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Annual Management Report for Shellfish Fisheries in the Kodiak, Chignik, and South Peninsula Districts, 2022

by

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and

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November 2023

Alaska Department of Fish and Game **Divisions of Sport Fish and Commercial Fisheries**

Symbols and Abbreviations

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Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	pound
s	
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat or long
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	e
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	E
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	′
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	″
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

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ABSTRACT

This management report summarizes 2022 shellfish fisheries in the Kodiak, Chignik, and South Peninsula Districts of Registration Area J. During 2022, commercial fisheries occurred for Tanner crab *Chionoecetes bairdi*, Dungeness crab *Metacarcinus magister*, giant Pacific octopus *Enteroctopus dofleini*, red sea cucumber *Apostichopus californicus*, green sea urchin *Strongylocentrotus droebachiensis*, and weathervane scallop *Patinopecten caurinus*.

Keywords: Tanner crab, *Chionoecetes bairdi*, Dungeness crab, *Metacarcinus magister*, red sea cucumber, *Apostichopus californicus*, weathervane scallop, *Patinopecten caurinus,* red king crab, *Paralithodes camtschaticus*, golden king crab, *Lithodes aequispinus,* Pacific octopus, *Enteroctopus dofleini,* Pandalid shrimp, *Pandalus, Pandalopsis,* catch per unit effort, CPUE, Exclusive Economic Zone, EEZ, guideline harvest level, GHL, Board of Fisheries, BOF, Kodiak, Chignik, South Peninsula

INTRODUCTION

This management report provides information on Kodiak, Chignik, and South Peninsula commercial shellfish fisheries including fishery-specific harvest, effort, and exvessel value. Kodiak, Chignik, and South Peninsula shellfish fisheries occur in the Gulf of Alaska south of Cape Douglas, west of long 149°W, and east of Scotch Cap Light (Figure 1). Most shellfish fisheries are managed by the Alaska Department of Fish and Game (ADF&G) in both state waters (0–3 nmi) and the U.S. Exclusive Economic Zone (EEZ; 3–200 nmi), except for giant Pacific octopus *Enteroctopus dofleini*, which is managed by ADF&G only in state waters, and weathervane scallops *Patinopecten caurinus*, which is jointly managed by state and federal governments according to a federal fisheries management plan. Tanner crab *Chionoecetes bairdi*, Dungeness crab *Metacarcinus magister*, Pandalid shrimp *Pandalus* and *Pandalopsis*, and miscellaneous invertebrate fisheries are managed by district (e.g., Kodiak, Chignik, and South Peninsula Districts), whereas red king crab *Paralithodes camtschaticus* and weathervane scallop are managed by area (e.g., Kodiak and Alaska Peninsula Areas; Figure 2).

Historically, Kodiak, Chignik, and South Peninsula waters supported substantial red king crab, Tanner crab, and Pandalid shrimp fisheries (for more details on historical commercial shellfish fisheries, see Spalinger 2017). Since the early 1980s, red king crab stocks have not supported commercial fisheries, Tanner crab stocks have supported modest commercial fisheries with periodic closures, and Pandalid shrimp stocks have supported only negligible harvests. In recent years, most commercial shellfish effort has been directed toward Tanner crab, Dungeness crab, red sea cucumber *Apostichopus californicus*, weathervane scallops, and giant Pacific octopus.

ADF&G issues emergency orders to enact regulatory action to open, close, and modify fishing periods, areas, and legal gear. In total, 16 emergency orders were issued during 2022/23 for Kodiak, Chignik, and South Peninsula shellfish fisheries (Table 1).

TANNER CRAB

BACKGROUND

Tanner crab fisheries developed in the 1970s and were managed by ADF&G until December 1978 when a federal fishery management plan (FMP) was adopted. Under the FMP, ADF&G managed Tanner crab in waters 0–3 nmi offshore and the federal government managed Tanner crab in waters 3–200 nmi offshore. Joint jurisdiction occurred until 1987 when the state again assumed full management authority.

In the early 1980s, Tanner crab abundance and commercial harvests began a decline that continued through the 1990s. In response, ADF&G developed new harvest strategies with conservative management measures aimed at preventing overharvest and localized depletion. In 1999, the Alaska Board of Fisheries (BOF) adopted 5 AAC 35.507 *Kodiak, Chignik, and South Peninsula Districts C. bairdi Tanner crab harvest strategies*, which currently guides the fisheries.

The harvest strategies in effect during 2022 Tanner crab fisheries specify biological and management thresholds. The biological threshold requires mature male abundance within the district, or sections within a district, to meet or exceed 50% of the long-term average abundance of mature male crab. The management threshold requires guideline harvest levels (GHLs) to meet section and/or district minimum GHL thresholds. If mature male abundance and minimum GHL thresholds are met, a commercial fishery may occur in that management unit (Table 2).

In March 2022, the BOF adopted revisions to the harvest strategies, pot limits, escape mesh size requirement, and regulatory season closure dates that will guide fisheries beginning with the 2023 season[1]; the revised harvest strategies will update the abundance assessment time series and apply a new harvest control rule that incorporates both mature male and mature female abundance when determining maximum legal male exploitation rates. A full description of the analytical approach, results, and department recommendations can be found in Spalinger et al. 2021.

Tanner crab stock information is collected annually during an ADF&G bottom trawl survey on the R/V *Resolution*. In addition to providing Tanner crab stock abundance information, trawl survey results and information on other shellfish and groundfish from Kodiak, Chignik, and South Peninsula waters are published annually by ADF&G (Spalinger and Knutson 2022).

Biological data from Tanner crab, including carapace width (CW), average weight, and shell condition, are collected on survey and during the fishery by the Kodiak dockside sampling program. Shell condition is a measure of relative age differences among mature crab assessed by evaluating characteristics of shell wear such as scratches, discoloration, and the accumulation of epibionts[2]. Biological fishery data and confidential skipper interviews are utilized for inseason management and in conjunction with ADF&G trawl survey data when determining fishery openings and GHLs.

The Kodiak District for Tanner crab is subdivided into 8 sections: Northeast, Eastside, Southeast, Southwest, Semidi Island Overlap, Westside, North Mainland, and South Mainland (5 AAC 35.505(a)(1–8); Figure 3). The South Peninsula District is divided into 2 sections, Eastern and Western, by long 162°W (5 AAC 35.505(b)(1 and 2); Figure 4). The Chignik District is managed as a single unit (5 AAC 35.505(f); Figure 4).

Tanner crab seasons in the Kodiak, Chignik, and South Peninsula Districts may open on January 15 unless delayed by weather as specified in regulation (5 AAC 35.510(a)(2), (b)(2), and (c)(2)).

KODIAK DISTRICT 2022 TANNER CRAB FISHERY

The 2021 Kodiak District survey estimate of mature male Tanner crab abundance was above the regulatory threshold in the Eastside, Southeast, and Southwest Sections, and calculated section GHLs met the 100,000-pound minimum GHL requirement (Table 2). The 2022 Kodiak District

[1] ADF&G. 2022. 2022–2023 Statewide King and Tanner Crab Commercial Fishing Regulations. Alaska Department of Fish and Game, Juneau.

[2] ADF&G. 2009. Westward Region Chionoecetes Shell Condition Standard. Alaska Department of Fish and Game, Kodiak. (Accessed October 16, 2023). [URL not publicly available as some information is confidential.]

GHL was 1.1 million pounds, meeting the 400,000-pound district minimum GHL; the Eastside Section GHL was 500,000 pounds, the Southeast Section GHL was 400,000 pounds, and the Southwest Section GHL was 200,000 pounds (Tables 3 and 4). The Kodiak District Tanner crab fishery opened January 15; the GHL was fully harvested in 7.5 days.

The Semidi Island Overlap Section (SIOS) opens when either the Southwest Section of the Kodiak District or the Chignik District opens; therefore, the SIOS opened in 2022 to both Kodiak District and Chignik District permit holders (5 AAC 35.507(c)(3)(A)). The SIOS is not surveyed for Tanner crab; therefore, due to a lack of stock status information, no GHL was established for the 2022 season. The section was open to exploratory fishing and was managed inseason based on fishery performance. The SIOS remained open for 75 days until the regulatory closure date of March 31, 2022.

The Kodiak District commercial Tanner crab fishery opened to commercial fishing on January 15, 2022 (Table 1). A total of 88 vessels participated; total harvest, including deadloss and personal use, was 1,252,699 pounds from 128 landings (Table 3). The estimated exvessel value was approximately $10.4 million based on an average price of $8.29 per pound; this was the highest price per pound in the time series (Table 3).

Kodiak dockside staff sampled 92 Tanner crab deliveries, conducted 70 confidential skipper interviews, and collected biological data from 9,113 crab.

Eastside Section

The 2021 survey indicated legal males were distributed throughout the surveyed portions of the Eastside Section and the distribution of sublegal males and mature females did not indicate localized concentrations of nontarget crab. Therefore, the entire Eastside Section was open for fishing with no partial section or inner bay closures; a GHL of 500,000 pounds was established (Table 4).

The section closed to commercial fishing at 5:59 p.m. January 22, resulting in a 7.5-day fishery (Table 1). Fifty-one vessels made 68 landings; the average landing was 7,772 pounds. Total harvest was 528,475 pounds (106% of the GHL) and average harvest was 10,362 pounds per vessel (Table 4). The section catch per unit effort (CPUE) was 35 legal crab per pot which was higher than the 2020 fishery (2020 CPUE = 12). Harvest was well distributed with the largest portion of harvest occurring in Outer Kiliuda (statistical area 525703; Figure 5).

The average CW of Tanner crab sampled from the Eastside Section during the 2022 fishery was 144 mm, the average weight was 2.16 pounds per crab, and 91% of crab were new shell condition. Average CW and weight in 2022 were smaller than the previous Tanner crab season in 2020 (149 mm and 2.38 pounds, respectively). Shell condition indicates that the 2020 and 2022 fisheries were prosecuted on 2 distinct cohorts of crab; very few crab were new shell condition in 2020 because old shell condition was more prominent (81% old shell).

Southeast Section

The 2021 survey indicated legal males were well distributed throughout the surveyed portions of the Southeast Section, and no distinct concentration of females or juvenile males were identified that warranted preseason inner bay or subsection closures; therefore, the entire Southeast Section was open for fishing, and a GHL of 400,000 pounds was established (Table 4).

The section closed to commercial fishing at 5:59 p.m. January 19, resulting in a 4.5-day fishery. Twenty-eight vessels made 30 landings; the average landing was 13,137 pounds. Total harvest was 394,117 pounds (99% of the GHL) with an average harvest of 14,076 pounds per vessel (Table 4). The section CPUE was 45 legal crab per pot, which was higher than the 2020 fishery (2020 CPUE = 13). Harvest in the section was concentrated nearshore, south of Sitkalidak Island (statistical area 535631; Figure 5).

The average CW of Tanner crab sampled from the Southeast Section during the 2022 fishery was 145 mm, the average weight was 2.21 pounds per crab, and 84% of crab were new shell condition. Average CW and weight in 2022 were slightly smaller than the previous Tanner crab season in 2020 (146 mm and 2.27 pounds, respectively). Shell condition indicates that the 2020 and 2022 fisheries were prosecuted on 2 distinct cohorts of crab, because the majority of 2020 crab were old shell condition (66% old shell).

Southwest Section

The 2021 survey indicated legal males were well distributed throughout the surveyed portions of the Southwest Section, and no distinct concentration of females or juvenile males were identified that warranted preseason inner bay or subsection closures; therefore, the entire Southwest Section was open for fishing, and a GHL of 200,000 pounds was established (Table 4).

The section closed at 5:59 p.m. January 22, resulting in a 7.5-day fishery. Thirteen vessels made 13 landings; total harvest was 217,459 pounds (109% of the GHL) with an average harvest of 16,728 pounds per vessel (Table 4). The section CPUE was 30 legal crab per pot which was lower than the 2018 fishery (2018 CPUE = 35). Most of the harvest in the section occurred in Alitak Bay (statistical area 5456321; Figure 5).

The average CW of Tanner crab sampled from the Southwest Section during the 2022 fishery was 147 mm, the average weight was 2.33 pounds per crab, and 70% of crab were new shell condition. In 2022, average CW was slightly larger and average weight was heavier than the previous Tanner crab season in 2018 (146 mm and 2.26 pounds, respectively). Shell condition and duration between fisheries indicate that the 2018 and 2022 fisheries were prosecuted on 2 distinct cohorts of crab; the majority of 2018 crab were new shell condition (86% new shell).

Semidi Island Overlap Section

The SIOS opened in conjunction with the other sections of the Kodiak District; however, the first fishing effort began after the closure of the Eastside Section of the Kodiak District. New vessels continued to enter the fishery throughout the season, and daylight fishing hours remained in place. The entire section remained open until the regulatory closure on March 31, resulting in a 75-day fishery.

Seven vessels made 17 landings in the SIOS; 2 vessels fished the SIOS using a Chignik District permit and 5 vessels fished in the SIOS using a Kodiak District permit. The average landing was 2,921 pounds. Total harvest was 112,648 pounds with an average harvest of 16,093 pounds per vessel (Table 4). CPUE was 18 legal crab per pot, which was the highest documented CPUE for the SIOS (Table 4). Harvest in the section was concentrated nearshore in Chiginagak and Nakalilok Bays (statistical area 565633); all other harvest locations are confidential (Figure 6). The 2022 harvest and participation were the highest on record; the previous record harvest of 28,195 occurred in 2012 (Table 4).

The average CW of Tanner crab sampled from the SIOS Section during the 2022 fishery was 147 mm, the average weight was 2.38 pounds per crab, and 48% of crab were new shell condition; the majority of SIOS crab were old or very old shell condition (49% and 3%, respectively). In 2022, average CW was larger and average weight was heavier than the previous Tanner crab season in 2018 (143 mm and 2.10 pounds, respectively).

CHIGNIK DISTRICT 2022 TANNER CRAB FISHERY

The 2021 Chignik District survey estimate of mature male Tanner crab abundance was above the regulatory threshold and the calculated district GHL met the 200,000-pound minimum GHL requirement (Table 2). Legal males were well distributed throughout the surveyed portions of the Chignik District, and no distinct concentration of females or juvenile males were identified that warranted preseason inner bay or subsection closures; therefore, the entire Chignik District opened January 15. This was the first commercial Tanner crab fishery in the Chignik District since 2012 (Table 5). The district closed to commercial fishing at 5:59 p.m. February 1, resulting in a 17.5-day fishery.

Fourteen vessels made 37 landings in the Chignik District; the average landing was 5,146 pounds (Table 5). Total harvest was 190,416 pounds (95% of the GHL) with an average harvest of 16,093 pounds per vessel (Table 5). The 2022 Chignik District CPUE was 14 legal crab per pot, which is the lowest CPUE in the most recent 4 years a fishery has occurred (Table 5). Harvest was concentrated nearshore with the majority of harvest occurring near Ivanof Bay (statistical area 595531; Figure 7).

Kodiak dockside staff sampled 6 Tanner crab deliveries, conducted 6 confidential skipper interviews, and collected biological data from 629 crab. The average CW of Tanner crab sampled from the Chignik District during the 2022 fishery was 142 mm, the average weight was 2.07 pounds per crab, and 89% of crab were new shell condition.

SOUTH PENINSULA DISTRICT 2022 TANNER CRAB FISHERY

The 2021 South Peninsula District survey estimate of mature male Tanner crab abundance was above the regulatory threshold in the Eastern and Western Sections, and calculated section GHLs met the 200,000-pound minimum GHL requirement (Table 2). The 2022 South Peninsula District GHL was 500,000 pounds; the Eastern Section GHL was 200,000 pounds, and the Western Section GHL was 300,000 pounds (Tables 6 and 7). The South Peninsula District Tanner crab fishery opened January 15. This was the first commercial Tanner crab fishery in the South Peninsula District since 2013 (Tables 6 and 7). The district GHL was fully harvested in 9.5 days.

Kodiak dockside staff sampled 34 Tanner crab deliveries, conducted 17 confidential skipper interviews, and collected biological data from 2,757 crab.

Eastern Section

During the 2021 survey, the majority of legal males were found in Pavlof Bay and near the Dolgoi Islands. Although the low abundance of legal males in the Shumagin Islands was unusual, the legal male crab in Pavlof Bay and Dolgoi Islands were well distributed and no distinct concentration of females or juvenile males were identified to warrant preseason inner bay or subsection closures; therefore, the entire Eastern Section was open for fishing, and a GHL of 200,000 pounds was established (Table 7).

The section closed to commercial fishing at 2:00 p.m. January 24, resulting in a 9-day fishery. Eighteen vessels made 31 landings; the average landing was 6,646 pounds. Total harvest was 206,040 pounds (103% of the GHL) with an average harvest of 11,447 pounds per vessel (Table 7). The section CPUE was 32 legal crab per pot which was lower than the most recent fishery (2013 CPUE = 39). Harvest in the section was concentrated in Pavlof Bay and near the Dolgoi Islands (statistical area 615508; Figure 8).

The average CW of sampled Tanner crab from the Eastern Section during the 2022 fishery was 144 mm, the average weight was 2.11 pounds per crab, and 73% of crab were new shell condition.

Western Section

The 2021 survey found most of the legal male abundance in Morzhovoi Bay, which is not unusual for the Western Section. Legal males were well distributed throughout Morzhovoi Bay, and no distinct concentration of females or juvenile males were identified that warranted preseason inner bay or subsection closures; therefore, the entire Western Section was open for fishing, and a GHL of 300,000 pounds was established (Table 7).

The section to commercial fishing closed at 5:59 p.m. January 24, resulting in a 9.5-day fishery. Twenty-seven vessels made 58 landings; the average landing was 5,274 pounds. Total harvest was 300,631 pounds (100% of the GHL) with an average harvest of 11,134 pounds per vessel (Table 7). The section CPUE was 24 legal crab per pot, which was lower than the most recent fishery (2012 CPUE = 90). Harvest was well distributed with the largest portion of harvest outside Morzhovoi and Ikatan Bays (statistical area 635432; Figure 8).

The average CW of sampled Tanner crab from the Western Section during the 2022 fishery was 143 mm, the average weight was 2.09 pounds per crab, and 84% of crab were new shell condition.

DUNGENESS CRAB

BACKGROUND

Dungeness crab fisheries in the Kodiak, Chignik, and Alaska Peninsula Districts are part of Registration Area J (Figure 2). Prior to 2002, the Chignik District was part of the Alaska Peninsula District, but in 2002, the BOF created a separate Chignik District (Figure 9). There is no stock assessment for Dungeness crab and GHLs are not established. The commercial fishery is managed by regulating size, sex, and season (3-S management). Under 3-S management, only male crab 6.5 inches in carapace width (CW) or larger may be retained during the open fishing season. All 3 districts are open access fisheries but require superexclusive vessel registrations. Historically, there are no pot limits or vessel size restrictions for Dungeness crab fisheries in the Kodiak, Chignik, or Alaska Peninsula Districts. However, in March 2022, the BOF adopted pot limits for the Kodiak and Alaska Peninsula Districts that will be implemented beginning with the 2023 season.

KODIAK DISTRICT 2022 DUNGENESS CRAB FISHERY

The Kodiak District for Dungeness crab is divided north and south at lat 59°49.98′ N on the east side of Kodiak Island (i.e., the southernmost tip of Boot Point) and at lat 57°17.40′ N on the west side of Kodiak Island (i.e., Cape Ikolik; Figure 10). By regulation, the fishery opens May 1 in the northern portion of the district and June 15 in the southern portion of the district. The fishery closes by regulation for the entire district on October 31 (Figure 10). Twenty-one vessels participated in the fishery and the number of registered pots ranged from 200 to 2,000 pots per vessel, with an

average of 658 pots per vessel. Harvest totaled 2,313,335 pounds from 121 landings. Average CPUE was 8 crab per pot (Table 8). Harvest was concentrated south of Tugidak and Sitkinak Islands and in Alitak Bay (statistical areas 545601 and 545632; Figure 11). The estimated exvessel value was approximately $5.8 million based on an average price per pound of $2.49 (Table 8). The 2022 harvest was the 3rd largest since 1990.

Biological data from Dungeness crab, including CW, average weight, and shell condition, were collected through the Kodiak dockside sampling program. In 2022, staff collected biological data from 16 deliveries, sampling 1,303 crab. The average CW of sampled Dungeness crab harvested was 181 mm, average weight was 2.11 pounds, and 93% of crab were new shell condition. The 2022 fishery CW, average weight, and percentage of new shell condition were larger compared to the 2021 season (178 mm, 2.10 pounds, and 88%, respectively).

CHIGNIK DISTRICT 2022 DUNGENESS CRAB FISHERY

The regulatory season for Dungeness crab in the Chignik District is May 1 through October 31. Since inception of the district in 2002, effort and harvest have been sporadic and generally low. Most years, fewer than 3 vessels participate in the fishery, making harvest information confidential (Table 9). In 2022, 4 vessels participated in the fishery and the number of registered pots ranged from 100 to 1,200 pots per vessel, with an average of 590 pots per vessel. Harvest totaled 323,624 pounds from 32 landings; average CPUE was 6 crab per pot (Table 9). The estimated exvessel value was approximately $650,000 based on an average price per pound of $2.01 (Table 9).

There is no dockside sampling program for the Chignik District Dungeness crab fishery; fish ticket data was used to derive the average weight of 2.2 pounds per crab.

ALASKA PENINSULA DISTRICT 2022 DUNGENESS CRAB FISHERY

The regulatory season for Dungeness crab in the Alaska Peninsula District is May 1 through October 31. Nineteen vessels participated in the fishery and the number of registered pots ranged from 50 to 1,500 pots per vessel, with an average of 451 pots per vessel. Harvest totaled 579,910 pounds from 151 landings; average CPUE was 5 crab per pot (Table 10). The majority of harvest occurred in Pavlof Bay (statistical area 615508), Beaver Bay (statistical area 605506), and Morzhovoi Bay (statistical area 635502; Figure 12). The estimated exvessel value was approximately $1.4 million based on an average price per pound of $2.40 (Table 10). The 2022 fishery had the third largest harvest and second largest participation since the Alaska Peninsula District was redefined in 2002 (Table 10). For historical Alaska Peninsula Dungeness harvest prior to the inception of the Chignik District, see Table 11.

There is no dockside sampling program for the Alaska Peninsula District Dungeness fishery; fish ticket data was used to derive the average weight of 2.1 pounds per crab.

WEATHERVANE SCALLOP

BACKGROUND

The weathervane scallop fishery is comanaged by ADF&G and NOAA Fisheries. Most scallop harvest in the Kodiak and Alaska Peninsula Areas occurs in federal waters, although several commercially important scallop beds extend into state waters.

In federal waters, the *Fishery Management Plan for the Scallop Fishery off Alaska* (FMP) is established by the North Pacific Fishery Management Council (NPFMC 2014). The FMP delegates most scallop management to ADF&G, including the authority to set GHLs and crab bycatch limits, open and close scallop fishing seasons, and require onboard observer coverage. Federal management includes establishing overfishing limits and implementing the Scallop License Limitation Program (LLP), which requires a Scallop LLP license for vessels participating in scallop fisheries in federal waters.

In state waters, ADF&G previously managed a vessel-based limited entry program that closely mirrored the federal limited access Scallop LLP program; however, the state's limited entry program expired on December 31, 2013, and scallop fisheries in state waters became open access. In response, the BOF adopted 5 AAC 38.078 *State-Waters Weathervane Scallop Management Plan* in January 2014. Under the management plan, ADF&G is authorized to set a separate state-waters GHL within the same scallop bed if a vessel separately registers for the state-waters fishery. Since inception of the S*tate-Waters Weathervane Scallop Management Plan*, no vessels have registered solely for the state-waters fishery, and separate GHLs have not been set.

Biological data and fishery information are collected through the weathervane scallop observer program, which requires 100% observer coverage for vessels participating in the fishery. Observer data, including scallop size and age composition, scallop discards, and bycatch, are summarized annually in the Stock Assessment and Fishery Evaluation (SAFE) Report for the Scallop Fishery off Alaska (NPFMC 2022).

The regulatory seasons for commercial weathervane scallop fishing extend across 2 calendar years, from July 1 through February 15. Harvest information for weathervane scallops is reported by regulatory season as 2022/23.

ADF&G manages the fishery by registration area or district, and GHLs are established annually for each area/district. Biological fishery data from the onboard observer program are utilized in conjunction with ADF&G dredge survey data when determining GHLs. Areas may close by emergency order prior to the regulatory season closure if GHLs are achieved, fishery performance is low, or crab bycatch is high.

KODIAK AREA 2022/23 WEATHERVANE SCALLOP FISHERY

The Kodiak Area for commercial weathervane scallop fishing is divided into 5 districts, although most effort occurs in the Northeast, Southwest, and Shelikof Districts (5 AAC 34.405(a–e)); Figure 13).

The total 2022/23 GHL for the Kodiak Area was 190,000 pounds of shucked scallop meat divided among the districts as follows: Northeast (40,000 pounds), Shelikof (100,000 pounds), Southeast (15,000 pounds), and Southwest (35,000 pounds); the Semidi Island District is an exploratory area without an established GHL (Table 12). During the 2022/23 season, 2 vessels participated in the Kodiak Area and signed a confidentiality waiver to release harvest data. Total harvest was 174,950 pounds of shucked scallop meat; GHLs were achieved in the Northeast, Shelikof, and Southwest Districts (Tables 12 and 13). State-waters harvest was approximately 10% of the total catch (Table 13).

The GHLs for the 2016/17–2019/20 seasons in the Shelikof District were set at 20,000 pounds (excluding the Shelikof west subsection; statistical areas 545701 and 545733). The GHL was increased to 40,000 pounds in 2020/21 and 80,000 pounds in 2021/22 due to a steady increase in

fishery performance. For the 2022/23 season, the GHL was increased again to 100,000 pounds due to a continued increase in fishery performance and consistent signs of recruitment. During the 2022/2023 season, effort in the Shelikof District primarily occurred from September through November. The Shelikof District closed on November 28, 2022, and total harvest was 102,110 pounds (Table 12).

The GHLs for the 2018/19–2020/21 seasons in the Northeast District were set at 15,000 pounds. The GHL was increased from 15,000 pounds to 30,000 pounds prior to the 2021/22 season and increased to 40,000 pounds prior to the 2022/23 season due to increased fishery performance and consistent signs of recruitment. Effort in the Northeast District occurred from late September through mid-November. The Northeast District closed on November 12, 2022, and total harvest was 40,020 pounds (Table 12).

As a result of shifting the Shelikof west subsection 5,000-pound GHL to the Southwest District, the Southwest District GHL was increased from 30,000 pounds to 35,000 pounds beginning with the 2019/20 season (Table 12). Effort in the Southwest District during the 2022/23 season occurred during July and October, and total harvest was 32,820 pounds (Table 12). The Southwest District closed October 6, 2022.

In March 2018, the BOF opened the Southeast District to commercial weathervane scallop fishing and a 15,000-pound GHL was established. The 2022/23 season was the 5th year that the Southeast District was open. No fishing effort occurred, and the Southeast District closed by regulation on February 15, 2023 (Table 12).

ALASKA PENINSULA AREA 2022/23 WEATHERVANE SCALLOP FISHERY

Weathervane scallop fishing effort in the Alaska Peninsula Area is low relative to other management areas and small GHLs are established for federal waters in the Unimak Bight District and waters between long 160°W and 161°W (Figure 14). The total GHL for the Alaska Peninsula Area was 15,000 pounds of shucked scallop meat, with 7,500 pounds in Unimak Bight and 7,500 pounds in waters between long 160°W and 161°W (Table 12).

Effort occurred in the Unimak Bight District, and total harvest was 7,360 pounds (Tables 12 and 14). No fishing effort occurred in the Alaska Peninsula Area between 160°W and 161°W during the 2022/23 season (Table 12). The Unimak Bight District closed on July 27, 2022, and waters between long 160°W and 161°W closed by regulation on February 15, 2023 (Table 12).

RED SEA CUCUMBER

BACKGROUND

Red sea cucumbers were not commercially harvested in the Kodiak or Chignik Districts until 1991 when processors recruited divers to gather small numbers of sea cucumbers to test marketability. In the spring of 1993, processors enlisted 50 divers to prosecute a commercial fishery (Table 15). As the fishery developed, ADF&G carried out several management measures intended to prevent overharvest, including implementing seasonal closures, setting GHLs, and establishing fishing periods to allow ADF&G opportunity to accurately track harvest and assess inseason fishery performance. Additionally, management sections were established in the Kodiak District to distribute effort and prevent localized depletion (Figure 3).

Kodiak, Chignik, and South Peninsula red sea cucumber fisheries are open access dive gear fisheries. GHLs are established for each district. The Kodiak and South Peninsula District GHLs are further apportioned into sections. Sea cucumbers may only be taken during fishing periods established by emergency order after the regulatory season opening date on September 15 (i.e., the Chignik District) or October 1 (i.e., Kodiak and South Peninsula Districts). Fishing periods vary in length based on inseason assessment of effort, harvest rate, and remaining GHL.

The regulatory seasons for red sea cucumber fishing extend across 2 calendar years, from either September 15 or October 1 through April 30. Harvest information for red sea cucumber is reported by regulatory season as 2022/23.

KODIAK DISTRICT 2022/23 RED SEA CUCUMBER FISHERY

The Kodiak District for sea cucumbers is subdivided into 8 sections: Northeast, Eastside, Southeast, Southwest, Semidi Island, Westside, North Mainland, and South Mainland (5 AAC 35.505(a)(1–8)); Figure 3). The total 2022/23 GHL for the Kodiak District was 120,000 pounds of eviscerated sea cucumbers. The majority of the GHL (100,000 pounds) was apportioned between the Eastside, Southeast, Southwest, and Westside Sections. Exploratory 5,000-pound GHLs were assigned to the Northeast, North Mainland, South Mainland, and Semidi Island Overlap Sections (Table 16).

All 2022/23 red sea cucumber fishery effort and harvest occurred during 2 fishing periods, from October through December (Table 1). Market uncertainty for sea cucumbers greatly reduced harvest and effort in 2022/23; 3 divers made 5 landings (Table 15). Some harvest occurred in the Eastside, Southeast, and Westside Sections; however, GHLs were not achieved in any section, and the fishery closed by regulation on April 30 (Table 16). Harvest data are confidential due to a limited number of processors purchasing sea cucumbers.

Dockside staff collected average eviscerated weight samples from 80% of 2022/23 deliveries. The average weight was 0.40 pounds per eviscerated cucumber, which was below average and the lowest average weight on record (Table 15).

CHIGNIK AND SOUTH PENINSULA DISTRICTS 2022/23 RED SEA CUCUMBER FISHERIES

The Chignik District is managed at the district level, whereas the South Peninsula District is divided into 2 sections, Eastern and Western, by long 162°W (Figure 4). The Chignik District GHL was 15,000 pounds of eviscerated sea cucumbers and the South Peninsula District was 20,000 pounds, with 10,000 pounds in each section (Table 16). No effort occurred in the Chignik and South Peninsula Districts during the 2022/23 season.

SHRIMP

BACKGROUND

The Kodiak, Chignik, and South Peninsula shrimp districts are subdivided into management sections (Figure 15).

Prior to 2015, most sections had established management thresholds called Minimum Acceptable Biomass Indices (MABI). For a commercial fishery to occur in a section with an established threshold, estimated shrimp biomass must meet or exceed the MABI. However, the ADF&G small-mesh trawl survey has not been conducted since 2015; therefore, due to the lack of a biomass

estimate, fishery-dependent CPUE combined with historic biomass estimates were used to establish GHLs between 2015 and 2022. Commercial fishing seasons for shrimp varied by district, section, and gear type.

Effective midseason (September 25, 2022), the BOF repealed district- and gear-specific management plans and established a new fishery strategy guided by a single June 1–February 28 season date for all districts, sections, and gear types. The department was provided commissioner permit authority to establish annual harvest and vessel trip limits, fishing area, gear limits, reporting and biological sampling requirements, and other conditions necessary for conservation or management[3].

Kodiak, Chignik, and South Peninsula Districts are nonexclusive registration areas; pot and trawl gear are legal gear types. The regulatory seasons for shrimp fishing extend across 2 calendar years; therefore, harvest for shrimp is reported by regulatory season as 2022/23. In general, commercial shrimp fishing effort usually occurs in late summer and fall.

KODIAK, CHIGNIK, AND SOUTH PENINSULA DISTRICTS 2022/23 SHRIMP FISHERIES

There was no fishing effort for shrimp in the Kodiak, Chignik, or South Peninsula Districts during the 2022/23 season. Historical shrimp harvest information from the Kodiak, Chignik, and South Peninsula Districts can be found in Spalinger (2017).

GIANT PACIFIC OCTOPUS

BACKGROUND

Giant Pacific octopus are found throughout Alaska waters and are managed by National Marine Fisheries Service as a groundfish species in federal waters (3–200 nmi) and by ADF&G as a shellfish species in state waters (0–3 nmi).

The octopus fisheries in the Kodiak, Chignik, and South Peninsula Districts occur within the miscellaneous shellfish districts of Registration Area J (Figures 1 and 2). Directed fishing inside state waters may only occur under provisions of a commissioner permit. While targeting octopus, vessel operators may not participate in other directed pot gear fisheries such as the state-waters Pacific cod *Gadus macrocephalus* fishery. However, vessel operators participating in other pot gear fisheries may retain octopus as bycatch up to 20% by weight of the target species onboard.

KODIAK, CHIGNIK, AND SOUTH PENINSULA DISTRICTS 2022 OCTOPUS FISHERIES

There was 1 commissioner permit issued for directed harvest of octopus using pot gear in the Kodiak District, and there was no directed effort or harvest of octopus in the Chignik or South Peninsula Districts during 2022.

All other octopus harvested in 2022 were taken as bycatch in other commercial fisheries. Most harvest occurred during state and federal Pacific cod pot gear fisheries. In 2022, octopus harvested totaled 118,087 pounds from state and federal waters combined (Table 17). In state waters, 20

[3] ADF&G. 2022. 2022–2023 Statewide Commercial Fishing Regulations Shrimp, Dungeness Crab and Miscellaneous Shellfish. Alaska Department of Fish and Game, Juneau.

vessels harvested 14,921 pounds (Table 17). Fish ticket information reported an average price of $0.44 per pound for an estimated total exvessel value of $51,958 for state and federal waters combined (Table 17).

KING CRAB

RED KING CRAB

ADF&G closed the Kodiak and Alaska Peninsula Areas commercial red king crab fisheries prior to the start of the 1983/84 season in response to declining fishery CPUE, harvest, and abundance estimates from annual assessment surveys. Red king crab abundance is estimated annually by a trawl survey conducted by ADF&G; however, the red king crab fishery has not reopened since 1982/83. For more information on the history of the Kodiak and Alaska Peninsula red king crab fisheries, regulations, and stock status, see Spalinger (2017) and Spalinger and Knutson (2022).

GOLDEN KING CRAB

Golden king crab have been periodically targeted in the Kodiak and Alaska Peninsula Areas since 1983. ADF&G does not assess the golden king crab stock, and fishing occurs under provisions of a commissioner permit. No commissioner permits were issued to target golden king crab in 2022.

OTHER SHELLFISH

Occasionally, ADF&G receives requests to harvest other miscellaneous shellfish such as urchins, snails, squid, clams, and other crab species in the Kodiak, Chignik, and South Peninsula Districts. Minor harvests of green sea urchins *Strongylocentrotus droebachiensis*, Pacific razor clams *Siliqua patula*, and grooved Tanner crab *Chionoecetes tanneri* have historically occurred.

Generally, fishing for these species occurs conditionally under an ADF&G commissioner permit and by regulations for miscellaneous shellfish found in Chapter 38 of the Alaska Administrative Code. In 2022, a commissioner permit was issued to harvest grooved Tanner crab in the Kodiak and Alaska Peninsula Districts. In 2022/23, a commissioner permit was issued to harvest green sea urchins in the Kodiak District. Harvest data are confidential.

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Spalinger, K., and M. Knutson. 2022. Large-mesh bottom trawl survey of crab and groundfish: Kodiak, Chignik, South Peninsula, and Eastern Aleutian Management Districts, 2021. Alaska Department of Fish and Game, Fishery Management Report No. 22-02, Anchorage.

TABLES

Table 1.–Kodiak, Chignik, and South Peninsula Districts commercial shellfish emergency orders, 2022/23 fisheries.

Emergency order	Effective date	Explanation
4-S-01-22	January 15, 2022	Opened the 2022 commercial Tanner crab fishery in the Kodiak District of Registration Area J.
4-S-02-22	January 15, 2022	Opened the 2022 commercial Tanner crab fisheries in the Chignik and South Peninsula Districts of Registration Area J.
4-S-03-22	January 19, 2022	Closed the 2022 commercial Tanner crab fishery in the Southeast Section of the Kodiak District of Registration Area J.
4-S-04-22	January 22, 2022	Closed the 2022 commercial Tanner crab fisheries in the Eastside and Southwest Sections of the Kodiak District of Registration Area J.
4-S-05-22	January 24, 2022	Closed the 2022 commercial Tanner crab fishery in the Western Section of the South Peninsula District of Registration Area J.
4-S-06-22	January 24, 2022	Closed the 2022 commercial Tanner crab fishery in the Eastern Section of the South Peninsula District of Registration Area J.
4-S-07-22	February 1, 2022	Closed the 2022 commercial Tanner crab fishery in the Chignik District of Registration Area J.
4-S-12-22	July 27, 2022	Closed the fishing season for weathervane scallops in waters of the Unimak Bight of the Alaska Peninsula Registration Area for the remainder of the 2022/23 season.
4-S-13-22	October 1, 2022	Established the first fishing period for the 2022/23 red sea cucumber season in the Kodaik District of Registration Area J.
4-S-15-22	October 4, 2022	Extended the first commercial fishing period for the 2022/23 sea cucumber season in the Kodiak District of Registration Area J.
4-S-16-22	October 6, 2022	Closed the fishing season for weathervane scallops in waters of the Southwest District of the Kodiak Registration Area for the remainder of the 2022/23 season.
4-S-17-22	November 7, 2022	Established the second fishing period for the 2022/23 red sea cucumber season in the Kodaik District of Registration Area J.
4-S-18-22	November 12, 2022	Closed the fishing season for weathervane scallops in waters of the Northeast District of the Kodiak Registration Area for the remainder of the 2022/23 season.
4-S-19-22	November 17, 2022	Extended the second commercial fishing period for the 2022/23 sea cucumber season in the Kodiak District of Registration Area J.

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Table 1.– Page 2 of 2.

Emergency order	Effective date	Explanation
4-S-20-22	November 28, 2022	Closed the fishing season for weathervane scallops in waters of the Shelikof District of the Kodiak Registration Area for the remainder of the 2022/23 season.
4-S-21-22	November 30, 2022	Extended the second commercial fishing period for the 2022/23 sea cucumber season in the Kodiak District of Registration Area J.

Note: Omitted emergency orders (e.g., 4-S-08-22) enacted for management areas outside of Kodiak, Chignik, and South Peninsula Districts.

Table 2.–Tanner crab regulatory harvest strategies mature male abundance threshold levels in number of crab; estimates of number of mature male crab by survey year from bottom trawl surveys, 2017–2021; and respective fishery guideline harvest levels (GHLs), 2018–2022.

	Abundance threshold	Number of mature males (CW > 114 mm)				
	(number of mature males CW >114 mm)	2017	2018	2019	2020	2021
Kodiak District						
Northeast Section	1,123,000	411,803	530,533	964,771	647,927	279,902
Eastside Section	1,552,000	5,164,475[a]	6,207,284	3,377,273[a]	7,266,442[a]	22,730,216[a]
Southeast Section	733,000	667,890	1,945,812	3,863,863[a]	4,966,423[a]	6,117,900[a]
Southwest Section	1,236,000	1,581,401[a]	829,358	454,256	1,393,340[a]	4,240,951[a]
Westside Section	764,000	308,643	637,127	387,567	456,525	220,316
North Mainland Section	1,469,000	313,323	613,235	592,594	316,984	not surveyed
Chignik District	973,000	319,501	777,204	1,149,541[a]	2,217,566[a]	4,915,284[a]
South Peninsula District						
Eastern Section	2,015,000	436,361	421,580	722,459	1,875,762	4,270,494[a]
Western Section	1,250,000	733,065	899,185	1,213,950	3,058,249[a]	9,426,450[a]
	Minimum GHL	GHL for following Tanner season (pounds)				
	(pounds)	2018	2019	2020	2021	2022
Kodiak District						
Northeast Section	100,000	below threshold	below threshold	below threshold	below threshold	below threshold
Eastside Section	100,000	260,000	500,000	300,000	–[b]	500,000
Southeast Section	100,000	below threshold	115,000	100,000	–[c]	400,000
Southwest Section	100,000	140,000	below threshold	below threshold	–[c]	200,000
Westside Section	100,000	below threshold	below threshold	below threshold	below threshold	below threshold
North Mainland Section	100,000	below threshold	below threshold	below threshold	below threshold	–[d]
Chignik District	200,000	below threshold	below threshold	–[b]	–[b]	200,000
South Peninsula District						
Eastern Section	200,000	below threshold	below threshold	below threshold	below threshold	200,000
Western Section	200,000	below threshold	below threshold	below threshold	–[b]	300,000

Notes: At least 2 sections within the Kodiak District must meet mature male abundance and minimum GHL thresholds and provide a district total GHL of at least 400,00 pounds before the fishery can open. CW = carapace width.

[a] Above mature male harvest strategy threshold.

[b] The maximum calculated fishery GHL did not meet minimum GHL requirements.

[c] GHL requirements were met but, due to uncertainty in survey estimates and conservation concerns, the fishery was not opened.

[d] Not surveyed; last available data was below threshold.

Table 3.–Kodiak District commercial Tanner crab guideline harvest level (GHL), effort, harvest, average weight, and value, 1967–2022.

Year	GHL	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
		Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
1967	NA	NA	83	NA	110,961	NA	1,337	NA	NA	$0.07	NA
1968	NA	NA	817	NA	2,560,687	NA	3,134	NA	NA	$0.10	NA
1969	NA	85	955	NA	6,827,312	72,748	7,149	43	NA	$0.11	NA
1969/70	NA	67	833	3,237,244	8,416,782	78,266	10,104	42	2.6	$0.11	NA
1970/71	NA	82	453	2,686,067	6,744,163	60,967	14,888	44	2.5	$0.11	NA
1971/72	NA	46	505	3,878,618	9,475,902	65,907	18,764	59	2.4	$0.13	NA
1972/73	NA	105	1,466	13,609,688	30,699,777	188,158	20,941	72	2.3	$0.17	NA
1973/74	NA	123	1,741	11,857,573	29,820,899	217,523	17,129	55	2.5	$0.20	NA
1974/75	NA	74	471	5,459,940	13,649,966	73,826	28,981	74	2.5	$0.17	NA
1975/76	NA	104	1,168	10,748,958	27,336,909	199,304	23,405	54	2.5	$0.20	NA
1976/77	NA	102	998	7,830,727	20,720,079	164,213	20,762	48	2.6	$0.33	NA
1977	NA	148	1,483	12,401,243	33,281,472	251,621	22,442	49	2.6	$0.43	NA
1978	NA	218	1,225	10,702,829	29,173,807	275,455	23,815	38	2.7	$0.55	NA
1979	NA	211	1,385	6,813,128	18,623,875	282,946	13,447	24	2.7	$0.55	NA
1980	NA	188	771	4,398,631	11,748,629	174,351	15,238	25	2.7	$0.65	NA
1982	NA	221	950	5,413,467	13,756,159	230,403	14,480	24	2.5	$1.65	NA
1983	NA	348	1,439	7,744,812	18,927,061	377,562	13,153	21	2.4	$1.25	NA
1984	NA	303	1,229	5,891,968	14,478,066	303,764	11,780	19	2.5	$1.21	NA
1985	NA	216	710	4,540,114	11,947,696	176,215	16,828	26	2.6	$1.54	$18,399,452
1986	NA	233	602	3,451,322	8,981,761	159,973	14,920	22	2.6	$1.84	$16,526,440
1987	NA	190	506	1,832,962	4,839,446	111,198	9,564	16	2.6	$2.46	$11,905,037
1988	NA	178	560	1,648,064	3,959,504	103,391	7,071	16	2.4	$2.41	$9,542,405
1989	NA	171	566	2,096,540	5,185,563	86,056	9,162	24	2.5	$3.06	$15,867,823
1990	NA	232	547	1,437,935	3,446,937	96,956	6,302	15	2.4	$2.38	$8,203,710
1991	NA	135	445	764,357	1,917,713	54,110	4,309	14	2.5	$1.67	$3,202,581
1992	NA	143	434	982,391	2,400,213	47,384	5,530	21	2.4	$2.27	$5,448,484
1993	NA	140	353	518,982	1,318,446	43,528	3,735	12	2.5	$2.09	$2,755,552
1994	NA	130	379	511,131	1,253,462	41,587	3,307	12	2.5	$2.55	$3,196,328

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Table 3.–Page 2 of 2.

Season	GHL	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
		Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
1995–2000						No commercial fishery					
2001	500,000	145	192	193,138	510,407	7,233	2,658	27	2.6	$2.30	$1,173,936
2002	500,000	181	279	146,655	361,166	10,446	1,294	14	2.5	$2.20	$794,565
2003	510,000	72	276	215,924	511,324	11,108	1,853	19	2.4	$2.48	$1,268,084
2004	795,000	66	252	254,960	566,218	15,550	2,247	16	2.2	$2.45	$1,387,234
2005	1,750,000	76	291	779,041	1,806,416	21,429	6,338	36	2.3	$1.73	$3,125,100
2006	2,100,000	68	249	890,925	2,123,931	21,962	8,530	41	2.4	$1.53	$3,249,614
2007	800,000	50	96	318,815	765,092	7,834	7,970	41	2.4	$1.84	$1,407,769
2008	500,000	33	64	172,230	425,353	5,490	6,646	31	2.5	$1.98	$842,199
2009	400,000	31	48	148,882	359,056	5,835	7,480	26	2.4	$1.80	$646,301
2010	700,000	52	84	294,569	650,315	8,417	7,742	35	2.2	$1.58	$1,027,498
2011	1,490,000	80	131	638,959	1,537,384	11,213	11,736	57	2.4	$3.04	$4,673,647
2012	950,000	64	93	436,133	1,078,106	10,460	11,593	42	2.5	$3.00	$3,234,318
2013	660,000	59	115	263,213	658,194	13,084	5,723	20	2.5	$2.70	$1,777,124
2014–2017						No commercial fishery					
2018	400,000	56	65	186,647	431,991	8,120	6,646	23	2.3	$4.52	$1,952,599
2019	615,000	82	119	262,412	620,726	15,035	5,216	17	2.4	$4.40	$2,731,194
2020	400,000	49	114	171,681	400,990	13,850	3,517	12	2.3	$4.25	$1,704,208
2021						No commercial fishery					
2022	1,100,000	88	128	566,760	1,252,699	16,781	9,787	34	2.2	$8.29	$10,384,874

Notes: NA = not available; GHL = guideline harvest level (pounds); CPUE = legal crab per pot lift.

[a] Includes deadloss and personal use.

[b] Pounds per crab.

Table 4.–Kodiak District commercial Tanner crab guideline harvest levels (GHLs), effort, and harvest by section, 2010–2022.

Season	Section[a]	GHL	Vessels[b]	Landings[c]	Pounds	Pots lifted	CPUE
2010	Northeast	100,000	23	37	80,133	1,192	31
	Eastside	500,000	30	37	469,807	6,287	34
	Southeast	100,000	7	10	100,375	938	48
	Total	700,000	52	84	650,315	8,417	35
2011	Northeast	100,000	16	33	130,317	985	55
	Eastside	1,000,000	52	67	983,028	6,976	58
	Southeast	240,000	16	15	229,781	1,501	62
	Southwest	150,000	10	13	179,680	1,264	64
	Semidi	NA	6	6	14,578	487	13
	Total	1,490,000	80	131	1,537,384	11,213	57
2012	Eastside	550,000	39	50	618,543	5,159	48
	Southeast	300,000	23	29	321,031	3,337	39
	Southwest	100,000	5	8	110,336	934	50
	Semidi	NA	5	6	28,195	1,030	12
	Total	950,000	64	93	1,078,106	10,460	42
2013	Eastside	520,000	47	94	535,653	10,150	21
	Southeast	140,000	18	21	122,541	2,934	17
	Total	660,000	59	115	658,194	13,084	20
2014–2017				No commercial fishery			
2018	Eastside	260,000	43	48	272,288	5,382	21
	Southwest	140,000	12	12	150,516	1,921	35
	Semidi	NA	3	5	9,186	4,400	5
	Total	400,000	56	65	431,991	8,120	23
2019	Eastside	500,000	70	98	506,119	12,414	17
	Southeast	115,000	14	21	114,607	2,621	19
	Total	615,000	82	119	620,726	15,035	17
2020	Eastside	300,000	41	90	301,141	10,464	12
	Southeast	100,000	10	24	99,849	3,386	13
	Total	400,000	49	114	400,990	13,850	12
2021				No commercial fishery			
2022	Eastside	500,000	51	68	528,475	7,032	35
	Southeast	400,000	28	30	394,117	3,951	45
	Southwest	200,000	13	13	217,459	3,050	30
	Semidi	NA	7	17	112,648	2,748	18
	Total	1,100,000	88	128	1,252,699	16,781	34

Notes: NA = not applicable; GHL = guideline harvest level (pounds); CPUE = legal crab per pot lift.

[a] The Semidi Island Overlap Section (abbreviated Semidi) does not have a GHL.

[b] Totals unique vessels; several vessels participated in multiple sections.

[c] Some landings include multiple sections.

Table 5.–Chignik District commercial Tanner crab guideline harvest level (GHL), effort, harvest, average weight, and value, 1968–2022.

Year	GHL	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
		Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
1968	NA	NA	NA	NA	21,100	NA	NA	NA	NA	NA	NA
1969	NA	NA	NA	NA	38,100	NA	NA	NA	NA	NA	NA
1969/70	NA	NA	NA	NA	2,800	NA	NA	NA	NA	NA	NA
1970/71	NA	NA	NA	NA	152,300	NA	NA	NA	NA	NA	NA
1971/72	NA	NA	NA	NA	26,500	NA	NA	NA	NA	NA	NA
1972/73	NA	15	56	297,363	747,788	8,080	13,353	51	2.5	$0.16	NA
1973/74	NA	25	115	1,585,560	4,054,873	28,083	35,260	57	2.6	$0.20	NA
1974/75	NA	25	91	1,438,508	3,649,444	22,675	40,104	63	2.5	$0.14	NA
1975/76	NA	35	217	4,434,381	11,201,941	59,377	51,622	75	2.5	$0.19	NA
1976/77	NA	21	141	2,098,226	5,672,919	40,604	40,233	52	2.7	$0.33	NA
1977/78	NA	32	140	1,725,042	4,693,830	38,414	33,527	45	2.8	$0.42	NA
1978/79	NA	39	126	926,253	2,536,105	28,378	20,128	33	2.7	$0.55	NA
1979/80	NA	42	155	2,340,004	3,517,920	54,627	22,696	25	2.6	$0.54	NA
1980/81	NA	24	112	1,534,847	3,653,723	44,022	32,623	35	2.4	$0.64	NA
1981/82	NA	45	174	1,343,500	3,240,476	47,830	18,623	28	2.4	$1.21	NA
1983	NA	48	136	1,432,029	3,497,370	60,210	25,716	24	2.4	$1.12	NA
1984	NA	17	41	269,724	659,043	14,665	16,074	18	2.4	$1.09	NA
1985	NA	15	30	148,232	343,579	14,162	11,453	10	2.3	$1.66	$570,341
1986	NA	7	14	91,008	199,452	8,246	14,247	11	2.2	$2.10	$418,849
1987	NA	9	18	86,732	189,087	6,819	10,505	13	2.2	$2.30	$434,900
1988	NA	5	10	53,958	112,513	4,641	11,251	12	2.1	$2.22	$249,779
1989	NA	6	35	152,250	346,556	10,345	9,902	15	2.3	NA	NA
1990–2004	No commercial fishery										
2005	400,000	22	59	184,706	410,741	7,456	6,962	25	2.2	$1.66	$681,830
2006	200,000	4	7	57,547	143,164	2,037	20,452	28	2.5	$1.20	$171,797
2007–2010	No commercial fishery										
2011	600,000	13	35	276,691	646,531	5,516	18,472	50	2.3	$2.58	$1,668,050
2012	700,000	28	43	296,310	698,043	8,141	16,234	36	2.4	$2.21	$1,542,675

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Table 5.–Page 2 of 2.

Year	GHL	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
		Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
2013–2021					No commercial fishery						
2022	200,000	14	37	93,331	190,416	6,527	5,146	14	2.0	$8.30	$1,580,453

Notes: NA = not available; GHL = guideline harvest level (pounds); CPUE = legal crab per pot lift.

[a] Includes deadloss and personal use.

[b] Pounds per crab.

Table 6.–South Peninsula District commercial Tanner crab guideline harvest level (GHL), effort, harvest, average weight, and value, 1967–2022.

Year	GHL	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
		Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
1967	NA	NA	NA	NA	3,100	NA	NA	NA	NA	NA	NA
1968	NA	NA	155	36,835	110,610	NA	714	NA	3.0	NA	NA
1969	NA	NA	173	221,946	606,178	NA	3,504	NA	2.7	NA	NA
1969/70	NA	NA	NA	NA	2,093,600	NA	NA	NA	NA	NA	NA
1970/71	NA	17	242	813,610	2,140,585	NA	8,845	NA	2.6	$0.10	NA
1971/72	NA	NA	NA	NA	3,618,900	NA	NA	NA	NA	NA	NA
1972/73	NA	36	390	2,213,006	5,615,563	53,573	14,399	41	2.5	NA	NA
1973/74	NA	44	386	3,504,668	8,300,578	58,444	21,504	60	2.4	NA	NA
1974/75	NA	44	131	2,053,530	5,195,800	38,153	39,663	54	2.5	$0.14	NA
1975/76	NA	36	288	2,724,509	6,926,161	52,381	24,049	52	2.5	$0.20	NA
1976/77	NA	28	289	2,524,565	6,773,838	63,143	23,439	40	2.7	$0.32	NA
1977/78	NA	36	374	2,847,948	7,446,270	70,587	19,910	40	2.6	$0.40	NA
1978/79	NA	48	332	3,267,122	8,684,408	82,374	26,158	40	2.7	$0.51	NA
1979/80	NA	61	363	2,581,544	6,961,251	96,989	19,177	27	2.7	$0.54	NA
1980/81	6,000,000	43	268	1,274,539	3,294,106	59,560	12,291	21	2.6	$0.58	NA
1981/82	4,500,000	72	365	1,815,060	4,589,042	81,008	12,573	22	2.5	$1.05	NA
1983	3,000,000	82	230	1,144,096	2,863,798	70,524	12,451	16	2.5	$1.20	NA
1984	2,750,000	61	207	775,472	1,789,883	50,726	8,647	15	2.3	$1.08	NA
1985	1,930,000	52	187	1,085,864	2,514,843	48,416	13,448	22	2.3	$1.36	$3,420,186
1986	3,900,000	75	187	1,589,757	3,781,950	65,078	20,224	24	2.4	$1.72	$6,504,954
1987	2,000,000	55	106	950,300	2,400,784	37,506	22,649	25	2.5	$1.98	$4,753,552
1988	3,431,000	73	148	1,360,367	3,328,799	52,516	22,492	26	2.4	$2.19	$7,290,070
1989	700,000	65	87	433,112	1,055,082	27,958	12,127	15	2.4	$2.66	$2,806,518
1990–2000	No commercial fishery										
2001	375,000	56	69	108,613	260,982	4,510	3,782	24	2.4	$1.46	$381,034
2002–2004	No commercial fishery										
2005	300,000	42	68	134,019	295,741	5,655	4,349	24	2.2	$1.66	$490,930
2006	290,000	15	47	127,061	287,749	3,703	6,122	34	2.3	$1.20	$345,299

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Table 6.–Page 2 of 2.

Year	GHL	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
		Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
2007	200,000	6	15	74,187	165,811	1,959	11,054	38	2.2	$0.79	$130,991
2008	250,000	9	42	102,290	236,241	3,368	5,625	30	2.3	$1.50	$354,362
2009	275,000	12	66	122,441	265,560	5,311	4,024	23	2.2	$1.50	$398,340
2010	500,000	41	72	261,170	583,202	5,779	8,100	45	2.2	$1.39	$810,651
2011	2,300,000	51	134	1,135,050	2,866,041	15,816	21,388	72	2.5	$2.47	$7,079,121
2012	1,620,000	56	117	723,578	1,875,277	10,524	16,028	69	2.6	$2.24	$4,200,620
2013	230,000	24	44	141,912	343,293	3,596	7,802	39	2.4	$2.29	$786,141
2014–2021	No commercial fishery										
2022	500,000	45	89	240,274	506,671	9,086	5,693	26	2.1	$8.30	$4,205,369

Notes: NA = not available; GHL = guideline harvest level (pounds); CPUE = legal crab per pot lift.

[a] Includes deadloss and personal use.

[b] Pounds per crab.

Table 7.– South Peninsula District commercial Tanner crab guideline harvest levels (GHLs), effort, and harvest by section, 2005–2022.

Season	Section	GHL	Vessels[a]	Landings[b]	Pounds	Pots lifted	CPUE
2005	Total[c]	300,000	42	68	295,741	5,655	24
2006	Western	290,000	15	47	287,749	3,703	34
2007	Western	200,000	6	15	165,811	1,959	38
2008	Western	250,000	9	42	236,241	3,368	30
2009	Eastern	275,000	12	66	265,560	5,311	23
2010	Eastern	300,000	27	78	354,512	3,458	44
	Western	200,000	14	30	228,690	2,321	46
	Total	500,000	41	108	583,202	5,779	45
2011	Eastern	900,000	27	92	988,544	8,606	48
	Western	1,400,000	28	80	1,886,199	7,210	100
	Total	2,300,000	51	171	2,874,743	15,816	72
2012	Eastern	380,000	25	61	492,361	4,805	44
	Western	1,240,000	43	74	1,382,916	5,719	90
	Total	1,620,000	56	135	1,875,277	10,524	69
2013	Eastern	230,000	24	55	343,293	3,596	39
2014–2021	No commercial fishery						
2022	Eastern	200,000	18	31	206,040	2,983	32
	Western	300,000	27	58	300,631	6,103	24
	Total	500,000	45	89	506,671	9,086	26

Notes: GHL = guideline harvest level (pounds); CPUE = legal crab per pot lift.

[a] Totals unique vessels; several vessels participated in multiple sections.

[b] Some landings include multiple sections.

[c] Eastern and Western Sections were open with a districtwide GHL.

Table 8.–Kodiak District commercial Dungeness crab effort, harvest, average weight, and value, 1962–2022.

Year	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
	Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
1962	NA	149	NA	1,904,567	NA	12,782	NA	NA	$0.09	$171,411
1963	NA	354	NA	2,487,512	NA	7,026	NA	NA	$0.09	$223,876
1964	29	395	NA	4,254,565	NA	10,537	NA	NA	$0.09	$382,911
1965	25	351	NA	3,311,571	NA	9,434	NA	NA	$0.12	$397,389
1966	12	144	NA	1,416,174	NA	7,976	NA	NA	$0.13	$184,103
1967	18	439	NA	6,663,668	NA	15,179	NA	NA	$0.13	$866,277
1968	43	536	NA	6,829,061	NA	12,741	NA	NA	$0.14	$956,069
1969	29	455	NA	5,834,628	190,967	12,823	NA	NA	$0.16	$933,540
1970	33	318	NA	5,741,438	249,800	18,005	NA	NA	$0.14	$803,801
1971	24	173	515,653	1,445,864	90,913	8,358	6	2.8	$0.18	$260,256
1972	34	316	766,960	2,059,536	140,921	6,517	5	2.7	$0.40	$823,814
1973	42	487	879,484	2,000,526	251,467	4,108	3	2.3	$0.50	$1,000,263
1974	23	172	337,839	750,057	104,062	4,361	3	2.2	$0.47	$352,527
1975	15	154	307,272	639,813	76,411	4,154	4	2.1	$0.61	$390,286
1976	4	6	38,072	87,110	4,410	14,518	9	2.3	$0.15	$13,067
1977	2	16	46,333	113,026	3,805	7,875	12	2.4	$0.30	$33,908
1978	20	173	618,357	1,362,306	93,633	7,875	7	2.2	$0.75	$1,021,730
1979	28	237	595,850	1,311,275	137,951	5,543	4	2.2	$0.75	$983,456
1980	21	197	968,829	2,011,736	107,261	10,212	9	2.1	$0.45	$905,281
1981	50	466	2,614,545	5,566,463	295,138	11,945	9	2.1	$0.70	$3,896,524
1982	111	991	2,004,075	4,546,311	481,542	4,588	4	2.3	$0.75	$3,409,733
1983	103	1,079	2,044,505	4,752,148	503,464	4,408	4	2.3	$1.05	$4,989,755
1984	106	1,163	2,393,974	5,303,052	627,441	4,564	4	2.2	$1.45	$7,689,425
1985	126	1,240	1,786,305	4,146,897	598,027	3,344	3	2.3	$1.48	$6,137,408
1986	82	577	441,007	967,423	199,356	1,667	2	2.2	$1.21	$1,170,582
1987	45	379	747,193	1,450,983	150,067	3,828	5	1.9	$1.26	$1,828,239
1988	50	364	1,064,427	2,125,114	203,237	5,838	5	2.0	$1.06	$2,252,621
1989	47	359	1,428,973	3,077,937	185,242	8,574	8	2.2	$1.10	$3,385,731

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Table 8.–Page 2 of 3.

Year	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
	Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
1990	62	519	1,301,465	2,937,168	296,168	5,659	4	2.3	$1.60	$4,699,469
1991	62	732	695,470	1,414,499	279,872	1,932	2	2.0	$1.38	$1,952,009
1992	46	501	805,215	1,656,793	218,602	3,306	4	2.1	$0.87	$1,441,410
1993	42	263	647,736	1,369,889	180,534	5,209	4	2.1	$0.95	$1,301,395
1994	31	162	426,848	948,461	151,888	5,855	3	2.2	$1.25	$1,185,576
1995	24	106	257,677	527,434	107,506	4,976	2	2.0	$1.74	$917,735
1996	21	113	334,237	668,772	88,682	5,918	4	2.0	$1.05	$702,211
1997	21	123	257,697	529,550	95,066	4,305	3	2.1	$2.11	$1,117,351
1998	12	60	185,249	371,241	63,926	6,187	3	2.0	$1.46	$542,012
1999	13	72	269,277	551,183	65,721	7,655	4	2.0	$1.58	$870,869
2000	12	69	114,038	238,955	57,037	3,463	2	2.1	$1.65	$394,276
2001	21	57	101,371	208,265	41,760	3,654	2	2.1	$1.80	$374,877
2002	18	74	181,698	355,943	71,096	4,810	3	2.0	$1.45	$516,117
2003	17	89	228,309	467,623	48,715	5,254	5	2.0	$1.50	$701,435
2004	11	57	169,899	352,216	42,990	6,179	4	2.1	$1.50	$528,324
2005	14	75	185,358	390,995	38,422	5,213	5	2.1	$1.23	$480,924
2006	12	62	74,044	148,583	31,670	2,397	2	2.0	$1.45	$215,445
2007	12	86	323,489	663,077	65,071	7,710	5	2.0	$2.08	$1,379,200
2008	15	86	517,567	1,030,498	93,414	11,983	6	2.0	$2.19	$2,256,791
2009	17	108	614,793	1,335,503	129,003	12,366	5	2.2	$1.59	$2,123,450
2010	19	100	473,708	1,002,576	101,341	10,026	5	2.1	$1.90	$1,904,894
2011	11	57	181,754	389,270	64,157	6,829	3	2.1	$2.39	$930,355
2012	7	23	45,996	97,000	27,061	4,217	2	2.1	$2.65	$257,050
2013	3	17	33,226	69,001	19,597	4,059	2	2.1	$2.68	$184,923
2014	6	34	108,406	223,773	35,960	6,582	3	2.1	$2.95	$660,130
2015	7	40	93,674	193,223	35,041	4,830	3	2.1	$3.00	$579,669
2016	8	63	133,142	273,617	46,466	4,343	3	2.1	$3.19	$872,838

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Table 8.–Page 3 of 3.

Year	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
	Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
2017	5	41	93,916	183,769	28,296	4,482	3	2.0	$2.70	$496,176
2018	7	59	330,096	647,396	52,253	10,973	6	2.0	$3.12	$2,019,876
2019	16	124	691,981	1,511,864	76,807	12,192	9	2.2	$2.75	$4,157,626
2020	29	203	1,236,536	2,786,897	198,603	13,729	6	2.3	$2.08	$5,796,746
2021	25	151	922,044	1,897,304	204,362	12,565	5	2.1	$4.35	$8,253,272
2022	21	121	1,027,226	2,313,335	135,812	19,118	8	2.3	$2.49	$5,760,204

Notes: NA = not available; CPUE = legal crab per pot lift.

[a] Includes deadloss and personal use.

[b] Pounds per crab.

Table 9.–Chignik District commercial Dungeness crab effort, harvest, and value, 2002–2022.

Year	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
	Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
2002	2	7	CF	CF	CF	CF	CF	2.0	CF	CF
2003	1	3	CF	CF	CF	CF	CF	2.0	CF	CF
2004	2	9	CF	CF	CF	CF	CF	2.0	CF	CF
2005	1	4	CF	CF	CF	CF	CF	2.0	CF	CF
2006	2	8	CF	CF	CF	CF	CF	1.9	CF	CF
2007	2	19	CF	CF	CF	CF	CF	2.0	CF	CF
2008	3	8	26,751	54,152	3,882	6,769	7	2.0	$2.11	$114,261
2009	1	9	CF	CF	CF	CF	CF	2.0	CF	CF
2010	2	10	CF	CF	CF	CF	CF	2.1	CF	CF
2011	2	14	CF	CF	CF	CF	CF	2.1	CF	CF
2012	1	5	CF	CF	CF	CF	CF	2.3	CF	CF
2013	No commercial fishing effort									
2014	1	4	CF	CF	CF	CF	CF	1.8	CF	CF
2015	1	4	CF	CF	CF	CF	CF	2.1	CF	CF
2016	1	2	CF	CF	CF	CF	CF	2.2	CF	CF
2017	1	8	CF	CF	CF	CF	CF	2.2	CF	CF
2018	1	22	CF	CF	CF	CF	CF	2.0	CF	CF
2019	3	40	218,364	457,695	22,023	11,442	10	2.1	$2.65	$1,212,892
2020	3	36	220,497	513,642	28,430	14,268	8	2.3	$1.75	$898,874
2021	4	49	278,439	609,622	37,454	12,441	7	2.2	$4.00	$2,438,488
2022	4	32	145,529	323,624	23,142	10,113	6	2.2	$2.01	$650,484

Notes: CF = confidential; CPUE = legal crab per pot lift.

[a] Includes deadloss and personal use crab.

[b] Pounds per crab.

Table 10.–Alaska Peninsula District commercial Dungeness crab effort, harvest, and value, 2002–2022.

Year	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
	Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
2002	2	23	CF	CF	CF	CF	CF	2.4	CF	CF
2003	4	39	134,572	269,107	12,037	6,900	11	2.0	$1.45	$390,205
2004	4	44	107,632	215,632	17,896	4,901	6	2.0	$1.38	$297,572
2005	5	31	135,590	274,879	13,605	8,867	10	2.0	$1.25	$343,599
2006	2	18	CF	CF	CF	CF	CF	2.1	CF	CF
2007	2	17	CF	CF	CF	CF	CF	1.9	CF	CF
2008	4	31	234,930	462,989	23,965	14,935	10	2.0	$2.11	$976,907
2009	6	47	244,837	500,514	40,938	10,649	6	2.0	$1.49	$745,766
2010	4	27	117,844	247,221	27,497	9,156	4	2.1	$1.79	$442,526
2011	5	26	80,214	174,940	17,609	6,728	5	2.2	$2.25	$393,615
2012	5	26	57,766	126,630	18,405	4,870	3	2.2	$2.25	$284,918
2013	3	15	32,967	75,679	6,947	5,045	5	2.3	$2.41	$182,386
2014	3	18	37,896	76,813	10,936	4,267	3	2.0	$2.70	$207,395
2015	4	16	48,770	98,373	6,175	6,148	8	2.0	$2.90	$285,282
2016	4	24	52,635	118,107	10,241	4,921	5	2.2	$3.00	$354,321
2017	2	8	CF	CF	CF	CF	CF	2.0	CF	CF
2018	4	42	228,263	440,576	18,509	10,490	12	1.9	$3.00	$1,321,728
2019	6	60	223,071	450,712	25,891	7,512	9	2.0	$2.65	$1,194,387
2020	16	173	684,344	1,411,947	64,402	8,162	11	2.1	$1.94	$2,739,177
2021	26	276	828,777	1,753,230	109,693	6,352	8	2.1	$3.97	$6,960,323
2022	19	151	282,058	579,910	58,632	3,840	5	2.1	$2.40	$1,391,784

Notes: CF = confidential; CPUE = legal crab per pot lift.

[a] Includes deadloss and personal use crab.

[b] Pounds per crab.

Table 11.–Historical Alaska Peninsula District (including present-day Chignik District) commercial Dungeness crab effort, harvest, average weight, and value, 1968–2001.

Year	Number					Avg. pounds per landing	Avg. CPUE	Avg. weight[b]	Avg. price per pound	Exvessel value
	Vessels	Landings	Crab[a]	Pounds[a]	Pots lifted					
1968	NA	NA	434,142	1,259,013	NA	NA	NA	2.9	NA	NA
1969	NA	NA	411,000	1,056,000	NA	NA	NA	2.6	NA	NA
1970	NA	NA	4,200	13,000	NA	NA	NA	3.1	NA	NA
1971	NA	NA	3,900	11,000	NA	NA	NA	2.8	NA	NA
1972	NA	NA	29,400	65,000	NA	NA	NA	2.2	NA	NA
1973	NA	NA	86,700	194,500	NA	NA	NA	2.2	NA	NA
1974–1978	No commercial fishing effort									
1979	NA	NA	42,816	102,320	NA	NA	NA	2.4	$0.68	NA
1980	No commercial fishing effort									
1981	NA	NA	22,995	42,296	NA	NA	NA	1.8	NA	NA
1982	16	79	357,955	779,600	59,265	9,868	6.0	2.2	$0.75	NA
1983	18	132	565,430	1,207,128	113,061	9,145	5.0	2.1	$0.97	NA
1984	13	99	294,191	647,497	106,056	6,540	2.8	2.2	$1.38	NA
1985	7	31	243,203	497,367	52,717	16,044	4.6	2.0	$1.29	$642,811
1986	7	28	87,988	180,261	30,280	6,438	2.9	2.0	$1.05	$187,921
1987	5	21	88,744	182,706	22,588	8,700	3.9	2.1	$1.09	$196,983
1988	2	12	87,517	179,022	10,108	14,919	8.7	2.0	$1.08	$193,290
1989	1	9	62,364	132,447	13,400	14,716	4.7	2.1	NA	NA
1990	4	10	31,074	65,806	5,225	6,581	5.9	2.1	$1.53	$95,543
1991	7	18	39,069	80,248	12,813	4,458	3.0	2.1	$1.24	$73,924
1992	2	9				Confidential				
1993	3	15	127,979	273,811	15,675	18,254	8.2	2.1	$0.79	$214,982
1994	4	24	134,429	277,639	27,590	11,568	4.9	2.1	$0.92	$278,354
1995	1	3				Confidential				
1996	4	9	52,694	112,438	16,557	12,493	3.2	2.1	$0.49	$555,095
1997	7	17	120,935	240,128	42,703	14,125	2.8	2.0	$2.06	$485,445
1998	3	8	60,049	116,757	19,800	14,595	3.0	1.9	$1.44	$162,059
1999	2	5				Confidential				
2000	3	3				Confidential				
2001	2	2				Confidential				

Notes: NA = not available; CPUE = legal crab per pot lift.

[a] Includes deadloss and personal use.

[b] Pounds per crab.

Table 12.–Kodiak and Alaska Peninsula Areas commercial weathervane scallop guideline harvest level (GHL), harvest, and fishery closure date, by district, 2022/23.

Area/District	GHL[a]	Pounds[a]	Fishery closure date
Kodiak Area			
Northeast	40,000	40,020	November 12, 2022
Shelikof	100,000	102,110	November 28, 2022
Southeast	15,000	0	February 15, 2023
Southwest	35,000	32,820	October 6, 2022
Semidi Island	Exploratory	0	February 15, 2023
Total	190,000	174,950	
Alaska Peninsula Area			
Waters between 160°W and 161°W	7,500	0	February 15, 2023
Unimak Bight	7,500	7,360	July 27, 2022
Total	15,000	7,360	

Notes: Harvest excludes discards at sea; GHL = guideline harvest level (pounds); fishery opened July 1.

[a] Pounds of shucked scallop meat.

Table 13.–Kodiak Area commercial weathervane scallop guideline harvest level (GHL), effort, and federal and state water harvest, 1996/97–2022/23.

Season	GHL[a]	Vessels	Federal waters		State waters		Total pounds[a]
			Pounds[a]	% of Total	Pounds[a]	% of Total	
1996/97	NA	4	157,029	58.5	111,516	41.5	268,545
1997/98	NA	5	282,305	78.3	78,034	21.7	360,339
1998/99	NA	8	245,462	81.4	56,138	18.6	301,600
1999/00	255,000	6	216,661	81.4	49,531	18.6	266,012
2000/01	260,000	5	205,383	79.0	54,669	21.0	260,052
2001/02	260,000	4	170,293	66.1	87,289	33.9	257,582
2002/03	260,000	3	189,960	72.9	70,620	27.1	260,580
2003/04	260,000	2	205,786	79.2	54,190	20.8	259,976
2004/05	260,000	2	177,643	69.7	77,084	30.3	254,727
2005/06	240,000	3	187,389	78.1	52,542	21.9	239,931
2006/07	250,000	3	175,382	73.8	62,315	26.2	237,697
2007/08	260,000	3	193,080	78.8	51,993	21.2	245,073
2008/09	260,000	4	84,834	95.7	3,790	4.3	88,624
2009/10	270,000	3	223,724	92.6	17,761	7.4	241,485
2010/11	260,000	4	186,988	79.2	48,981	20.8	235,969
2011/12	230,000	4	183,282	83.0	37,541	17.0	220,823
2012/13	190,000	4	154,536	80.1	38,344	19.9	192,880
2013/14	185,000	5	160,655	88.8	20,227	11.2	180,882
2014/15	185,000	4	106,882	73.2	39,181	26.8	146,063
2015/16	155,000	3	87,702	82.2	18,976	17.8	106,678
2016/17	105,000	2	59,930	80.3	14,720	19.7	74,650
2017/18	105,000	1	56,662	88.1	7,650	11.9	64,312
2018/19	85,000	1	36,770	52.1	33,870	47.9	70,640
2019/20	85,000	2	52,370	74.6	17,835	25.4	70,205
2020/21	105,000	1	41,410	50.4	40,800	49.6	82,210
2022/23	160,000	2	114,875	78.9	30,705	21.1	145,580
2022/23	190,000	2	158,285	90.5	16,665	9.5	174,950

Notes: Harvest excludes discards at sea; GHL = guideline harvest level (pounds); NA = not applicable.

[a] Pounds of shucked scallop meat.

Table 14.–Alaska Peninsula Area commercial weathervane scallop guideline harvest level (GHL), effort, and federal and state water harvest, 1996/97–2022/23.

			Federal waters		State waters		Total
Year	GHL[a]	Vessels	Pounds[a]	% of Total	Pounds[a]	% of Total	pounds[a]
1996/97	200,000	2	12,560	100.0	0	0.0	12,560
1997/98	200,000	4	51,616	100.0	0	0.0	51,616
1998/99	200,000	4	63,290	100.0	0	0.0	63,290
1999/00	200,000	5	75,590	100.0	20	< 1	75,610
2000/01	33,000	3	7,660	100.0	0	0.0	7,660
2001/02–2004/05	NA			No commercial fishery			
2005/06	20,000			No commercial fishing effort			
2006/07	25,000	2	155	100.0	0	0.0	155
2007/08	10,000			No commercial fishing effort			
2008/09	10,000	1	2,460	100.0	0	0.0	2,460
2009/10–2011/12	NA			No commercial fishery			
2012/13	15,000	1	15,040	100.0	0	0.0	15,040
2013/14	15,000	1	15,155	100.0	0	0.0	15,155
2014/15	15,000	3	15,020	100.0	0	0.0	15,020
2015/16	15,000	1	15,000	100.0	0	0.0	15,000
2016/17	15,000	1	14,996	100.0	0	0.0	14,996
2017/18	15,000	1	15,250	100.0	0	0.0	15,250
2018/19	15,000	1	8,905	100.0	0	0.0	8,905
2019/20	15,000	1	5,750	100.0	0	0.0	5,750
2020/21	15,000			No commercial fishing effort			
2022/23	15,000			No commercial fishing effort			
2022/23	15,000	1	7,360	100.0	0	0.0	7,360

Notes: Harvest excludes discards at sea; NA = not applicable.

[a] Pounds of shucked scallop meat.

Table 15.–Kodiak District commercial red sea cucumber effort, harvest, and value, 1991–2022/23.

Season	GHL[a]	Number				Avg. pounds per landing	CPUE[c]	Avg. weight[d]	Avg. price per pound	Exvessel value
		Permits	Vessels	Landings	Pounds[a]					
1991	NA	2	1	2	CF	CF	ND	ND	CF	CF
1992	NA	1	1	2	CF	CF	ND	ND	CF	CF
1993	NA	50	37	487	564,516	1,159	ND	ND	$0.91	$513,710
1994[b]	NA	69	30	164	256,659	1,565	2.4	ND	$1.08	$277,192
1994/95	135,000	42	19	106	CF	CF	CF	ND	CF	CF
1995/96	135,000	18	8	52	CF	CF	CF	0.55	CF	CF
1996/97	135,000	31	16	85	147,843	1,739	2.7	0.52	$0.82	$121,863
1997/98	125,000	26	14	61	118,910	1,949	3.1	0.55	$0.66	$98,309
1998/99	125,000	16	7	44	CF	CF	CF	0.54	CF	CF
1999/00	125,000	18	7	56	CF	CF	CF	ND	CF	CF
2000/01	135,000	19	7	50	CF	CF	CF	ND	CF	CF
2001/02	140,000	18	7	51	CF	CF	CF	0.66	CF	CF
2002/03	140,000	24	8	62	CF	CF	CF	0.57	CF	CF
2003/04	150,000	21	7	80	CF	CF	CF	0.62	CF	CF
2004/05	150,000	12	4	47	CF	CF	CF	0.58	CF	CF
2005/06	145,000	17	5	61	CF	CF	CF	0.63	CF	CF
2006/07	145,000	19	6	58	CF	CF	CF	0.68	CF	CF
2007/08	140,000	16	5	46	CF	CF	CF	0.66	CF	CF
2008/09	140,000	16	5	51	CF	CF	CF	0.61	CF	CF
2009/10	140,000	16	6	45	CF	CF	CF	0.63	CF	CF
2010/11	140,000	21	6	64	CF	CF	CF	0.59	CF	CF
2011/12	140,000	20	6	59	121,274	2,055	4.0	0.68	$4.97	$602,789
2012/13	140,000	23	8	85	121,364	1,428	3.3	0.59	$4.66	$565,811
2013/14	140,000	22	8	61	107,320	1,759	4.1	0.65	$3.39	$364,040
2014/15	140,000	20	8	57	130,532	2,290	4.7	0.66	$4.01	$522,900
2015/16	140,000	28	11	69	134,370	1,947	4.0	0.71	$3.62	$486,534
2016/17	140,000	24	9	66	CF	CF	CF	0.70	CF	CF

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Table 15.–Page 2 of 2.

Season	GHL[a]	Number				Avg. pounds per landing	CPUE[c]	Avg. weight[d]	Avg. price per pound	Exvessel value
		Permits	Vessels	Landings	Pounds[a]					
2017/18	140,000	19	9	51	CF	CF	CF	0.71	CF	CF
2018/19	140,000	17	7	46	CF	CF	CF	0.73	CF	CF
2019/20	130,000	17	5	45	CF	CF	CF	0.61	CF	CF
2020/21	130,000	9	3	33	CF	CF	CF	0.48	CF	CF
2022/23	120,000	12	6	30	CF	CF	CF	0.50	CF	CF
2022/23	120,000	3	3	5	CF	CF	CF	0.40	CF	CF

Notes: CF = confidential; ND = no data.

[a] Pounds of eviscerated cucumber.

[b] Covers the period from January 1, 1994, to September 30, 1994.

[c] Pounds of eviscerated cucumber per minute.

[d] Pounds per eviscerated cucumber.

Table 16.–Kodiak, Chignik, and South Peninsula Districts commercial red sea cucumber guideline harvest level (GHL) and harvest, by district and section, 2022/23.

District/Section	GHL[a]	Pounds[a]	Fishery closure date
Kodiak			
Northeast Section	5,000	0	April 30, 2023
Eastside Section	40,000	CF	April 30, 2023
Southeast Section	30,000	CF	April 30, 2023
Southwest Section	20,000	0	April 30, 2023
Westside Section	10,000	CF	April 30, 2023
North Mainland Section	5,000	0	April 30, 2023
South Mainland Section	5,000	0	April 30, 2023
Semidi Island Section	5,000	0	April 30, 2023
Total Kodiak	120,000	CF	
Chignik	15,000	0	April 30, 2023
South Peninsula			
Eastern Section	10,000	0	April 30, 2023
Western Section	10,000	0	April 30, 2023
Total South Peninsula	20,000	0	
Total	155,000	CF	

Notes: CF = confidential; fishery opened Sept. 15 in Chignik District and Oct. 1 in Kodiak and South Peninsula Districts.

[a] Pounds of eviscerated cucumber.

Table 17.–Kodiak, Chignik, and South Peninsula Districts commercial Pacific octopus effort and harvest, by state and federal waters, and combined value, 1990–2022.

	State waters			Federal waters			Combined					
Year	Vessels	Landings	Pounds[a]	Vessels	Landings	Pounds[a]	Vessels[b]	Landings	Pounds[a]	Avg. pounds per landing	Avg. price per pound	Exvessel value[c]
1990	32	140	62,798	29	84	22,520	50	218	85,318	391	$1.04	$88,731
1991	73	331	121,851	40	118	26,874	95	447	148,725	333	$1.02	$151,700
1992	94	401	146,192	70	255	59,234	134	647	205,426	318	$0.91	$186,938
1993	31	112	116,445	41	73	11,231	64	183	127,676	698	$0.70	$89,373
1994	22	48	23,422	8	14	1,666	29	61	25,088	411	$0.97	$24,335
1995	45	309	70,218	25	94	4,858	58	349	75,076	215	$0.40	$30,030
1996	50	240	78,357	32	151	21,227	66	312	99,584	319	$0.54	$53,775
1997	84	666	280,647	59	280	46,371	111	801	327,018	408	$0.55	$179,860
1998	61	419	263,337	58	294	118,707	86	687	382,044	556	$0.59	$225,406
1999	50	311	198,685	29	147	54,676	67	443	253,361	572	$0.33	$83,609
2000	57	301	99,256	51	253	62,460	82	506	161,716	320	$0.45	$72,772
2001	30	209	100,051	36	89	14,832	53	266	114,882	432	$0.34	$39,060
2002	32	215	209,798	31	112	28,364	50	297	238,162	802	$0.58	$138,134
2003	57	143	57,091	27	67	30,687	74	204	87,778	430	$0.44	$38,622
2004	74	361	136,115	45	168	159,544	91	511	295,659	579	$0.30	$88,698
2005	72	202	63,536	47	255	159,662	99	433	223,198	515	$0.63	$140,615
2006	78	339	112,194	54	267	180,357	106	560	292,551	522	$0.63	$184,307
2007	91	486	208,263	75	356	208,310	128	782	417,573	534	$0.63	$263,071
2008	91	546	353,634	91	358	224,166	135	831	577,800	695	$0.65	$375,570
2009	84	407	334,222	81	246	209,424	129	604	543,645	900	$0.47	$255,513
2010	98	370	226,806	95	305	338,708	155	641	565,514	882	$0.40	$226,206
2011	93	430	338,856	90	424	473,416	147	801	812,272	1,014	$0.56	$454,872
2012	77	362	181,216	89	478	382,193	128	768	563,409	734	$0.59	$332,411
2013	64	263	113,579	63	294	317,532	100	516	431,111	835	$0.49	$211,244

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Table 17.–Page 2 of 2.

	State waters			Federal waters			Combined					
Year	Vessels	Landings	Pounds[a]	Vessels	Landings	Pounds[a]	Vessels[b]	Landings	Pounds[a]	Avg. pounds per landing	Avg. price per pound	Exvessel value[c]
2014	79	395	324,307	94	534	823,760	140	900	1,148,067	1,276	$0.62	$711,801
2015	91	552	357,622	100	597	463,439	153	1086	821,061	756	$0.64	$525,479
2016	89	482	200,889	73	290	185,114	129	734	386,003	526	$0.60	$231,602
2017	78	386	180,141	58	267	201,368	99	614	381,509	621	$0.61	$232,720
2018	24	85	27,778	40	196	127,780	55	274	155,557	568	$0.51	$79,334
2019	47	126	94,490	56	285	325,347	89	403	419,836	1,042	$0.60	$251,902
2020	12	28	15,537	29	181	33,267	40	208	48,804	235	$0.40	$19,522
2021	13	48	9,939	10	31	35,756	19	77	45,695	593	$0.74	$33,814
2022	20	65	14,921	28	66	103,167	41	127	118,087	930	$0.44	$51,958

[a] Landed primarily as bycatch; does not include discards.

[b] Some vessels made landings from both state and federal waters.

[c] Includes personal use and product used for bait.

FIGURES

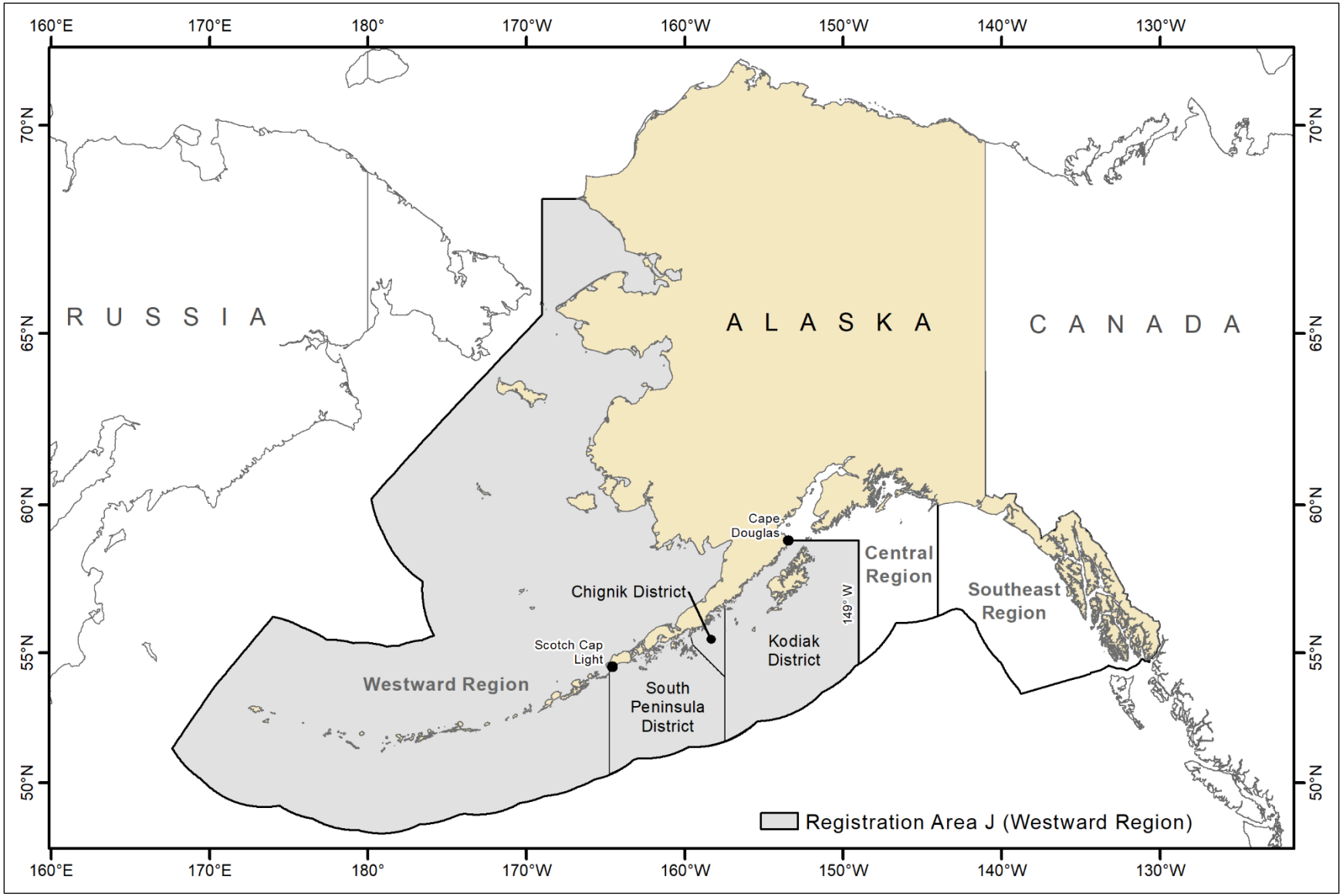

Figure 1.–Regions used by Alaska Department of Fish and Game for shellfish fisheries management in Alaska with Registration Area J (Westward Region) defined and showing Kodiak, Chignik, and South Peninsula Tanner crab and miscellaneous shellfish districts, 2022.

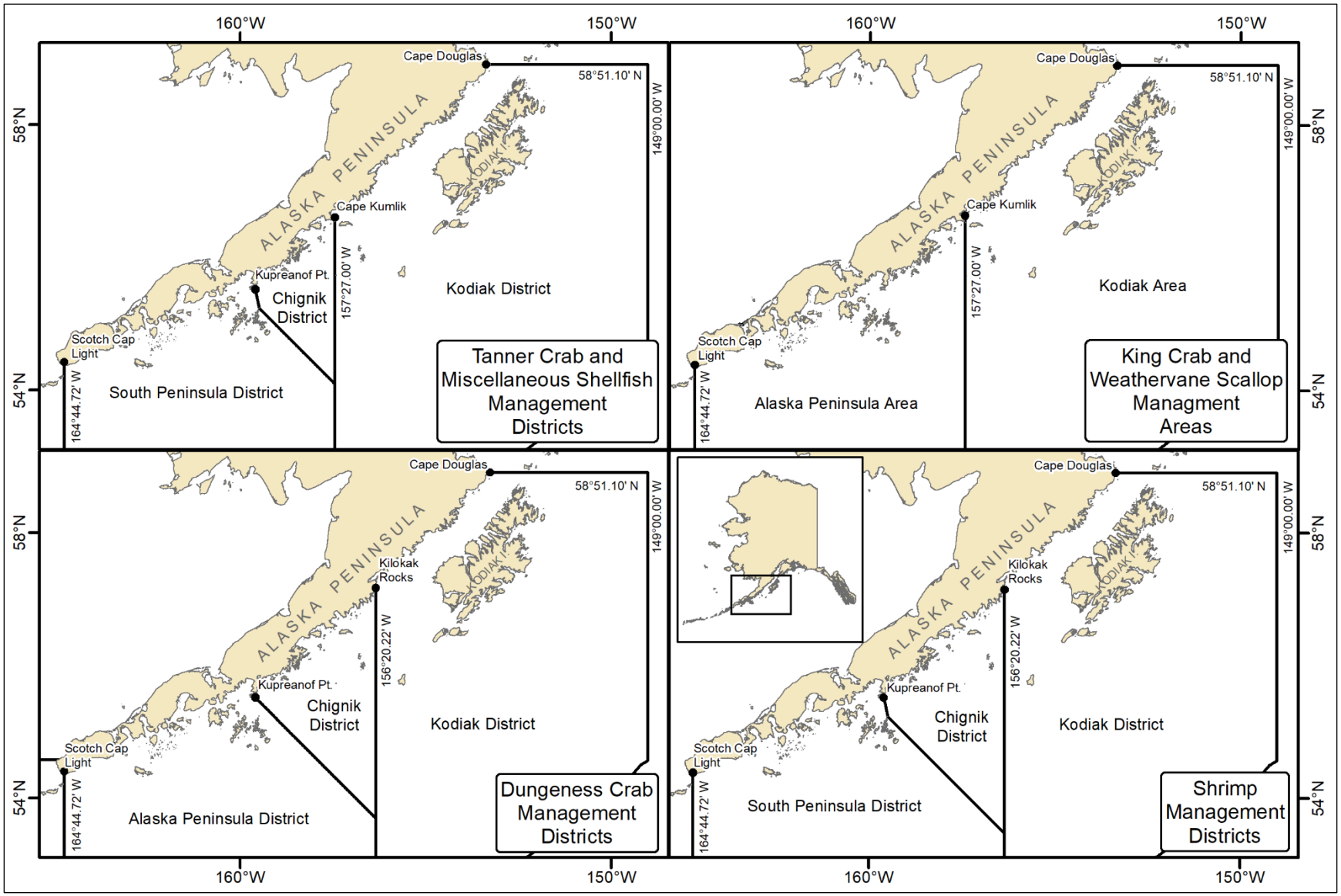

Figure 2.–Tanner crab, miscellaneous shellfish, king crab, weathervane scallop, Dungeness crab, and shrimp management units used by ADF&G, 2022.

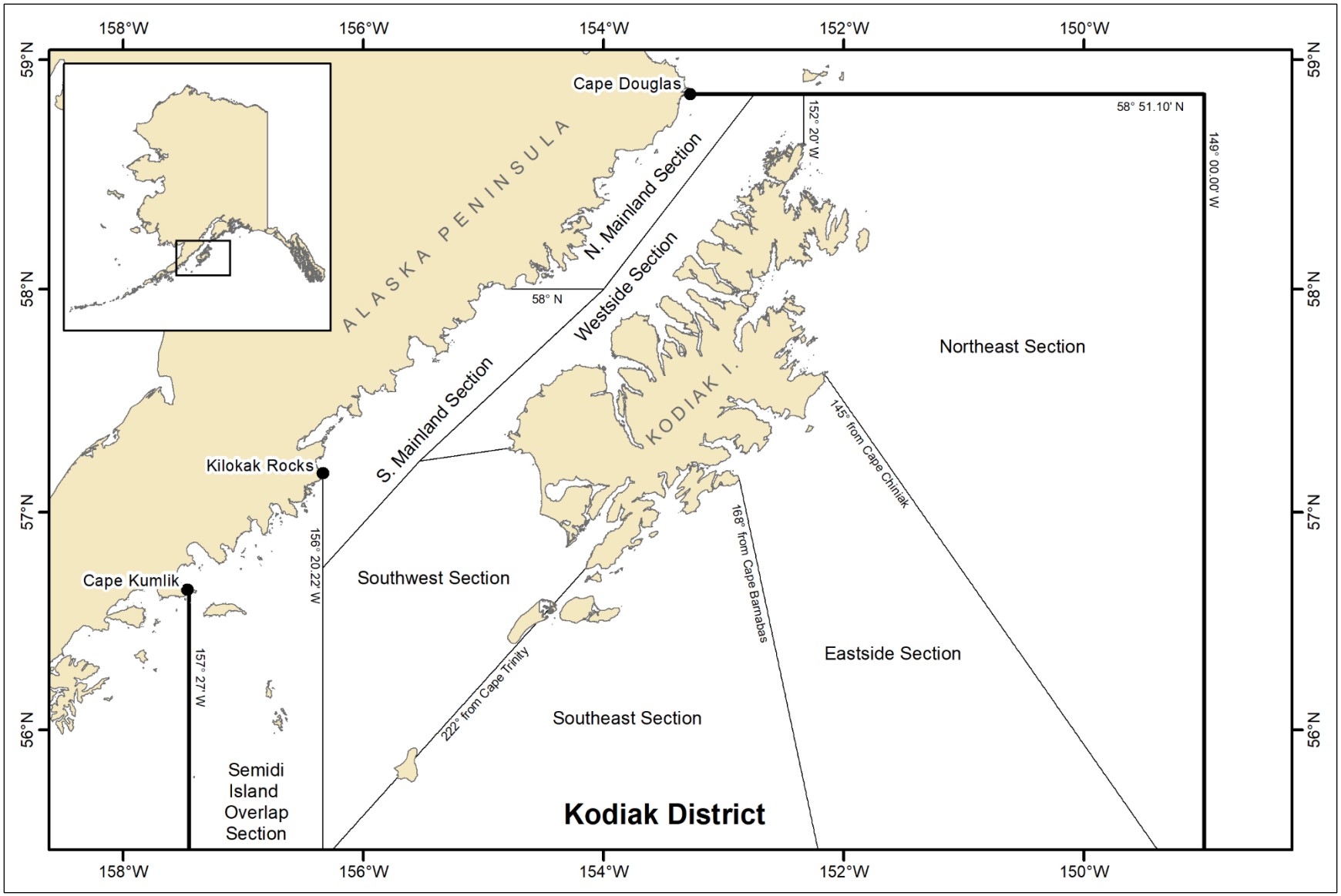

Figure 3.–Kodiak District and sections for Tanner crab and red sea cucumber fishery management, 2022.

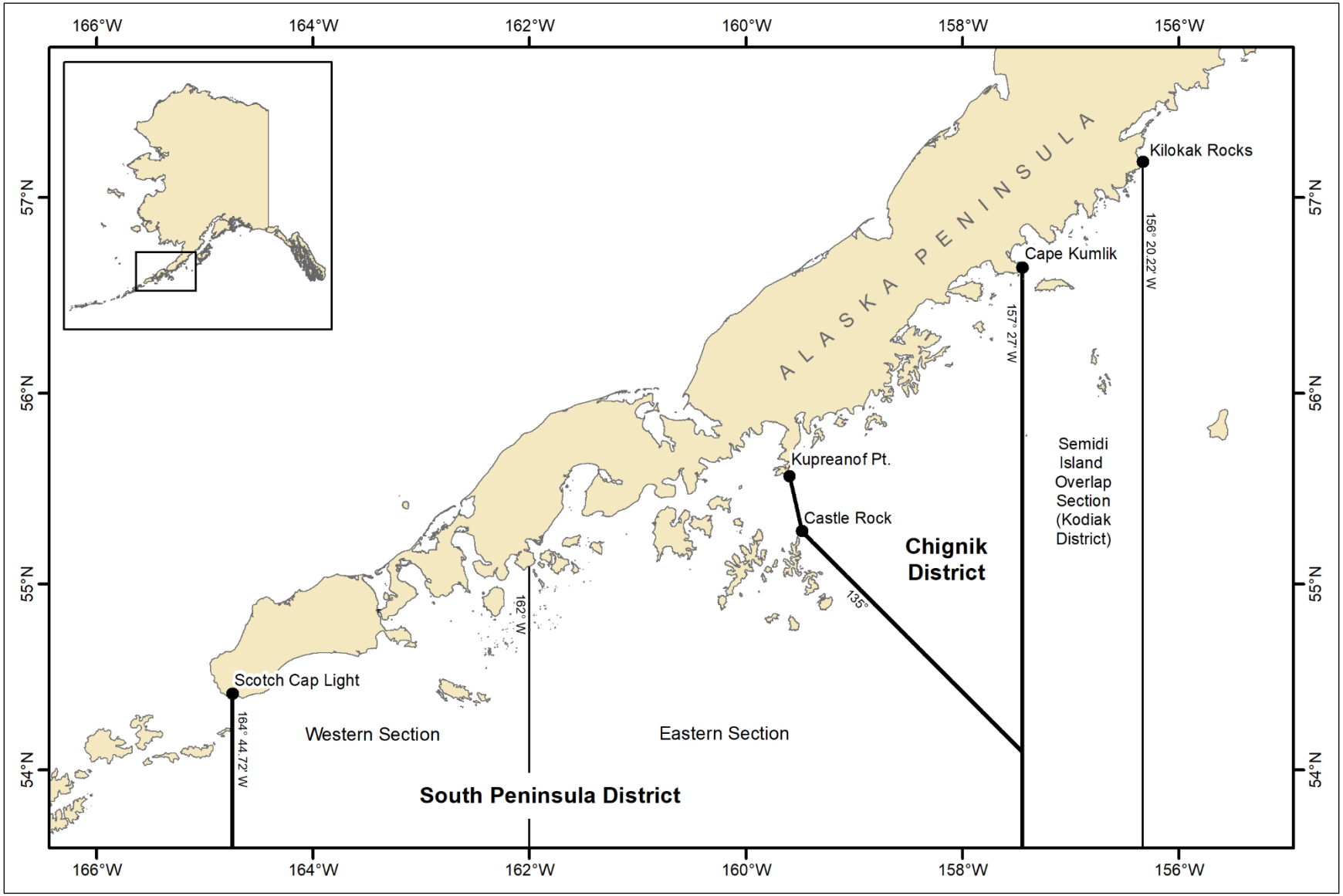

Figure 4.–Chignik and South Peninsula Districts and sections for Tanner crab and red sea cucumber fishery management, 2022.

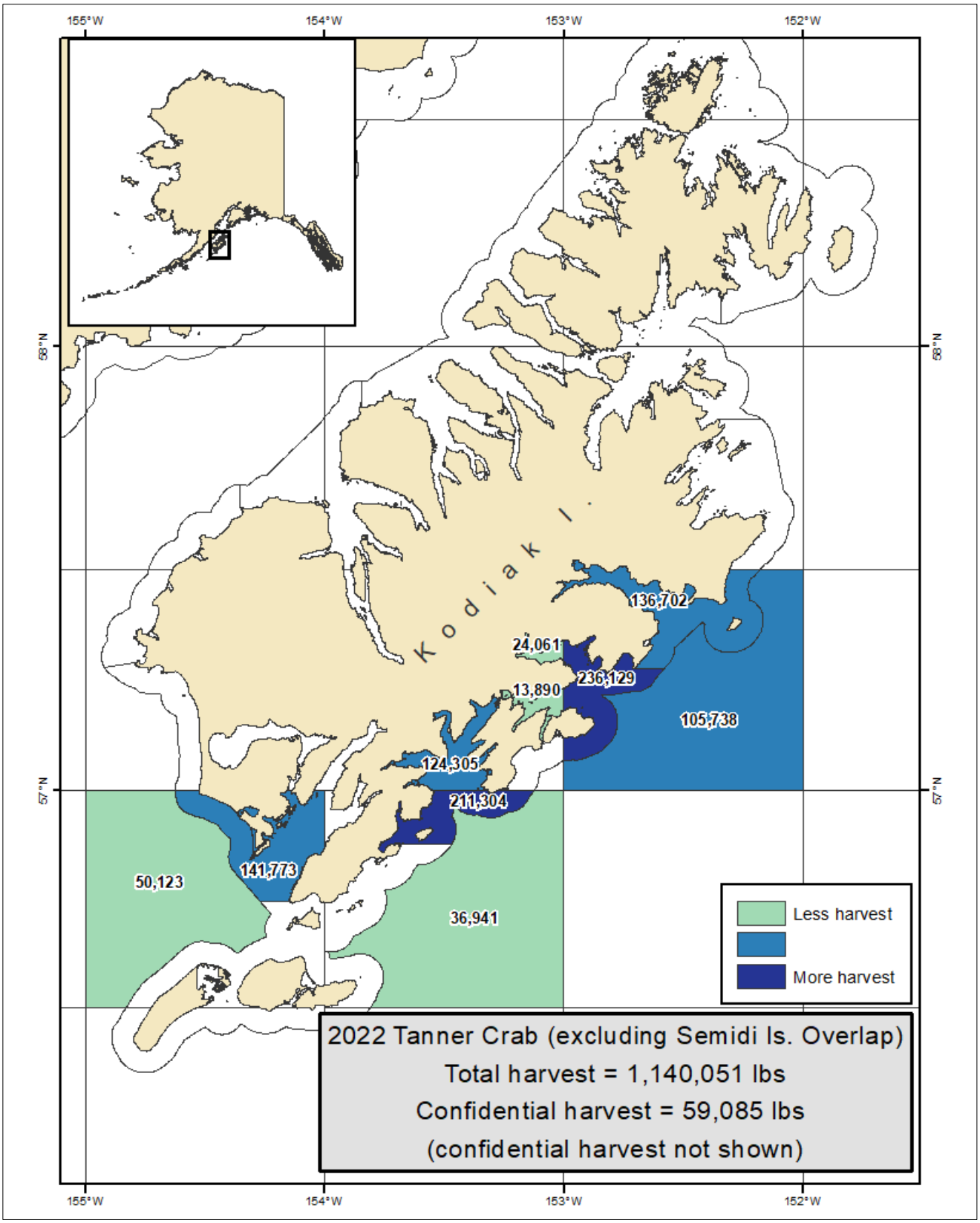

Figure 5.–Kodiak District Tanner crab harvest, in pounds, by statistical area, 2022.

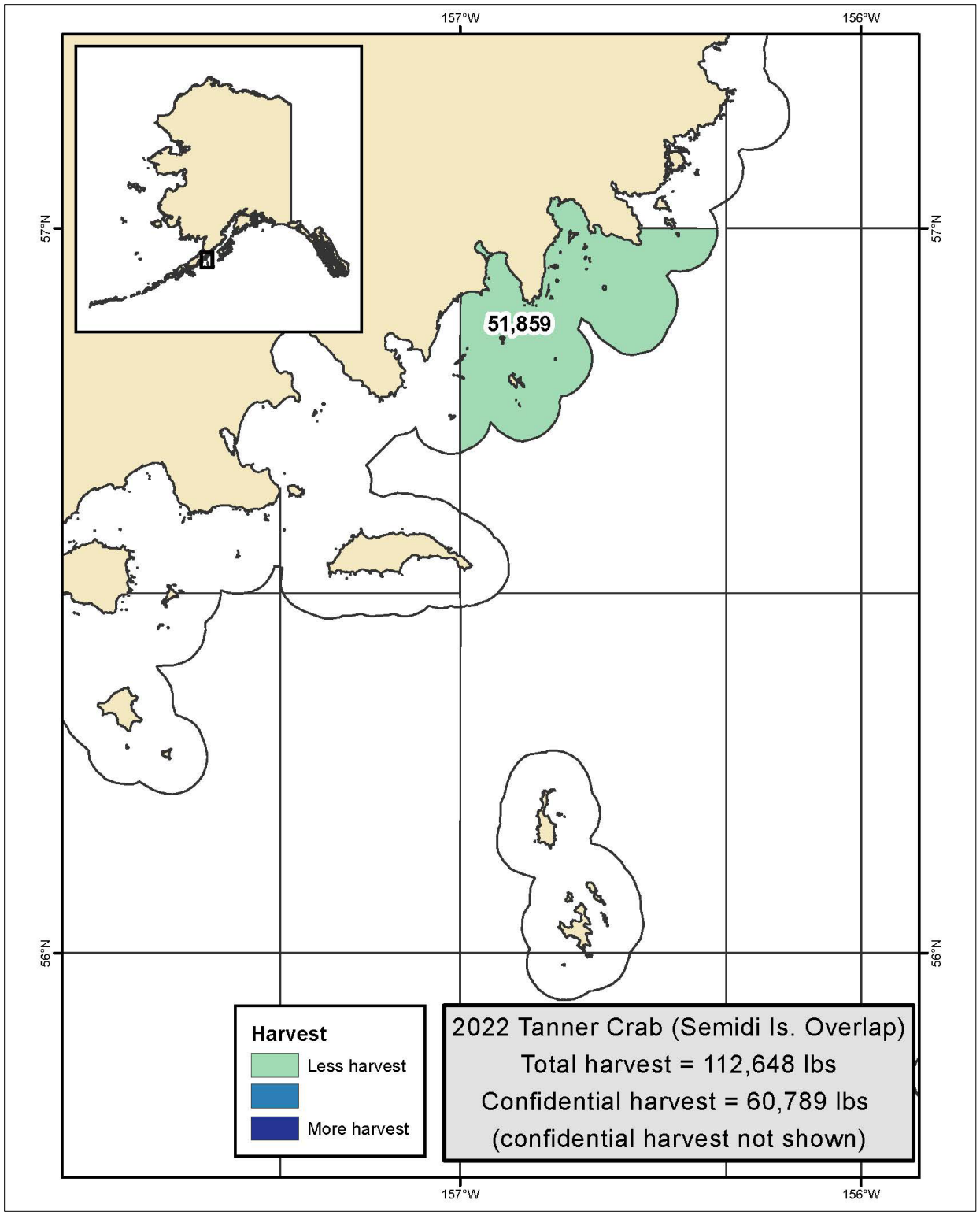

Figure 6.–Semidi Island Overlap Section of the Kodiak District Tanner crab harvest, in pounds, by statistical area, 2022.

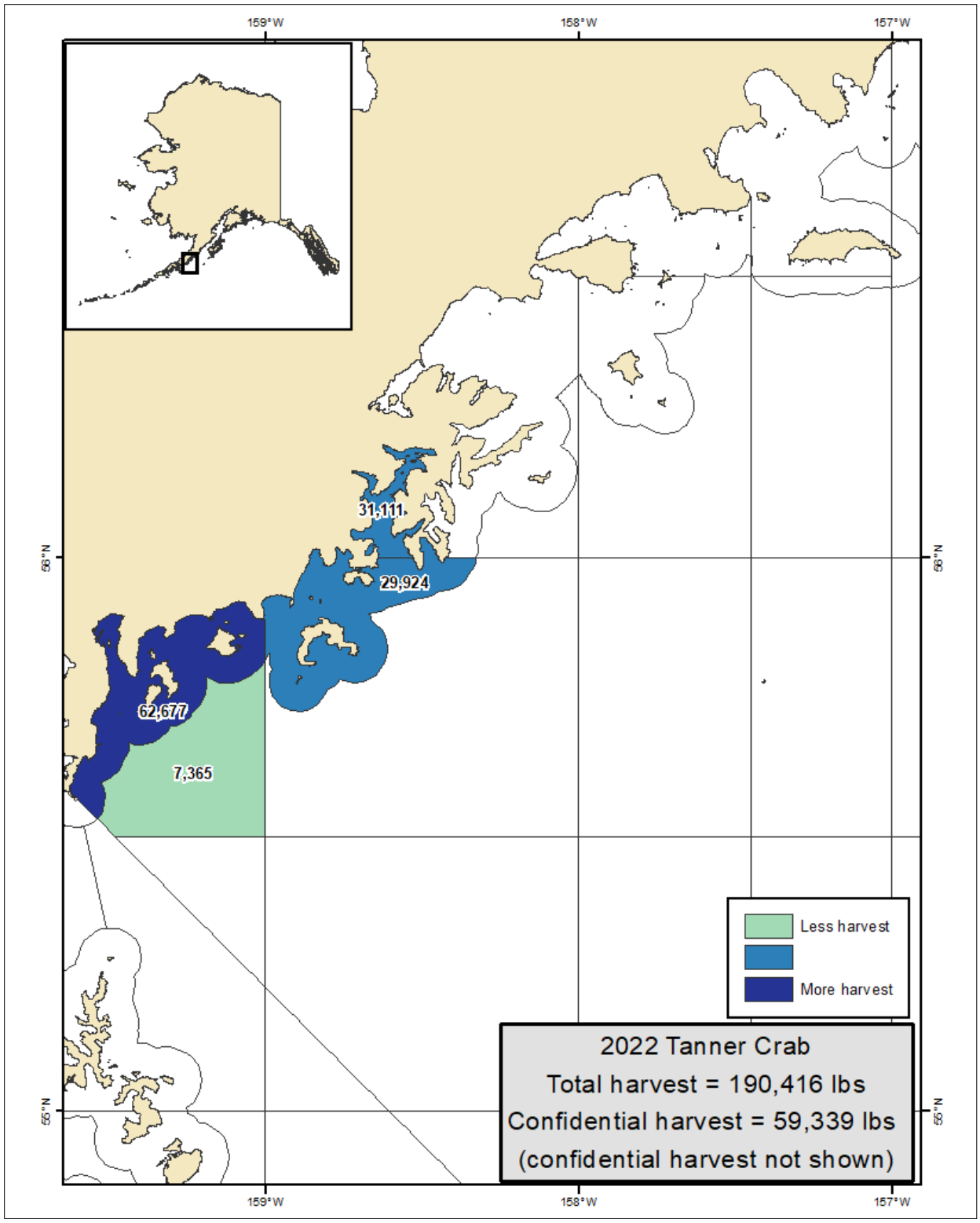

Figure 7.–Chignik District Tanner crab harvest, in pounds, by statistical area, 2022.

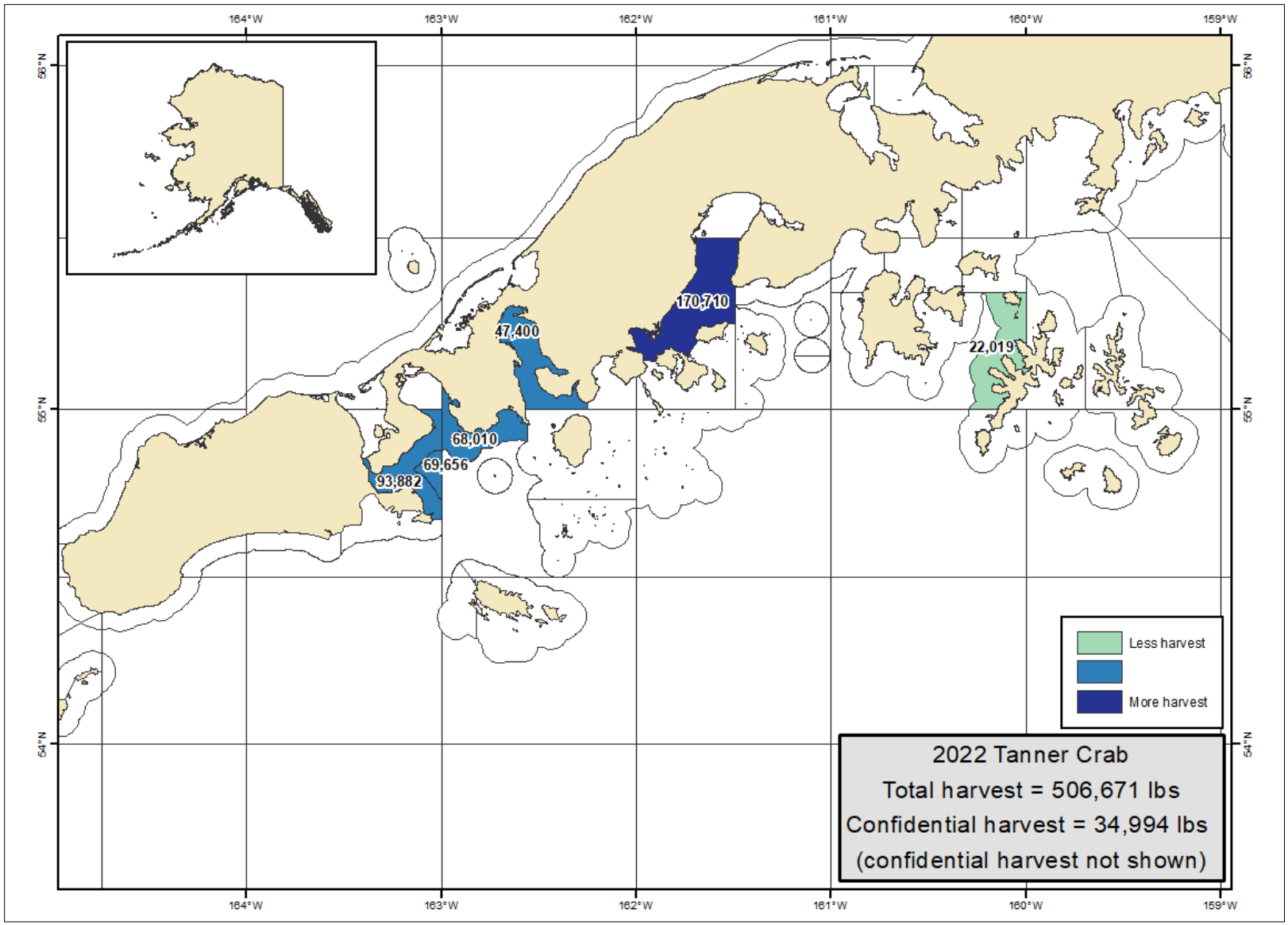

Figure 8.–South Peninsula District Tanner crab harvest, in pounds, by statistical area, 2022.

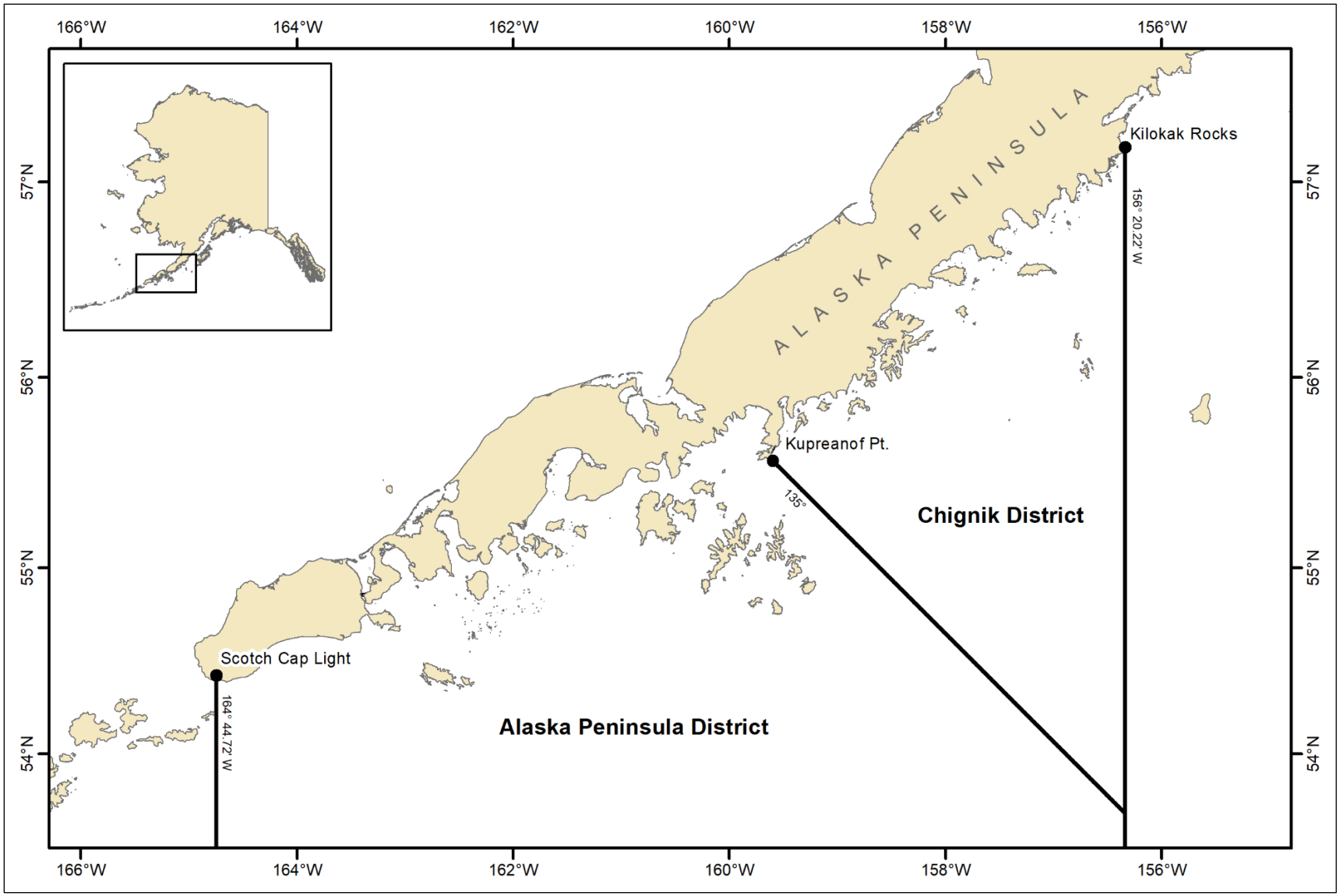

Figure 9.–Chignik and Alaska Peninsula Districts for Dungeness crab fishery management, 2022.

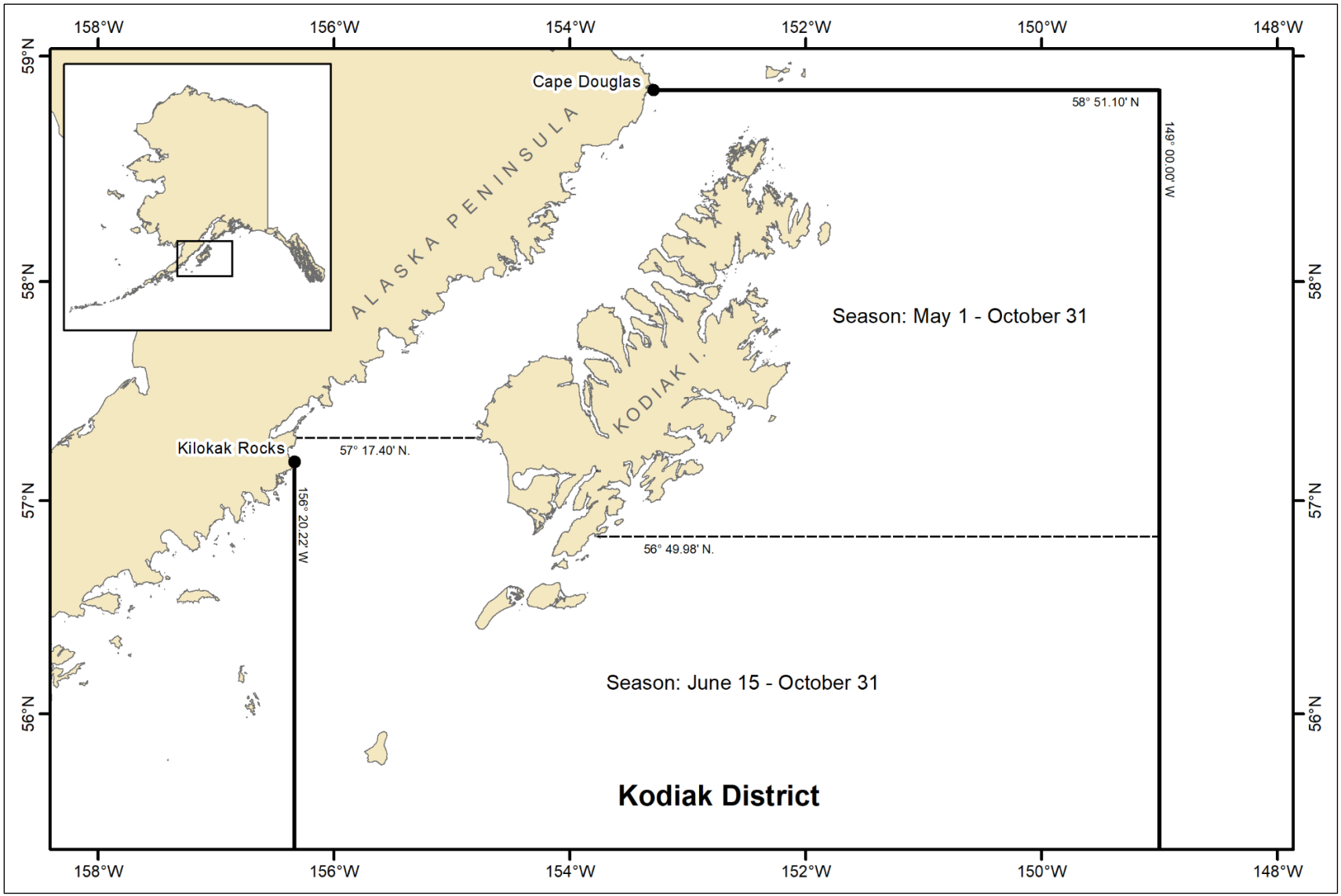

Figure 10.–Kodiak District for Dungeness crab fishery management and boundaries for fishing season dates, 2022.

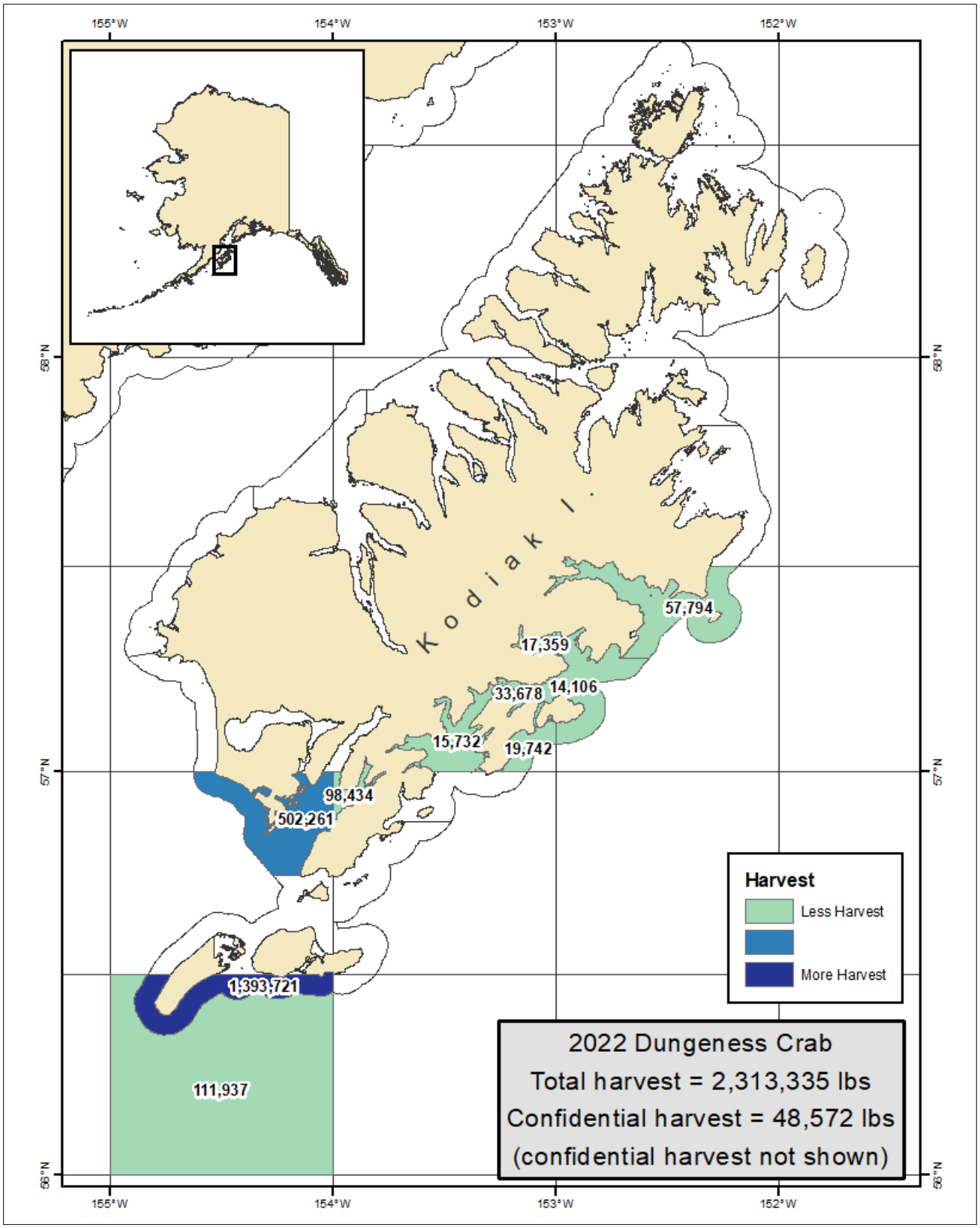

Figure 11.–Kodiak District Dungeness crab harvest, in pounds, by statistical area, 2022.

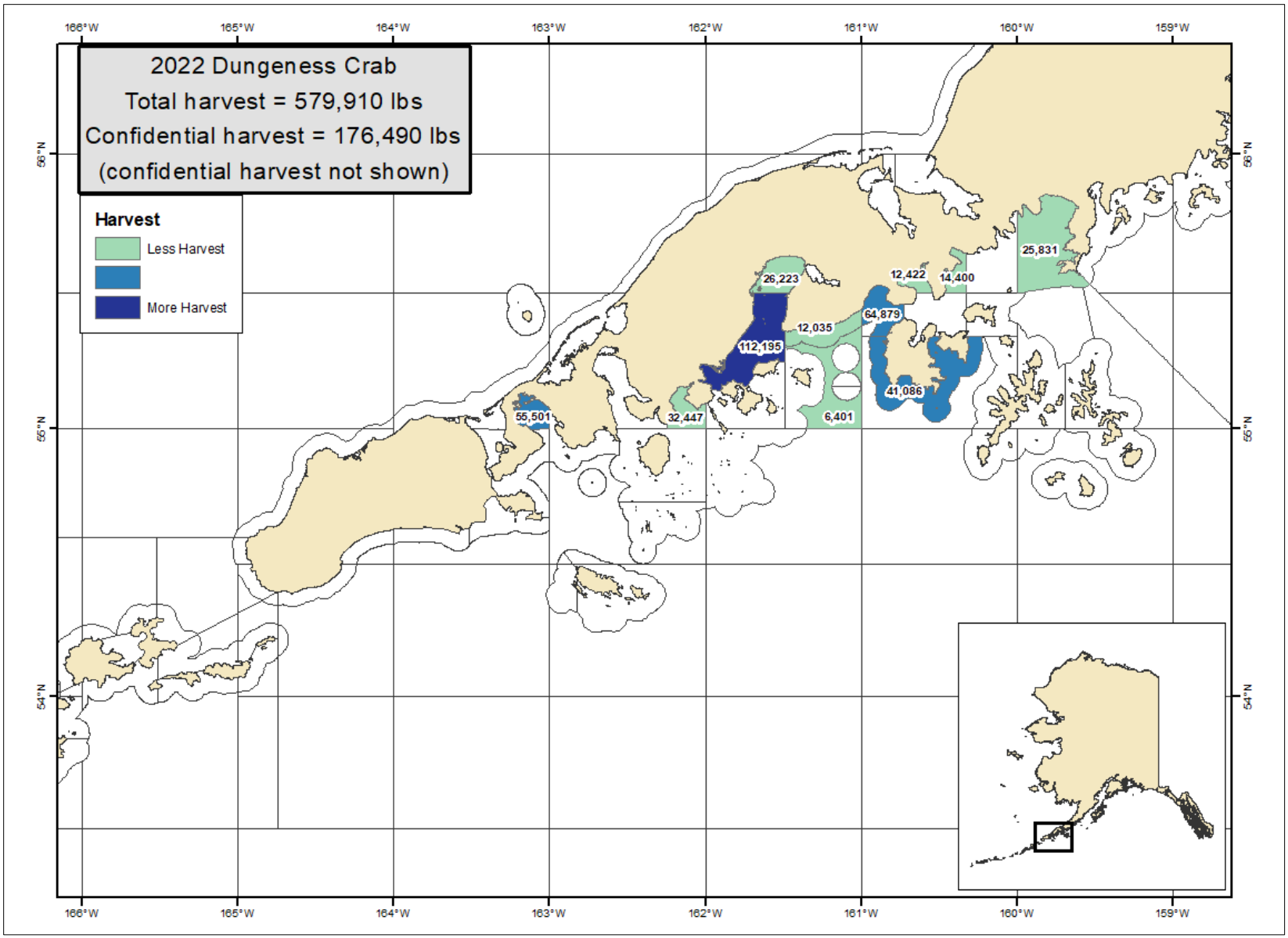

Figure 12.–Alaska Peninsula District Dungeness crab harvest, in pounds, by statistical area, 2022.

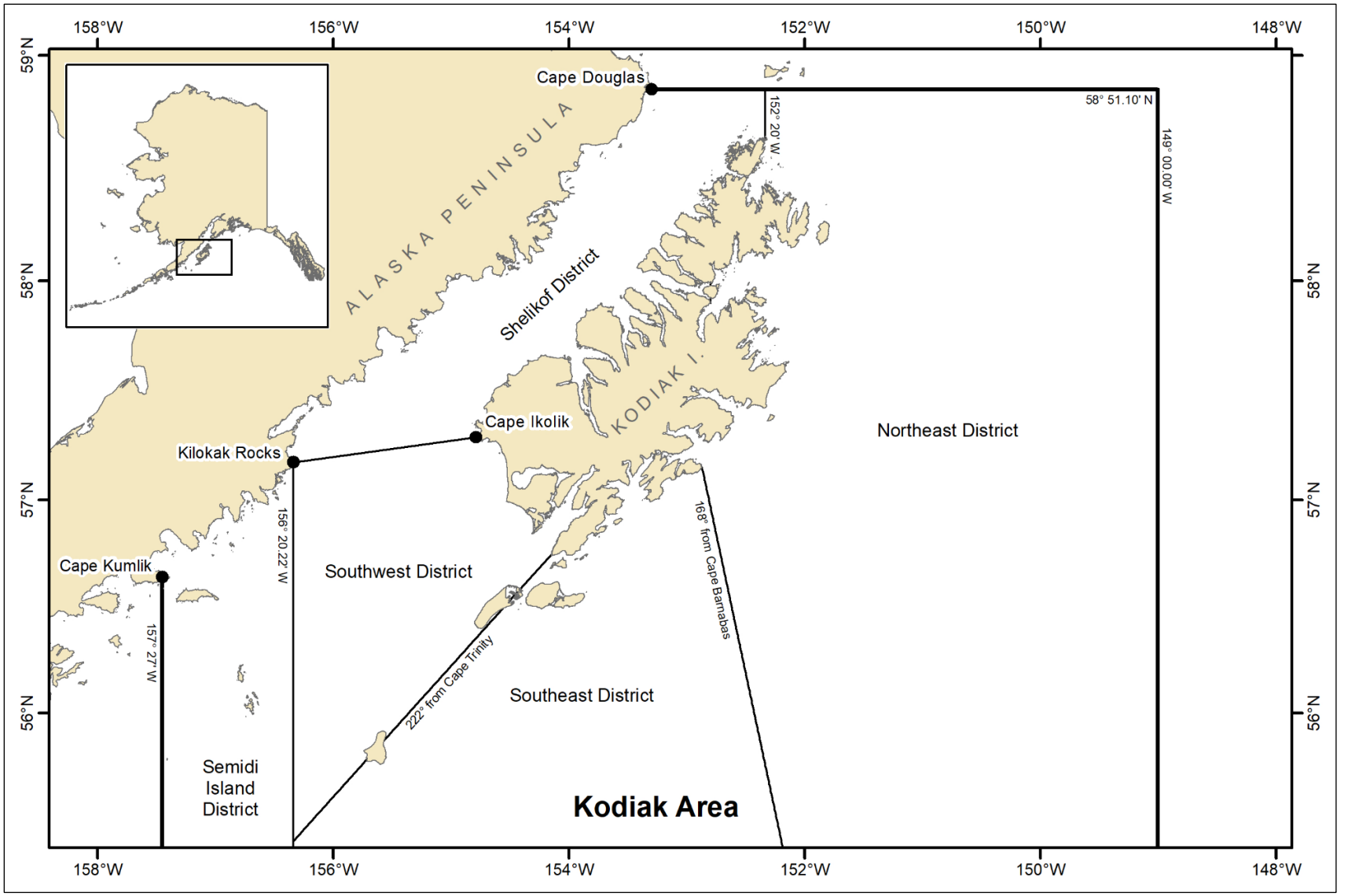

Figure 13.–Kodiak Area and districts for king crab and weathervane scallop fishery management, 2022.

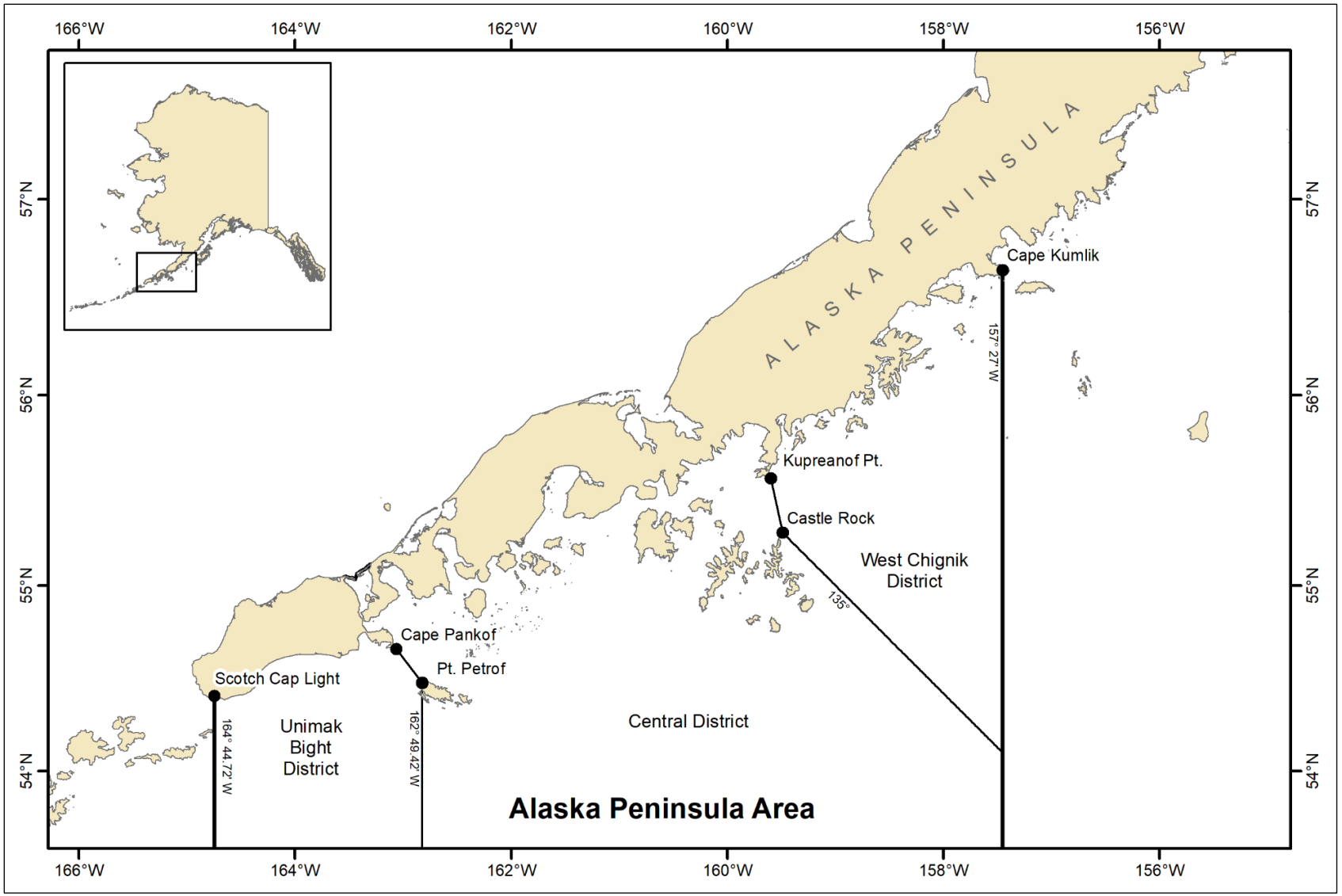

Figure 14.–Alaska Peninsula Area and districts for king crab and weathervane scallop fishery management, 2022.

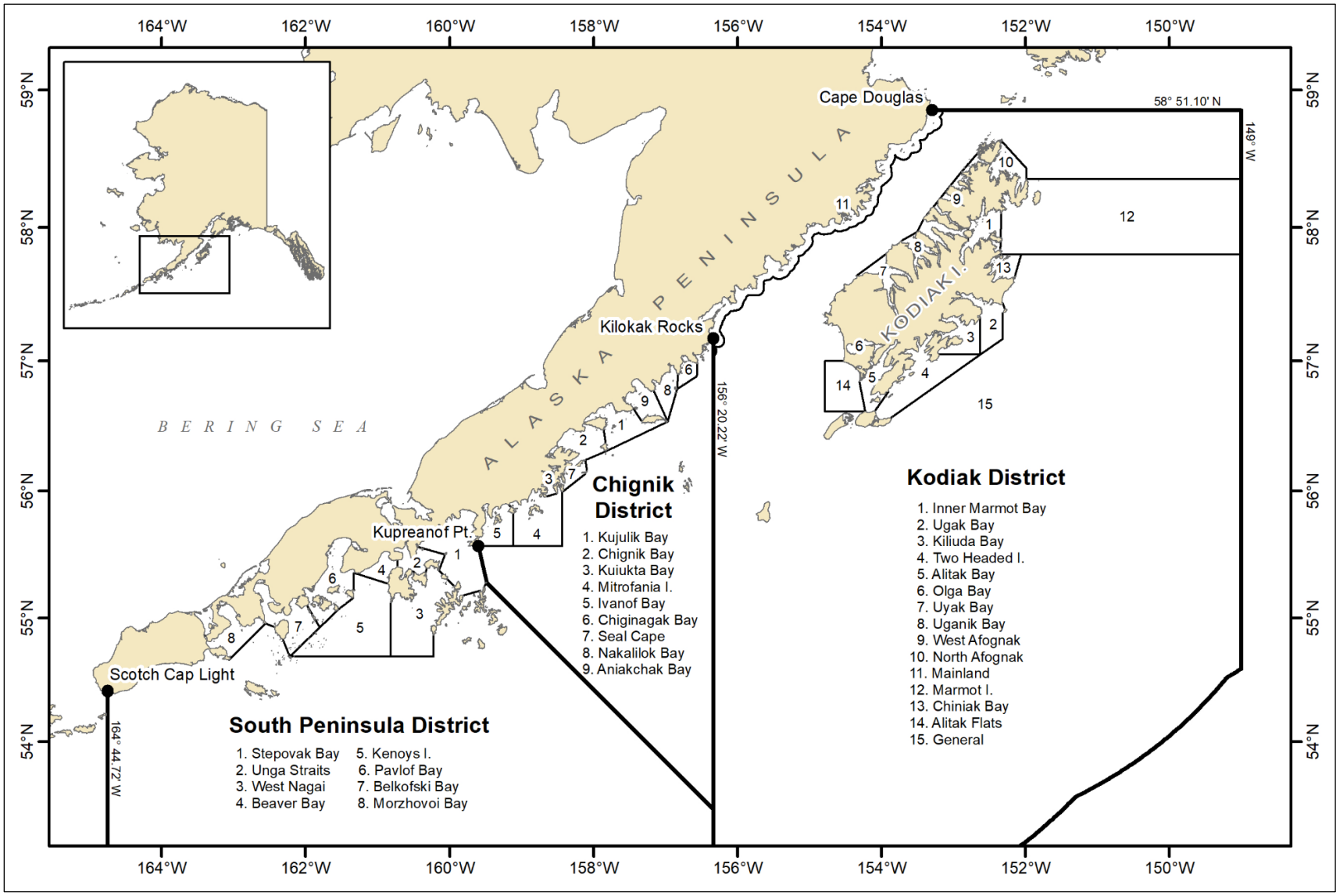

Figure 15.–Kodiak, Chignik, and South Peninsula Districts and sections for shrimp fishery management, 2022.