the length frequencies by gear type of the South Alaska Peninsula Area. The data collected in 2006 did not show any substantial differences from the data collected in previous years. Average Pacific cod lengths have typically varied between the two gear types and lengths from the 2006 season were no exception; jig gear harvested fish that averaged 64.5 cm in length while pot gear harvested fish that averaged 67.5 cm in length (Figure 5).

There were 510 pairs of otoliths collected from the South Alaska Peninsula Area state-waters Pacific cod fishery. Analysis of the 2006 otolith age data has not been completed. Analysis of otolith data from the 2002 state-waters season (the most recent data available) showed that retained Pacific cod ranged from 2 to 8 years, with the average age of 5.6 years, and the predominant age class was age six.

### **2006 WESTERN GULF OF ALASKA PARALLEL PACIFIC COD FISHERIES**

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 allowed beginning January 1, and trawl gear beginning January 20. Most state waters in the South Alaska Peninsula Area 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 *Theagra chalcogramma* 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, typically 20% by target species weight, must be retained under a prohibited species designation by NMFS.

During the parallel season, vessels are not required to possess a Limited License Program (LLP) to participate inside state waters. However, to participate beyond three nmi, vessels must have a specific species, gear, and area endorsement from NMFS.

Fishery statistics compiled by NMFS show Pacific cod landings from the Gulf of Alaska beginning in 1964, with the highest harvests occurring in the 1990s. Catches between 1977 and 2005 have averaged approximately 97.5 million pounds per year. Harvest figures from 2005

show a WGOA catch of approximately 38.8 million pounds (Table 3). Harvest figures through October 1, 2006 show a total WGOA catch of approximately 37.4 million pounds (Table 3).

The harvest of Pacific cod from state waters within the WGOA (Area 610; Figure 2) has ranged from 1.9 million pounds in 1993 to 28.0 million pounds in 2004 (Table 3). The 2005 harvest from state waters was 22.3 million pounds. The harvest in state waters through October 1, 2006 was approximately 27.2 million pounds.

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 March 2, 2006.

The total 2005 harvest of Pacific cod from state waters of the South Alaska Peninsula Area during the parallel fishery was 9.8 million pounds (Table 4). The increase in Pacific cod harvest with trawl gear that began in 2004 continued in 2005. The 2001 harvest by trawls was 2.4 million pounds; this dropped to 0.7 million pounds in 2002, and 0.3 million pounds in 2003, increased to 1.0 million pounds in 2004, and increased again to 2.9 million pounds in 2005 (Table 4). Through October 1, 2006, harvest by trawl gear was 6.2 million pounds. In 2005, fishers using pot gear harvested approximately 63% of the cod taken in state waters during parallel fisheries; through October 1, 2006 fishers using pot gear harvested approximately 58% of the cod taken in state waters during parallel fisheries.

The percentage of the harvest in state waters of the South Alaska Peninsula Area during the parallel fishery by vessels 58-feet and under, for all gear types, has declined from 94% in 2002 to 75% in 2005 (Table 5). The downward trend continued in 2006, as of October 1, vessels 58-feet and under accounted for 59% of the total harvest in state waters (Figure 6).

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## **TABLES AND FIGURES**

**Table 1.**-South Alaska Peninsula Area state-waters Pacific cod fishery openings by gear type, 1997-2006.

	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 repealed.	
<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.	
<b>2005</b>	<i>Fishery Dates:</i>	
	March 3 - March 24	March 3 - August 31
	<i>Management Actions:</i> Pot fishery closed when GHL allocation was attained. Jig fishery closed August 31, prior to reaching jig GHL, parallel portion of WGOA reopened Sept 1-Dec 31.	
<b>2006</b>	<i>Fishery Dates:</i>	
	March 9 - March 29; April 4 - April 8	March 9 - September 1
	<i>Management Actions:</i> Pot fishery initially closed when pot GHL allocation was estimated to be reached (3/29). Pot fishery reopened, for set period, to allow for harvest of remaining 2.5 million pounds (4/4-4/8). Jig fishery closed September 1, prior to reaching jig GHL, parallel portion of WGOA reopened Sept 1-Dec 31.	

**Table 2.**-South Alaska Peninsula Area Pacific cod allocation (GHL) and harvest in millions of pounds by gear type and year, 2000-2006.

YEAR	Pot Gear			Pot GHL difference	Jig Gear		
	Vessels	GHL <sup>a</sup>	Harvest <sup>b</sup>		Vessels	GHL <sup>a</sup>	Harvest
2000	67	12.90	<b><i>14.28</i></b>	1.38	28	2.28	0.76
2001	55	11.39	10.40	-0.99	69	2.01	<b><i>3.00</i></b>
2002	50	10.50	<b><i>10.70</i></b>	0.20	65	1.86	<b><i>2.05</i></b>
2003	41	9.69	7.93	-1.76	65	1.80	<b><i>3.63</i></b>
2004	45	10.60	<b><i>10.77</i></b>	0.17	51	1.90	1.67
2005	36	9.80	<b><i>10.20</i></b>	0.40	39	1.73	1.23
2006 <sup>c</sup>	43	12.58	11.64	-0.94	11	2.22	0.08

<sup>a</sup> Pot gear is capped at 85% of the annual GHL, jig gear has no specified GHL cap in regulation.

<sup>b</sup> Bold/italics indicate harvest exceeding the GHL

<sup>c</sup> Based on landing data received by ADF&G through October 1, 2006.

**Table 3.-**Pacific cod harvest in millions of pounds from the Western Gulf of Alaska (Area 610) federal, parallel and state-waters fisheries, 1989-2006, with percent harvest from state waters.

Year	Vessels	Landings	Pounds	State Waters	
				Pounds <sup>a</sup>	Percentage <sup>b</sup>
1989	141	607	32.1	8.6	27%
1990	162	989	86.0	13.1	15%
1991	280	1,379	76.5	4.2	5%
1992	288	1,448	73.6	13.2	18%
1993	166	989	39.9	1.9	5%
1994	209	1,149	32.3	7.4	23%
1995	272	1,141	44.9	9.0	20%
1996	237	1,380	48.9	12.8	26%
1997	284	1,805	67.3	19.5	29%
1998	271	1,702	58.1	17.9	31%
1999	271	1,887	60.9	21.0	34%
2000	282	2,023	61.7	27.9	45%
2001	298	1,973	43.0	19.9	46%
2002	293	1,841	46.6	21.3	46%
2003	280	1,745	43.5	25.9	60%
2004	202	1,848	45.3	28.0	62%
2005	195	1,602	38.8	22.3	57%
2006 <sup>c</sup>	153	1,164	37.4	27.2	73%

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

<sup>b</sup> Percentage of total WGOA Pacific cod harvested in the parallel and state-waters fisheries.

<sup>c</sup> Based on landing data received by ADF&G through October 1, 2006.

**Table 4.** South Alaska Peninsula Area Pacific cod harvest in pounds by gear type during the parallel season, 1997-2006.<sup>a</sup>

Year	Gear Type				Total <sup>b</sup>
	Pot	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	3,294,577	54,019	2,424,221	340,386	6,113,203
2002	6,161,553	31,831	709,783	410,586	7,313,753
2003	13,051,612	61,065	310,012	92,528	13,515,217
2004	12,877,834	32,356	1,013,986	409,107	14,333,283
2005	6,234,618	579,031	2,919,484	101,375	9,834,508
2006 <sup>c</sup>	8,889,953	205,397	6,228,353	Confidential	15,323,703

<sup>a</sup> Harvest including discards.

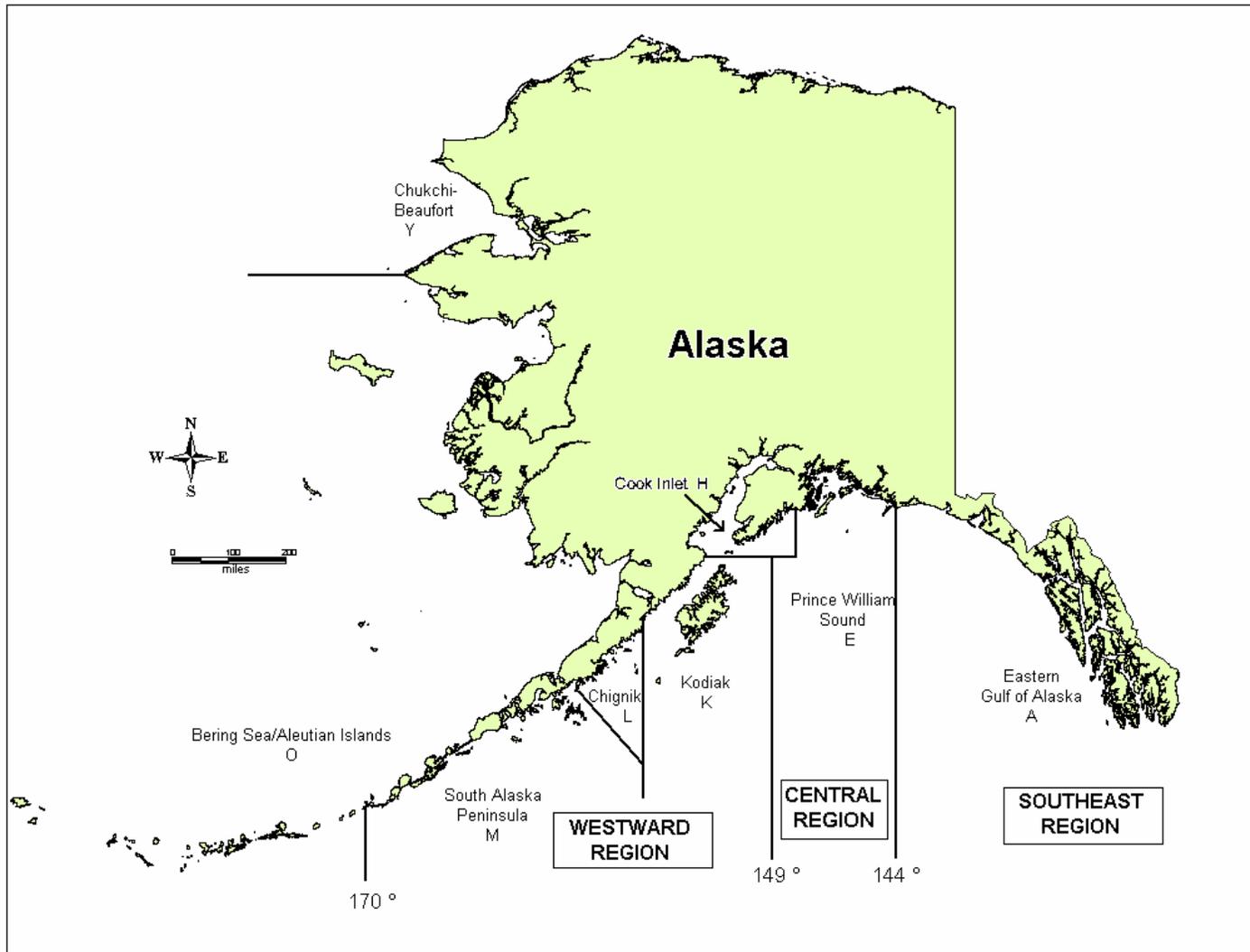
<sup>b</sup> Does not include confidential information.

<sup>c</sup> Based on landing data received by ADF&G through October 1, 2006.

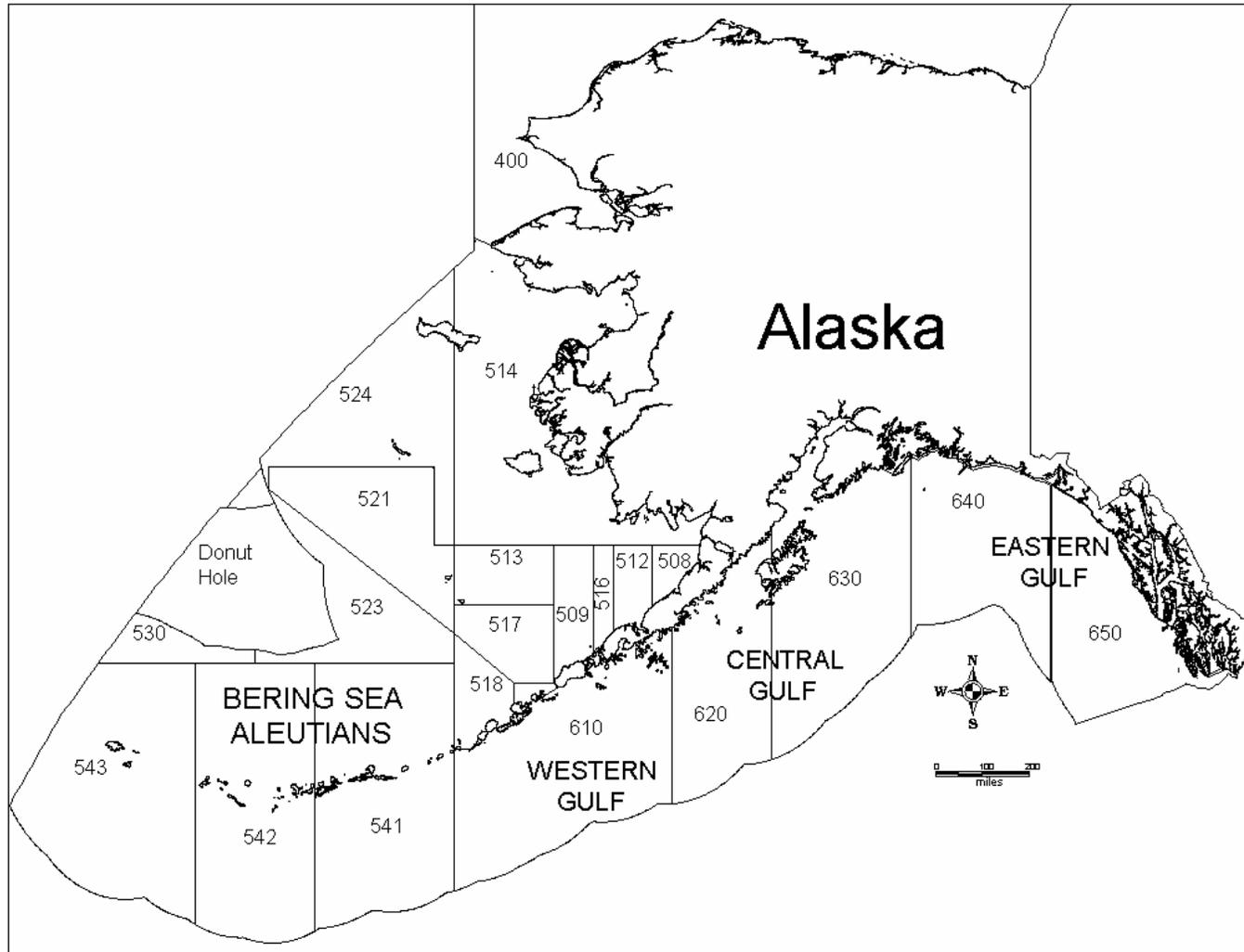
**Table 5.-**South Alaska Peninsula Area Pacific cod harvest in pounds by vessel size during the parallel season, 2002-2006.

Year	Total Pounds	Vessels 58' and under			Vessels over 58'		
		Pounds	Percentage	Number	Pounds	Percentage	Number
2002	7,313,754	6,889,327	94%	153	424,427	6%	14
2003	13,515,217	11,235,062	83%	124	2,280,155	17%	31
2004	14,333,283	9,994,637	70%	127	4,338,646	30%	33
2005	9,834,508	7,345,539	75%	122	2,488,970	25%	27
2006 <sup>a</sup>	15,347,618	9,055,095	59%	78	6,292,523	41%	33
Average	12,068,876	8,903,932	76%	121	3,850,074	24%	28

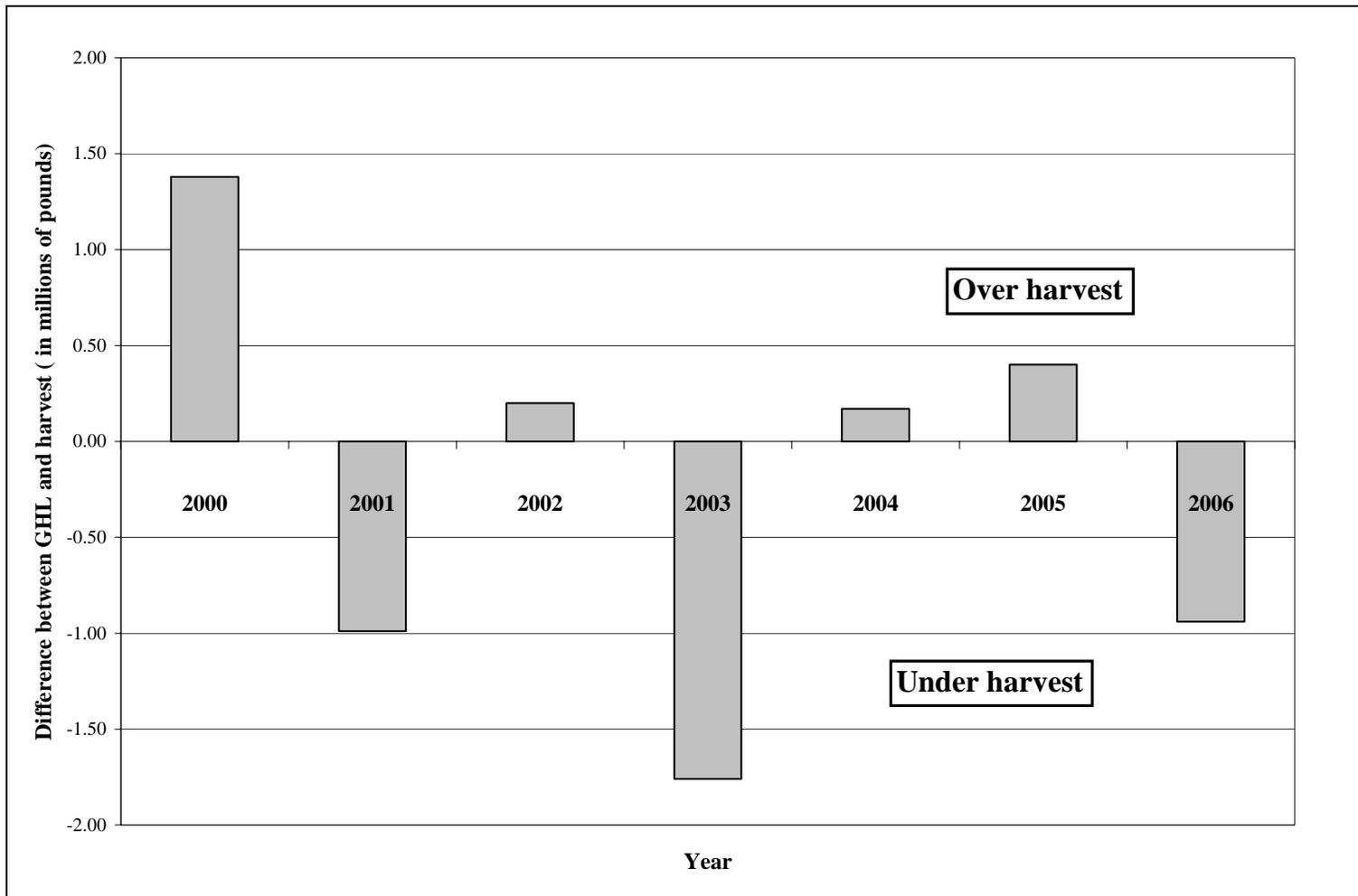
<sup>a</sup> Based on landing data received by ADF&G through October 1, 2006.



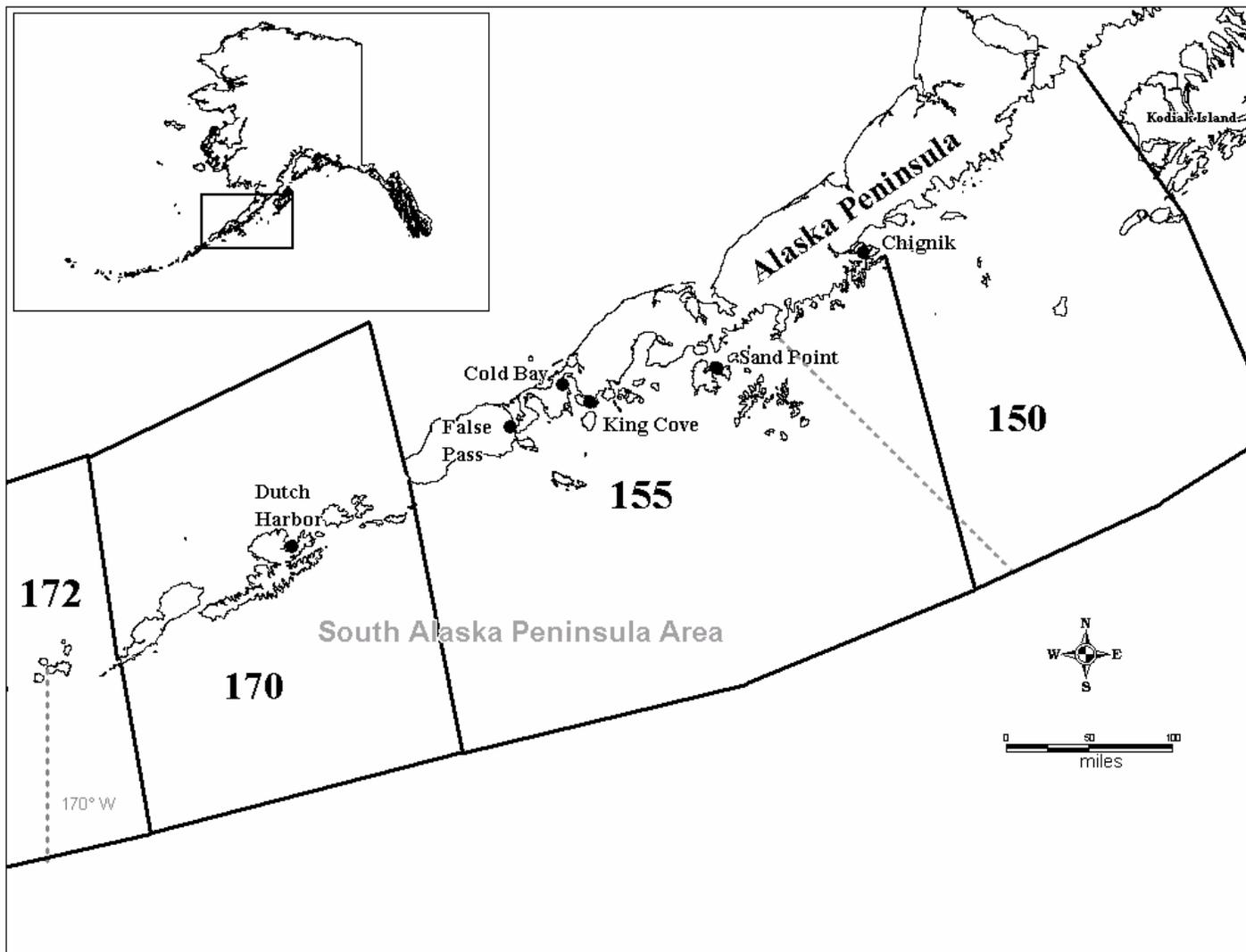
**Figure 1.-**Alaska Department of Fish and Game groundfish registration areas and regions.



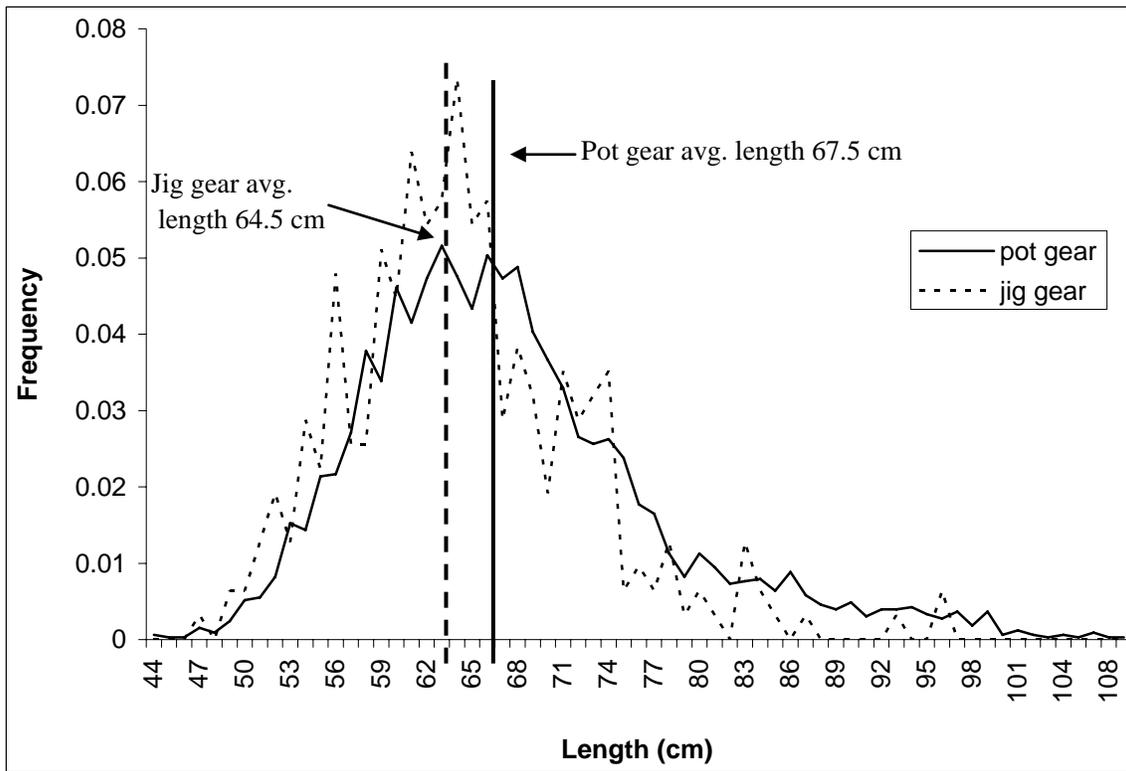
**Figure 2.-**Federal groundfish management areas.



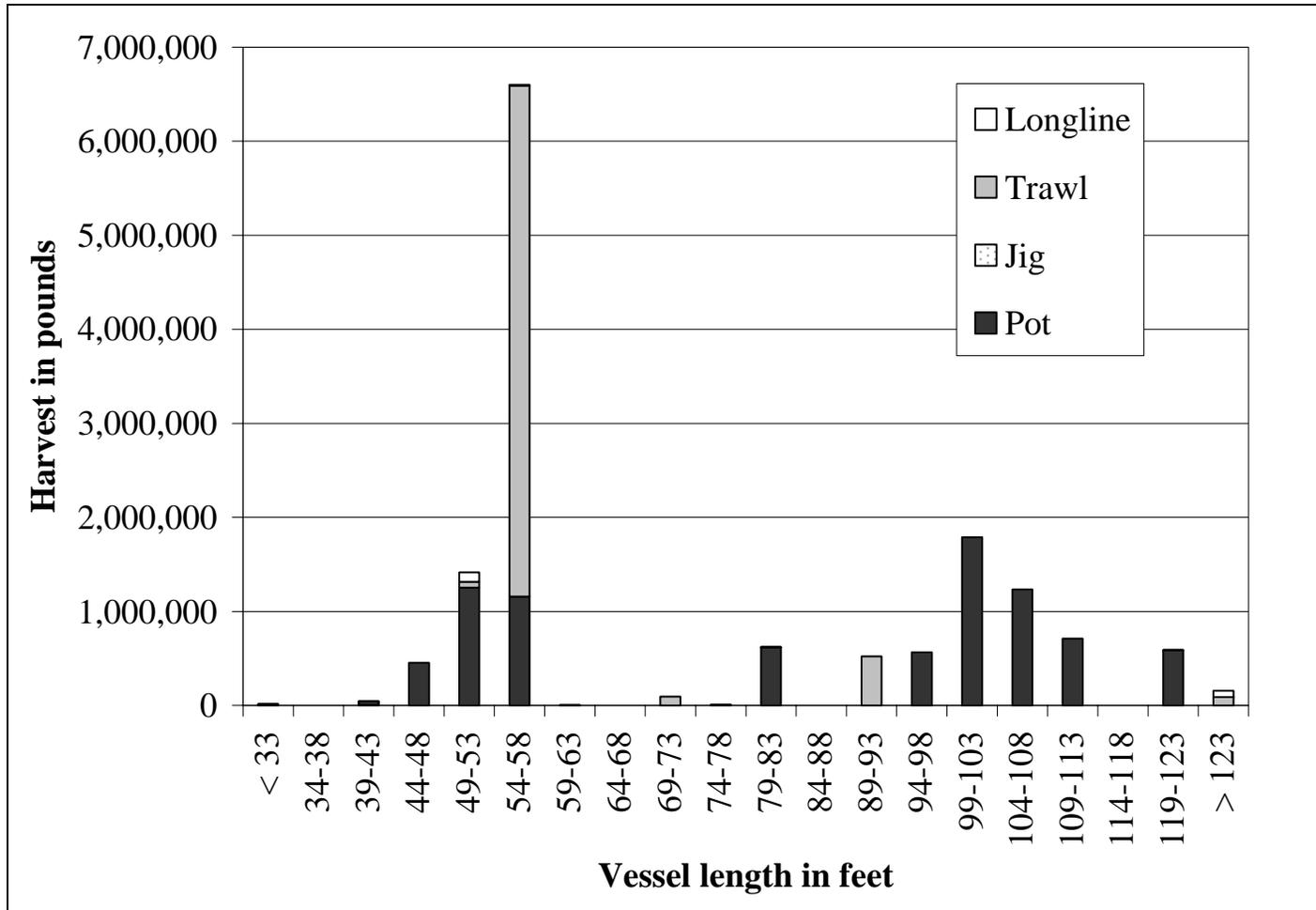
**Figure 3.-**South Alaska Peninsula Area state-waters Pacific cod fishery difference between pot gear GHL and pot gear harvest in millions of pounds by year, 2000-2006.



**Figure 4.-**National Weather Service marine forecast areas for the South Alaska Peninsula.



**Figure 5.**-Length frequencies of Pacific cod by gear type from the South Alaska Peninsula Area state-waters Pacific cod fishery, 2006.



**Figure 6.**-Parallel Pacific cod fishery harvest by vessel length and gear type from the South Alaska Peninsula Area, 2006 (based on landing data received by ADF&G through 1 October, 2006).

**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 or 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 rockfish management plans in the Alaska Administrative Code (AAC)

**APPENDIX B. SOUTH ALASKA PENINSULA AREA STATE  
WATERS STATISTICAL AREAS FOR GROUND FISH**

