

ANNUAL MANAGEMENT REPORT  
FOR THE COMMERCIAL SHELLFISH FISHERIES OF THE  
ALASKA PENINSULA MANAGEMENT AREA, 2001

By

Michael P. Ruccio  
David R. Jackson  
Kally Spalinger  
Carrie L. Worton  
and  
Lisa Pittman

Kodiak Area Office  
211 Mission Road  
Kodiak, AK 99615  
(907) 486-1840

## ALASKA PENINSULA

### *Introduction*

The Alaska Peninsula Management Area includes waters of the territorial sea and EEZ of the Pacific Ocean west of the longitude of Cape Kumlik (157°27' W long.) and east of the longitude of Scotch Cap Light (164°44' W long.) (Figure 3-1). The area varies slightly for shrimp and Dungeness crab where the eastern boundary is Kilokak Rocks (156° 20.22' W long.). Additionally, the area is divided into sections and districts of varying boundaries depending on the fishery.

Commercial shellfish fisheries have occurred in the Alaska Peninsula Area for red king crab *Paralithodes camtschaticus*, Tanner crab *Chionoecetes bairdi*, grooved Tanner crab *Chionoecetes tanneri*, Dungeness crab *Cancer magister*, various pandalid shrimp, weathervane scallops *Patinopecten caurinus*, red sea cucumbers *Parastichopus californicus*, and giant Pacific octopus *Octopus dofleini*. Shellfish stocks are depressed for most species within the management area. No commercial fishery for king crab or shrimp has occurred since 1982. The weathervane scallop fishery was closed for the 2001 season. This closure was based on declining fishery performance from the commercial fisheries in 1999 and 2000. Effort occurred in 2001 for Tanner crab, Dungeness crab, and octopus. The 2001 Tanner crab fishery was the first commercial fishery since 1989. Table 3-1 contains information on the number of pounds and exvessel fishery value for the 2001 shellfish fisheries of the Alaska Peninsula Area. Bristol Bay red king crabs and Bering Sea snow crabs *Chionoecetes opilio* were landed in King Cove during 2001. However, because only one processor was involved, information on these landings will be combined with all data and reported in the appropriate Bering Sea section found later in this report.

There were four emergency orders issued in 2001 that pertained to shellfish fisheries in the Alaska Peninsula Area (Table 3-2).

## KING CRAB

### *Introduction*

The Alaska Peninsula King Crab Registration Area 'M' includes the Pacific Ocean waters south of the Alaska Peninsula between the longitude of Cape Kumlik (157°27' W long.) and the longitude of Scotch Cap Light (164°44' W long.). Area M is further divided into the Unimak Bight, Central, and West Chignik Districts (Figure 3-1). The Alaska Peninsula Area is a superexclusive registration area for king crab.

## *Red King Crab*

### **Historic Background**

The red king crab fishery in Area M began in 1947, when 141,000 pounds were landed. The largest historic catch of 22.6 million pounds occurred in 1966 (Table 3-3). Throughout the 1970s and early 1980s, most of the harvest occurred in the Central District with Pavlof Bay being the most productive area. The annual catch in the Unimak Bight District during the same period averaged less than half the annual harvest taken from the Central District. Catches in the West Chignik District during this period varied depending on effort, but annually did not exceed 386,000 pounds.

During the 1980/81 season, the Area M harvest totaled just over five million pounds, the highest catch since the 1968/69 season. The catch was the result of strong recruitment from 1978 through 1980. Recruitment of young crabs to legal size has declined severely since that time, resulting in a closure of the fishery since the 1983/84 season.

### **Stock Status**

The Alaska Department of Fish and Game has annually conducted a trawl survey of the Alaska Peninsula crab stocks since 1988 with the R/V Resolution. The 2001 survey consisted of 130 tows in king crab habitat throughout the registration area (Figure 3-2). Data from the survey indicate the red king crab population remains at very low levels though animals were captured in almost every major bay in the area. The estimated population from the 2001 survey was 43,509 crabs, down from the estimated 133,521 crabs from the 2000 survey. As has been the case with previous surveys in the Alaska Peninsula Area, wide ranges of sizes in both sexes were captured.

## *Golden King Crab*

### **Historic Background**

On occasion, fishermen have expressed an interest in exploring Area M for golden or brown king crab. In 1983, five vessels registered but no catch was landed. Presently, male golden king crab 6-inches or greater in shell width may be taken from January 1 through December 31 under a permit issued by the commissioner. No vessels registered to fish for golden king crab in Area M during 2001.

### **Stock Status**

ADF&G does not assess golden king crab stocks in the Alaska Peninsula Area. Exploratory efforts by commercial fishermen have yet to locate quantities sufficient to sustain a commercial fishery in the Alaska Peninsula Area.

## TANNER CRAB

### *Introduction*

The waters south of the Alaska Peninsula are part of Tanner crab Registration Area J and are designated as the Chignik and South Peninsula Districts (Figure 3-3). The east boundary of the Chignik District is the longitude of Cape Kumlik (157°27' W long.) and the west boundary is Kupreanof Point (55° 34' N lat. 159° 36' W long.). The South Peninsula District has its eastern boundary at Kupreanof Point and its western boundary at the longitude of Scotch Cap Light (164°44' W long.). BOF regulations set the Chignik and South Peninsula Districts as nonexclusive registration districts for Tanner crab. No vessel may participate in more than one Tanner crab district at a time and vessels longer than 58' length overall may not be used to take Tanner crab in the Chignik or South Peninsula Districts.

### *Chignik District Tanner Crab*

#### **Historic Background**

The Chignik Tanner crab fishery began in 1968 when 21,100 pounds were harvested (Table 3-4). Thirty-five vessels participated in the 1975/76 season with landings reaching a peak harvest of approximately 7 million pounds. Three other points characterized the first 14 years of the Chignik District fishery. First, the productive grounds included nearly all waters of the district with highest catches offshore between Mitrofanina Island, Lighthouse Rocks, and the Semidi Islands. Second, most of the effort occurred in late March after the Kodiak and South Peninsula District fisheries closed. Third, no abundance surveys were conducted during this period.

ADF&G conducted trawl surveys each summer from 1981 to 1984, which predicted poor recruitment following the 1983 fishing season. As predicted from survey data, commercial fishing success and harvest dropped sharply each season from 1984 to 1986. The catch did not decline uniformly over the entire district, but fell off first and most rapidly in the popular offshore waters. Production from offshore waters decreased steadily until the harvest was limited to Chignik Bay and a few other near shore areas in 1988. Concurrent with dwindling catches, fleet size decreased from 48 vessels in 1983 to 6 vessels in 1988. Since 1990, the Chignik District fishery has remained closed due to low abundance of Tanner crabs in the area.

In 1999, ADF&G presented the BOF with a comprehensive Tanner crab harvest strategy for the Chignik District. The harvest strategy established thresholds of abundance that must be met, based on preseason survey population estimates, and a minimum GHL to allow for a commercial Tanner crab fishery (Urban et al. 1999). The harvest strategy requires additional criteria to be in place for an opening of commercial Tanner crab in the Chignik or South Peninsula Districts. Other management measures, largely the product of public input at the BOF meeting, resulted in a revised pot limit of 30 for the Chignik District regardless of the GHL. In addition, the South Peninsula District must also open for a fishery to occur in the Chignik District. The harvest strategy, as adopted by the BOF, can be found under 5 AAC 35.507 KODIAK, CHIGNIK, SOUTH PENINSULA DISTRICTS, *C bairdi* TANNER CRAB HARVEST STRATEGIES in the shellfish regulations.

The 2000 Tanner crab population estimates were at the highest level since the trawl survey time series began in the late 1980s. The 2000 estimate of mature male Tanner crabs in the Chignik District was above the threshold of one-half the average long-term abundance. However, the Chignik District did not meet the minimum GHL requirements of 200,000 pounds specified in the harvest strategy. Therefore, the Chignik District did not open to commercial Tanner crab fishing in 2001.

### **Stock Status**

The 2001 trawl survey estimate of mature male abundance was slightly below the regulatory threshold of 973,000 animals. The estimated mature male abundance was 954,135 animals. Therefore, no commercial fishery was allowed in the Chignik District in 2002 (Table 3-5).

The Chignik District estimate of all sizes and sex of crabs increased from 11.3 million crabs in 2000 to 12.7 million in 2001. A large component of the 2001 estimate was male crabs smaller than 70-mm carapace width. Total legal-sized crabs in the Chignik District decreased from an estimated 600,000 animals to 375,000 animals. Given the large component of the population estimate composed of animals smaller than 70 mm, future recruitment may improve in the Chignik District.

## ***South Peninsula District Tanner Crab***

### **Introduction**

The South Peninsula District of Area J for Tanner crab (Figure 3-3) includes all waters south of the Alaska Peninsula and west of the line from Kupreanof Point (55°34' N lat., 159°36' W long.) to the easternmost point of Castle Rock (55°16.51' N lat., 159°29'59' W long.) then extending 135° southeast from the easternmost point of Castle Rock and east of the longitude of Scotch Cap Light (164°44' W long.).

### **Historic Background**

The first harvest of Tanner crab from the area occurred in 1967 when 3,100 pounds were landed (Table 3-6). The fishery grew quickly and, by 1973, the harvest exceeded five million pounds. GHLS were established in 1974. In 1975, seasons were imposed to protect adult crab during the mating and molting period. In 1976, the minimum size limit of 5.5" CW was established. During the six fishing seasons from 1974 through 1978/79, harvests ranged from 5 to 9 million pounds. The fishery peaked in 1978/79 when 9 million pounds of Tanner crab were caught. From 1979 to 1984, the harvest and CPUE declined as a result of low recruitment and in the 1984 season the fleet only landed two million pounds. Recruitment improved in the years 1985 through 1988 and the harvest ranged from two million to 3.8 million pounds. The harvest decreased to 1 million pounds in 1989 and indications from the ADF&G trawl survey predicted a decline in recruitment for future years. The fishery has been closed from 1990 to 2000 due to the low abundance of legal-sized crab and the lack of recruitment.

In 1999, ADF&G presented the BOF with a comprehensive harvest strategy for Tanner crab in the South Peninsula District. The harvest strategy established a threshold of abundance that must be met, based on preseason survey estimates, to allow for a commercial Tanner crab fishery (Urban et

al. 1999). The harvest strategy requires additional criteria to be in place for an opening of the commercial Tanner crab fishery in the South Peninsula District. Largely due to public input at the BOF meeting, a stair-step pot limit for the South Peninsula Area of 30, 40, or 75 pots per vessel depending on GHL size was adopted. The harvest strategy, as adopted by the BOF, can be found under 5 AAC 35.507 KODIAK, CHIGNIK, SOUTH PENINSULA DISTRICTS, *C bairdi* TANNER CRAB HARVEST STRATEGIES in the shellfish regulations.

The 2000 Tanner crab population estimates were at the highest level since the trawl survey time series began in the late 1980s. The estimated number of mature male Tanner crabs in the South Peninsula District was above one-half the threshold value of the average long-term abundance for the second year in a row. The district also met the remaining regulatory benchmarks for a commercial fishery; therefore, an opening was scheduled for 2001.

### **2001 South Alaska Peninsula Fishery.**

The 2001 South Peninsula District Tanner crab fishery opened at 12:00 noon on January 15. This was the first Tanner crab fishery in South Peninsula District since 1989. A 375,000 pound guideline harvest level (GHL) was established for the district; under the regulatory harvest strategy. The pot limit for the GHL was 30 pots per vessel. Fifty-six vessels registered 1,648 pots for the fishery. One vessel did not participate. To ensure manageability of the fishery, daily 12-hour fishing periods, from 8:00 AM to 7:59 PM, were established by emergency order (Table 3-2).

The 2001 fishery was managed inseason by voluntary catch reports submitted by participants. Participation in the inseason reporting fluctuated widely and no more than 50% of the fleet reported on any given day.

The fishery closed on January 18, 2001 at 7:59 PM after four fishing periods (44 hours of actual fishing time). Projected harvest from voluntary inseason reports from approximately 50% of the fleet indicated the 375,000-pound GHL to be fully attained at the time of closure. Actual harvest, however, was lower than projected. The harvest for the 2001 fishery was 258,631 pounds from 91 landings.

Many of the vessels that did not submit inseason reports and were assumed by ADF&G staff to be performing near the fleet average for pots lifted and daily reported CPUE were actually below the averages. Seventeen deliveries occurred where the season harvest was below 1,500 pounds. Nine of those deliveries were less than 500 pounds each. Few if any of these vessels with very low season harvest totals participated in the inseason reporting and would have influenced the daily projections had they reported. Weather was a significant factor during the fishery as well. Many vessels reported being unable to work on some days or being restricted to working in protected areas.

The majority of fishing effort occurred in Leonard's Harbor adjacent to Cold Bay and in the Ikatan/Morzhovi Bay area. Some effort also occurred in Pavlof and Canoe Bays and adjacent to Popov and Nagai Islands.

Dockside samplers at shore-based processors and an onboard observer aboard the sole floating processor conducted 52 confidential interviews. Ninety-one landings were made for the 2001

South Peninsula District Tanner crab fishery, 44% of these were sampled. The average weight was calculated to be 2.34 pounds. Weights ranged from 2.25 pounds to 2.70 pounds per crab.

Processors paid \$1.60 per pound for crab designated as 'clean'; crabs designated as 'dirty' or 'c-grade' were purchased for \$0.40 per pound. Penalties were imposed on vessels that delivered above a specified percentage of dirty or c-grade crabs resulting in some entire loads being purchased for \$0.40 per pound. Fish ticket data shows that an average of \$0.80 per pound was paid for deliveries. Estimated exvessel value for the fishery is \$320,000.

Several operators reported fishing on average CPUE in excess of 100 crabs but retained only 30 to 40 crabs to ensure that their loads were not docked for high percentages of dirty crabs. Processors reported that both grades of crabs had good meat infill but that the clean crab had a darker shell than desired for their established markets.

### **Stock Status**

The 2001 estimated mature male abundance for the South Peninsula District fell below the established regulatory threshold. The estimated abundance was 1,213,607 mature males and the threshold is established at 1,375,000 animals (Table 3-5). Consequently, a commercial fishery was not held in the South Peninsula District in January 2002.

The overall total population estimate was 14.3 million animals, up from the 2000 estimate of 13.2 million. The legal-sized population estimate in the district was 497,000 animals; a significant decrease from the 2000 estimate of 873,000 animals. Morzhovoi and Cold Bays showed the highest densities of legal Tanner crab in the South Peninsula District (Figure 3-4). As was the case in all survey areas, the majority of the estimated population is less than 70 mm in carapace width. However, the number of animals 92-114 mm decreased from the 2000 estimate. This indicates that it may be a few years before sufficient number of mature males exist for a commercial fishery opening to resume.

## ***Deep Water Tanner Crab***

### **Historic Background**

The Alaska Peninsula was initially explored for commercial fishing on grooved Tanner crabs *Chionoecetes tanneri* and, to some extent, triangle Tanner crabs *C. angulatus* in 1994. Both species are found along the continental shelf break at great depths, with commercial fishing often occurring between 325 and 475 fathoms. The commercial fishery was permitted under the terms of 5 AAC 35.511 PERMITS FOR *TANNERI* AND *ANGULATUS* TANNER CRAB IN AREA J. Vessels were required to use single line pot gear and carry ADF&G approved observers. A minimum legal size of 5.0 inches CW for *C. tanneri* and 4.5 inches for *C. angulatus* was stipulated by commissioners permit. Two vessels fished in the Alaska Peninsula District during 1994 and their harvest remains confidential.

Interest in the deep water Tanner crab fishery increased in 1995. Six vessels made landings totaling 947,014 pounds (Table 3-7). Grooved Tanner crabs comprised the vast majority of deep water Tanner catch retained. The average catch per pot was 81 crabs with an average weight of 1.6 pounds. Average size of retained crabs was 133 mm in carapace width.

Performance of the fishery declined in 1996. Seven vessels made 35 deliveries, but the catch fell to 553,028 pounds and CPUE declined to 17 crabs per pot. The price also fell from an average of \$1.40 to \$1.00 per pound. Much of the fishery production came from previously unexplored areas.

New regulations passed by the BOF became effective in 1996. These regulations contained provisions allowing for the longlining of pots and established pot limits. Alaska Peninsula fishermen were allowed up to 300 small pots, defined as those no more than 20 feet in perimeter and no more than 42 inches high or 150 large pots.

ADF&G established conservative guideline harvest levels (GHLs) in February 1997. The Alaska Peninsula District GHL was established at 200,000 pounds. Additional requirements for testing escape mechanisms to lessen the amount of crab handled and discarded at sea were added to the conditions of the deep water Tanner permit. Given the reductions in GHLs, introduction of pot limits, declining CPUE, and the fall in market price for crab, no vessels registered for the harvest of deep water Tanner crabs during 1997 to 1999. One vessel participated in 2000, however the harvest remains confidential.

### ***2001 Fishery***

No vessels fished for deepwater Tanner crabs in the Alaska Peninsula Area in 2001. Historic harvest information from the district is shown in Table 3-7.

### **Stock Status**

Information on the biology of deep water Tanner crabs is limited. Data still needs to be collected on size at maturity, handling mortality, molt timing, and other important biological parameters. The department does not conduct population assessments. As a condition of the operating permits, deep water Tanner vessels are required to carry onboard observers who are working to collect this information.

## **ALASKA PENINSULA DUNGENESS CRAB**

### ***Introduction***

The Alaska Peninsula District for Dungeness crab (Figure 3-5) includes all waters of Registration Area J west of a line at 135° off Kupreanof Point and east of the longitude of Scotch Cap Light (164°44' W long.). Prior to 2001, the Chignik District was a part of the Alaska Peninsula District. This district was designated superexclusive for Dungeness crab in 1983.

### ***Historic Background***

Historically, Dungeness crab catches from the district have been sporadic, with the highest catch recorded in 1968 when 1.26 million pounds were landed (Table 3-8). Subsequent effort and harvest

remained low for many years due to low prices and better prospects in other fisheries. During the early 1980s, the decline in king crab stocks and a stronger market for Dungeness crabs generated renewed interest in the fishery. As a result, local fishermen became concerned with over exploitation of the stock. In response, the BOF specified the Alaska Peninsula District as a superexclusive registration area in 1983. The superexclusive designation has reduced effort in the district and recent poor catches have discouraged participation in the fishery. District boundaries were changed in 2001 moving the eastern boundary from Cape Kumlik to Kupreanof Point.

Management of the Alaska Peninsula District Dungeness fishery has been achieved by '3-S management wherein the sex, size and season are regulated. Only males greater than 6.5 inches in carapace width may be harvested from May 1 through December 31.

### *Alaska Peninsula District 2001 Fishery*

The 2001 Alaska Peninsula Dungeness crab season opened May 1. Three vessels were registered to fish. One vessel reported catches, however fish tickets were not submitted. An investigation is occurring at this time as to the disposition of that product. The two remaining vessels did not participate.

### *Chignik District 2001 Fishery*

The Chignik District during 2001 was managed separately from the Alaska Peninsula District for the first time. In 2000, the Board of Fisheries created a separate registration district and designated it superexclusive. The Chignik District consisted of waters east of Kupreanof Point and west of Kilokak Rocks along the south side of the Alaska Peninsula. Parts of this district were previously included in both the Kodiak and Alaska Peninsula Districts. One vessel registered for the Chignik District and made one landing. The catch information remains confidential (Table 3-8).

### *Stock Status*

No stock assessments have been conducted for the Dungeness crab in the Alaska Peninsula or Chignik Districts. Department activity has been limited to monitoring commercial fishery deliveries, conducting vessel operator interviews, and recording the harvest. Given the few deliveries available for sampling and the scant anecdotal information from vessel operator interviews, no definitive conclusions can be readily drawn concerning the status of the Alaska Peninsula or Chignik Dungeness crab stocks.

## **ALASKA PENINSULA SHRIMP**

### *Introduction*

The Alaska Peninsula shrimp fishery is divided into the Chignik and South Peninsula Districts (Figure 3-6). The Chignik District contains all waters south of the Alaska Peninsula between the

longitude of Kilokak Rocks (156° 20.22' W long.) and a line from Kupreanof Point (55°33.98' N lat., 159° 35.88' W long.) to the easternmost point of Castle Rock (55° 16.51' N lat., 159° 29'59 W long.) and east of a line extending 135° southeast from the easternmost point of Castle Rock. The South Peninsula District is comprised of all waters south of the Alaska Peninsula and west of a line from Kupreanof Point to Castle Rock that extends 135° southeast from the easternmost point of Castle Rock and east of the longitude of Cape Sarichef (164°55' W long.). Both districts are subdivided into sections that are managed according to 5 AAC 31.590 WESTWARD AREA SHRIMP FISHERIES MANAGEMENT PLAN.

### ***Historic Background***

Shrimp fishing in the Alaska Peninsula and Chignik Districts began in 1968, but catch levels remained relatively low until the 1972/73 season when 19.5 million pounds were harvested (Table 3-9). The historic high catch was reached in the 1977/78 season harvest of 71.5 million pounds from the two districts. Catches declined rapidly until all Alaska Peninsula sections were closed in 1980/81. Although the Sutwik Island Section and all offshore waters of the Chignik District remained open in 1981/82, only 70,948 pounds of shrimp were landed from those areas. Since that time, all the inshore waters have remained closed and no fishing has occurred in the open area offshore. No vessels were registered for the offshore sections that were open to fishing during the 2001/02 season.

### ***Stock Status***

ADF&G last conducted a trawl survey in the Chignik Bay and Kuiukta Bay Sections of the Chignik District in 1995. Thirteen tows in the Chignik District averaged 146 pounds of shrimp per nautical mile towed, down from the 246 pounds per nautical mile captured during the 1992 survey. The 1995 Chignik District population estimate was 1.4 million pounds, well below the 4.55 million pounds minimum acceptable biomass index (MABI) needed to open the commercial fishery. The next ADF&G shrimp survey is scheduled for September 2002.

## **SOUTH PENINSULA SEA CUCUMBERS**

### ***Introduction***

The districts in use for Tanner crab management are also used to delineate sea cucumber management districts. Fisheries for sea cucumbers in the Westward Region are nonexclusive.

### ***Historic Background***

The waters adjacent to the south side of the Alaska Peninsula were initially explored for commercial fishing on the red sea cucumber *Parastichopus californicus* in 1993. The majority of dive effort occurred in the Chignik District, with the farthest west exploration occurring in Kuiukta Bay. The harvest in the Chignik District has historically been delivered to Kodiak

processors. The management measures for the Chignik sea cucumber fishery were developed at the same time and in the same manner as those adopted for the Kodiak Area fishery. Additionally, effort in the Chignik District has been sporadic and often tied into harvest from the Mainland Section of the Kodiak District. For these reasons, the Chignik Area sea cucumber fishery information is reported under the Kodiak section of this report.

In February 1994, concerns about overharvest in Kodiak and Chignik led the department to establish guideline harvest levels for areas with established harvest histories using areas delineated by the Tanner crab districts. Because little historic effort had occurred in the South Peninsula District and relative resource strength was difficult to assess from the data poor situation, no South Peninsula GHL was established in 1994. A closed season was also established for all sections and districts for the period of April 30 to October 1 to protect spawning aggregates of sea cucumbers. A weekly, five-day fishing period with daily dive logbook requirements was established to monitor the fishery. The fishing period was later reduced in 1995 to three days to improve manageability. A 5,000-pound GHL was developed for the South Peninsula District in 2000. This conservative GHL was implemented for all districts and sections lacking historic harvest data. The goal was to allow exploration by divers while ADF&G gathered data to assess if adjustments to the GHL were needed.

Very little effort has historically occurred in the South Peninsula District for red sea cucumbers. Effort occurred in the 1994 season with three divers registered. The catch during this season remains confidential as only two divers made landings. There was no effort during the 1995/1996 season in the Alaska Peninsula area. In 1996/1997, one diver participated, and the harvest statistics remain confidential. During the 1997/1998 season four divers landed 13,427 pounds. There have been no registered divers for the Alaska Peninsula since the 1997/98 season.

### ***2001/02 Fishery***

No fishing occurred in the South Peninsula District during the 2001/02 sea cucumber fishery. The season was open from October 1 through April 30 with a GHL of 5,000 pounds for exploratory fishing.

### ***Stock Status***

No biomass assessment is done on red sea cucumbers in the Westward Region. Little commercial harvest has occurred within the Alaska Peninsula District. Actual population levels, especially at depths below those available to the divers, are unknown. In addition, the extent of the westward range of red sea cucumbers is not well documented; however, ADF&G trawl surveys have captured *P. californicus* as far west as Pavlof Bay.

## OCTOPUS

### *Historic Background*

Giant Pacific octopus *Octopus dofleini* have been frequently harvested in the Alaska Peninsula area for bait or food since the early 1980s (Table 3-10). Directed fishing for octopus occurs but the majority of the harvest is taken incidental to other fisheries. Until 1988, octopus was usually taken as incidental harvest during the Tanner crab fishery. Since then, octopus has been landed primarily by trawl and pot fishermen targeting Pacific cod. In recent years, over 90% of the octopus catch has been taken with pot gear. The majority of octopus harvest in the Alaska Peninsula Area has come from within state waters. In 1997, a harvest of 52,112 pounds was recorded on fish tickets as taken from state and federal waters. Of this amount, 48,286 pounds were harvested inside three nautical miles. This increase in reported landings of octopus in 1997 was in part due to improved tracking of octopus registrations and subsequent reporting of octopus as incidental harvest that began in the late 1990s. Additionally, more of the Pacific cod harvest in the Central and Western Gulf was taken with pot gear in that year, particularly with the advent of the state waters Pacific cod fishery.

In 2001, ADF&G adopted a revised product recovery rate for octopus designated as “gutted” on fish tickets. The revision has changed historic data within the department’s fish ticket database from 1995 to the present. This report may contain data that is different from previously published reports on octopus harvest.

### *2001 Fishery*

The 2001 harvest of octopus in the Alaska Peninsula area totaled 2,566 pounds from state and federal waters. No vessels registered for directed fishing of octopus in the Alaska Peninsula Area in 2001. All harvest occurred as incidental harvest during groundfish fishing, primarily from vessels targeting Pacific cod using pot gear. Three vessels harvested 345 pounds from five landings in state waters. A total of 2,221 pounds were harvested from federal waters by seven vessels making 17 landings. None of the fish tickets for 2001 had value recorded for the octopus harvest; it was used as bait, retained for personal use, or had no price recorded by the processing facility issuing the fish ticket. It is probable that the intense, short seasons for Pacific cod in both the federal and state fishery resulted in the low harvest of octopus.

### *Stock Status*

No stock assessment is currently conducted on this species in the Westward Region; the population status is unknown.

### LITERATURE CITED

Urban, D., D. Pengilly, D. Jackson, I. Vining. 1999. A Tanner crab harvest strategy for Kodiak, Chignik, and the South Peninsula Districts. A Report to the Board of Fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries, Westward Region, Regional Information Report 4K99-21, Kodiak.

Table 3-1. Landings and values of shellfish fisheries in the South Peninsula Area, 2001.

Species	Pounds	Exvessel Value (Dollars)
Tanner Crab	258,635	320,730
Dungeness crab	Confidential <sup>a</sup>	Confidential <sup>a</sup>
Octopus <sup>b</sup>	2,566	NA
<hr/>		
TOTAL		

<sup>a</sup> Less than three vessels or processors participated.

<sup>b</sup> Harvest from shellfish and groundfish landings.

NA = Not available

Source: Alaska Department of Fish and Game fish ticket data base, April 2002.

Table 3-2. Shellfish emergency orders issued for the Alaska Peninsula Management Area, 2001.

Emergency Order	Effective Date	Explanation
<u>Tanner Crab</u>		
4-S-01-01	January 15, 2001	Established daily 12-hour fishing periods from 8:00 AM to 7:59 PM in the South Peninsula District of Registration Area J <i>Chionoecetes bairdi</i> Tanner crab fishery beginning 12:00 Noon on January 15 until fishery is closed by emergency order.
4-S-03-01	January 18, 2001	Closed the South Peninsula District of Registration Area J <i>Chionoecetes bairdi</i> Tanner crab at 7:59 PM. on January 18, 2001 for remainder of the season.
<u>Weathervane Scallops</u>		
4-S-18-01	December 8, 2001	Closed the Alaska Peninsula and Dutch Harbor Areas to Weathervane Scallop fishing for entire 2001/2002 season.
<u>King Crab</u>		
4-S-10-01	September 25, 2001	Closed the Registration Area 'K' (Kodiak) and Registration Area 'M' (Alaska Peninsula) to red and blue king crab fishing for 2001/2002 commercial fishing season.

Table 3-3. Catch and effort statistics for red king crab in the Alaska Peninsula Area M, 1947-2001.

Year	Number			Pounds	Pots Lifted	CPUE	Average Weight	Price Per Pound (\$)
	Vessels	Landings	Crab					
1947	NA	NA	18,800	141,000	NA	NA	7.5	NA
1948	NA	NA	518,500	3,363,000	NA	NA	6.5	NA
1949	NA	NA	205,500	3,476,000	NA	NA	12.0	NA
1950	NA	NA	270,000	2,124,000	NA	NA	7.9	NA
1951	NA	NA	86,500	599,000	NA	NA	6.9	NA
1952	NA	NA	32,400	298,000	NA	NA	7.6	NA
1953	NA	NA	38,400	380,000	NA	NA	10.0	NA
1954	NA	NA	31,666	316,660	NA	NA	10.0	NA
1955	NA	NA	164,069	1,640,688	NA	NA	10.0	NA
1956	NA	NA	421,651	4,221,496	NA	NA	10.0	NA
1957	NA	NA	668,709	6,687,092	NA	NA	10.0	NA
1958	NA	NA	724,595	7,245,947	NA	NA	10.0	NA
1959	NA	NA	568,303	6,166,974	NA	NA	10.0	NA
1960	NA	1,496	677,100	6,700,000	NA	NA	9.9	NA
1961	NA	959	419,354	3,900,000	NA	NA	9.3	NA
1962	NA	657	287,624	2,273,013	NA	NA	7.9	NA
1963	27	1,037	970,739	6,539,129	NA	NA	6.7	0.09
1964	40	1,297	1,906,018	14,354,060	NA	NA	7.5	0.10
1965	36	1,081	1,813,728	14,713,501	NA	NA	8.1	0.10
1966	37	1,255	2,494,949	22,577,587	NA	NA	9.0	0.10
1967	39	1,062	1,943,463	17,252,307	NA	NA	8.9	0.19
1968/69	34	885	1,273,567	10,944,472	NA	NA	8.6	0.34
1969/70	33	415	558,800	4,137,000	51,300	11	7.7	0.25
1970/71	25	339	446,042	3,425,760	38,995	11	7.7	0.25
1971/72	26	364	597,394	4,123,130	41,759	14	6.9	0.28
1972/73	29	301	610,300	4,069,362	34,408	18	6.7	NA
1973/74	36	389	658,632	4,260,674	53,642	12	6.9	0.72
1974/75	36	318	644,054	4,572,101	44,951	14	7.1	0.43
1975/76	37	248	367,221	2,605,310	35,104	11	7.2	0.41
1976/77	26	122	125,778	958,069 <sup>a</sup>	17,748	7	7.7	0.61
1977/78	15	73	119,641	726,382	10,551	11	6.1	1.00
1978/79	33	226	520,168	3,093,859	31,142	17	5.9	1.27
1979/80	68	288	738,859	4,453,557	41,753	18	6.0	0.92
1980/81	51	358	821,071	5,080,632	54,114	15	6.2	0.96
1981/82	56	341	515,882	3,168,689	51,776	10	6.1	1.40
1982/83	63	157	271,237	1,683,654	30,894	9	6.2	3.20
1983-2001	NO FISHERY							

NA=Not Available.

<sup>a</sup>Combined 6 1/2 inch and 7 1/2 inch seasons.

Table 3-4. Chignik District Tanner crab *Chionoecetes bairdi* catch and effort statistics, 1968-2001.

Year	Number				Pots Lifted	Average Weight	CPUE	Price per Pound <sup>b</sup> (\$)	Percent Recruits <sup>c</sup>
	Vessels	Landings	Crab <sup>a</sup>	Pounds <sup>a</sup>					
1968	NA	NA	NA	21,100	NA	NA	NA	NA	NA
1969	NA	NA	NA	38,100	NA	NA	NA	NA	NA
1970	NA	NA	NA	2,800	NA	NA	NA	NA	NA
1971	NA	NA	NA	152,300	NA	NA	NA	NA	NA
1972	Harvest Confidential								
1973	15	56	297,363	747,788	8,080	2.5	51	0.16	NA
1974	25	115	1,586,560	4,054,873	28,083	2.6	57	0.2	NA
1974/75	25	91	1,438,508	3,649,444	22,675	2.5	63	0.14	NA
1975/76	35	288	2,724,509	11,201,900	52,381	2.5	52	0.19	NA
1976/77	21	141	2,098,226	5,672,919	40,604	2.7	52	0.33	NA
1977/78	32	140	1,725,042	4,693,830	38,414	2.8	45	0.42	NA
1978/79	39	126	926,253	2,536,105	28,378	2.7	33	0.55	NA
1979/80	42	155	2,340,004	3,517,920	54,627	2.6	25	0.54	NA
1980/81	24	112	1,534,847	3,653,723	44,022	2.4	35	0.64	65.6
1981/82	45	174	1,343,500	3,240,576	47,830	2.4	28	1.21	64.7
1983	48	136	1,432,029	3,497,370	60,210	2.4	24	1.12	65.1
1984	17	41	269,724	659,043	14,665	2.4	18	1.09	33.5
1985	15	27	162,448	375,476	15,708	2.3	10	1.42	51.2
1986	6	12	85,697	188,162	7,435	2.2	12	1.97	85.3
1987	10	20	89,329	195,060	7,052	2.2	13	2.28	90.1
1988	6	11	87,148	183,111	6,544	2.1	13	2.33	91.3
1989	6	34	142,470	323,120	9,845	2.3	15	3.05	95.0
1990-2001	No commercial fishery has occurred since 1989.								

<sup>a</sup>Includes deadloss.

<sup>b</sup>Computed only for live poundage where price information was available.

<sup>c</sup>Recruits = newshell male crab from 137 to 163 mm carapace width.

NA = Not available

Table 3-5. Chignik and South Peninsula Area Tanner crab population estimates, 2001.

Section	Mature Male Abundance Threshold <sup>a</sup>	Mature Male Abundance 2001 Estimate (No.)	Molting Mature Male Status	Mature Male Abundance	Harvest Rate	Harvestable Crabs (No.)	GHL (pounds)
Chignik	973,000	954,135	<b>Below Threshold</b>	955,000	NA	NA	NA
South Peninsula	1,375,000	1,213,607	<b>Below Threshold</b>	1,214,000	NA	NA	NA

<sup>a</sup> "Molting mature male abundance" means the estimated abundance of 100 percent newshell and 15% oldshell male *C. bairdi* that are more than 114 mm carapace width.

Table 3-6. Tanner crab *Chionoecetes bairdi* catch and effort statistics for South Peninsula District, 1967-2001.

Year	Number				Pots Lifted	Average Weight	Price per CPUE Pounds <sup>b</sup> (\$)	Percent Recruits	
	Vessels	Landings	Crab <sup>a</sup>	Pounds <sup>a</sup>					
1967	NA	NA	NA	3,100	NA	NA	NA	NA	
1968	NA	155	36,835	110,610	NA	3	NA	NA	
1969	NA	173	221,946	606,178	NA	2.7	NA	NA	
1970	NA	NA	NA	2,093,600	NA	NA	NA	NA	
1971	17	242	813,610	2,140,585	NA	2.6	NA	0.10	
1972	NA	NA	NA	3,618,900	NA	NA	NA	NA	
1973	36	390	2,213,006	5,615,563	53,573	2.5	41	NA	
1974	44	386	3,504,668	8,300,578	58,444	2.4	60	NA	
1974/75	44	131	2,053,530	5,195,800	38,153	2.5	54	0.14	
1975/76	36	288	2,724,509	6,926,161	52,381	2.5	52	0.20	
1976/77	28	389	2,524,565	6,773,838	63,143	2.7	40	0.32	
1977/78	36	374	2,847,948	7,446,270	70,587	2.6	40	0.40	
1978/79	48	332	3,267,122	8,684,408	82,374	2.7	40	0.51	
1979/80	61	363	2,581,544	6,961,251	96,989	2.7	27	0.54	
1980/81	43	268	1,274,539	3,294,106	59,560	2.6	21	0.58	
1981/82	72	365	1,815,060	4,589,042	81,008	2.5	22	1.05	
1983	82	230	1,144,096	2,863,798	70,524	2.5	16	1.20	
1984	61	207	775,472	1,789,883	50,726	2.3	15	1.04	
1985	52	184	1,097,182	2,549,686	47,465	2.3	23	1.42	
1986	74	187	1,589,759	3,781,950	65,078	2.4	24	1.72	
1987	54	106	950,300	2,400,784	37,511	2.5	25	2.03	
1988	73	148	1,359,371	3,328,809	52,516	2.4	26	2.20	
1989	65 <sup>c</sup>	87	433,112	1,055,082	27,958	2.4	15	2.70	
1990-2000	No commercial fishery 1990-2000.								
2001	55	67	107,653	258,631	4,426	2.4	24	1.24	

<sup>a</sup>Includes deadloss.

<sup>b</sup>Computed for live crab.

<sup>c</sup>One additional vessel was registered but did not fish in the district.

NA = not available

Table 3-7. Commercial catch and effort for deepwater Tanner crabs, *Chionoecetes tanneri* and *angulatus*, Alaska Peninsula District, 1994-2001.

Year	Number			Pounds <sup>a</sup>	Pots Lifted	CPUE	Average Weight (lbs)	Price Per Pound (\$)	Deadloss (lbs.)
	Vessels	Landings	Crab <sup>a</sup>						
1994						Confidential			
1995	6	34	600,984	947,014	7,143	81	1.6	1.40	24,473
1996	7	35	335,234	553,028	19,285	17	1.6	1.00	43,643
1997						No commercial fishing effort			
1998						No commercial fishing effort			
1999						No commercial fishing effort			
2000						Confidential			
2001						No commercial fishing effort			

<sup>a</sup>Deadloss included.

Table 3-8. Dungeness crab *Cancer magister* harvest statistics, Alaska Peninsula District, 1968 - 2001.

Year	Number				Pots Lifted	CPUE	Ave. Wt. (Lbs.)	Price per Pound (\$)
	Vessels	Landings	Crab <sup>a</sup>	Pounds <sup>a</sup>				
1968	NA	NA	434,142	1,259,013	NA	NA	2.9	NA
1969	NA	NA	411,000	1,056,000	NA	NA	NA	NA
1970	NA	NA	4,200	13,000	NA	NA	NA	NA
1971	NA	NA	3,900	11,000	NA	NA	NA	NA
1972	NA	NA	29,400	65,000	NA	NA	NA	NA
1973	C o n f i d e n t i a l							
1974	N o C o m m e r c i a l F i s h i n g							
1975	N o C o m m e r c i a l F i s h i n g							
1976	N o C o m m e r c i a l F i s h i n g							
1977	N o C o m m e r c i a l F i s h i n g							
1978	N o C o m m e r c i a l F i s h i n g							
1979	C o n f i d e n t i a l							
1980	N o C o m m e r c i a l F i s h i n g							
1981/82	C o n f i d e n t i a l							
1982/83	16	79	357,955	779,600	59,265	6	2.2	0.75
1983/84	18	132	565,430	1,207,128	113,061	5	2.1	0.97
1984/85	13	99	294,191	647,497	106,056	3	2.1	1.38
1985/86	7	31	239,202	488,107	52,117	5	2.0	1.26
1986/87	6	28	87,925	180,261	30,280	3	2.0	1.05
1988	C o n f i d e n t i a l							
1989	C o n f i d e n t i a l							
1990	4	10	31,074	65,806	5,225	6	2.1	1.53
1991	7	18	39,069	80,248	12,813	3	2.1	1.24
1992	C o n f i d e n t i a l							
1993	3	15	127,979	273,811	15,675	8	2.1	0.79
1994	4	24	134,429	277,639	27,950	5	2.1	1.01
1995	C o n f i d e n t i a l							
1996	4	9	47,824	112,388	15,306	4	2.3	1.01
1997	7	17	120,935	240,128	42,324	3	2.0	2.06
1998	3	7	48,629	96,073	14,800	3	2.0	1.50
1999	C o n f i d e n t i a l							
2000	3	3	8,970	18,388	4,350	2	2.1	1.65
2001	C o n f i d e n t i a l							

Table 3-9. South Peninsula and Chignik District shrimp harvest statistics, 1968-2001.

Year	SOUTH PENINSULA				CHIGNIK			
	Number			Price per Pound (\$)	Number			Price per Pound (\$)
	Vessels	Landings	Pounds		Vessels	Landings	Pounds	
1968			Confidential				Confidential	
1969			Confidential				Confidential	
1970	4	173	4,398,800	0.04			890,705	
1971			Confidential				Confidential	
1972/73			14,740,801	0.07			4,829,117	
1973/74	12	347	19,987,246	0.07	33	277	51,673,788	0.08
1974/75	22	387	26,145,720	0.08	37	323	23,392,352	0.08
1975/76	24	326	20,044,112	0.09	50	334	24,435,480	0.08
1976/77	19	424	37,148,932	0.09	48	303	27,232,630	0.10
1977/78	48	409	45,003,794	0.13	50	271	26,512,791	0.13
1978/79	23	108	9,418,276	0.16	40	201	23,257,869	0.17
1979/80	10	41	3,134,367	0.21	35	195	23,722,330	0.23
1980/81			0		54	148	12,843,270	0.29
1981/82			0		3	4	70,948	0.27

No commercial fishing activity has occurred in these districts after 1981/82.

Table 3-10. Harvest statistics of octopus in the state and federal waters of the Alaska Peninsula District, 1980-2001.

Year	State waters			Federal waters			Total				
	Vessels	Landings	Pounds Harvested	Vessels	Landings	Pounds Harvested	Vessels <sup>a</sup>	Landings	Pounds Harvested	Price per Pound	Fishery value (\$)
1980-1985						Confidential					
1986-1987						No fishing					
1988	22	58	9,946	16	132	34,622	31	190	44,568	0.92	41,003
1989	12	41	5,309	15	82	9,581	23	123	14,890	1.00	14,890
1990	7	45	6,746	14	33	2,393	19	78	9,139	1.00	9,139
1991	18	72	15,103	14	36	4,392	29	108	19,495	1.00	19,495
1992	38	183	38,651	39	100	6,579	72	283	45,230	1.00	45,230
1993	9	23	9,017	28	59	3,007	35	82	12,024	1.00	12,024
1994	16	36	15,621	8	14	1,171	23	50	16,792	0.59	9,907
1995	15	49	5,939	15	18	2,140	24	67	8,079	0.45	3,636
1996	20	52	11,258	18	22	4,667	26	74	15,925	0.49	7,803
1997	27	143	48,286	15	20	3,826	34	163	52,112	0.49	25,535
1998	13	15	4,554	13	22	4,638	15	37	9,192	0.53	4,872
1999	9	10	2,051	10	19	1,710	18	29	3,761	0.50	1,881
2000	18	17	1,507	19	19	5,235	30	36	6,742	NA <sup>b</sup>	NA <sup>b</sup>
2001	3	5	345	7	17	2,221	7	22	2,566	NA <sup>c</sup>	NA <sup>c</sup>

<sup>a</sup> Some vessels made landings in both state and federal waters.

<sup>b</sup> No fish tickets provided price information in 2000; octopus were retained as bait or personal use or price per pound was not recorded by processing plant.

<sup>c</sup> Only one fishticket provided price information in 2001; most octopus were retained as bait or personal use.

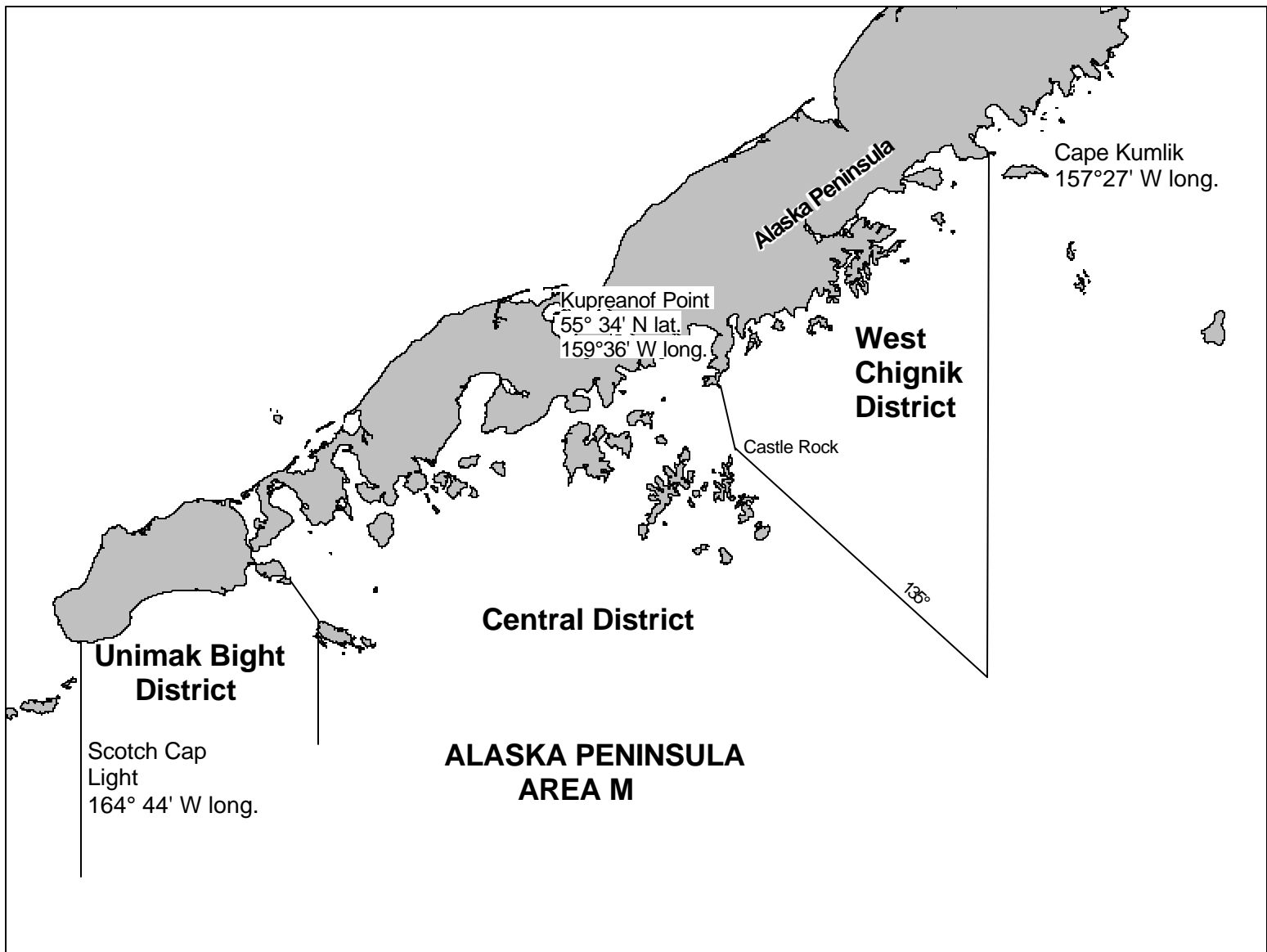


Figure 3-1. Unimak Bight, Central, and Chignik Districts of the king crab Registration Area M.

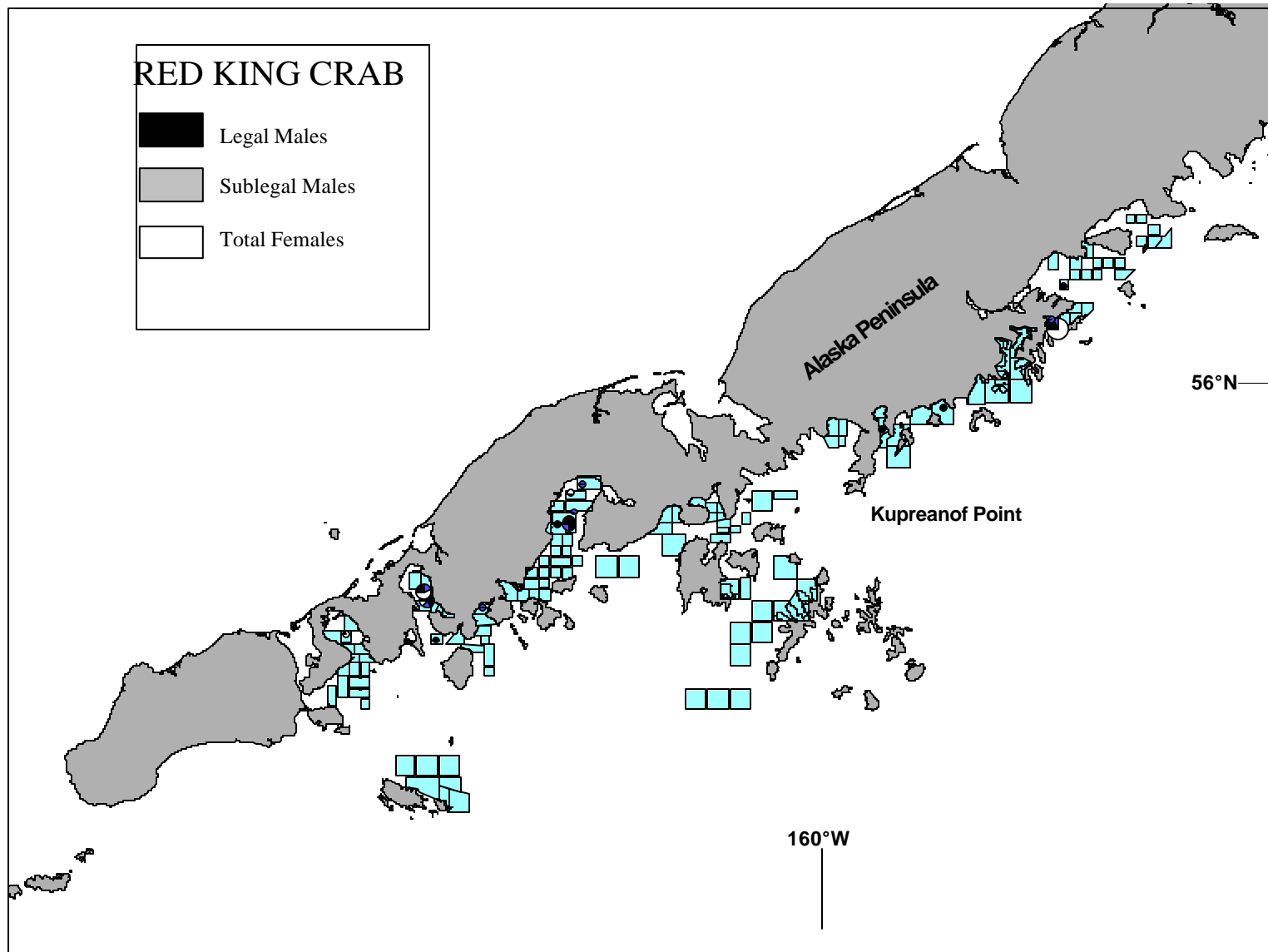


Figure 3-2. Survey stations towed and number of red king crabs per kilometer towed during the 2001 Alaska Peninsula trawl survey.

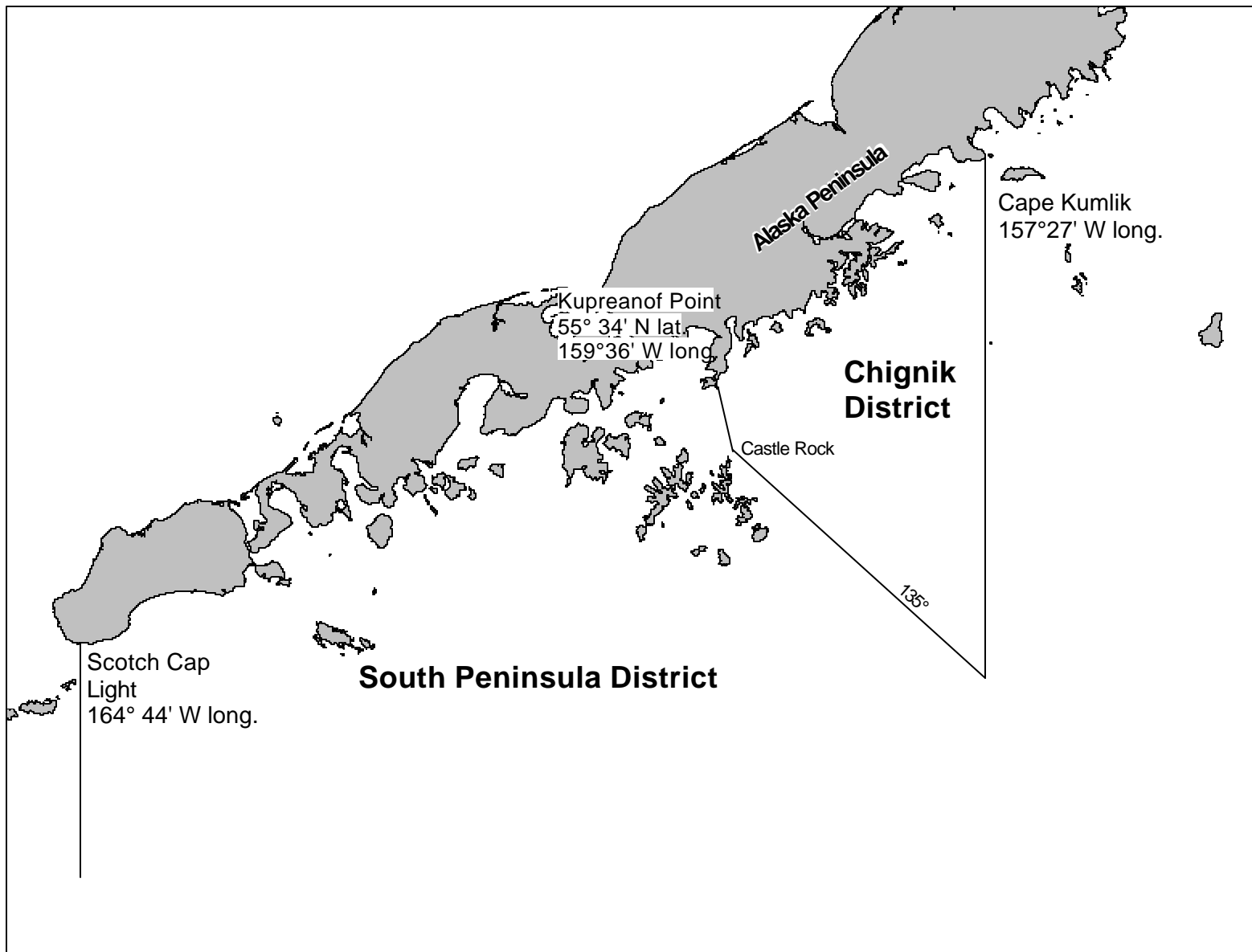


Figure 3-3. Chignik and South Peninsula Districts of Tanner crab Registration Area J.

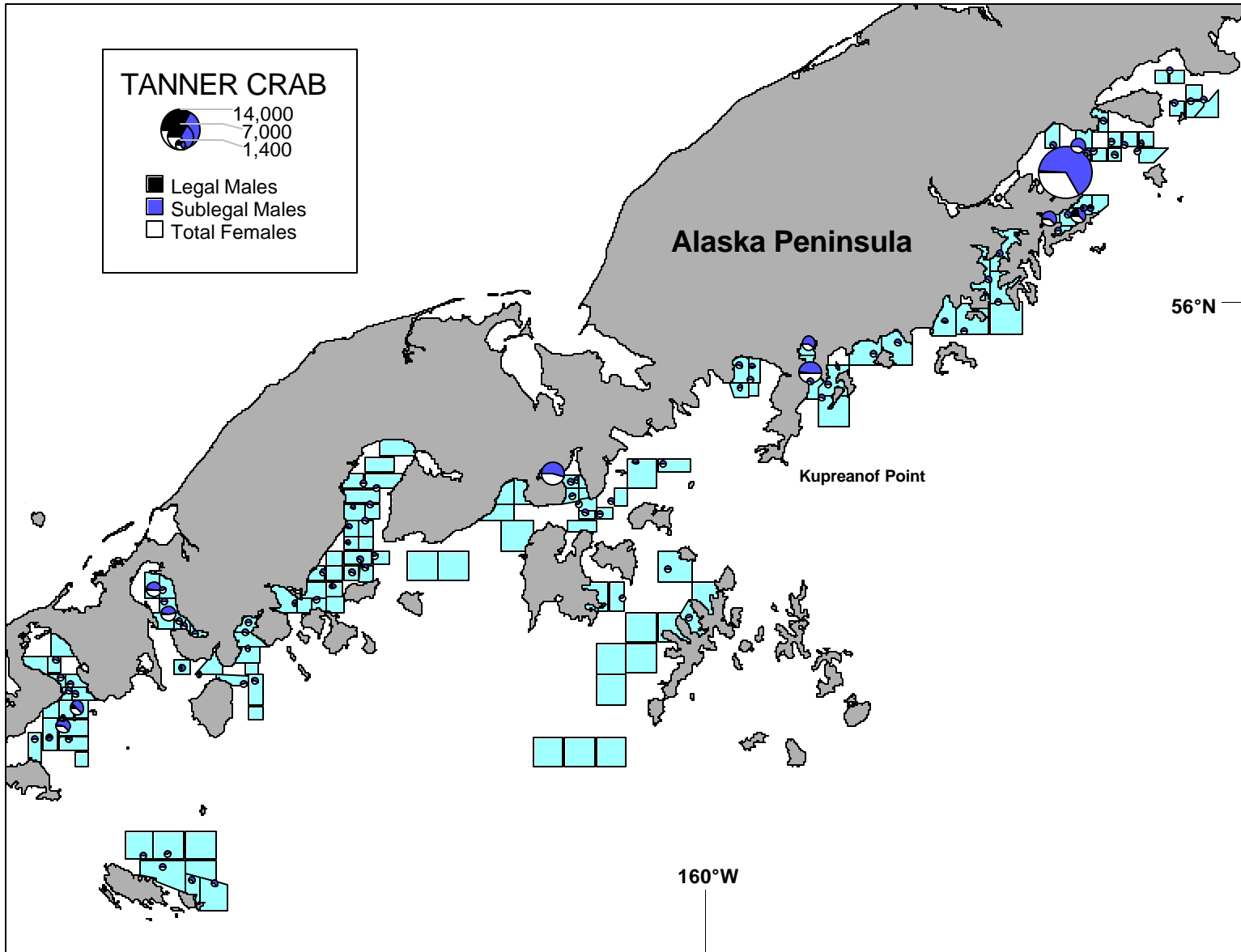


Figure 3-4. Survey stations towed and the number of Tanner crabs per kilometer towed from the 2001 Alaska Peninsula trawl survey.

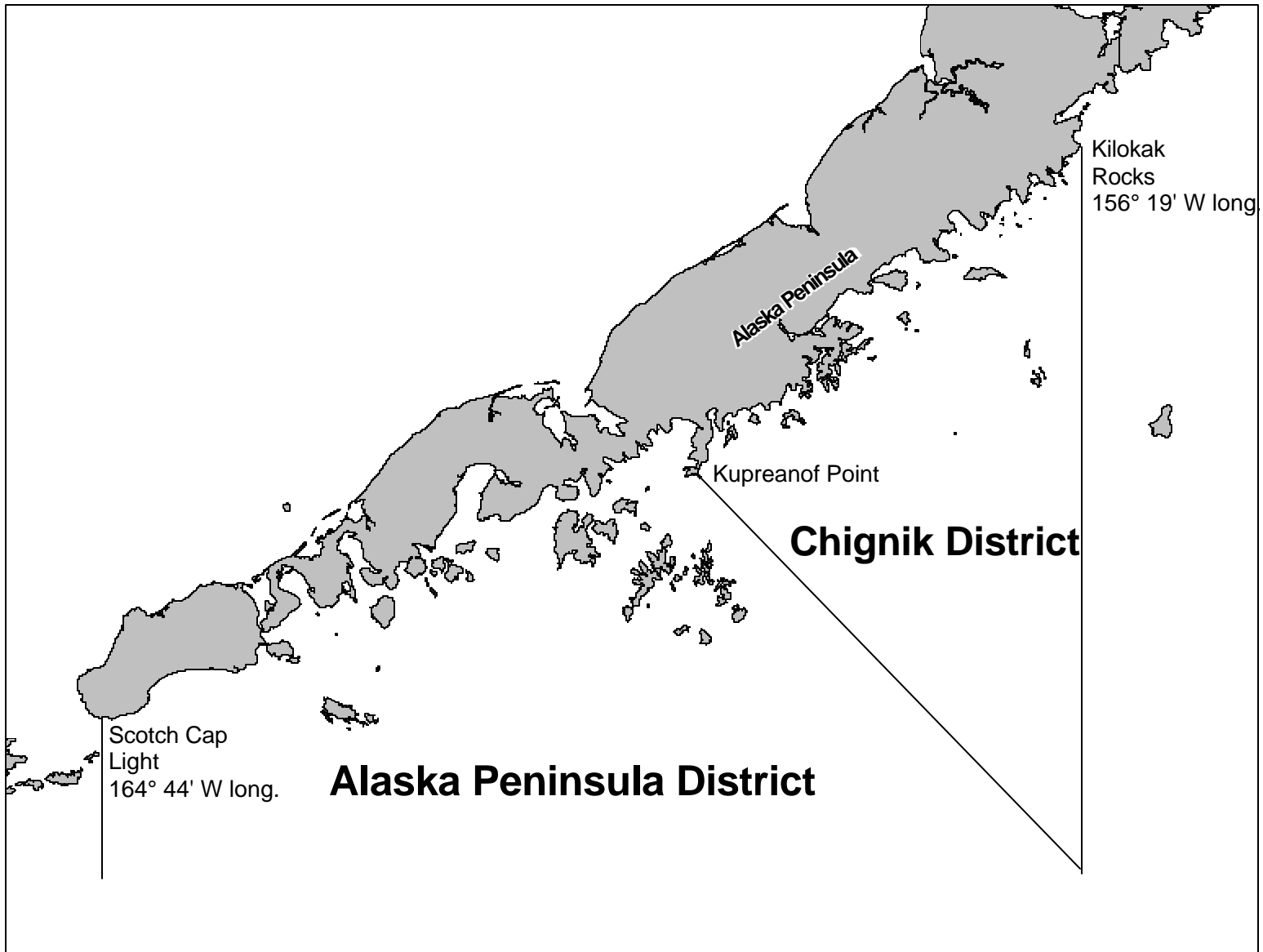


Figure 3-5. Alaska Peninsula and Chignik Districts of Dungeness crab Registration Area J.

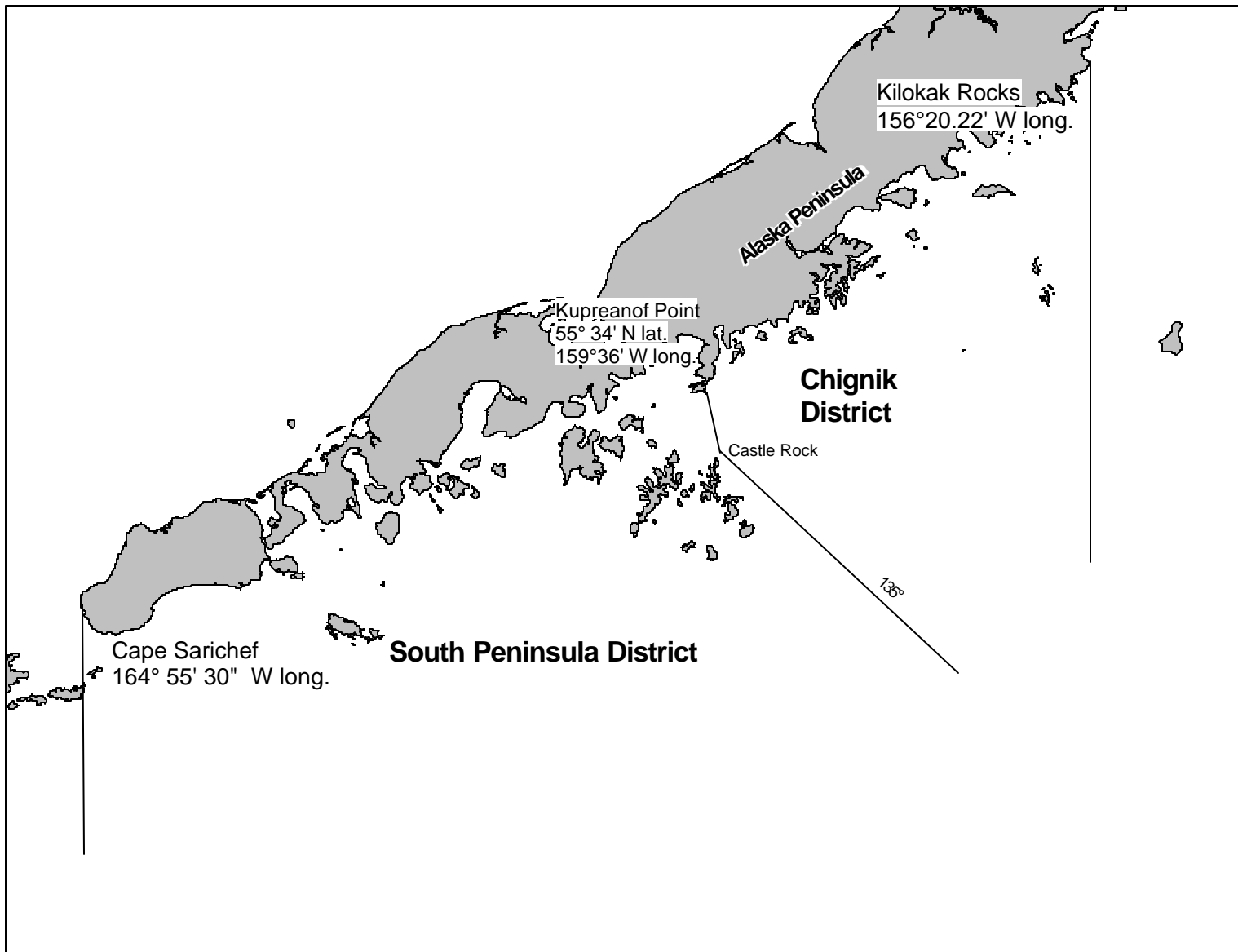


Figure 3-6. Chignik and South Peninsula Districts of shrimp Registration Area J.