

Fishery Management Report No. 19-16

Large-Mesh Bottom Trawl Survey of Crab and Groundfish: Kodiak, Chignik, South Peninsula, and Eastern Aleutian Management Districts, 2018

by

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and

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September 2019

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



Symbols and Abbreviations

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Weights and measures (metric)		General	Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly accepted abbreviations	alternate hypothesis	H _A
gram	g	e.g., Mr., Mrs., AM, PM, etc.	base of natural logarithm	e
hectare	ha		catch per unit effort	CPUE
kilogram	kg		coefficient of variation	CV
kilometer	km		common test statistics	(F, t, χ^2 , etc.)
liter	L		confidence interval	CI
meter	m		correlation coefficient	R
milliliter	mL	at	(multiple)	
millimeter	mm	compass directions:	correlation coefficient	
		east	E	
		north	N	
		south	S	(simple)
		west	W	covariance
		copyright	©	degree (angular)
		corporate suffixes:		degrees of freedom
		Company	Co.	expected value
		Corporation	Corp.	greater than
		Incorporated	Inc.	greater than or equal to
mile	mi	Limited	Ltd.	harvest per unit effort
nautical mile	nmi	District of Columbia	D.C.	less than
ounce	oz	et alii (and others)	et al.	less than or equal to
pound	lb	et cetera (and so forth)	etc.	logarithm (natural)
quart	qt	exempli gratia		logarithm (base 10)
yard	yd	(for example)	e.g.	logarithm (specify base)
		Federal Information Code	FIC	minute (angular)
		id est (that is)	i.e.	not significant
		latitude or longitude	lat or long	null hypothesis
		monetary symbols		percent
		(U.S.)	\$, ¢	probability
		months (tables and figures): first three letters	Jan,...,Dec	probability of a type I error (rejection of the null hypothesis when true)
		registered trademark	®	probability of a type II error (acceptance of the null hypothesis when false)
		trademark	™	α
		United States		β
		(adjective)	U.S.	second (angular)
		United States of America (noun)	USA	standard deviation
		U.S.C.	United States Code	standard error
		U.S. state	use two-letter abbreviations (e.g., AK, WA)	variance
				population sample
volts	V			Var
watts	W			var

FISHERY MANAGEMENT REPORT NO. 19-16

**LARGE-MESH BOTTOM TRAWL SURVEY OF CRAB AND
GROUNDFISH: KODIAK, CHIGNIK, SOUTH PENINSULA, AND
EASTERN ALEUTIAN MANAGEMENT DISTRICTS, 2018**

by

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ABSTRACT

This report summarizes results from the large-mesh bottom trawl survey that took place June through September, 2018 to assess crab and groundfish resources in the Kodiak, Chignik, South Peninsula, and Eastern Aleutian Tanner crab *Chionoecetes bairdi* management districts. A total of 368 trawl hauls were conducted to assess relative abundance and condition of commercially important crabs, as well as spatial distribution, species composition, size frequency, and catch per unit effort of commercially important groundfish. Survey estimates indicated that mature and legal male Tanner crab abundance was sufficient to support a commercial fishery in 2 sections of the Kodiak District. Red king crab *Paralithodes camtschaticus* abundance estimates in each of the surveyed management areas remain too low to consider opening a red king crab commercial fishery. Flathead sole *Hippoglossoides elassodon*, arrowtooth flounder *Atheresthes stomias*, walleye pollock *Gadus chalcogrammus*, and yellowfin sole *Limanda aspera*, were the dominant groundfish captured during the survey.

Key words: crab, groundfish, *Chionoecetes bairdi*, *Paralithodes camtschaticus*, trawl survey, Kodiak, South Peninsula, Chignik, Eastern Aleutian, *Hippoglossoides elassodon*, *Atheresthes stomias*, *Limanda aspera*, *Gadus chalcogrammus*

INTRODUCTION

The Alaska Department of Fish and Game (ADF&G) conducted a large-mesh bottom trawl survey during 2018 around Kodiak Island, along the Alaska Peninsula from Cape Douglas to False Pass, and in the Eastern Aleutian Islands from Akutan Island to Unalaska Island (Figure 1). The survey area corresponds to the Kodiak, Chignik, South Peninsula, and Eastern Aleutian districts of Registration Area J (Westward) for Tanner crab *Chionoecetes bairdi* (5 AAC 35.505¹(a)(b)(c) and (f)); the Kodiak and Alaska Peninsula king crab registration areas, and the Dutch Harbor District of the Aleutian Islands king crab Registration Area (5 AAC 34.400², 34.500³, and 34.604⁴(1)); the Kodiak, Alaska Peninsula, and Dutch Harbor scallop registration areas (5 AAC 38.076⁵(b)(5)(6)and(7))); and the Kodiak, Chignik, and South Alaska Peninsula groundfish registration areas, and Aleutian Islands District of the Bering Sea–Aleutian Islands (BSAI) groundfish Registration Area (5 AAC 28.400⁶, 28.500⁷, 28.550⁸, and 28.605⁹(a)) (Figure 2). Tanner crab management units are districts; king crab, weathervane scallops, and groundfish management units are areas. This report summarizes survey data by district or area, accordingly.

ADF&G began conducting trawl surveys focused on red king crab *Paralithodes camtschaticus* around Kodiak Island in 1963. Early trawl surveys were limited to localized areas known to have concentrations of red king crab (Reynolds and Powell 1964; McMullen 1967a; McMullen 1967b; Kingsbury and James 1971; Figure 3). Beginning in 1980, bottom trawl surveys to assess Tanner crab were initiated in the North Shelikof Strait of the Kodiak District (Colgate and Hicks 1982; Figure 3); These surveys were not used as the primary crab stock assessment tool. Rather, ADF&G conducted pot surveys from 1973 to 1986 as the primary method to determine crab stock abundance. Pot surveys targeted red king crab; Tanner crab were assessed as a secondary species (Colgate and Hicks 1983). From 1981 through 1986 trawl survey development was

¹ Alaska Administrative Code: *Description of [Tanner crab] Registration Area J Districts [Westward]*

² Alaska Administrative Code: *Description of [king crab] Registration Area K [Kodiak]*

³ Alaska Administrative Code: *Description of [king crab] Registration Area M [Alaska Peninsula]*

⁴ Alaska Administrative Code: *Description of red king crab [Registration Area O (Aleutian Islands)] districts*

⁵ Alaska Administrative Code: *Alaska Scallop Fishery Management Plan*

⁶ Alaska Administrative Code: *Description of Kodiak Area [for groundfish]*

⁷ Alaska Administrative Code: *Description of Chignik Area [for groundfish]*

⁸ Alaska Administrative Code: *Description of South Alaska Peninsula Area [for groundfish]*

⁹ Alaska Administrative Code: *Description of Bering Sea–Aleutian Islands Area districts [for groundfish]*

focused on Tanner crab assessment and expanded to additional areas of the Kodiak, Chignik, and South Peninsula districts (Colgate and Hicks 1983; Colgate 1984). The first comprehensive large-mesh trawl survey of the Kodiak district occurred in 1987 (Jackson 1990). In 1988, following the collapse of the red king crab stocks, large-mesh trawl surveys replaced pot surveys as the standard Tanner crab stock assessment tool in the Kodiak, Chignik, and South Peninsula districts (Urban and Vining 1999; Spalinger 2015b). The Eastern Aleutian District large-mesh bottom trawl survey was added to the regionwide survey program in 1990 and generally continued triennially until 2003. Beginning in 2004, selected locations of the Eastern Aleutian District have been surveyed annually. Since 1988, between 287 and 410 successful hauls have been completed annually in the Kodiak, Chignik, South Peninsula, and Eastern Aleutian Districts (Table 1).

Annual trawl survey results have been used since 1999 to determine if Tanner crab abundance is above regulatory thresholds allowing for commercial fisheries (5 AAC 35.507¹⁰, 34.509¹¹; Urban et al. 1999; Table 2). When survey results indicate that abundance thresholds are met, Tanner crab Guideline Harvest Levels (GHLs) are primarily determined by estimating the number of molting mature male crab (Appendix A1) as determined by the trawl survey in a district or section and applying a harvest rate based on composition of the male population. Details on the Tanner crab harvest strategy, survey results directly affecting Tanner crab fisheries, and recent fishery information are published annually by ADF&G (Richardson et al. *In prep*).

Primary objectives of the 2018 crab and groundfish large-mesh bottom trawl survey were to 1) estimate the relative abundance and condition of Tanner and red king crabs; and 2) determine spatial distribution, species composition, length frequency, and CPUE of commercially important groundfish species.

Secondary objectives of the survey were to 1) determine size frequency of weathervane scallops *Patinopecten caurinus*; 2) determine sex composition of skate species (*Raja* spp. and *Bathyraja* spp.); 3) measure chela (claw) height of male Tanner crab in Northeast, Eastside, and Westside sections of the Kodiak District; and 4) collect 600 walleye pollock otoliths and associated biological information for National Marine Fisheries Service (Spalinger 2015b). Collections of chela height of male Tanner crab in the Eastside, Westside, and Northeast sections of the Kodiak District are ongoing ADF&G research projects; results are not presented here.

Additionally, the following special projects were conducted in 2018 (Knutson 2018):

1. Small-mesh survey hauls were conducted in Pavlof and Chiniak bays upon completion of large-mesh bottom trawl survey hauls. Data were incorporated into the small-mesh trawl survey time-series. Information on the small-mesh survey can be obtained by contacting the ADF&G shellfish management office in Kodiak.
2. Sea stars were monitored throughout the survey for signs of sea star wasting syndrome.

¹⁰ Alaska Administrative Code: *Kodiak, Chignik, and South Peninsula Districts C. bairdi Tanner crab harvest strategies*

¹¹ Alaska Administrative Code: *Eastern Aleutian District Tanner crab harvest strategy*

METHODS

SURVEY DESIGN

The 2018 large-mesh bottom trawl survey was conducted in known Tanner crab habitat using a fixed-grid station design developed in 1988. Survey station area totals approximately 15,500 km² at depths greater than 20 fathoms. Station size variation results from irregular coastline topography and bathymetry. Offshore stations average approximately 74.4 km² each and inshore stations average approximately 21.7 km² each (Appendix B2; Spalinger 2015b). In 2018, one successful bottom trawl haul was conducted in each of 368 stations (Figure 1, Appendix C).

VESSEL AND FISHING GEAR

The R/V *Resolution* (28.9 m) has been used to conduct the large-mesh bottom trawl survey since 1988. The R/V *Resolution* is a house-forward stern trawler equipped with an aft net reel, telescoping deck crane, and paired hydraulic trawl winches.

The trawl survey net is a 400-mesh eastern otter trawl designed to sweep a 12.2 m path. The net mouth is constructed with 10.2 cm stretch mesh, the net body with 8.9 cm stretch mesh, and the codend with a 3.2 cm stretch mesh liner. The net has a 21.3 m headrope with 18 floats 20.3 cm in diameter. The footrope is 29.0 m long with a 1.0 cm diameter chain attached every 25.4 cm to ensure the footrope contacts bottom. The dandy lines are 45.7 m long, each consisting of a 1.5 cm diameter cable that is 18.3 m long and a pair of 1.3 cm diameter cables that are each 27.4 m long; one attached to the top and the other to the bottom of each net wing (Spalinger 2015b). Astoria “V” type doors weighing 340 kg and measuring 1.5 m x 2.1 m are used to spread the net.

Within each station, the trawl net was towed on bottom at an average speed of 5.0 km/h for a target distance of 1.85 km (1 nmi). Haul distance was determined by Global Positioning System as the distance traveled by the vessel from when the footrope contacted bottom until the footrope left bottom. The vessel captain estimated corrections in distance for hauls that were not straight or when irregular bottom type, net hang ups, or exceptionally large catches caused haul distance to differ from 1.85 km. Haul locations were limited to trawlable substrate as determined from nautical charts and bottom mapping systems on the vessel. All hauls were made during daylight hours. Haul location, distance, time, and depth were recorded on ADF&G skipper trawl record forms. Quality of net performance was rated and a haul was discarded and repeated when the skipper and cruise leader determined the net did not adequately sample the bottom (Spalinger 2015b). A temperature-depth data logger was attached to the net’s headrope and was approximately 2 m above the sea floor when fishing. Water temperature and depth were recorded in one-minute intervals for each haul. Only temperatures recorded when the footrope was on bottom were used to determine average water temperature during the haul.

CATCH SAMPLING PROCEDURES

Total catch weight from each haul was determined by weighing the full trawl codend with an electronic crane scale (MSI 9300; Measurement Systems International, Seattle, USA¹²; ±1.0 kg), emptying the codend into on-deck sorting bins, and subtracting the empty codend weight from the full codend weight. Prior to emptying the trawl catch from the codend, a 1.5 m² subsampling net was tied into the on-deck sorting bin. After emptying the entire catch into the on-deck sorting

¹² Product names used in this publication are intended for scientific completeness and do not indicate product endorsement.

bin, species selected for sampling from the entire haul (whole-haul) were weighed using a motion compensated electronic scale (Marel 1500, Gardabaer, Iceland; ± 0.01 kg), counted, and measured (± 1.0 cm) when applicable. The following species were whole-haul sampled: sablefish *Anoplopoma fimbria*, Pacific cod *Gadus macrocephalus*, walleye pollock *Gadus chalcogrammus*, Pacific halibut *Hippoglossus stenolepis*, all rockfish *Sebastodes* spp. and *Sebastolobus* spp., lingcod *Ophiodon elongatus*, Atka mackerel *Pleurogrammus monopterygius*, giant Pacific octopus *Octopus dofleini*, squid *Berryteuthis magister*, Pacific herring *Clupea harengus*, salmon *Onchorhynchus* spp., weathervane scallop, red sea cucumber *Parastichopus californicus*, Bering skate *Bathyraja interrupta*, Aleutian skate *B. aleutica*, Alaska skate *B. parmifera*, longnose skate *Raja rhina*, big skate *R. binoculata*, Dungeness crab *Metacarcinus magister*, Tanner crab, red king crab, snow crab *Chionoecetes opilio*, hair crab *Erimacrus isenbeckii*, box crab *Lopholithodes foraminatus*, spiny dogfish *Squalus acanthius*, Pacific sleeper shark *Somniosus pacificus*, salmon shark *Lamna ditropis*, wolf-eel *Anarrichthys ocellatus*, and giant wrymouth *Cryptacanthodes giganteus*. As whole-haul species were removed from the on-deck sorting bin for sampling, the subsampling net was lifted by crane through remaining catch and the resulting subsample was placed on the sorting table for species composition sampling. All species on the sorting table were identified and weighed. Data recorded for subsampled organisms was used post survey to expand results to the entire haul catch. Human-made products, kelp, empty shells, regurgitated fish, rocks, etc. in the subsample were classified as “debris” and weighed.

Length or width measurements were taken from selected shellfish species. Crabs were categorized by shell condition and measurements were electronically recorded using digital calipers linked to a shellfish measurement database. Tanner crab carapace width (CW) was measured perpendicular to the carapace midline, between the lateral margin spines; however, legal status (meets minimum size requirement to retain in a fishery) was determined including lateral margin spines. King crab were measured for carapace length (CL) from the right eye socket to the medial-posterior edge of the carapace whereas legal status was determined by measuring perpendicular to the carapace midline including lateral margin spines. An explanation of the terms used to characterize Tanner and king crabs are presented in Appendix A. Dungeness crab were measured for CW and checked for legal status across the carapace immediately anterior to the tenth anterolateral spine (Spalinger 2015b).

Tanner, king, and Dungeness crabs were subsampled when each species/sex exceeded 200 individuals per haul. Chela height measurements (the greatest height, excluding spines, on the right chela) from up to 50 Tanner crab per haul were taken from male crab >60 mm CW in the Northeast, Eastside, and Westside sections of the Kodiak District. Clutch fullness of mature female Tanner, king, and Dungeness crabs was estimated by examining egg clutch and assigning a fractional clutch size relative to the size of the abdominal flap (Spalinger 2015b). Embryo development was noted by the presence or absence of eyed eggs. External signs of bitter crab disease, black mat, nemertean worms, and parasitic barnacles were recorded for all measured crabs. When available, shell height measurements for 20 weathervane scallops per haul were collected (Spalinger 2015b).

Length measurements were taken from selected finfish species. Target sample size was 30 to 50 measurements per species per haul. Measurements were entered directly into a fish measurement database using a magnetic fish measuring board. Commercial finfish species were measured from snout to mid-point of the caudal fin. Sharks were measured from snout to tip of caudal fin.

Skates were measured along the dorsal surface from the snout to the anterior notch of the pectoral fin. All sharks and skates were measured and sex determined by the presence or absence of claspers (Spalinger 2015b).

CPUE, DENSITY, AND ABUNDANCE INDICES

Survey catch data were converted to density estimates for each haul by dividing the number or weight of animals caught in the haul by the area swept with the trawl during the tow. The area swept is the product of the assumed net width of 12.2 m and the haul distance:

$$\text{density} = \frac{\text{number or weight of animals}}{\text{net width} * \text{haul distance}}.$$

Relative abundance indices for Tanner and king crabs were derived from trawl survey data using the area swept technique (Alverson and Pereyra 1969). Density estimates were multiplied by the station area (Appendix B2) to estimate station abundance:

$$\text{station abundance} = \text{density} * \text{station area}.$$

The sum of abundances from stations in a geographic area provides a total abundance index for the area:

$$\text{total district or section abundance} = \sum \text{station abundance}.$$

In addition to crab relative abundance indices, a commonly used measure in this report is CPUE, which is standardized to kg or number caught per km towed, allowing for comparisons between hauls:

$$\text{CPUE} = \frac{\text{number or weight of animals}}{\text{distance towed}}.$$

RESULTS AND DISCUSSION

Detailed haul data are in Appendix B1 and include date, station, start position, heading, average depth, distance towed, and bottom temperature.

KODIAK

In the Northeast, Eastside, Southeast, and Southwest sections of the Kodiak Tanner crab District, 149 hauls were successfully completed between June 14 and July 12 (haul numbers 1–149). Haul locations are shown in Appendices C1–C7. In the Westside and North Mainland sections, 61 hauls were successfully completed between September 4 and September 13 (haul numbers 308–368). The total area of the surveyed sections used to determine abundance estimates for the district in 2018 was 8,084.8 km² (Appendix B2).

Throughout the Kodiak District 148 species were identified and weighed. A total of 48,636 size measurements were collected from 4 invertebrate species and 32,149 length measurements were collected from 40 fish species.

Catch Composition

The CPUE of all species from Kodiak sample hauls was 515 kg per km towed. Arrowtooth flounder *Atheresthes stomias* was the dominant species caught by weight (20.1%), followed by Flathead sole *Hippoglossoides elassodon* (18.4%), Tanner crab (11.2%), walleye pollock

(11.1%), and Pacific halibut (4.0%; Table 3). Arrowtooth flounder, flathead sole, walleye pollock, and Tanner crab were the 4 most abundant species captured by weight in previous years (2014–2017; Figure 4), with the exception of 2016 when walleye pollock was the 6th most abundant by weight.

Tanner Crab

The 2018 Kodiak District survey captured 155,566 male Tanner crab and 136,919 female Tanner crab. Tanner crab were caught in 95% of all hauls, with catches ranging from 0 to 17,753 crab per km towed, with the highest CPUE at station UGE in Ugak Bay within the Eastside Section (Figure 5). Total Tanner crab CPUE was 797 crab per km towed.

Tanner crab abundance estimates for each station were summed by management section (Appendix D1). The total 2018 Kodiak District surveyed Tanner crab abundance was estimated at 271.7 million crab, an increase from 69.2 million crab estimated in 2017 and the largest estimate in survey record (Table 4). The largest increases were observed among males <70 mm CW and juvenile females (Table 4).

The 2018 estimated abundance of legal-sized male Tanner crab was 3.2 million crab, an increase from the 2017 estimate of 2.1 million, and the highest legal-sized male abundance estimate since 2012 (Table 4). In 2018, the abundance estimate of 2.0 million legal-sized male crab in the Eastside Section was the largest in the district, while the Westside and Northeast sections had the smallest estimated abundances of legal males.

Trawl survey results indicated that mature male Tanner crab abundance in the Eastside and Southeast sections met minimum regulatory thresholds and both sections opened to commercial Tanner crab fishing in 2019. Mature male Tanner crab abundance estimates for the Northeast, Southwest, Westside, and North Mainland sections were below thresholds needed for commercial seasons (Table 2).

Male Tanner crab had a mean size of 58.1 mm CW and females had a mean size of 52.8 mm CW. A large proportion of male and female crab were between 35 mm CW and 60 mm CW (Figure 6). Only 5.4% of male crab were mature (Figure 7; Table 5). In the Eastside, Southwest, and North Mainland sections most male crab were less than 80 mm and in new shell condition. The Northeast, Southeast, and Westside sections had a greater proportion of male crab that were greater than 80 mm, in various shell conditions (Figures 8 and 9). Soft/new pliable shell and new shell crab comprised 96% (149,698) of the total male Tanner crab captured in the Kodiak District (Table 5).

Mature female Tanner crab had a mean size of 82.8 mm CW. A total of 5,093 mature female crab were measured and clutch information was determined. Multiparous crab accounted for 47.1% (2,399) of mature females, down from 76.5% in 2017 (Figure 11; Spalinger and Knutson 2018). Only 72 mature females examined did not produce an egg clutch and 51.3% (2,613) of mature females had an egg clutch greater than half full (Figure 10). This was less than 2017 when 73.4% of mature females sampled had egg clutches that were more than half full (Spalinger and Knutson 2018). Average clutch fullness in 2018 declined from a peak in 2016 (Figure 11).

Red King Crab

Red king crab were caught in 12.9% of Kodiak Area hauls totaling 280 males and 245 females. King crab catch ranged from 0 to 146 crab per haul, with 88.2% of king crab caught inside Alitak Bay and 7.4% caught on Alitak Flats (Figure 12).

Red king crab abundance estimates were derived for 4 districts of the Kodiak Registration Area by size and sex categories (Table 6). The 2018 Kodiak red king crab abundance was estimated at 401,991 crab, which was more than the estimated 266,430 crab in 2017. The largest increases were observed among mature females. Total number of male king crab declined due mostly to lower numbers of postrecruit males (Table 6). The total estimated abundance of legal males decreased from 139,975 crab in 2017 to 113,991 crab in 2018 and represented 55.4% of the total male abundance.

Mean king crab size was 156.8 mm CL for males and 133.3 mm CL for females (Figures 13 and 14). The majority of female king crab were mature and the majority of males were legal (Table 6). During the 2018 Kodiak Area survey, 66.2% (155) of all mature females examined had an egg clutch that was more than half full (Figure 15), similar to 2017 (68.0%; Spalinger and Knutson 2018).

CHIGNIK

In the Chignik Tanner crab district 46 hauls were successfully completed from July 23 through July 28 (haul numbers 150–195; Appendices C8–C9). The total area used to determine abundance estimates for the district in 2018 was 1,374.7 km² (Appendix B2).

Throughout the Chignik District 104 species were identified and weighed. A total of 14,286 size measurements were collected from 4 invertebrate species and 6,181 length measurements were collected from 27 fish species.

Catch Composition

The CPUE of all species from Chignik sample hauls was 387 kg per km towed. Arrowtooth flounder (24.8%), flathead sole (21.2%), and Tanner crab (10.3%) were the dominant species caught by weight, followed by big skate (7.4%) and Pacific halibut (5.5%; Table 7). With the exception of Tanner crab in 2017, these species have been among the top 10 species in recent surveys (Spalinger 2014, 2015a, 2016, 2017; Spalinger and Knutson 2018; Figure 4).

Tanner Crab

The 2018 Chignik District bottom trawl survey captured 21,539 male Tanner crab and 16,887 female Tanner crab. Tanner crab were caught in all hauls, with catches ranging from 1 to 2,638 crab per km towed. Station 4296 in Kujulik Bay had the highest CPUE of Tanner crab (Figure 16). Total Tanner crab CPUE was 462 crab per km towed.

Abundance estimates for Tanner crab in each station were summed by surveyed locale (Appendix D2). The total 2018 Chignik District Tanner crab abundance was estimated at 55.3 million crab, an increase from 9.0 million crab in 2017 and the highest abundance estimate in survey history (Table 8). Juvenile female crab and male crab <70 mm CW showed the largest increases from recent years. The estimated abundance of legal-sized male Tanner crab in 2018 increased to 106,875 crab from 73,537 crab in 2017 (Table 8; Figure 17). Estimated mature male abundance was below the threshold needed for opening a commercial fishery in 2019 (Table 2).

The mean Chignik District Tanner crab CW was 64.4 mm for males and 59.3 mm for females. A large proportion of male and female crab were between 40 mm CW and 70 mm CW (Figure 6). Juvenile males with soft/new pliable or new shell conditions accounted for 95.9% (20,654) of all male Tanner crab captured in the district (Table 5) compared to 87.3% in 2017 (Spalinger and Knutson 2018). Mitrofania had the highest number of new shell male crab, which were predominantly smaller-sized crab (<115 mm CW), while Chignik Bay had the highest number of larger male crab (>115 mm CW; Figures 18 and 19).

Mature female Tanner crab had a mean size of 83.5 mm CW. A total of 596 mature females were measured and clutch information recorded. Most mature females were primiparous; multiparous females accounted for 43.5% (259) of mature female Tanner crab examined in 2018 compared to 92.7% in 2017 (Spalinger and Knutson 2018). Egg clutches that were more than half full were found in 54.4% (324) of mature females examined (Figure 20). Average clutch fullness in 2018 declined from a peak in 2016 (Figure 21).

SOUTH PENINSULA

In the South Peninsula Tanner crab District, 86 hauls were successfully completed from July 29 through August 20 (haul numbers 196–239 and 266–307; Appendices C9–C12). The total area used to determine abundance estimates for the district in 2018 was 2,551.0 km² (Appendix B2).

Throughout the South Peninsula District, 108 species were identified and weighed. A total of 23,977 size measurements were collected from 4 invertebrate species and 12,199 length measurements were collected from 31 fish species.

Catch Composition

The CPUE of all species from South Peninsula sample hauls was 769 kg per km towed. Flathead sole (23.9%), yellowfin sole (16.0%), and walleye pollock (13.6%) were the dominant species caught by weight, followed by arrowtooth flounder (12.1%) and starry flounder (4.8%; Table 9). These species, with the exception of starry flounder, have been among the top 10 species in recent surveys (Spalinger 2014, 2015a, 2016, 2017; Spalinger and Knutson 2018; Figure 4).

Tanner Crab

The 2018 South Peninsula District survey caught 21,312 male Tanner crab and 21,844 female Tanner crab. Tanner crab were caught in 98% of all hauls, with catches ranging from 0 to 5,886 crab per km towed, with the highest CPUE at station COOX in the Western Section, near King Cove (Figure 16). Total Tanner crab CPUE was 289 crab per km towed.

Tanner crab abundance estimates for each station were summed by surveyed locale and management section (Appendix D3). The total 2018 Tanner crab abundance in the surveyed portion of the South Peninsula District was estimated at 52.6 million crab, an increase from 9.7 million crab in 2017, and the highest estimate since 2009 (Table 10). In 2018, increases in Tanner crab abundance were observed across all groups of crab except the largest size category of legal males. Juvenile female crab and male crab <70 mm CW showed the largest increases from recent years (Table 10; Figure 22). Estimated abundance of legal-sized male Tanner crab increased to 0.2 million crab in 2018 from 0.1 million crab in 2017. Abundance estimates of mature male Tanner crab in the Eastern and Western sections were below thresholds needed for commercial seasons in 2019 (Table 2).

Male Tanner crab in the South Peninsula District had a mean size of 53.9 mm CW and females had a mean size of 50.0 mm CW. The highest proportions of male and female crab were observed at 35 mm CW and 40 mm CW, respectively (Figure 6). Sublegal male crab <70 mm CW accounted for 84.8% (18,078) of the total male Tanner crab captured in the district with most of those found around Cold Bay/Belkofski Bay (Table 5; Figures 23 and 24).

Mature female Tanner crab had a mean size of 90.8 mm CW. A total of 632 mature female Tanner crab were measured and clutch information determined. Multiparous females in the South Peninsula District accounted for 58.9% (372) of mature female Tanner crab examined in 2018 compared to 92.7% in 2017 (Spalinger and Knutson 2018). Egg clutches that were more than half full were found in 60.1% (380) of mature female Tanner crab examined (Figure 25). Average clutch fullness declined from 2017, while the proportion of primiparous females increased (Figure 26).

Red King Crab

The Alaska Peninsula king crab management area consists of waters west of Cape Kumlik and east of Scotch Cap Light (5 AAC 34.500), approximately corresponding to the South Peninsula and Chignik Tanner crab management district boundaries (Figure 2). The 2018 abundance estimate was 1,147,914 crab, which was higher than 208,080 crab estimated in 2017 (Table 6). A total of 615 male and 43 female red king crab were captured in the Alaska Peninsula Area, most of which were from Pavlof Bay (Figure 12). Male king crab mean carapace length was 140.8 mm and female red king crab mean carapace length was 114.7 mm. Most female king crab examined were mature (95.0%; 41 crab). The patchy catches of king crab in the sampling areas may not accurately reflect changing abundance.

EASTERN ALEUTIAN

In the Eastern Aleutian Tanner crab District, 26 hauls (haul numbers 240–265) were completed from August 6 to August 13 (Appendices C13–C14). The total area used to determine abundance estimates was 545.1 km² (Appendix B2).

Throughout the Eastern Aleutian District 104 species were identified and weighed. A total of 4,135 size measurements were collected from 4 invertebrate species and 3,506 length measurements were collected from 26 fish species.

Catch Composition

The CPUE of all species from Eastern Aleutian sample hauls was 476 kg per km towed. Arrowtooth flounder was the dominant species by weight (41.9%), followed by flathead sole (11.9%), walleye pollock (11.8%), Tanner crab (6.7%), and Pacific halibut (5.3%; Table 11; Figure 4).

Tanner Crab

The 2018 Eastern Aleutian District survey captured 2,614 male and 4,571 female Tanner crab. Tanner crab were caught in 96% of hauls with catches ranging from 0 to 729 crab per km towed. Makushin Bay had the highest CPUE of 729 crab per km towed at station MKC (Figure 27). Total Tanner crab CPUE was 165 crab per km towed.

Tanner crab abundance estimates for each station were summed by management section (Appendix D4). Total abundance in 2018 was estimated at 6.8 million crab, a decrease from 10.1

million crab in 2017 (Table 12). The legal-sized male abundance was estimated to be 139,469 crab, similar to 128,867 legal males in 2017, with Makushin Bay having the largest abundance of legal-sized male crab. Estimated mature male abundance for all sections of the Eastern Aleutian District were below thresholds needed for a commercial fishery in 2019 (Table 2).

Mean Tanner crab CW was 85.6 mm for males and 75.3 mm for females. Size distribution of male Tanner crab showed relatively similar proportions of small (35 mm CW), medium (75 mm CW), and large (135 mm CW) size crab (Figure 6). Most females were between 65 mm CW and 95 mm CW. Of the 1,275 mature female Tanner crab sampled, 55.9% (713) had an egg clutch greater than half full (Figures 28 and 29).

Red King Crab

Red king crab abundance in the surveyed areas around Akutan and Unalaska islands remains at historic low levels. A total of 1 female red king crab was captured during the 2018 trawl survey in Beaver Inlet.

WEATHERVANE SCALLOPS

Weathervane scallops accounted for 0.4% of total animal weight from all areas surveyed in 2018. Total CPUE was 2.0 kg per km towed, which is below the 1988–2017 CPUE of 3.0 kg per km towed (Figure 30). The highest catch of 56.4 kg per km towed was at station 285 in Marmot Bay, and overall, the Kodiak Area had the highest total weathervane scallop CPUE at 3.1 kg per km towed. Ninety percent of all weathervane scallops caught were located in the Kodiak Area (Figure 31).

A total of 4,899 scallops were caught in 2018 and averaged 132.0 mm in shell height (Figure 32). This was a decrease from 136.4 mm in 2017, and was the smallest average height since scallop measurements were first collected in 1999 (Figure 33).

ARROWTOOTH FLOUNDER

Arrowtooth flounder accounted for 19.2% of total animal weight from all areas surveyed in 2018. Total CPUE was 106.5 kg per km towed, which is below the 1988–2017 CPUE of 167.4 kg per km towed (Figure 34). The highest catch of 1,176.6 kg per km towed was at station UNC in Unalaska Bay and the Aleutian Islands District of the BSAI Area had the highest total CPUE at 199.4 kg per km towed (Figure 35).

A total of 121,942 arrowtooth flounder were caught in 2018, and averaged 35.2 cm in length (Figure 36). This was a slight decrease from 35.9 cm in 2017 and below the average survey length since 1999 (Figure 37).

FLATHEAD SOLE

Of all species captured in 2018, flathead sole accounted for 20.1% of animal weight. Total CPUE was 111.2 kg per km towed, which was below the 1988–2017 CPUE of 135.8 kg per km towed (Figure 38). The highest catch of 889.5 kg per km was at station KUW in Uganik Bay on the west side of Kodiak Island, but overall the South Alaska Peninsula Area had the highest total CPUE at 183.9 kg per km towed (Figure 39).

A total of 249,294 flathead sole were caught in 2018 and averaged 29.3 cm in length (Figure 40), which was similar to 29.4 cm in 2017 and slightly below the average length since 1999 (Figure 41).

WALLEYE POLLOCK

Walleye pollock accounted for 11.4% of total animal weight from all areas surveyed in 2018. Total CPUE was 63.3 kg per km towed, which was below the 1988–2017 CPUE of 109.3 kg per km towed (Figure 42). The highest catch of 3,310.0 kg per km towed was at station 535D in Barnabas Gully on the east side of Kodiak Island, but overall, the South Alaska Peninsula Area had the highest total CPUE at 104.7 kg per km towed (Figure 43).

A total of 51,128 walleye pollock were caught in 2018, and averaged 44.4 cm in length (Figure 44). This was smaller than 46.6 cm in 2017 and below the average length since 1999 (Figure 45).

PACIFIC HALIBUT

Pacific halibut accounted for 3.6% of total animal weight from all areas surveyed in 2018. Total CPUE was 20.1 kg per km towed, which is similar to the 1988–2017 CPUE of 21.0 kg per km towed (Figure 46). The highest catch of 219.0 kg per km towed was at station UNE in Unalaska Bay, and the Aleutian Islands District of the BSAI Area had the highest total CPUE of 25.0 kg per km towed (Figure 47).

A total of 2,546 Pacific halibut were caught in 2018. They averaged 70.0 cm in length (Figure 48), which was smaller than the 2017 average length of 70.8 cm but larger than the 1999–2017 average length (Figure 49).

PACIFIC COD

Pacific cod accounted for 1.8% of total animal weight from all areas surveyed in 2018. Total CPUE was 10.2 kg per km towed, which is less than half of the overall CPUE of 23.3 kg per km towed from 1988–2017 (Figure 50). The highest catch of 153.4 kg per km towed was at station MOL in Morzhovoi Bay. Chignik, South Alaska Peninsula, and BSAI areas had similar CPUE of Pacific cod, ranging from 12.2 kg per km towed in Aleutian Islands District of the BSAI Area to 12.7 kg per km towed in Chignik Area, and 12.8 kg per km towed in South Alaska Peninsula Area (Figure 51). CPUE of Pacific cod was lowest in Kodiak Area at 8.3 kg per km towed.

A total of 2,675 Pacific cod were caught in 2018. They averaged 54.2 cm in length (Figure 52), which was smaller than the 2017 average length of 55.7 cm, but similar to the 1999–2017 average length (Figure 53).

YELLOWFIN SOLE

Yellowfin sole accounted for 7.5% of total animal weight from all areas surveyed in 2018. Total CPUE was 41.6 kg per km towed, which is just below the 1988–2017 CPUE of 45.3 kg per km towed (Figure 54). The highest catch of 1,048.6 kg per km towed was at station COE in Cold Bay and the South Alaska Peninsula Area had the highest total yellowfin sole CPUE at 123.1 kg per km towed (Figure 55).

A total of 66,105 yellowfin sole were caught in 2018, averaging 30.9 cm in length (Figure 56). This was similar to 2017, and smaller than the 1999–2017 average length (Figure 57).

SABLEFISH

Sablefish accounted for 1.0% of total animal weight from all areas surveyed in 2018. Total CPUE was 5.6 kg per km towed, which is more than 3 times the 1988–2017 CPUE of 1.5 kg per km towed (Figure 58). The highest catch of 272.4 kg per km towed was at station 535C in Barnabas Gully on the east side of Kodiak Island, and the Kodiak Area had the highest total sablefish CPUE at 8.4 kg per km towed (Figure 59).

A total of 3,484 sablefish were caught in 2018. They averaged 45.2 cm in length (Figure 60), which was larger than the 2017 average length of 40.3, and larger than the 1999–2017 average length (Figure 61).

SKATES

Skate species accounted for 4.8% of total animal catch from all areas surveyed in 2018. Total skate CPUE was 26.4 kg per km towed, which is higher than the 1988–2017 CPUE of 20.4 kg per km towed (Figure 62). The highest catch of a single skate species in 2018 was 281.9 kg per km towed of big skates at station 4915 outside of Ivanof Bay in the Chignik Area. The Chignik Area also had the highest total big skate CPUE at 28.8 kg per km towed (Figure 63). The Kodiak Area had the highest total CPUE of longnose skate (10.0 kg per km), Bering skate (4.7 kg per km), and Aleutian skate (3.0 kg per km) and the Aleutian Islands District of the BSAI Area had the highest total Alaska skate CPUE (1.2 kg per km; Figure 64).

Species, sex, and length were determined for each skate caught during the 2018 trawl survey. A total of 3,012 skates were captured and measured from all districts surveyed. Although big skates accounted for the largest proportion of skate weight (54.6%), Bering skates, which only accounted for 11.9% of total skate weight, were the most abundant (Table 13). Bering skates comprised 41.6% of the total number of skates caught and averaged 28.8 cm from snout to anterior notch of the pectoral fin (Figure 65). Longnose skates made up 25.7% of the total number of skates caught and averaged 42.7 cm in length. Big skates accounted for 25.2% of the number of skates caught and had an average length of 56.7 cm. Aleutian skates accounted for 5.3% of all skates caught and averaged 56.0 cm, and Alaska skates made up 2.3% and averaged 41.9 cm (Figure 65). Larger skate species, big and Aleutian skates, were mostly female (big skates: 79.2% female; Aleutian skates: 74.2% female), whereas the smaller species (Bering, longnose, and Alaska skates) were composed of 47.7%, 49.4%, and 50.7% females, respectively.

WATER TEMPERATURE

Near-bottom water temperatures (~2 m above sea floor) in 2018 ranged from 3.47°C (Deadman Bay, Station ALQ) to 10.99°C (Terror Bay, Station KUYB; Figure 66; Appendix B1). Stations with the lowest average temperatures were in Deadman Bay sampled during mid-July at an average depth of 143 m (3.53°C). The warmest stations, on average, were in Cold Bay, sampled during mid-August at an average depth of 64 m (9.86°C, Figures 66 and 67). Average near-bottom water temperature across the entire survey area was 6.22°C, which was 0.11°C higher than in 2017 (Appendix B1; Figure 67). Average survey temperature increased from 2012 to 2016 but declined in 2017 and 2018. The 2017 and 2018 averages were the lowest since 2013 (Figure 67).

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TABLES AND FIGURES

Table 1.—Number of large-mesh bottom trawl survey hauls used to determine king and Tanner crab abundance, by Tanner crab management district, 1988–2018.

Year	Kodiak	Chignik	South Peninsula	Eastern Aleutian	Total
1988	213	0	106	0	319
1989	215	34	108	0	357
1990	208	37	120	45	410
1991	223	32	115	37	407
1992	204	29	114	0	347
1993	223	35	111	0	369
1994	200	34	121	44	399
1995	218	31	0	38	287
1996	222	27	122	0	371
1997	218	34	115	0	367
1998	217	35	93	0	345
1999	230	36	93	39	398
2000	220	35	94	36	385
2001	222	36	94	0	352
2002	225	47	93	0	365
2003	211	45	93	39	388
2004	211	45	94	24	374
2005	217	46	92	23	378
2006	207	46	89	28	370
2007	211	45	92	23	371
2008	215	44	89	23	371
2009	215	46	93	28	382
2010	213	45	90	23	371
2011	207	46	91	23	367
2012	209	46	91	28	374
2013	208	45	93	23	369
2014	211	45	92	23	371
2015	211	46	90	26	373
2016	209	46	93	21	369
2017	204	45	93	21	363
2018	210	46	86	26	368

Note: All hauls occurring in Chignik and South Peninsula Tanner crab districts are within the Alaska Peninsula king crab area.

Table 2.—Tanner crab mature male abundance threshold levels from regulatory harvest strategies, estimates of number of mature male crab by survey year from large-mesh bottom trawl surveys, 2014–2018.

	Fishery Threshold (number of mature males >114 mm CW)	Survey estimated number of mature males (>114 mm CW)				
		2014	2015	2016	2017	2018
Kodiak District						
Northeast Section	1,123,000	486,625	245,327	285,473	411,803	530,533
Eastside Section	1,552,000	879,619	795,901	5,779,765 ^a	5,164,475 ^a	6,207,284 ^a
Southeast Section	733,000	2,048,688 ^a	770,595 ^a	1,258,528 ^a	667,890	1,945,812 ^a
Southwest Section	1,236,000	582,977	581,810	1,021,219	1,581,401 ^a	829,358
Westside Section	764,000	654,991	231,583	224,050	308,643	637,127
North Mainland Section	1,469,000	201,926	561,951	447,094	313,323	613,235
Chignik District	973,000	1,803,796 ^a	1,043,633 ^a	610,875	319,501	777,204
South Peninsula District						
Eastern Section	2,015,000	799,794	1,194,423	1,370,094	436,361	421,580
Western Section	1,250,000	2,299,520 ^a	1,733,879 ^a	3,420,640 ^a	733,065	899,185
Eastern Aleutian District						
Akutan Section	200,000	467,082 ^a	13,017	74,855	106,962	40,697
Unalaska/Kalekta Bay Section	65,000	196,112 ^a	175,550 ^a	14,865	65,317 ^a	253,449 ^a
Makushin/Skan Bay Section	45,000	272,424 ^a	203,114 ^a	150,737 ^a	292,866 ^a	250,735 ^a

^a Above mature male harvest strategy threshold.

Table 3.-Predominant species by weight in the Kodiak Tanner crab District large-mesh bottom trawl survey, 2018.

Common name	Species name	% of catch by weight
Arrowtooth flounder	<i>Atheresthes stomias</i>	20.1
Flathead sole	<i>Hippoglossoides elassodon</i>	18.4
Tanner crab	<i>Chionoecetes bairdi</i>	11.2
Walleye pollock	<i>Gadus chalcogrammus</i>	11.1
Pacific halibut	<i>Hippoglossus stenolepis</i>	4.0
Yellowfin sole	<i>Limanda aspera</i>	3.6
Spiny dogfish shark	<i>Squalus acanthius</i>	3.3
Big skate	<i>Raja binoculata</i>	2.6
Sunflower seastar	<i>Pycnopodia helianthoides</i>	2.3
English sole	<i>Parophrys vetulus</i>	2.0
Longnose skate	<i>Raja rhina</i>	1.9
Sablefish	<i>Anoplopoma fimbria</i>	1.6
Pacific cod	<i>Gadus macrocephalus</i>	1.6
Northern rock sole	<i>Lepidotretta polyxystra</i>	1.5
Anemone	Order: Actinaria	1.3
Starry flounder	<i>Platichthys stellatus</i>	1.3
Rex sole	<i>Glyptocephalus zachirus</i>	1.0
Alaska plaice	<i>Pleuronectes quadrituberculatus</i>	1.0
Bering skate	<i>Bathyraja interrupta</i>	0.9
Red king crab	<i>Paralithodes camtschaticus</i>	0.7
All others	(128 species)	8.5
		100.0

Table 4.—Tanner crab abundance estimates from large-mesh bottom trawl surveys in the Kodiak District, 1988–2018.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
Northeast Section													
1988	1,630,762	234,651	1,865,410	1,521,941	292,778	271,513	330,972	189,767	15,536	13,807	219,110	2,636,315	4,501,727
1989	4,102,889	3,120,366	7,223,255	3,921,034	1,221,125	1,346,371	1,124,565	602,640	86,462	114,652	803,756	8,416,850	15,640,105
1990	1,328,388	2,056,603	3,384,991	1,097,187	1,090,554	755,329	608,856	256,700	59,039	54,797	370,534	3,922,466	7,307,458
1991	3,427,808	1,894,924	5,322,734	2,837,563	1,227,405	1,202,318	1,043,081	428,157	23,871	52,116	504,147	6,814,517	12,137,248
1992	1,686,845	1,278,938	2,965,784	1,329,572	1,172,958	890,239	776,334	207,279	14,039	7,070	228,386	4,397,483	7,363,270
1993	1,432,940	1,039,391	2,472,334	1,333,380	340,021	525,424	592,685	264,729	31,637	16,787	313,153	3,104,662	5,576,997
1994	440,533	1,161,521	1,602,053	149,768	239,864	434,372	96,667	91,792	2,401	625,232	190,860	1,464,446	3,066,499
1995	3,752,250	1,214,569	4,966,819	3,675,881	878,260	269,577	335,922	9,039	124,138	0	133,177	5,292,815	10,259,633
1996	1,912,715	2,302,910	4,215,629	1,514,878	2,332,954	1,096,662	398,858	29,473	51,094	1,604	82,171	5,425,523	9,641,149
1997	379,433	935,783	1,315,214	436,913	869,379	1,007,484	560,733	44,203	22,402	0	68,883	2,943,396	4,258,613
1998	1,383,819	2,325,285	3,709,105	1,025,277	2,159,050	1,803,166	1,408,517	222,130	40,589	11,255	273,975	6,669,986	10,379,086
1999	1,553,845	851,680	2,405,526	1,767,972	255,346	558,088	715,093	168,115	98,924	1,904	268,945	3,565,446	5,970,974
2000	5,704,136	1,475,947	7,180,080	5,594,824	1,147,652	703,341	811,750	293,880	227,555	12,238	533,675	8,791,241	15,971,322
2001	14,094,656	4,872,780	18,967,439	13,622,529	5,042,356	2,846,411	1,495,486	157,690	257,606	2,963	418,258	23,425,036	42,392,477
2002	3,524,427	2,385,993	5,910,419	3,775,736	2,432,295	2,361,790	1,639,344	186,216	45,329	0	231,546	10,440,705	16,351,124
2003	1,409,466	2,615,606	4,025,071	1,540,636	1,689,696	2,938,869	2,673,429	356,077	133,550	6,148	495,777	9,338,398	13,363,472
2004	2,651,777	4,260,341	6,912,119	2,360,296	1,221,360	2,052,940	2,953,781	875,891	129,813	12,533	1,018,239	9,606,617	16,518,733
2005	3,631,110	3,094,318	6,725,425	3,933,422	1,439,686	1,419,878	2,802,277	790,716	264,016	4,905	1,059,636	10,654,890	17,380,317
2006	8,340,276	1,733,887	10,074,165	7,453,502	2,228,019	914,781	912,671	122,964	112,171	7,489	242,624	11,751,595	21,825,756
2007	5,606,114	2,014,429	7,620,552	4,038,766	2,282,508	2,270,599	1,951,415	173,364	188,475	0	361,837	10,905,123	18,525,668
2008	6,085,883	3,010,942	9,096,823	5,529,663	1,822,588	2,531,748	1,744,042	214,053	97,536	3,697	315,285	11,943,325	21,040,150
2009	3,171,509	1,906,897	5,078,409	2,634,387	2,907,862	3,087,715	2,716,467	666,825	29,301	0	696,127	12,042,551	17,120,959
2010	2,576,574	3,940,024	6,516,600	2,379,450	1,610,640	1,058,419	2,159,621	499,837	292,814	13,066	805,717	8,013,844	14,530,442
2011	1,184,358	951,698	2,136,057	1,245,659	204,063	376,750	873,125	86,136	182,328	2,363	281,693	2,981,284	5,117,339
2012	4,155,939	605,221	4,761,158	4,055,429	164,548	205,760	574,211	38,415	170,673	0	209,087	5,209,037	9,970,194
2013	25,030,918	938,563	25,969,480	24,684,698	1,490,903	415,811	228,588	34,034	67,800	0	106,454	26,926,455	52,895,931
2014	5,720,166	3,931,225	9,651,389	4,659,105	2,721,889	1,440,196	346,277	11,901	122,229	6,218	140,348	9,307,818	18,959,208
2015	435,407	1,543,857	1,979,265	439,703	820,670	567,931	194,394	21,733	29,200	0	50,932	2,073,635	4,052,897
2016	759,351	1,268,993	2,028,343	652,806	352,283	436,626	229,991	16,261	39,221	0	55,482	1,727,188	3,755,531
2017	2,695,084	1,603,646	4,298,733	3,150,077	315,008	504,640	360,623	27,072	23,631	477	51,179	4,381,522	8,680,255
2018	5,937,942	2,223,179	8,161,121	5,385,100	1,838,496	1,048,602	443,603	30,848	55,102	983	86,932	8,802,730	16,963,851
Eastside Section													
1988	2,061,299	762,131	2,823,428	1,599,121	434,581	610,398	689,188	279,635	97,689	1,914	379,236	3,712,512	6,535,935

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Table 4.—Page 2 of 7.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
1989	2,315,842	3,430,969	5,746,810	1,979,980	1,228,590	1,375,295	1,265,912	803,733	265,072	29,979	1,098,782	6,948,552	12,695,354
1990	1,472,521	9,452,524	10,925,041	1,248,275	667,516	1,940,947	3,844,980	751,361	134,360	57,684	943,405	8,645,116	19,570,158
1991	1,498,865	3,671,541	5,170,399	1,204,036	305,078	661,606	2,677,115	2,997,741	494,675	38,636	3,531,054	8,378,878	13,549,275
1992	1,494,597	1,955,463	3,450,056	1,613,212	331,773	502,134	1,594,419	525,304	267,165	75,584	868,053	4,909,577	8,359,627
1993	1,719,650	1,500,333	3,219,977	1,357,111	252,168	402,736	989,366	115,839	348,460	14,328	478,628	3,479,992	6,699,967
1994	1,767,160	566,400	2,333,558	705,158	462,351	568,095	47,946	120,912	2,837	739,790	171,694	3,217,166	5,550,722
1995	3,792,461	505,129	4,297,586	3,321,664	594,245	456,053	410,938	28,656	84,036	2,394	115,085	4,897,976	9,195,561
1996	2,070,985	916,541	2,987,523	2,159,913	704,721	609,763	848,358	107,362	179,489	14,539	301,388	4,624,138	7,611,664
1997	800,291	652,062	1,452,355	771,288	677,803	724,276	707,297	117,305	103,542	15,558	236,405	3,117,062	4,569,415
1998	4,390,229	2,431,287	6,821,511	3,854,716	1,767,292	2,715,320	2,215,788	288,234	397,429	74,273	759,934	11,313,050	18,134,560
1999	6,267,399	1,468,370	7,735,763	5,090,059	394,774	1,033,098	1,941,389	368,285	568,053	87,803	1,024,143	9,483,445	17,219,206
2000	5,345,242	3,360,682	8,705,921	5,136,356	1,536,289	683,544	1,706,929	486,668	769,101	69,842	1,325,611	10,388,716	19,094,636
2001	28,271,214	3,092,285	31,363,498	22,768,490	3,233,656	1,454,585	1,159,217	72,143	984,133	78,208	1,134,484	29,750,428	61,113,925
2002	14,180,072	4,646,177	18,826,250	4,110,650	8,122,154	2,836,534	1,409,594	275,211	665,910	36,365	977,484	17,456,408	36,282,658
2003	2,520,605	8,553,327	11,073,935	2,649,111	2,922,961	10,092,328	5,074,824	215,854	358,600	19,061	593,514	21,332,730	32,406,665
2004	4,249,060	2,426,488	6,675,551	3,825,810	1,107,990	3,296,833	8,524,404	1,236,288	203,839	12,760	1,452,887	18,207,923	24,883,473
2005	1,553,368	3,316,472	4,869,840	1,768,248	131,919	1,258,057	6,796,866	3,034,483	535,098	51,861	3,621,441	13,576,526	18,446,367
2006	31,187,557	559,421	31,746,977	27,974,217	510,696	575,638	4,639,044	756,712	1,900,603	23,263	2,680,581	36,380,161	68,127,135
2007	41,718,044	2,376,973	44,095,012	21,272,982	25,931,589	1,599,981	3,770,602	206,871	1,427,355	18,357	1,652,582	54,227,724	98,322,733
2008	9,145,867	14,169,105	23,314,969	6,721,840	4,619,632	12,189,763	2,611,890	96,559	991,192	31,642	1,119,393	27,262,511	50,577,476
2009	2,968,693	8,962,999	11,931,690	708,414	3,452,835	5,043,296	12,248,939	2,136,073	251,967	34,437	2,422,474	23,875,940	35,807,628
2010	2,270,143	6,443,397	8,713,543	1,984,618	271,378	2,203,722	10,027,463	3,508,602	1,058,224	103,388	4,670,212	19,157,376	27,870,920
2011	5,202,385	2,592,195	7,794,580	5,097,964	103,753	550,828	4,158,718	1,066,462	1,253,650	55,022	2,375,133	12,286,383	20,080,961
2012	2,580,888	523,392	3,104,280	2,551,539	114,171	439,367	3,764,517	551,200	1,970,519	133,426	2,655,144	9,524,728	12,629,005
2013	30,969,141	540,183	31,509,324	29,649,164	1,407,170	427,549	1,094,291	13,854	608,505	28,115	650,473	33,228,639	64,737,959
2014	20,997,829	1,677,985	22,675,817	14,308,109	6,813,026	1,302,105	589,386	13,148	275,957	1,128	290,233	23,302,864	45,978,679
2015	1,445,145	3,578,999	5,024,143	1,228,244	2,565,413	3,424,944	638,483	78,122	65,453	13,843	157,417	8,014,492	13,038,638
2016	1,180,484	8,881,760	10,062,242	1,137,607	1,906,346	6,641,137	5,290,295	309,345	176,073	4,052	489,469	15,464,847	25,527,085
2017	8,011,302	3,886,433	11,897,736	6,692,487	939,577	2,014,575	4,161,036	763,285	230,021	10,133	1,003,438	14,811,106	26,708,842
2018	46,635,134	5,856,344	52,491,477	44,877,962	2,846,062	1,803,810	4,230,303	1,102,534	866,409	8,039	1,976,984	55,735,111	108,226,590
Southeast Section													
1988	205,391	306,388	511,777	160,392	160,858	426,837	1,077,533	746,692	123,661	49,324	919,676	2,745,287	3,257,067
1989	903,462	492,317	1,395,778	688,803	93,443	180,551	522,388	184,966	75,168	12,642	272,775	1,757,954	3,153,725
1990	1,122,473	731,106	1,853,577	1,057,451	107,489	225,073	525,876	289,966	101,413	4,420	395,799	2,311,677	4,165,252

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Table 4.—Page 3 of 7.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
1991	4,643,290	916,448	5,559,736	4,419,715	420,967	263,630	345,159	176,786	35,702	7,382	219,871	5,669,332	11,229,066
1992	2,150,176	1,294,433	3,444,604	1,640,451	692,489	446,230	573,374	32,883	142,802	10,199	185,885	3,538,424	6,983,021
1993	3,920,738	597,730	4,518,463	3,647,473	249,339	433,304	414,432	27,357	116,327	8,769	152,453	4,896,999	9,415,458
1994	112,458	221,331	333,789	28,664	86,943	473,013	107,893	54,496	4,252	639,654	166,638	841,253	1,175,042
1995	2,670,117	107,497	2,777,610	2,375,567	15,058	28,423	82,247	76,922	46,938	2,370	126,229	2,627,521	5,405,129
1996	2,547,755	141,637	2,689,389	2,269,696	484,343	110,861	124,290	55,489	68,127	7,990	131,605	3,120,786	5,810,171
1997	457,206	140,330	597,536	360,968	200,785	114,901	45,486	3,133	44,726	1,337	49,197	771,332	1,368,867
1998	1,974,011	127,986	2,101,998	2,218,753	47,419	92,558	227,904	28,851	26,243	866	55,960	2,642,594	4,744,588
1999	3,919,534	158,773	4,078,305	4,019,039	98,997	95,849	193,398	127,663	65,506	8,583	201,751	4,609,036	8,687,340
2000	3,420,858	363,129	3,783,985	3,743,637	301,838	76,008	186,518	19,080	126,209	253	145,543	4,453,533	8,237,516
2001	9,448,017	2,945,931	12,393,951	9,541,603	2,255,870	344,924	321,770	48,095	222,346	13,686	284,129	12,748,291	25,142,241
2002	2,618,992	1,403,060	4,022,051	2,901,813	4,190,180	2,507,979	381,296	21,057	336,139	4,949	362,146	10,343,409	14,365,454
2003	481,349	479,053	960,400	628,937	1,557,932	1,715,093	976,621	51,970	91,267	0	143,239	5,021,814	5,982,213
2004	4,553,549	359,686	4,913,231	4,316,869	418,750	566,065	1,636,243	250,829	60,525	0	311,351	7,249,275	12,162,505
2005	3,968,071	539,475	4,507,545	3,759,906	373,861	476,640	1,483,977	102,187	210,177	1,411	313,777	6,408,150	10,915,692
2006	14,162,611	1,405,607	15,568,219	14,443,798	991,870	552,530	1,063,339	7,675	298,219	0	305,893	17,357,428	32,925,645
2007	11,124,842	4,009,477	15,134,318	8,110,713	8,461,823	2,078,980	1,129,380	10,109	295,360	0	305,470	20,086,357	35,220,673
2008	1,246,835	1,767,652	3,014,487	1,080,046	1,680,529	3,417,448	1,306,242	28,029	125,176	0	153,204	7,637,464	10,651,945
2009	460,373	945,857	1,406,231	574,423	561,598	1,239,465	3,226,378	685,687	41,942	5,463	733,094	6,334,953	7,741,181
2010	2,752,975	1,196,211	3,949,185	2,139,892	289,842	1,179,268	4,470,858	1,046,634	541,587	7,263	1,595,485	9,675,335	13,624,521
2011	1,676,276	390,308	2,066,583	1,789,232	72,952	272,548	1,958,277	349,066	1,418,778	42,854	1,810,697	5,903,698	7,970,276
2012	2,633,029	114,102	2,747,131	2,285,865	1,058,632	318,322	1,253,661	13,636	870,264	26,035	909,934	5,826,407	8,573,538
2013	14,727,401	323,947	15,051,345	12,916,858	738,190	175,543	501,856	32,203	431,622	13,474	477,300	14,809,743	29,861,087
2014	7,391,645	3,226,075	10,617,721	4,998,984	3,780,780	1,456,946	821,934	5,949	1,188,137	32,668	1,226,755	12,285,401	22,903,125
2015	496,492	791,280	1,287,772	379,009	707,633	1,307,676	688,125	50,492	30,988	990	82,470	3,164,907	4,452,675
2016	2,610,131	840,270	3,450,400	2,561,952	57,970	276,964	1,074,156	49,106	135,266	0	184,372	4,155,412	7,605,809
2017	8,411,559	712,059	9,123,617	8,900,592	2,230,451	480,018	476,787	84,920	104,725	1,458	191,103	12,278,940	21,402,556
2018	27,652,635	4,920,944	32,573,582	26,243,837	10,575,036	3,377,034	1,602,252	0	343,560	0	343,560	42,141,714	74,715,292
Southwest Section													
1988	170,503	163,010	333,513	147,327	13,145	45,652	467,408	899,130	47,264	42,716	989,111	1,662,646	1,996,158
1989	2,190,500	167,659	2,358,160	2,008,642	117,696	146,712	409,792	188,979	103,330	57,677	349,988	3,032,831	5,390,992
1990	2,386,223	618,601	3,004,822	1,910,951	845,766	478,801	509,858	43,360	48,813	8,851	101,025	3,846,402	6,851,221
1991	1,263,826	222,587	1,486,415	1,022,587	223,786	347,511	643,845	128,605	74,613	6,090	209,309	2,447,040	3,933,450
1992	455,592	197,142	652,735	450,611	152,337	318,610	234,215	264,484	66,834	4,972	343,096	1,498,868	2,151,600

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Table 4.—Page 4 of 7.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
1993	6,635,495	244,706	6,880,201	6,153,372	504,018	181,474	391,160	250,347	69,727	13,352	333,425	7,563,455	14,443,652
1994	205,248	120,527	325,777	131,512	70,316	60,386	145,272	128,502	23,030	7,394	158,927	566,414	892,191
1995	150,726	91,130	241,856	136,754	56,965	109,373	123,865	33,632	48,012	0	81,642	508,600	750,456
1996	346,288	44,723	391,011	324,729	98,278	161,973	239,780	35,951	74,200	1,536	111,689	936,445	1,327,459
1997	263,210	66,061	329,271	253,919	101,323	81,930	185,074	123,659	88,079	3,169	215,927	838,174	1,167,446
1998	237,613	36,579	274,194	230,680	59,605	54,531	62,803	22,385	85,742	2,193	110,323	517,941	792,136
1999	815,403	29,802	845,202	843,294	56,048	44,878	175,884	33,257	119,806	4,314	157,380	1,277,483	2,122,687
2000	3,003,937	67,880	3,071,814	2,949,004	184,394	113,293	166,972	54,803	104,346	714	159,863	3,573,527	6,645,340
2001	9,655,357	316,117	9,971,472	7,043,577	3,524,938	295,460	216,927	116,958	74,560	1,972	193,493	11,274,392	21,245,865
2002	2,502,575	972,134	3,474,706	1,587,174	1,796,456	1,770,050	423,125	84,294	73,974	1,974	160,243	5,737,043	9,211,752
2003	88,071	305,947	394,017	72,936	332,445	777,843	1,292,737	112,745	88,748	8,694	210,189	2,686,145	3,080,161
2004	336,728	307,894	644,621	304,927	64,562	315,710	940,544	1,195,138	130,481	16,236	1,341,858	2,967,599	3,612,221
2005	590,697	224,679	815,379	562,877	43,825	158,240	588,829	336,600	462,240	22,916	821,757	2,175,520	2,990,901
2006	6,038,059	597,821	6,635,882	7,028,088	242,323	133,434	468,416	106,125	597,805	23,463	727,392	8,599,651	15,235,534
2007	10,357,207	1,416,520	11,773,729	8,392,449	3,209,991	509,710	611,578	135,558	1,051,549	28,927	1,216,033	13,939,761	25,713,488
2008	5,802,830	3,572,935	9,375,768	2,263,701	5,936,109	4,572,867	697,450	129,245	243,032	9,409	381,686	13,851,815	23,227,580
2009	365,497	2,243,247	2,608,743	183,276	529,868	2,472,641	3,308,319	233,605	133,317	8,020	374,943	6,869,046	9,477,794
2010	40,940	3,096,850	3,137,790	24,411	87,825	1,403,646	4,587,459	1,023,856	185,042	6,293	1,215,191	7,318,531	10,456,321
2011	346,439	661,146	1,007,584	335,528	9,500	57,849	756,206	327,979	412,326	12,563	753,228	1,912,307	2,919,897
2012	645,852	699,003	1,344,856	686,600	29,533	42,217	563,026	29,029	522,949	10,290	562,267	1,883,644	3,228,498
2013	19,146,831	231,581	19,378,412	18,627,853	525,916	138,220	404,822	1,202	300,250	5,767	307,221	20,004,032	39,382,443
2014	5,392,720	363,227	5,755,945	5,534,731	2,709,259	715,540	456,448	14,231	112,298	0	126,530	9,542,510	15,298,456
2015	1,344,303	1,080,845	2,425,147	669,631	1,967,846	1,303,993	427,224	73,158	79,021	2,407	154,586	4,523,284	6,948,431
2016	55,651	1,322,224	1,377,871	41,337	391,928	1,306,211	933,779	57,200	30,240	0	87,439	2,760,695	4,138,564
2017	457,304	332,188	789,492	508,877	94,070	165,039	948,065	561,611	71,725	0	633,336	2,349,389	3,138,881
2018	27,069,155	144,170	27,213,324	25,392,195	763,824	98,580	372,514	316,870	134,346	5,626	456,843	27,083,956	54,297,282
Westside Section													
1988	974,322	578,548	1,552,871	749,615	52,332	208,397	279,051	143,332	18,421	14,242	175,995	1,465,387	3,018,255
1989	3,495,983	559,026	4,055,009	2,778,136	504,497	267,684	293,592	122,759	19,472	5,872	148,103	3,992,007	8,047,020
1990	756,450	2,182,208	2,938,662	352,843	689,731	401,179	472,666	104,971	57,647	16,606	179,222	2,095,641	5,034,302
1991	192,204	582,097	774,301	130,432	146,658	494,811	454,902	37,066	22,320	4,950	64,336	1,291,138	2,065,439
1992	168,907	420,383	589,291	129,030	171,208	217,488	309,164	118,442	46,407	5,616	170,465	997,358	1,586,646
1993	397,675	575,892	973,569	266,120	161,061	150,062	273,655	49,604	95,847	7,188	152,638	1,003,542	1,977,111
1994	158,913	248,765	407,678	113,242	74,756	90,261	31,732	42,413	0	164,406	74,149	460,938	868,623

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Table 4.—Page 5 of 7.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
1995	168,930	403,189	572,120	108,065	164,086	159,438	136,282	14,443	88,979	2,203	105,625	673,497	1,245,621
1996	221,984	406,957	628,942	104,838	263,795	293,384	226,222	36,715	99,629	469	136,815	1,025,059	1,654,001
1997	221,626	676,562	898,189	83,886	292,487	419,574	305,346	68,319	62,405	2,605	133,329	1,234,624	2,132,814
1998	784,298	640,054	1,424,353	693,960	170,752	290,665	228,482	30,694	53,771	3,008	87,475	1,471,336	2,895,685
1999	786,633	303,891	1,090,528	495,747	389,828	252,141	208,931	43,439	102,079	8,631	154,151	1,500,799	2,591,322
2000	857,983	673,744	1,531,726	529,492	452,760	470,344	245,893	88,067	73,382	11,132	172,580	1,871,072	3,402,796
2001	1,838,858	867,797	2,706,655	1,454,818	690,480	406,475	419,781	61,894	74,190	9,850	145,933	3,117,483	5,824,141
2002	527,722	793,616	1,321,340	314,807	576,533	490,709	314,587	97,176	71,244	9,680	178,098	1,874,738	3,196,077
2003	571,353	1,595,583	2,166,935	527,990	305,060	850,071	549,657	114,971	113,968	10,548	239,486	2,472,262	4,639,203
2004	348,491	536,566	885,057	318,080	123,002	164,582	183,539	105,808	75,246	6,710	187,762	976,964	1,862,027
2005	1,277,045	612,264	1,889,310	1,010,851	367,489	312,238	187,999	58,631	114,705	6,418	179,753	2,058,329	3,947,639
2006	2,743,480	1,978,839	4,722,322	2,050,866	1,069,393	739,258	422,756	61,494	242,097	26,030	329,622	4,611,892	9,334,218
2007	728,050	1,229,735	1,957,783	346,342	1,001,330	638,751	366,951	55,293	203,496	12,441	271,233	2,624,613	4,582,398
2008	1,512,322	1,677,824	3,190,145	1,337,898	816,546	1,306,246	1,483,097	216,263	28,473	18,447	263,184	5,206,972	8,397,115
2009	1,035,614	1,624,414	2,660,033	801,669	518,633	566,992	682,822	329,135	53,427	10,634	393,196	2,963,312	5,623,343
2010	487,127	1,154,821	1,641,949	449,979	262,351	403,098	397,571	137,521	140,056	15,631	293,211	1,806,207	3,448,153
2011	796,025	593,136	1,389,159	916,487	63,828	96,545	199,071	42,043	101,665	20,900	164,608	1,440,538	2,829,697
2012	1,230,971	597,219	1,828,189	1,210,838	694,666	197,830	142,793	48,115	69,367	20,940	138,422	2,384,545	4,212,734
2013	1,845,911	747,783	2,593,693	1,486,423	945,497	484,694	171,860	34,055	49,742	3,942	87,740	3,176,216	5,769,909
2014	487,317	1,304,339	1,791,657	201,481	647,794	727,617	549,343	66,180	35,895	3,573	105,649	2,231,879	4,023,534
2015	777,276	421,494	1,198,774	653,892	130,508	204,181	171,388	35,964	22,643	1,588	60,195	1,220,160	2,418,936
2016	1,234,892	1,170,363	2,405,251	860,496	268,734	246,642	159,084	16,797	47,240	929	64,969	1,599,927	4,005,178
2017	1,443,291	1,200,162	2,643,450	976,148	327,705	304,674	237,615	19,259	50,051	1,718	71,028	1,917,171	4,560,623
2018	1,253,977	1,872,681	3,126,657	710,184	834,244	966,842	545,507	55,479	36,141	0	91,618	3,148,400	6,275,059
North Mainland Section													
1988	3,770,435	864,800	4,635,231	3,407,068	168,134	464,878	1,240,542	851,431	82,195	27,343	960,966	6,241,575	10,876,804
1989	4,234,103	1,436,881	5,670,976	4,215,321	298,495	356,842	1,179,243	261,796	109,856	67,482	439,132	6,489,012	12,159,983
1990	6,881,983	3,259,191	10,141,174	5,821,303	2,244,924	787,769	1,459,181	134,091	114,695	27,645	276,431	10,589,593	20,730,758
1991	755,813	1,115,191	1,871,000	607,003	606,410	539,754	947,200	75,300	110,321	4,747	190,368	2,890,728	4,761,725
1992	2,383,311	905,602	3,288,908	2,277,873	225,884	400,297	804,671	157,864	74,715	33,492	266,071	3,974,780	7,263,685
1993	3,807,153	1,019,025	4,826,179	3,209,923	150,131	417,918	820,507	155,196	146,326	35,684	337,205	4,935,673	9,761,850
1994	3,022,644	533,484	3,556,121	543,821	232,749	359,494	140,534	116,067	55,865	671,960	312,462	3,675,553	7,231,673
1995	626,009	246,199	872,207	675,064	133,785	61,102	150,469	35,975	48,814	17,201	101,990	1,122,398	1,994,600
1996	4,440,016	390,196	4,830,209	4,282,003	340,013	215,819	339,923	32,850	163,695	21,209	217,753	5,395,498	10,225,703

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Table 4.—Page 6 of 7.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
1997	2,395,756	263,515	2,659,267	2,343,813	505,071	343,635	654,020	56,050	182,961	7,777	246,786	4,093,315	6,752,581
1998	3,767,207	228,193	3,995,396	3,525,948	316,549	274,439	293,764	7,596	121,618	15,531	144,741	4,555,435	8,550,824
1999	3,977,498	247,625	4,225,118	4,094,535	513,789	193,283	548,157	44,446	102,687	0	147,133	5,496,889	9,722,006
2000	4,422,651	534,343	4,956,992	4,540,113	1,372,986	537,002	339,548	64,048	57,500	2,032	123,579	6,913,215	11,870,201
2001	5,569,122	580,559	6,149,675	5,956,896	493,796	449,462	397,510	20,879	170,905	5,420	197,203	7,494,856	13,644,528
2002	7,040,189	638,105	7,678,291	7,239,051	2,443,246	927,375	219,352	9,268	26,922	339	36,528	10,865,543	18,543,832
2003	1,574,882	1,005,193	2,580,071	3,087,322	585,984	252,125	227,455	23,124	52,247	4,137	79,507	4,232,383	6,812,450
2004	4,807,839	269,078	5,076,916	4,052,391	281,654	390,045	410,836	28,132	52,195	5,075	85,402	5,220,316	10,297,226
2005	5,973,092	600,095	6,573,183	5,450,323	570,215	185,935	249,567	62,867	23,541	2,023	88,432	6,544,457	13,117,630
2006	5,752,649	1,905,998	7,658,643	6,277,192	1,549,452	804,595	164,764	123,714	38,778	14,924	177,417	8,973,417	16,632,058
2007	1,151,379	271,686	1,423,066	1,333,229	79,153	169,301	207,441	32,010	76,206	24,684	132,900	1,922,012	3,345,073
2008	2,000,053	163,905	2,163,956	2,074,605	27,948	75,192	224,046	10,840	113,232	22,375	146,447	2,548,229	4,712,180
2009	2,273,385	182,881	2,456,260	1,990,119	67,569	179,329	383,513	0	157,056	25,575	182,632	2,803,160	5,259,416
2010	2,059,073	286,257	2,345,324	2,100,884	214,402	379,884	312,629	40,634	38,751	7,318	86,702	3,094,492	5,439,809
2011	7,339,266	156,406	7,495,670	7,303,300	174,503	275,325	463,036	65,350	9,494	13,460	88,304	8,304,464	15,800,131
2012	2,375,150	58,384	2,433,534	2,411,334	30,386	75,425	196,019	252,242	15,832	18,701	286,775	2,999,937	5,433,472
2013	3,512,861	427,671	3,940,531	3,706,269	270,532	171,682	134,031	53,508	74,304	32,391	160,203	4,442,712	8,383,239
2014	1,778,897	59,311	1,838,205	1,533,746	50,266	99,133	128,835	44,522	9,231	19,338	73,091	1,885,067	3,723,269
2015	3,404,007	307,368	3,711,375	3,365,754	557,307	378,629	243,383	175,976	132,322	10,270	318,568	4,863,632	8,575,005
2016	5,810,449	755,204	6,660,589	4,745,625	460,148	404,148	354,950	48,276	42,722	1,146	92,144	6,057,010	12,717,601
2017	2,020,394	94,061	2,114,452	2,099,893	80,540	101,672	176,330	119,927	15,508	1,558	136,992	2,595,425	4,709,876
2018	3,414,280	953,522	4,367,799	5,169,925	752,631	320,741	328,619	184,307	95,995	4,319	284,620	6,856,524	11,224,319
KODIAK DISTRICT TOTALS													
1988	8,812,712	2,909,528	11,722,230	7,585,464	1,121,828	2,027,675	4,084,694	3,109,987	384,766	149,346	3,644,094	18,463,722	30,185,946
1989	17,242,779	9,207,218	26,449,988	15,591,916	3,463,846	3,673,455	4,795,492	2,164,873	659,360	288,304	3,112,536	30,637,206	57,087,179
1990	13,948,038	18,300,233	32,248,267	11,488,010	5,645,980	4,589,098	7,421,417	1,580,449	515,967	170,003	2,266,416	31,410,895	63,659,149
1991	11,781,806	8,402,788	20,184,585	10,221,336	2,930,304	3,509,630	6,111,302	3,843,655	761,502	113,921	4,719,085	27,491,633	47,676,203
1992	8,339,428	6,051,961	14,391,378	7,440,749	2,746,649	2,774,998	4,292,177	1,306,256	611,962	136,933	2,061,956	19,316,490	33,707,849
1993	17,913,651	4,977,077	22,890,723	15,967,379	1,656,738	2,110,918	3,481,805	863,072	808,324	96,108	1,767,502	24,984,323	47,875,035
1994	5,706,956	2,852,028	8,558,976	1,610,969	1,157,049	2,070,507	553,274	448,710	72,749	3,145,240	1,074,730	10,225,770	18,784,750
1995	11,160,493	2,567,713	13,728,198	10,292,995	1,842,399	1,083,966	1,239,723	198,667	440,917	24,168	663,748	15,122,807	28,851,000
1996	11,539,743	4,202,964	15,742,703	10,656,057	4,224,104	2,488,462	2,177,431	297,840	636,234	47,347	981,421	20,527,449	36,270,147
1997	4,517,522	2,734,313	7,251,832	4,250,787	2,646,848	2,691,800	2,457,956	412,669	504,115	30,446	950,527	12,997,903	20,249,736
1998	12,537,177	5,789,384	18,326,557	11,549,334	4,520,667	5,230,679	4,437,258	599,890	725,392	107,126	1,432,408	27,170,342	45,496,879

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Table 4.—Page 7 of 7.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
1999	17,320,312	3,060,141	20,380,442	16,310,646	1,708,782	2,177,337	3,782,852	785,205	1,057,055	111,235	1,953,503	25,933,098	46,313,535
2000	22,754,807	6,475,725	29,230,518	22,493,426	4,995,919	2,583,532	3,457,610	1,006,546	1,358,093	96,211	2,460,851	35,991,304	65,221,811
2001	68,877,224	12,675,469	81,552,690	60,387,913	15,241,096	5,797,317	4,010,691	477,659	1,783,740	112,099	2,373,500	87,810,486	169,363,177
2002	30,393,977	10,839,085	41,233,057	19,929,231	19,560,864	10,894,437	4,387,298	673,222	1,219,518	53,307	1,946,045	56,717,846	97,950,897
2003	6,645,726	14,554,709	21,200,429	8,506,932	7,394,078	16,626,329	10,794,723	874,741	838,380	48,588	1,761,712	45,083,732	66,284,164
2004	16,947,444	8,160,053	25,107,495	15,178,373	3,217,318	6,786,175	14,649,347	3,692,086	652,099	53,314	4,397,499	44,228,694	69,336,185
2005	16,993,383	8,387,303	25,380,682	16,485,627	2,926,995	3,810,988	12,109,515	4,385,484	1,609,777	89,534	6,084,796	41,417,872	66,798,546
2006	68,224,632	8,181,573	76,406,208	65,227,663	6,591,753	3,720,236	7,670,990	1,178,684	3,189,673	95,169	4,463,529	87,674,144	164,080,346
2007	70,685,636	11,318,820	82,004,460	43,494,481	40,966,394	7,267,322	8,037,367	613,205	3,242,441	84,409	3,940,055	103,705,590	185,710,033
2008	25,793,790	24,362,363	50,156,148	19,007,753	14,903,352	24,093,264	8,066,767	694,989	1,598,641	85,570	2,379,199	68,450,316	118,606,446
2009	10,275,071	15,866,295	26,141,366	6,892,288	8,038,365	12,589,438	22,566,438	4,051,325	667,010	84,129	4,802,466	54,888,962	81,030,321
2010	10,186,832	16,117,560	26,304,391	9,079,234	2,736,438	6,628,037	21,955,601	6,257,084	2,256,474	152,959	8,666,518	49,065,785	75,370,166
2011	16,544,749	5,344,889	21,889,633	16,688,170	628,599	1,629,845	8,408,433	1,937,036	3,378,241	147,162	5,473,663	32,828,674	54,718,301
2012	13,621,829	2,597,321	16,219,148	13,201,605	2,091,936	1,278,921	6,494,227	932,637	3,619,604	209,392	4,761,629	27,828,298	44,047,441
2013	95,233,063	3,209,728	98,442,785	91,071,265	5,378,208	1,813,499	2,535,448	168,856	1,532,223	83,689	1,789,391	102,587,797	201,030,568
2014	41,768,574	10,562,162	52,330,734	31,236,156	16,723,014	5,741,537	2,892,223	155,931	1,743,747	62,925	1,962,606	58,555,539	110,886,271
2015	7,902,630	7,723,843	15,626,476	6,736,233	6,749,377	7,187,354	2,362,997	435,445	359,627	29,098	824,168	23,860,110	39,486,582
2016	11,650,958	14,238,814	25,984,696	9,999,823	3,437,409	9,311,728	8,042,255	496,985	470,762	6,127	973,875	31,765,079	57,749,768
2017	23,038,934	7,828,549	30,867,480	22,328,074	3,987,351	3,570,618	6,360,456	1,576,074	495,661	15,344	2,087,076	38,333,553	69,201,033
2018	111,963,123	15,970,840	127,933,960	107,779,203	17,610,293	7,615,609	7,522,798	1,690,038	1,531,553	18,967	3,240,557	143,768,435	271,702,393

Table 5.—Number of male red king and male Tanner crabs by management unit, crab cohort, and shell condition captured in the 2018 large-mesh bottom trawl survey.

Cohort	Definition	SHELL CONDITION				Total
		Soft/ New pliable	New	Old	Very old/ Very very old	
Kodiak Area red king crab						
Prerecruit IV	<95 mm CL	0	4	0	0	4
Prerecruit III	95–112 mm CL	0	15	0	0	15
Prerecruit II	113–130 mm CL	0	33	0	0	33
Prerecruit I	>130 mm CL and sublegal	0	52	1	2	55
Recruit	<164 mm CL and legal soft/new	0	28	—	—	28
Postrecruit	≥164 mm CL or legal and not soft/new	0	35	33	77	145
Total		0	167	34	79	280
Alaska Peninsula Area red king crab						
Prerecruit IV	<79 mm CL	0	1	0	0	1
Prerecruit III	79–95 mm CL	0	0	0	0	0
Prerecruit II	96–115 mm CL	0	26	0	2	28
Prerecruit I	>115 mm CL and sublegal	0	232	0	23	255
Recruit	<152 mm CL and legal soft/new	0	104	—	—	104
Postrecruit	≥152 mm CL or legal and not soft/new	0	79	18	132	229
Total		0	442	18	157	617
Kodiak District Tanner crab						
Prerecruit IV	<70 mm CW	18,515	108,049	5	2	126,571
Prerecruit III	70–91 mm CW	672	13,422	117	39	14,250
Prerecruit II	92–114 mm CW	260	4,767	633	687	6,347
Prerecruit I	≥115 mm CW and sublegal	157	1,798	2,132	1,273	5,360
Recruit	<165 mm CW and legal soft/new	647	1,384	—	—	2,031
Postrecruit	≥165 mm CW or legal and not soft/new	11	16	759	221	1,007
Total		20,262	129,436	3,646	2,222	155,566
Mature only	≥115 mm CW	815	3,198	2,891	1,494	8,398
Chignik District Tanner crab						
Prerecruit IV	<70 mm CW	961	13,411	0	2	14,374
Prerecruit III	70–91 mm CW	165	4,639	12	41	4,857
Prerecruit II	92–114 mm CW	141	1,337	29	92	1,599
Prerecruit I	≥115 mm CW and sublegal	160	382	11	70	623
Recruit	<165 mm CW and legal soft/new	11	61	—	—	72
Postrecruit	≥165 mm CW or legal and not soft/new	0	2	5	7	14
Total		1,438	19,832	57	212	21,539
Mature only	≥115 mm CW	171	445	16	77	709

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Table 5.—Page 2 of 2.

Cohort	Definition	SHELL CONDITION				Total
		Soft/New pliable	New	Old	Very old/ Very very old	
South Peninsula District Tanner crab						
Prerecruit IV	<70 mm CW	2,477	15,599	1	1	18,078
Prerecruit III	70–91 mm CW	97	1,414	29	6	1,546
Prerecruit II	92–114 mm CW	16	480	72	127	695
Prerecruit I	≥115 mm CW and sublegal	1	281	145	354	781
Recruit	<165 mm CW and legal soft/new	0	139	—	—	139
Postrecruit	≥165 mm CW or legal and not soft/new	0	0	31	42	73
Total		2,591	17,913	278	530	21,312
Mature only	≥115 mm CW	1	420	176	396	993
Eastern Aleutian District Tanner crab						
Prerecruit IV	<70 mm CW	102	756	1	16	875
Prerecruit III	70–91 mm CW	7	681	8	38	734
Prerecruit II	92–114 mm CW	5	232	55	106	398
Prerecruit I	≥115 mm CW and sublegal	0	138	164	148	450
Recruit	<165 mm CW and legal soft/new	0	32	—	—	32
Postrecruit	≥165 mm CW or legal and not soft/new	0	0	52	73	125
Total		114	1,839	280	381	2,614
Mature only	≥115 mm CW	0	170	216	221	607

Note: En dashes indicate not applicable.

Table 6.—Red king crab abundance estimates from large-mesh bottom trawl surveys in the Kodiak and Alaska Peninsula areas, 2009–2018.

Year	Females			Prerecruit males				Recruit males	Postrecruit males	Legal males	Total males	Total crab					
	Juvenile	Mature	Total	IV	III	II	I										
KODIAK AREA																	
Northeast District																	
2009	635	270	905	270	1,080	270	0	270	0	270	1,890	2,795					
2010	0	0	0	0	327	0	0	0	0	0	327	327					
2011	0	0	0	0	0	1,419	0	0	0	0	1,419	1,419					
2012	0	0	0	0	0	0	0	0	0	0	0	0					
2013	1,519	1,182	2,701	270	0	0	0	0	0	0	270	2,971					
2014	365	0	365	0	0	0	0	0	0	0	0	365					
2015	0	0	0	0	0	0	0	0	365	365	365	365					
2016	0	7,154	7,154	0	0	0	0	0	365	365	365	7,519					
2017	0	3,281	3,281	0	0	0	2,187	3,990	3,625	7,617	9,804	13,085					
2018	196	4,452	4,648	0	775	0	709	709	4,522	5,232	6,716	11,364					
Southeast District																	
2009	0	0	0	0	0	0	0	0	0	0	0	0					
2010	0	0	0	0	0	0	0	0	0	0	0	0					
2011	0	0	0	0	0	0	0	0	0	0	0	0					
2012	0	0	0	0	0	0	0	0	0	0	0	0					
2013	0	0	0	4,232	0	0	0	0	0	0	4,232	4,232					
2014	0	0	0	0	0	0	0	0	0	0	0	0					
2015	0	0	0	0	0	0	0	0	0	0	0	0					
2016	0	0	0	0	1,234	0	851	0	0	0	2,085	2,085					
2017	0	2,336	2,336	0	0	0	0	851	2,970	3,821	3,821	6,157					
2018	1,367	2,734	4,101	0	2,734	0	0	2,734	1,367	4,101	6,836	10,937					
Southwest District																	
2009	152	3,507	3,659	4,166	0	0	0	1,611	14,181	15,793	19,959	23,617					
2010	26,655	22,075	48,730	22,907	22,658	10,572	567	3,211	23,842	27,054	83,758	132,488					
2011	140,454	48,315	188,770	74,180	25,982	5,640	4,302	1,124	12,078	13,201	123,306	312,075					
2012	45,939	36,492	82,431	2,074	49,416	43,670	5,559	5,917	10,331	16,248	116,966	199,397					
2013	19,763	135,960	155,724	1,551	12,884	50,872	30,011	8,948	12,100	21,050	116,370	272,093					
2014	5,262	160,532	165,794	4,367	3,798	17,750	48,193	145,167	59,526	204,695	278,800	444,592					
2015	8,940	162,793	171,733	3,190	6,863	7,242	22,189	111,896	219,653	331,552	371,037	542,770					
2016	124,312	79,933	204,246	66,445	86,292	10,107	2,881	11,770	184,636	196,405	362,129	566,376					
2017	1,241	41,734	42,975	1,074	5,046	44,872	21,099	9,404	117,291	126,696	198,785	241,760					
2018	8,633	178,987	187,619	2,855	11,321	30,806	42,429	17,416	87,096	104,509	191,920	379,541					

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Table 6.—Page 2 of 5.

Year	Females			Prerecruit males				Recruit males	Postrecruit males	Legal males	Total males	Total crab
	Juvenile	Mature	Total	IV	III	II	I					
Shelikof District												
2009	1,062	0	1,062	0	0	0	0	120	203	323	323	1,385
2010	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	334	334	0	0	0	0	0	334	334	334	668
2012	0	446	446	0	446	446	0	446	0	446	1,337	1,782
2013	226	0	226	750	226	0	0	0	0	0	976	1,202
2014	120	0	120	612	0	0	0	0	0	0	612	732
2015	774	0	774	0	0	149	0	0	297	297	446	1,220
2016	4,747	0	4,747	0	0	0	0	0	0	0	0	4,747
2017	614	1,605	2,219	922	0	447	0	0	1,841	1,841	3,210	5,428
2018	0	0	0	0	0	0	0	149	0	149	149	149
KODIAK AREA TOTAL												
2009	1,849	3,777	5,626	4,436	1,080	270	0	2,001	14,384	16,386	22,172	27,797
2010	26,655	22,075	48,730	22,907	22,985	10,572	567	3,211	23,842	27,054	84,085	132,815
2011	140,454	48,649	189,104	74,180	25,982	7,059	4,302	1,124	12,412	13,535	125,059	314,162
2012	45,939	36,938	82,877	2,074	49,862	44,116	5,559	6,363	10,331	16,694	118,303	201,179
2013	21,508	137,142	158,651	6,803	13,110	50,872	30,011	8,948	12,100	21,050	121,848	280,498
2014	5,747	160,532	166,279	4,979	3,798	17,750	48,193	145,167	59,526	204,695	279,412	445,689
2015	9,714	162,793	172,507	3,190	6,863	7,391	22,189	111,896	220,315	332,214	371,848	544,355
2016	129,059	87,087	216,147	66,445	87,526	10,107	3,732	11,770	185,001	196,770	364,579	580,727
2017	1,855	48,956	50,811	1,996	5,046	45,319	23,286	14,245	125,727	139,975	215,620	266,430
2018	10,196	186,173	196,368	2,855	14,830	30,806	43,138	21,008	92,985	113,991	205,621	401,991
ALASKA PENINSULA AREA												
Morzhovoi Bay												
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	2,344	2,344	0	0	0	0	0	0	0	0	2,344
2011	0	0	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	892	24,095	24,988	24,988	24,988
2014	0	0	0	0	0	0	793	0	34,110	34,110	34,903	34,903
2015	4,666	47,441	52,108	778	7,000	4,666	4,666	3,889	27,221	31,109	48,219	100,327
2016	0	884	884	0	0	0	0	0	1,598	1,598	1,598	2,482
2017	0	0	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	949	949	949	949

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Table 6.—Page 3 of 5.

Year	Females			Prerecruit males				Recruit males	Postrecruit males	Legal males	Total males	Total crab
	Juvenile	Mature	Total	IV	III	II	I					
Cold Bay/Belkofski Bay												
2009	0	483	483	0	161	161	0	0	0	0	322	805
2010	1,073	19,275	20,349	1,496	537	537	358	0	714	714	3,641	23,991
2011	268	671	938	268	535	268	268	803	4,723	5,525	6,863	7,802
2012	5,545	16,121	21,665	1,261	918	2,908	1,173	1,195	25,524	26,719	32,979	54,645
2013	714	230	944	2,431	0	0	0	0	0	0	2,431	3,375
2014	4,703	5,902	10,605	4,299	0	0	0	230	0	230	4,529	15,135
2015	17,894	2,627	20,521	10,438	10,083	1,491	0	1,136	1,491	2,627	24,639	45,161
2016	49,586	24,851	74,437	2,216	39,894	32,575	4,433	2,216	7,897	10,114	89,232	163,667
2017	0	1,007	1,007	0	0	161	0	0	161	161	322	1,329
2018	0	0	0	0	0	0	0	1,771	0	1,771	1,771	1,771
Pavlof Bay/Volcano Bay												
2009	0	898	898	0	0	0	0	0	15,368	15,368	15,368	16,266
2010	5,258	22,003	27,260	786	782	3,915	3,137	0	1,572	1,572	10,192	37,453
2011	373,744	402,041	775,785	44,048	315,537	570,765	250,363	77,528	63,079	140,607	1,321,321	2,097,107
2012	0	0	0	0	0	0	0	0	4,335	4,335	4,335	4,335
2013	6,258	55,542	61,801	3,911	3,129	24,251	46,937	24,251	19,920	44,170	122,399	184,199
2014	10,952	114,771	125,723	4,694	4,694	0	8,445	0	13,746	13,746	31,579	157,303
2015	0	4,337	4,337	3,579	0	0	5,204	9,541	14,827	24,367	33,151	37,487
2016	3,492	10,436	13,929	0	1,689	2,417	0	2,580	17,026	19,606	23,711	37,639
2017	1,988	20,453	22,441	0	0	3,129	782	11,083	76,426	87,509	91,420	113,861
2018	4,661	43,152	47,813	919	0	58,264	561,378	194,201	259,177	453,379	1,073,939	1,121,752
Beaver Bay/Balboa Bay/Unga Strait												
2009	0	0	0	0	0	0	0	0	564	564	564	564
2010	773	0	773	747	0	0	0	0	3,553	3,553	4,301	5,074
2011	0	0	0	0	0	0	735	0	1,792	1,792	2,527	2,527
2012	0	0	0	0	0	0	0	0	2,977	2,977	2,977	2,977
2013	0	0	0	0	0	0	0	0	2,242	2,242	2,242	2,242
2014	0	0	0	0	618	0	0	0	1,863	1,863	2,481	2,481
2015	0	0	0	0	0	0	0	0	564	564	564	564
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	18,292	18,292	0	0	1,495	747	6,163	0	6,163	8,405	26,697
2018	0	8,589	8,589	0	0	0	0	2,989	4,852	7,841	7,841	16,429

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Table 6.—Page 4 of 5.

Year	Females			Prerecruit males				Recruit males	Postrecruit males	Legal males	Total males	Total crab
	Juvenile	Mature	Total	IV	III	II	I					
West Nagai Strait												
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0	0	0
2013	3,723	0	3,723	0	0	0	0	1,241	0	1,241	1,241	4,964
2014	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0	0	0
Ivanof Bay												
2009	0	0	0	0	0	0	0	0	246	246	246	246
2010	0	0	0	0	0	0	0	0	0	0	0	0
2011	1,147	1,147	2,294	0	0	0	2,294	2,294	1,147	3,441	5,734	8,028
2012	0	0	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	917	0	0	0	917	2,813	3,731	4,648	4,648
2014	0	615	615	0	0	0	0	0	0	0	0	615
2015	0	6,015	6,015	0	0	273	820	0	0	0	1,094	7,109
2016	246	2,388	2,634	0	0	0	0	0	0	0	0	2,634
2017	0	2,752	2,752	0	0	738	699	2,953	984	3,937	5,621	8,373
2018	0	0	0	0	0	246	0	984	1,969	2,953	3,199	3,199
Mitrofania Island												
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	1,557	1,557	1,557	1,557
2011	0	0	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0	0	0

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Table 6.—Page 5 of 5.

Year	Females			Prerecruit males				Recruit males	Postrecruit males	Legal males	Total males	Total crab
	Juvenile	Mature	Total	IV	III	II	I					
Chignik Bay/Castle Bay												
2009	586	586	1,173	586	0	880	1,597	586	2,607	3,193	6,255	7,428
2010	10,554	29,591	40,145	0	5,277	8,795	8,795	0	7,604	7,604	30,471	70,617
2011	0	873	873	0	0	0	1,403	0	873	873	2,277	3,150
2012	873	0	873	0	0	0	1,297	0	0	0	1,297	2,171
2013	1,466	0	1,466	1,759	0	0	1,092	0	0	0	2,851	4,317
2014	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	3,072	3,072	0	0	0	366	0	3,353	3,353	3,719	6,792
2017	1,747	38,431	40,178	0	2,620	4,367	2,620	3,494	2,757	6,251	16,732	56,909
2018	0	3,390	3,390	0	0	0	424	0	0	0	424	3,814
Kujulik Bay												
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0	0	0	0	0
2014	3,190	456	3,646	456	0	0	456	0	0	0	911	4,557
2015	28,287	208,627	236,913	0	13,671	53,520	13,671	13,671	57,418	71,089	151,951	388,864
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	456	0	0	456	0	456	911	911
2018	0	0	0	0	0	0	0	0	0	0	0	0
ALASKA PENINSULA AREA TOTAL												
2009	586	1,967	2,554	586	161	1,041	1,597	586	18,785	19,371	22,755	25,309
2010	17,658	73,213	90,871	3,029	6,596	13,247	12,290	0	15,000	15,000	50,162	141,036
2011	375,159	404,732	779,890	44,316	316,072	571,033	255,063	80,625	71,614	152,238	1,338,722	2,118,614
2012	6,418	16,121	22,538	1,261	918	2,908	2,470	1,195	32,836	34,031	41,588	64,128
2013	12,161	55,772	67,934	9,018	3,129	24,251	48,029	27,301	49,070	76,372	160,800	228,733
2014	18,845	121,744	140,589	9,449	5,312	0	9,694	230	49,719	49,949	74,403	214,994
2015	50,847	269,047	319,894	14,795	30,754	59,950	24,361	28,237	101,521	129,756	259,618	579,512
2016	53,324	41,631	94,956	2,216	41,583	34,992	4,799	4,796	29,874	34,671	118,260	213,214
2017	3,735	80,935	84,670	0	3,076	9,890	4,848	24,149	80,328	104,477	123,411	208,080
2018	4,661	55,131	59,792	919	0	58,510	561,802	199,945	266,947	466,893	1,088,123	1,147,914

Note: Definitions of categories used to distinguish juvenile and mature females; prerecruit IV, III, II, and I; recruit; and postrecruit males are found in Appendix A1 and differ by management area.

Table 7.—Predominant species by weight in the Chignik Tanner crab District large-mesh bottom trawl survey, 2018.

Common name	Species name	% of catch by weight
Arrowtooth flounder	<i>Atheresthes stomias</i>	24.8
Flathead sole	<i>Hippoglossoides elassodon</i>	21.2
Tanner crab	<i>Chionoecetes bairdi</i>	10.3
Big skate	<i>Raja binoculata</i>	7.4
Pacific halibut	<i>Hippoglossus stenolepis</i>	5.5
Yellowfin sole	<i>Limanda aspera</i>	5.0
Walleye pollock	<i>Gadus chalcogrammus</i>	4.8
Pacific cod	<i>Gadus macrocephalus</i>	3.3
Anemone	Order: Actinaria	2.7
Dungeness crab	<i>Metacarcinus magister</i>	2.4
Northern rock sole	<i>Lepidotsetta polyxystra</i>	2.1
Starry flounder	<i>Platichthys stellatus</i>	1.8
Aleutian skate	<i>Bathyraja aleutica</i>	0.9
Rex sole	<i>Glyptocephalus zachirus</i>	0.8
Sablefish	<i>Anoplopoma fimbria</i>	0.7
Pink shrimp	<i>Pandalus borealis</i>	0.7
Longnose skate	<i>Raja rhina</i>	0.7
Sunflower seastar	<i>Pycnopodia helianthoides</i>	0.4
Oregon triton	<i>Fusitriton oregonensis</i>	0.4
Butter sole	<i>Isopsetta isolepis</i>	0.3
All others	(84 species)	3.6
		100.0

Table 8.—Tanner crab abundance estimates from large-mesh bottom trawl surveys in the Chignik District, 1989–2018.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
Ivanof Bay													
1989	267,850	164,754	432,603	213,734	83,220	471,604	445,292	204,617	7,396	7,396	219,409	1,433,259	1,865,862
1990	617,894	19,342	637,235	719,143	10,379	67,805	150,805	64,921	0	0	64,921	1,013,052	1,650,287
1991	275,037	1,476	276,513	302,532	0	0	1,723	7,136	0	738	7,874	312,129	588,643
1992	26,693	2,215	28,907	30,505	1,969	984	5,028	4,100	1,889	738	6,727	45,214	74,119
1993	47,617	1,929	49,546	26,775	41,776	9,880	3,055	0	699	0	699	82,185	131,732
1994	22,819	12,095	34,914	6,775	22,612	12,866	3,833	984	246	0	1,230	47,315	82,229
1995	40,024	3,833	43,857	46,548	2,848	492	2,461	2,707	492	0	3,199	55,548	99,405
1996	63,771	699	64,470	65,883	41,649	6,890	7,872	8,754	0	0	8,754	131,049	195,518
1997	22,655	4,675	27,330	29,632	3,619	7,770	4,183	3,691	492	246	4,429	49,634	76,964
1998	22,035	1,191	23,226	21,497	1,864	246	1,230	1,723	0	0	1,723	26,559	49,785
1999	42,136	3,652	45,786	44,603	492	1,476	9,907	10,089	945	0	11,034	67,511	113,299
2000	457,297	15,177	472,475	503,823	37,727	25,900	15,503	10,089	945	246	11,280	594,234	1,066,709
2001	570,000	85,642	655,640	403,999	296,452	64,697	41,587	2,848	15,299	0	18,147	824,884	1,480,524
2002	263,139	45,073	308,212	93,656	335,981	326,874	94,638	3,514	9,228	0	12,742	863,893	1,172,105
2003	25,198	240,133	265,331	3,168	41,275	91,790	106,904	25,048	7,990	0	33,039	276,173	541,506
2004	22,388	447,395	469,782	28,951	19,736	179,096	280,796	69,766	31,471	5,378	106,614	615,192	1,084,975
2005	339,705	898,151	1,237,856	495,062	40,357	83,921	218,668	56,910	50,474	1,182	108,565	946,573	2,184,429
2006	5,260,959	308,560	5,569,520	6,611,859	1,126,263	82,239	184,384	53,504	112,773	46,687	212,964	8,217,712	13,787,229
2007	2,404,530	177,375	2,581,906	2,320,990	1,640,663	300,377	64,073	16,935	25,403	3,629	45,967	4,372,070	6,953,976
2008	892,396	754,346	1,646,742	372,457	1,213,676	851,003	189,965	12,249	12,249	4,083	28,581	2,655,680	4,302,422
2009	37,251	982,209	1,019,460	46,515	290,602	1,099,892	1,011,168	46,640	31,497	2,515	80,653	2,528,831	3,548,291
2010	9,536	379,026	388,562	14,281	10,052	180,469	847,469	307,864	174,285	4,995	487,146	1,539,416	1,927,979
2011	99,210	137,350	236,559	119,793	0	28,130	313,172	228,662	219,550	30,771	478,981	940,075	1,176,634
2012	120,616	36,960	157,577	151,571	3,231	7,300	53,249	6,836	22,716	0	29,551	244,904	402,480
2013	1,578,022	124,172	1,702,194	1,844,152	16,434	12,578	429,087	0	419,719	19,189	438,908	2,741,162	4,443,354
2014	162,697	63,151	225,849	106,269	161,705	201,522	682,703	0	715,271	19,016	734,288	1,886,488	2,112,336
2015	687,142	1,251,420	1,938,562	276,204	539,085	450,958	460,557	21,702	217,000	3,709	242,411	1,969,214	3,907,774
2016	15,949	19,148	35,098	5,791	20,743	314,860	270,305	24,332	628	0	24,960	636,659	671,756
2017	270,628	328,653	599,281	268,460	30,591	45,622	87,637	43,064	7,455	0	50,519	482,829	1,082,109
2018	856,623	72,797	929,420	852,945	119,645	36,010	34,081	10,841	3,079	0	13,921	1,056,602	1,986,022

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Table 8.—Page 2 of 5.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
Mitrofania Island													
1989	238,524	510,311	748,835	295,652	155,511	637,889	315,908	42,526	17,719	21,263	81,508	1,486,468	2,235,303
1990	276,450	29,572	306,022	249,270	91,148	111,575	143,930	50,314	15,682	4,005	70,001	665,923	971,947
1991	369,923	30,210	400,133	319,748	66,937	43,973	35,851	32,084	3,591	1,557	37,232	503,742	903,877
1992	243,032	6,463	249,495	193,452	27,819	5,476	9,745	11,779	0	1,557	13,336	249,825	499,323
1993	99,118	15,182	114,300	63,361	48,606	28,121	12,889	12,846	9,048	653	22,547	175,522	289,822
1994	54,918	5,815	60,733	31,317	14,244	11,469	4,019	8,468	1,795	0	10,264	71,313	132,044
1995	173,519	28,205	201,724	203,549	10,550	29,769	20,644	17,563	0	1,557	19,120	283,630	485,350
1997	421,234	90,723	511,956	303,776	522,670	262,434	65,822	5,358	17,955	6,228	29,541	1,184,241	1,696,197
1998	192,756	202,589	395,345	158,484	113,257	160,133	65,394	17,920	21,756	0	39,676	536,944	932,289
1999	151,136	55,605	206,741	143,630	60,475	44,745	68,493	14,229	2,244	2,244	18,717	336,059	542,801
2000	1,120,703	93,687	1,214,390	1,289,872	74,232	58,562	54,854	58,667	9,801	41,948	110,417	1,587,934	2,802,325
2001	569,255	235,543	804,800	566,154	191,559	211,857	85,869	30,476	26,738	5,985	63,201	1,118,638	1,923,440
2002	821,007	387,781	1,208,787	868,750	1,887,372	1,093,803	286,266	40,844	6,855	1,929	49,629	4,185,820	5,394,608
2003	214,546	204,351	418,895	138,961	530,487	629,309	349,100	20,746	36,137	5,386	62,270	1,710,127	2,129,024
2004	899,469	252,600	1,152,070	921,342	206,230	1,090,695	1,022,954	291,234	29,722	3,591	324,547	3,565,764	4,717,835
2005	2,121,311	133,652	2,254,962	2,169,033	293,170	163,586	242,054	76,711	20,903	3,863	101,477	2,969,320	5,224,282
2006	6,270,837	305,972	6,576,810	6,370,972	808,999	275,366	284,210	23,279	66,215	0	89,493	7,829,040	14,405,849
2007	2,128,167	633,729	2,761,894	2,022,632	1,922,607	646,695	112,305	4,295	24,789	2,335	31,420	4,735,660	7,497,554
2008	2,669,345	842,375	3,511,717	1,934,506	4,368,293	3,101,719	690,953	47,360	11,970	3,474	62,804	10,158,276	13,669,995
2009	643,087	2,351,404	2,994,491	522,959	3,983,619	5,834,258	2,186,701	245,837	6,481	0	252,317	12,779,855	15,774,344
2010	166,039	1,217,108	1,383,145	108,925	211,792	2,465,593	4,302,694	1,514,241	136,391	14,731	1,665,364	8,754,358	10,137,502
2011	263,572	609,510	873,082	208,349	18,044	191,281	1,793,296	1,136,115	474,682	43,029	1,653,826	3,864,796	4,737,877
2012	352,164	127,225	479,389	364,292	15,717	56,097	536,787	95,357	392,931	12,275	500,563	1,473,460	1,952,850
2013	4,582,853	15,290	4,598,144	5,324,038	108,729	37,516	332,606	8,831	199,580	13,574	221,985	6,024,875	10,623,019
2014	1,061,109	93,941	1,155,048	828,743	349,985	242,579	239,854	2,684	100,632	0	103,317	1,764,475	2,919,523
2015	582,641	301,636	884,275	529,680	218,752	248,879	234,632	17,223	45,643	3,947	66,814	1,298,754	2,183,030
2016	36,723	58,550	95,274	15,743	11,540	48,672	69,473	12,744	1,795	1,557	16,097	161,526	256,799
2017	2,831,079	106,535	2,937,615	3,012,086	116,257	51,287	45,245	8,676	0	0	8,676	3,233,552	6,171,166
2018	15,690,726	870,476	16,643,917	16,874,661	4,096,357	1,260,020	206,664	43,889	9,505	0	53,395	22,491,092	39,135,012

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Table 8.—Page 3 of 5.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
Chignik Bay													
1989	667,856	444,176	1,112,032	655,157	88,786	81,131	172,141	40,153	13,174	0	53,330	1,050,540	2,162,572
1990	1,634,371	419,126	2,053,495	1,318,505	111,187	132,241	441,451	83,208	77,808	1,387	162,403	2,165,784	4,219,280
1991	1,110,229	479,825	1,590,054	1,056,644	98,077	48,537	131,065	67,099	66,093	0	133,192	1,467,514	3,057,570
1992	1,147,424	321,989	1,469,413	1,305,273	91,362	69,122	34,071	0	14,828	0	14,828	1,514,657	2,984,069
1993	819,309	215,111	1,034,419	788,593	464,122	305,588	185,738	21,972	60,687	3,286	85,945	1,829,984	2,864,402
1994	235,113	135,207	370,319	71,972	520,571	513,603	142,813	28,348	32,261	949	61,558	1,310,519	1,680,837
1995	172,122	93,531	265,653	204,920	3,191	52,923	174,170	82,082	14,528	0	96,610	531,814	797,467
1996	1,000,292	128,230	1,128,523	987,387	34,907	44,492	248,261	263,750	72,372	0	336,121	1,651,168	2,779,693
1997	1,121,412	333,004	1,454,416	1,017,334	268,500	165,228	234,175	148,418	75,513	5,298	229,229	1,914,462	3,368,879
1998	422,380	623,095	1,045,474	287,692	185,898	240,857	226,854	45,157	90,408	1,213	136,778	1,078,078	2,123,552
1999	624,036	145,490	769,531	467,811	307,462	351,337	428,710	143,757	163,065	0	306,820	1,862,137	2,631,665
2000	3,090,772	427,123	3,517,893	2,763,801	1,617,601	782,373	540,226	223,265	182,296	10,387	415,948	6,119,947	9,637,837
2001	2,225,223	482,766	2,707,989	919,915	2,814,170	838,299	414,732	216,631	48,359	2,513	267,503	5,254,619	7,962,611
2002	271,896	688,327	960,222	111,742	433,585	998,933	635,794	85,528	357,576	7,812	450,917	2,630,971	3,591,196
2003	134,167	492,743	626,910	114,283	120,204	343,810	463,268	70,010	130,985	7,402	208,396	1,249,959	1,876,869
2004	932,885	567,187	1,500,070	839,542	359,307	264,081	554,113	286,164	165,744	7,441	459,350	2,476,397	3,976,466
2005	1,009,683	431,973	1,441,654	1,030,864	374,323	636,603	508,778	111,884	82,407	1,585	195,876	2,746,444	4,188,095
2006	1,945,379	424,701	2,370,078	2,652,227	186,324	236,129	368,214	70,281	92,667	2,654	165,601	3,608,496	5,978,572
2007	767,565	760,170	1,527,735	765,008	436,765	583,634	465,569	105,576	38,934	1,898	146,411	2,397,383	3,925,119
2008	1,418,598	427,979	1,846,577	1,097,440	877,101	923,069	680,855	140,365	43,512	2,569	186,447	3,764,909	5,611,487
2009	1,554,631	596,338	2,150,969	958,198	1,048,445	1,090,671	1,012,322	328,686	43,099	9,522	381,307	4,490,943	6,641,914
2010	336,408	592,910	929,319	356,471	345,048	817,926	1,424,161	760,963	698,171	31,756	1,490,888	4,434,497	5,363,815
2011	778,503	130,101	908,606	938,675	16,858	160,026	588,728	135,980	480,223	47,254	663,458	2,367,745	3,276,348
2012	969,320	125,870	1,095,190	1,111,301	15,110	36,033	198,015	57,890	179,953	5,303	243,146	1,603,607	2,698,797
2013	4,806,728	64,133	4,870,860	6,511,779	110,030	30,560	65,009	1,941	72,021	0	73,962	6,791,337	11,662,200
2014	1,961,756	124,532	2,086,286	2,216,449	421,835	141,608	22,945	0	16,088	442	16,530	2,819,366	4,905,652
2015	635,702	283,190	918,891	318,926	538,037	234,591	70,634	0	8,909	677	9,586	1,171,775	2,090,666
2016	122,988	255,346	378,332	147,021	25,076	305,086	214,133	10,445	5,007	0	15,452	706,767	1,085,103
2017	536,697	228,825	765,524	528,287	86,568	108,657	111,259	12,401	1,941	0	14,342	849,113	1,614,637
2018	5,033,386	548,656	5,582,041	4,484,715	711,863	574,551	423,686	35,935	1,941	1,681	39,559	6,234,373	11,816,417

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Table 8.—Page 4 of 5.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
Kujulik Bay													
1989	80,263	11,838	92,101	76,292	747	8,136	10,284	807	0	0	807	96,265	188,365
1990	315,664	77,427	393,090	317,588	1,567	7,586	7,047	1,519	0	0	1,519	335,304	728,394
1991	7,612	948	8,560	13,539	0	0	0	0	0	0	0	13,539	22,098
1992	107,864	18,988	126,852	129,191	760	760	3,038	0	1,519	0	1,519	135,267	262,119
1993	106,845	15,935	122,780	99,092	80,941	29,651	1,367	0	0	0	0	211,050	333,830
1994	7,561	3,190	10,751	8,976	7,258	4,943	6,463	0	2,279	0	2,279	29,917	40,667
1995	842	28,612	29,453	2,771	0	911	456	0	0	0	0	4,138	33,591
1996	227,174	7,595	234,769	184,465	0	0	0	0	0	0	0	184,465	419,234
1997	47,555	61,288	108,844	60,483	456	3,711	14,105	0	5,425	0	5,425	84,179	193,022
1998	38,310	15,190	53,500	37,074	0	2,279	3,798	0	760	0	760	43,910	97,411
1999	90,546	0	90,546	85,961	456	0	0	0	456	0	456	86,873	177,416
2000	212,544	949	213,494	253,014	1,298	0	0	0	0	0	0	254,312	467,805
2001	180,902	0	180,902	205,835	760	2,515	0	807	0	0	807	209,915	390,819
2002	15,600	844	16,444	16,059	6,049	7,556	3,376	844	0	0	844	33,881	50,325
2003	370,806	0	370,806	447,147	948	0	0	0	0	0	0	448,095	818,901
2004	294,155	0	294,155	341,301	9,538	2,279	949	0	0	0	0	354,068	648,222
2005	148,861	0	148,861	141,273	4,084	2,069	0	0	0	0	0	147,427	296,287
2006	514,996	948	515,944	802,688	1,801	842	0	0	0	0	0	805,330	1,321,275
2007	132,133	0	132,133	156,794	2,139	0	0	0	0	0	0	158,933	291,067
2008	397,500	3,086	400,585	420,056	9,358	8,233	26,431	9,606	0	456	10,062	474,139	874,725
2009	263,457	182,222	445,679	157,036	190,351	225,422	87,856	9,183	0	0	9,183	669,844	1,115,524
2010	44,191	120,885	165,076	29,488	82,910	287,031	304,547	31,862	1,519	0	33,381	737,357	902,434
2011	89,733	12,445	102,179	86,889	456	8,811	35,859	6,195	10,763	0	16,957	148,970	251,147
2012	164,365	32,264	196,630	195,609	3,038	7,374	25,146	0	9,114	0	9,114	240,279	436,909
2013	550,287	15,048	565,334	720,217	32,736	6,916	6,646	0	3,798	0	3,798	770,312	1,335,642
2014	298,364	4,297	302,659	246,207	15,054	4,342	2,642	0	1,519	0	1,519	269,764	572,423
2015	15,151	911	16,062	11,284	10,528	10,960	0	0	0	0	0	32,773	48,834
2016	0	3,646	3,646	1,790	911	1,367	456	0	0	0	0	4,524	8,170
2017	66,508	0	66,508	92,823	456	911	1,823	0	0	0	0	96,013	162,521
2018	1,021,949	0	1,021,949	469,557	790,357	41,287	5,898	0	0	0	0	1,307,099	2,329,047

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Table 8.—Page 5 of 5.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
CHIGNIK DISTRICT TOTALS													
1989	1,254,493	1,131,079	2,385,571	1,240,835	328,264	1,198,760	943,625	288,103	38,289	28,659	355,054	4,066,532	6,452,102
1990	2,844,379	545,467	3,389,842	2,604,506	214,281	319,207	743,233	199,962	93,490	5,392	298,844	4,180,063	7,569,908
1991	1,762,801	512,459	2,275,260	1,692,463	165,014	92,510	168,639	106,319	69,684	2,295	178,298	2,296,924	4,572,188
1992	1,525,013	349,655	1,874,667	1,658,421	121,910	76,342	51,882	15,879	18,236	2,295	36,410	1,944,963	3,819,630
1993	1,072,889	248,157	1,321,045	977,821	635,445	373,240	203,049	34,818	70,434	3,939	109,191	2,298,741	3,619,786
1994	320,411	156,307	476,717	119,040	564,685	542,881	157,128	37,800	36,581	949	75,331	1,459,064	1,935,777
1995	386,507	154,181	540,687	457,788	16,589	84,095	197,731	102,352	15,020	1,557	118,929	875,130	1,415,813
1996	1,291,237	136,524	1,427,762	1,237,735	76,556	51,382	256,133	272,504	72,372	0	344,875	1,966,682	3,394,445
1997	1,612,856	489,690	2,102,546	1,411,225	795,245	439,143	318,285	157,467	99,385	11,772	268,624	3,232,516	5,335,062
1998	675,481	842,065	1,517,545	504,747	301,019	403,515	297,276	64,800	112,924	1,213	178,937	1,685,491	3,203,037
1999	907,854	204,747	1,112,604	742,005	368,885	397,558	507,110	168,075	166,710	2,244	337,027	2,352,580	3,465,181
2000	4,881,316	536,936	5,418,252	4,810,510	1,730,858	866,835	610,583	292,021	193,042	52,581	537,645	8,556,427	13,974,676
2001	3,545,380	803,951	4,349,331	2,095,903	3,302,941	1,117,368	542,188	250,762	90,396	8,498	349,658	7,408,056	11,757,394
2002	1,371,642	1,122,025	2,493,665	1,090,207	2,662,987	2,427,166	1,020,074	130,730	373,659	9,741	514,132	7,714,565	10,208,234
2003	744,717	937,227	1,681,942	703,559	692,914	1,064,909	919,272	115,804	175,112	12,788	303,705	3,684,354	5,366,300
2004	2,148,897	1,267,182	3,416,077	2,131,136	594,811	1,536,151	1,858,812	647,164	226,937	16,410	890,511	7,011,421	10,427,498
2005	3,619,560	1,463,776	5,083,333	3,836,232	711,934	886,179	969,500	245,505	153,784	6,630	405,918	6,809,764	11,893,093
2006	13,992,171	1,040,181	15,032,352	16,437,746	2,123,387	594,576	836,808	147,064	271,655	49,341	468,058	20,460,578	35,492,925
2007	5,432,395	1,571,274	7,003,668	5,265,424	4,002,174	1,530,706	641,947	126,806	89,126	7,862	223,798	11,664,046	18,667,716
2008	5,377,839	2,027,786	7,405,621	3,824,459	6,468,428	4,884,024	1,588,204	209,580	67,731	10,582	287,894	17,053,004	24,458,629
2009	2,498,426	4,112,173	6,610,599	1,684,708	5,513,017	8,250,243	4,298,047	630,346	81,077	12,037	723,460	20,469,473	27,080,073
2010	556,174	2,309,929	2,866,102	509,165	649,802	3,751,019	6,878,871	2,614,930	1,010,366	51,482	3,676,779	15,465,628	18,331,730
2011	1,231,018	889,406	2,120,426	1,353,706	35,358	388,248	2,731,055	1,506,952	1,185,218	121,054	2,813,222	7,321,586	9,442,006
2012	1,606,465	322,319	1,928,786	1,822,773	37,096	106,804	813,197	160,083	604,714	17,578	782,374	3,562,250	5,491,036
2013	11,517,890	218,643	11,736,532	14,400,186	267,929	87,570	833,348	10,772	695,118	32,763	738,653	16,327,686	28,064,215
2014	3,483,926	285,921	3,769,842	3,397,668	948,579	590,051	948,144	2,684	833,510	19,458	855,654	6,740,093	10,509,934
2015	1,920,636	1,837,157	3,757,790	1,136,094	1,306,402	945,388	765,823	38,925	271,552	8,333	318,811	4,472,516	8,230,304
2016	175,660	336,690	512,350	170,345	58,270	669,985	554,367	47,521	7,430	1,557	56,509	1,509,476	2,021,828
2017	3,704,912	664,013	4,368,928	3,901,656	233,872	206,477	245,964	64,141	9,396	0	73,537	4,661,507	9,030,433
2018	22,602,684	1,491,929	24,177,327	22,681,878	5,718,222	1,911,868	670,329	90,665	14,525	1,681	106,875	31,089,166	55,266,498

Table 9.—Predominant species by weight in the South Peninsula Tanner crab District large-mesh bottom trawl survey, 2018.

Common name	Species name	% of catch by weight
Flathead sole	<i>Hippoglossoides elassodon</i>	23.9
Yellowfin sole	<i>Limanda aspera</i>	16.0
Walleye pollock	<i>Gadus chalcogrammus</i>	13.6
Arrowtooth flounder	<i>Atheresthes stomias</i>	12.1
Starry flounder	<i>Platichthys stellatus</i>	4.8
Alaska plaice	<i>Pleuronectes quadrituberculatus</i>	3.7
Northern rock sole	<i>Lepidopsetta polyxystra</i>	3.2
Tanner crab	<i>Chionoecetes bairdi</i>	2.4
Anemone	Order: Actinaria	2.3
Pacific halibut	<i>Hippoglossus stenolepis</i>	2.2
Sunflower seastar	<i>Pycnopodia helianthoides</i>	2.0
Big skate	<i>Raja binoculata</i>	1.7
Pacific cod	<i>Gadus macrocephalus</i>	1.7
Red king crab	<i>Paralithodes camtschaticus</i>	1.5
Hermit crab	Family: Paguridae	1.5
Dungeness crab	<i>Metacarcinus magister</i>	1.0
Mussel	Family: Mytilidae	0.9
Great sculpin	<i>Myoxocephalus polyacanthocephalus</i>	0.8
Oregon triton	<i>Fusitriton oregonensis</i>	0.8
Yellow Irish lord	<i>Hemilepidotus jordani</i>	0.5
All others	(88 species)	3.4
		100.0

Table 10.—Tanner crab abundance estimates from large-mesh bottom trawl surveys in the South Peninsula District, 1988–2018.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
Sanak Island													
1989	1,071,609	116,990	1,188,600	1,159,768	23,925	31,519	64,965	6,836	0	0	6,836	1,287,012	2,475,613
1990	613,067	104,693	717,759	461,082	84,247	54,276	24,945	0	0	0	0	624,549	1,342,308
1991	502,735	30,289	533,023	515,060	33,734	40,658	0	0	0	0	0	589,451	1,122,475
1992	381,604	45,334	426,937	298,381	51,667	50,678	3,798	0	0	0	0	404,521	831,457
1993	302,560	16,822	319,381	238,482	28,992	33,299	9,219	0	0	0	0	309,991	629,373
1994	85,510	68,744	154,252	107,676	12,903	17,781	19,824	0	0	0	0	158,182	312,433
1996	554,162	132,998	687,160	416,751	52,698	28,959	35,079	0	0	0	0	533,484	1,220,643
1997	103,036	51,367	154,402	76,797	72,743	36,437	16,669	0	0	0	0	202,643	357,045
1998	279,450	401,219	680,667	377,230	81,490	124,402	63,941	0	0	0	0	647,062	1,327,728
1999	82,986	93,707	176,693	52,687	5,043	42,386	20,007	0	0	0	0	120,124	296,816
2000	578,289	183,975	762,263	546,298	59,137	93,362	32,780	0	2,522	0	2,522	734,097	1,496,358
2001	888,599	128,542	1,017,141	770,478	56,029	82,059	114,930	5,043	0	0	5,043	1,028,539	2,045,680
2002	723,329	1,012,098	1,735,427	714,685	270,913	220,391	103,390	0	10,807	0	10,807	1,320,184	3,055,610
2003	217,862	303,284	521,146	196,526	71,366	179,502	109,312	0	10,086	0	10,086	566,789	1,087,935
2004	710,374	200,465	910,838	648,112	100,068	55,619	6,674	0	0	0	0	810,472	1,721,310
2005	254,560	129,049	383,608	215,626	85,685	59,375	0	0	0	0	0	360,682	744,290
2006	3,111,150	64,327	3,175,478	2,873,714	58,344	80,351	16,974	0	0	0	0	3,029,384	6,204,859
2007	4,365,126	1,944,147	6,309,274	3,667,269	664,268	240,298	96,673	0	0	0	0	4,668,506	10,977,780
2008	191,878	1,816,432	2,008,310	843,242	1,791,588	322,364	33,687	0	0	0	0	2,990,878	4,999,188
2009	77,006	660,484	737,491	96,353	193,365	216,737	56,270	16,437	1,925	0	18,363	581,087	1,318,575
2010	172,832	561,273	734,104	187,437	15,876	160,098	574,126	1,007,317	65,331	74,563	1,147,211	2,084,748	2,818,852
2011	142,197	471,130	613,326	161,882	8,613	43,719	260,977	5,767	293,117	5,776	304,659	779,850	1,393,176
2012	94,342	9,249	103,591	100,182	8,578	7,003	75,273	0	166,084	9,349	175,433	366,468	470,059
2013	641,635	17,463	659,097	599,843	27,665	12,646	14,748	0	22,781	0	22,781	677,684	1,336,780
2014	447,199	78,897	526,095	483,930	37,251	24,502	46,007	0	61,810	6,304	68,114	659,807	1,185,900
2015	529,811	4,883	534,693	470,804	57,119	28,273	1,631	0	816	0	816	558,643	1,093,336
2016	58,960	4,747	63,707	79,260	22,547	0	0	0	0	0	0	101,807	165,512
2017	593,898	6,197	600,096	612,080	39,912	39,602	0	0	0	0	0	691,595	1,291,690
2018	2,114,937	107,904	2,222,840	1,652,383	473,954	69,430	34,587	0	0	0	0	2,230,357	4,453,195
Morzhovoi Bay													
1988	409,897	373,352	783,248	229,314	232,693	204,292	197,863	79,615	29,271	15,048	123,933	988,096	1,771,346
1989	3,184,336	1,093,829	4,278,163	2,702,511	1,125,103	371,020	114,369	33,216	4,861	0	38,077	4,351,079	8,629,242

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Table 10.—Page 2 of 10.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	>165 mm			
1990	1,825,523	1,000,174	2,825,698	1,261,202	602,744	539,452	192,870	25,710	24,592	1,005	51,307	2,647,577	5,473,273
1991	1,503,176	458,024	1,961,200	1,149,352	404,094	204,716	56,095	15,480	4,121	0	19,603	1,833,858	3,795,061
1992	330,947	811,312	1,142,255	169,738	434,799	264,319	190,288	31,963	20,925	949	53,838	1,112,981	2,255,238
1993	64,447	534,492	598,939	16,593	144,036	367,988	351,708	59,906	63,845	949	124,702	1,005,026	1,603,964
1994	35,472	239,257	274,730	8,051	52,802	114,581	187,395	6,269	47,754	0	54,023	416,851	691,582
1996	149,154	103,708	252,861	133,883	21,463	13,718	49,694	5,697	29,549	0	35,246	254,007	506,868
1997	135,531	85,958	221,489	85,565	77,864	61,176	35,202	6,646	8,986	0	15,631	275,433	496,922
1998	801,130	1,648,105	2,449,234	281,054	1,104,366	1,336,666	303,150	38,244	68,354	0	106,599	3,131,833	5,581,064
1999	147,187	461,834	609,021	39,215	280,881	526,371	723,052	59,664	55,341	1,899	116,902	1,686,425	2,295,445
2000	691,473	735,207	1,426,680	608,437	146,561	363,693	691,467	429,284	97,765	0	527,050	2,337,207	3,763,887
2001	888,809	282,222	1,171,029	555,947	788,464	192,929	215,208	175,234	103,956	10,266	289,455	2,042,008	3,213,036
2002	1,706,361	640,182	2,346,540	1,093,086	1,161,008	666,086	277,467	39,274	139,943	2,423	181,638	3,379,282	5,725,822
2003	508,542	1,568,783	2,077,324	100,921	1,119,089	772,766	394,283	38,984	98,142	0	137,125	2,524,183	4,601,510
2004	309,174	1,572,685	1,881,858	263,681	180,798	1,478,776	2,264,690	255,452	159,866	6,288	421,605	4,609,548	6,491,405
2005	511,238	3,645,114	4,156,354	344,821	153,399	357,585	1,241,173	460,860	198,447	2,649	661,954	2,758,935	6,915,289
2006	14,045,100	2,039,553	16,084,652	13,491,620	500,516	278,232	1,011,102	258,921	251,185	19,419	529,526	15,810,992	31,895,646
2007	10,741,143	1,910,757	12,651,903	7,091,636	6,311,806	1,713,752	2,143,262	509,078	221,335	11,256	741,667	18,002,121	30,654,022
2008	3,363,627	11,140,938	14,504,566	890,854	5,459,669	12,255,108	1,912,027	760,809	199,538	40,534	1,000,882	21,518,542	36,023,109
2009	255,207	2,393,371	2,648,577	147,145	504,198	3,876,175	7,574,448	354,957	12,940	9,482	377,378	12,479,339	15,127,914
2010	52,060	2,514,695	2,566,755	45,727	18,140	286,327	2,365,728	4,889,596	119,065	193,356	5,202,016	7,917,939	10,484,695
2011	224,511	1,278,220	1,502,731	236,648	6,168	77,932	789,609	1,320,172	1,650,445	292,204	3,262,821	4,373,179	5,875,908
2012	262,344	750,606	1,012,950	229,707	28,624	19,775	360,755	73,213	1,141,286	118,631	1,333,131	1,971,993	2,984,942
2013	4,510,100	133,707	4,643,805	4,925,601	223,248	41,649	90,394	1,938	511,446	45,837	559,222	5,840,115	10,483,923
2014	2,588,017	1,654,282	4,242,299	1,267,183	884,565	843,167	819,933	0	1,097,764	105,886	1,203,650	5,018,493	9,260,791
2015	1,360,711	2,089,562	3,450,271	203,591	2,006,779	3,167,943	1,132,512	150,722	128,453	0	279,175	6,790,000	10,240,272
2016	103,453	2,566,147	2,669,598	57,679	118,099	1,178,683	2,248,926	103,907	335,478	0	439,386	4,042,773	6,712,372
2017	88,766	359,371	448,136	82,453	5,418	153,359	559,556	44,088	37,336	0	81,424	882,209	1,330,346
2018	2,726,011	633,608	3,359,620	1,872,073	273,274	338,390	612,072	130,682	45,031	0	175,713	3,271,521	6,631,138
Cold Bay/Belkofski Bay													
1988	245,167	309,528	554,695	127,353	203,631	219,435	203,005	84,389	30,011	7,297	121,696	875,123	1,429,818
1989	465,271	55,255	520,527	408,307	54,811	29,721	16,589	3,880	488	0	4,368	513,797	1,034,326
1990	1,789,574	711,980	2,501,555	1,512,009	512,876	278,441	230,633	87,253	50,625	3,646	141,524	2,675,483	5,177,042
1991	597,704	642,244	1,239,950	663,094	132,800	247,214	494,517	77,978	152,806	161	230,945	1,768,575	3,008,525

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Table 10.—Page 3 of 10.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
1992	174,989	181,042	356,030	93,914	109,326	97,878	147,230	40,120	40,307	1,533	81,960	530,308	886,340
1993	97,181	277,803	374,984	66,301	85,424	159,343	145,875	36,567	22,350	434	59,353	516,296	891,280
1994	94,378	227,473	321,850	27,661	53,390	64,265	78,255	27,578	10,601	1,217	39,396	262,973	584,824
1996	332,658	15,587	348,245	260,751	59,794	38,484	31,147	24,510	2,998	201	27,708	417,885	766,129
1997	117,322	12,418	129,739	43,725	58,863	90,892	81,128	37,535	895	483	38,913	313,523	443,263
1998	384,971	154,913	539,885	113,976	289,247	352,476	183,679	49,039	20,425	5,616	75,081	1,014,461	1,554,346
1999	111,950	80,923	192,872	61,658	59,354	262,551	295,349	64,490	25,925	869	91,284	770,196	963,069
2000	455,889	221,576	677,465	552,078	107,735	284,006	327,963	198,168	16,388	2,811	217,368	1,489,154	2,166,619
2001	980,805	68,623	1,049,429	859,293	153,479	160,451	166,002	100,176	16,350	3,544	120,067	1,459,294	2,508,722
2002	951,056	273,703	1,224,761	503,854	464,269	321,094	218,041	60,958	101,511	3,459	165,929	1,673,188	2,897,949
2003	490,580	254,238	744,818	260,122	311,125	265,983	77,062	0	9,000	1,136	10,137	924,431	1,669,250
2004	624,983	134,040	759,025	427,022	330,725	398,480	192,333	22,874	2,530	0	25,404	1,373,964	2,132,988
2005	993,349	218,680	1,212,028	710,843	296,625	278,635	179,919	22,573	16,203	0	38,777	1,504,799	2,716,828
2006	2,649,095	420,921	3,070,019	2,061,411	466,727	562,538	233,997	27,671	13,589	0	41,260	3,365,936	6,435,951
2007	3,845,750	1,360,194	5,205,945	895,383	1,862,983	740,394	364,088	39,920	869	0	40,789	3,903,637	9,109,583
2008	1,008,163	3,859,739	4,867,902	185,717	2,091,796	3,978,114	1,144,869	95,258	85,637	838	181,733	7,582,227	12,450,130
2009	763,777	1,306,811	2,070,589	420,802	263,321	788,004	3,184,682	348,427	28,011	15,097	391,535	5,048,342	7,118,932
2010	268,615	2,653,858	2,922,473	230,437	77,077	369,308	1,525,762	1,370,575	283,412	79,516	1,737,224	3,939,809	6,862,281
2011	483,852	945,795	1,429,646	437,424	59,300	82,409	449,026	69,629	757,606	40,712	867,946	1,896,107	3,325,748
2012	343,992	171,847	515,840	396,404	85,500	160,419	177,454	19,925	189,934	6,096	215,957	1,035,735	1,551,575
2013	3,188,264	43,765	3,232,028	3,065,365	198,476	35,674	94,159	70,338	75,700	2,482	148,521	3,542,198	6,774,225
2014	839,972	109,296	949,268	800,002	456,297	195,357	82,194	3,471	71,226	4,925	79,622	1,613,472	2,562,743
2015	385,008	372,631	757,641	110,585	412,098	496,241	246,185	15,327	55,506	2,727	73,559	1,338,670	2,096,311
2016	31,558	678,225	709,782	35,537	79,011	502,975	634,623	10,191	86,490	1,025	97,707	1,349,851	2,059,635
2017	21,176	44,903	66,079	27,761	10,329	39,474	71,536	16,703	3,363	483	20,549	169,651	235,731
2018	8,872,488	51,210	8,923,699	7,421,221	26,523	62,257	63,578	3,204	10,031	0	13,235	7,586,816	16,510,514
Pavlof Bay/Volcano Bay													
1988	396,472	851,305	1,247,775	318,791	191,839	433,431	389,404	180,138	72,587	65,785	318,510	1,651,978	2,899,757
1989	982,971	1,637,332	2,620,303	706,565	378,690	263,715	309,107	82,124	48,809	13,946	144,876	1,802,956	4,423,261
1990	1,018,705	2,014,133	3,032,842	800,548	465,497	483,365	275,354	55,929	101,325	12,666	169,922	2,194,681	5,227,522
1991	476,479	465,867	942,344	442,307	75,625	215,027	198,812	39,934	69,645	4,066	113,645	1,045,424	1,987,767
1992	164,080	251,898	415,976	59,319	134,197	93,527	116,929	31,944	19,546	0	51,490	455,465	871,441
1993	110,998	168,533	279,530	64,214	149,790	472,724	213,751	37,839	24,032	1,897	63,767	964,243	1,243,772

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Table 10.—Page 4 of 10.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
1994	38,811	116,548	155,358	20,940	46,340	87,314	137,635	53,632	27,775	0	81,407	373,644	529,000
1996	264,721	51,767	316,490	250,154	39,274	24,090	48,745	14,698	9,285	980	24,963	387,224	703,715
1997	68,954	78,820	147,775	30,166	47,190	80,373	52,489	5,258	27,733	899	33,892	244,109	391,886
1998	123,170	169,886	293,061	33,550	186,768	335,468	415,570	8,543	57,097	0	65,640	1,036,992	1,330,056
1999	49,852	75,922	125,775	40,396	36,843	105,371	112,343	79,080	9,463	0	88,543	383,495	509,269
2000	1,221,546	228,967	1,450,514	1,063,815	233,699	150,334	245,502	92,698	28,660	0	121,359	1,814,714	3,265,227
2001	637,329	215,340	852,666	373,939	337,514	233,508	146,893	42,698	29,816	0	72,515	1,164,371	2,017,035
2002	1,159,412	398,152	1,557,562	1,098,831	373,111	549,662	417,058	45,913	43,795	1,225	90,931	2,529,594	4,087,161
2003	178,350	256,728	435,078	126,539	191,038	315,547	333,959	43,396	79,968	921	124,285	1,091,364	1,526,446
2004	287,514	348,252	635,767	258,804	103,412	541,662	404,760	104,231	115,029	2,200	221,459	1,530,097	2,165,865
2005	1,055,173	324,835	1,380,008	970,752	333,608	300,213	411,649	30,762	75,552	0	106,314	2,122,531	3,502,541
2006	3,246,754	318,555	3,565,310	3,178,826	686,965	364,771	230,246	27,704	54,757	980	83,440	4,544,244	8,109,557
2007	1,548,059	762,851	2,310,909	1,077,933	1,389,596	974,621	561,630	68,849	65,665	0	134,515	4,138,295	6,449,209
2008	1,931,401	2,097,108	4,028,508	525,205	3,182,635	2,614,265	1,632,032	318,556	21,924	5,903	346,385	8,300,523	12,329,032
2009	1,293,221	2,549,622	3,842,843	925,474	895,247	3,169,920	5,004,365	1,268,465	154,235	23,190	1,445,890	11,440,894	15,283,734
2010	607,426	1,328,668	1,936,096	473,284	391,314	632,226	2,297,122	1,733,023	575,843	32,630	2,341,496	6,135,439	8,071,537
2011	362,099	540,193	902,292	367,149	183,018	180,370	754,032	180,001	1,079,596	36,927	1,296,524	2,781,094	3,683,388
2012	508,923	327,194	836,116	534,012	54,792	220,016	429,445	37,012	532,755	11,533	581,300	1,819,560	2,655,678
2013	5,637,544	268,354	5,905,895	6,225,497	791,887	125,654	174,459	46,554	113,140	1,625	161,319	7,478,814	13,384,708
2014	1,365,620	330,174	1,695,797	989,167	1,130,832	682,128	248,994	28,744	172,619	3,270	204,635	3,255,754	4,951,552
2015	145,059	376,317	521,376	101,332	520,361	1,266,755	709,676	36,775	38,769	1,035	76,578	2,674,698	3,196,075
2016	195,563	191,559	387,124	230,534	50,091	421,593	630,419	57,449	128,726	7,650	193,823	1,526,458	1,913,582
2017	227,905	123,336	351,241	201,263	52,346	79,884	128,983	20,659	13,656	0	34,316	496,788	848,030
2018	4,791,990	302,302	5,094,293	4,497,989	265,516	266,478	202,764	15,940	21,115	0	37,055	5,269,808	10,364,101
Beaver Bay/Balboa Bay/Unga Strait													
1988	123,494	76,882	200,375	106,208	66,273	51,249	23,019	5,483	11,617	0	17,100	263,850	464,227
1989	197,155	257,804	454,960	187,673	58,696	50,884	34,037	0	6,059	0	6,059	337,346	792,308
1990	482,504	480,919	963,421	469,880	39,607	159,200	93,314	20,133	6,616	0	26,748	788,754	1,752,177
1991	369,956	192,356	562,312	343,662	40,332	59,938	51,441	5,013	3,073	0	8,086	503,457	1,065,769
1992	135,820	137,943	273,760	144,580	31,465	47,470	20,585	2,510	2,027	0	4,537	248,638	522,398
1993	26,384	43,104	69,488	41,382	9,532	31,285	33,351	3,164	4,362	0	7,526	123,073	192,560
1994	10,057	31,137	41,195	10,846	4,362	11,236	24,651	2,254	5,846	0	8,100	59,196	100,389
1996	821,170	5,040	826,210	859,655	15,533	10,707	10,287	715	368	0	1,083	897,260	1,723,470

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Table 10.—Page 5 of 10.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
1997	121,975	40,476	162,451	99,343	73,182	18,189	6,765	0	1,946	0	1,946	199,424	361,877
1998	126,979	81,698	208,680	93,259	39,343	56,277	4,983	0	0	0	0	193,862	402,541
1999	34,815	72,130	106,944	81,508	10,811	41,261	31,839	860	0	0	860	166,280	273,223
2000	447,950	37,324	485,274	432,550	6,817	23,244	22,112	1,356	1,356	0	2,713	487,435	972,710
2001	993,788	80,794	1,074,583	1,032,812	91,142	32,641	16,685	0	0	0	0	1,173,278	2,247,861
2002	647,596	316,783	964,379	570,708	679,101	354,635	36,224	0	13,518	0	13,518	1,654,187	2,618,564
2003	83,251	252,020	335,273	38,328	121,196	246,506	135,914	7,972	9,654	0	17,625	559,565	894,837
2004	314,553	203,840	518,391	324,495	108,694	181,829	145,100	37,897	3,666	860	42,421	802,536	1,320,928
2005	2,052,393	151,547	2,203,940	2,610,558	88,385	50,775	64,770	12,484	0	0	12,484	2,826,970	5,030,907
2006	3,800,591	1,083,098	4,883,687	2,631,953	2,261,312	980,256	401,123	8,703	42,734	0	51,437	6,326,082	11,209,765
2007	631,937	1,393,871	2,025,810	565,420	1,747,627	1,405,074	476,954	25,175	2,880	1,148	29,202	4,224,279	6,250,086
2008	794,200	2,652,921	3,447,121	420,984	1,934,846	2,289,198	1,200,370	144,915	3,583	2,154	150,651	5,996,051	9,443,172
2009	414,125	2,090,678	2,504,802	286,953	546,197	1,117,426	1,391,497	752,534	103,165	949	856,649	4,198,722	6,703,528
2010	84,384	814,393	898,778	49,936	67,410	240,531	415,764	104,717	132,100	1,731	238,548	1,012,186	1,910,964
2011	135,533	328,382	463,914	121,776	19,910	80,312	294,279	21,795	157,643	0	179,438	695,712	1,159,627
2012	126,130	132,348	258,476	157,309	1,634	44,081	394,934	8,372	259,847	0	268,219	866,177	1,124,653
2013	1,870,044	112,798	1,982,841	1,710,549	57,369	23,486	47,765	0	12,589	0	12,589	1,851,756	3,834,596
2014	439,348	95,103	534,452	256,515	452,473	165,787	100,688	0	48,515	894	49,409	1,024,875	1,559,324
2015	82,817	256,949	339,762	83,471	126,344	299,302	143,032	0	49,262	0	49,262	701,410	1,041,173
2016	58,376	99,710	158,086	68,857	12,822	65,334	33,343	5,150	1,550	0	6,701	187,058	345,143
2017	210,858	26,021	236,878	234,594	17,149	22,173	22,888	1,513	949	0	2,462	299,265	536,142
2018	2,270,503	79,169	2,349,670	2,319,743	96,829	24,335	10,224	0	0	0	0	2,451,132	4,800,801
West Nagai Strait													
1989	250,282	193,216	443,498	291,460	134,656	68,629	23,042	1,859	5,185	0	7,044	524,830	968,328
1990	221,904	36,745	258,648	227,456	16,930	17,328	5,672	0	908	0	908	268,294	526,945
1991	209,317	22,391	231,706	232,608	5,312	5,312	15,936	3,813	0	0	3,813	262,982	494,688
1992	24,424	31,724	56,149	13,307	8,214	18,230	7,954	0	3,165	0	3,165	50,869	107,019
1993	19,404	4,835	24,239	15,942	9,600	74,295	14,798	908	0	0	908	115,543	139,783
1994	20,348	24,860	45,209	8,271	24,514	29,969	27,083	8,469	0	0	8,469	98,302	143,511
1996	48,279	4,706	52,985	38,902	7,431	16,596	20,149	0	908	0	908	83,987	136,973
1997	333,029	263,583	596,610	180,060	292,165	173,199	25,182	0	4,706	0	4,706	675,310	1,271,918
1998	84,815	122,946	207,760	35,756	106,723	175,190	58,732	3,564	908	0	4,473	380,874	588,635
1999	58,649	24,684	83,333	45,436	34,194	28,481	46,396	5,615	0	0	5,615	160,121	243,452

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Table 10.—Page 6 of 10.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
2000	320,957	23,673	344,630	363,106	5,425	5,696	18,988	5,615	1,899	0	7,513	400,728	745,355
2001	499,829	68,360	568,187	340,805	124,643	65,414	32,390	908	0	0	908	564,160	1,132,347
2002	180,556	126,619	307,175	82,437	89,360	287,060	100,976	4,747	0	0	4,747	564,577	871,751
2003	39,253	57,642	96,894	7,611	59,635	37,323	11,146	3,798	0	0	3,798	119,511	216,403
2004	36,564	92,054	128,616	32,796	11,393	59,786	46,150	12,301	1,899	0	14,199	164,324	292,939
2005	408,940	46,500	455,439	470,143	14,241	38,507	70,970	11,106	0	0	11,106	604,965	1,060,404
2006	1,141,989	123,506	1,265,496	850,316	605,915	157,389	115,801	908	2,725	0	3,633	1,733,056	2,998,552
2007	1,114,056	2,408,980	3,523,033	402,145	1,710,559	1,254,230	435,630	27,634	41,115	0	68,749	3,871,309	7,394,343
2008	814,607	6,810,600	7,625,208	287,211	1,808,034	2,620,888	1,177,024	58,937	42,677	0	101,615	5,994,769	13,619,975
2009	317,524	9,700,974	10,018,498	95,226	1,300,764	2,953,848	3,184,350	542,834	87,282	11,779	641,896	8,176,082	18,194,579
2010	191,030	3,321,173	3,512,202	147,975	164,797	1,003,031	2,061,674	1,302,037	188,142	26,083	1,516,261	4,893,740	8,405,943
2011	30,611	578,793	609,403	61,776	21,573	239,696	708,342	73,083	179,640	9,513	262,232	1,293,619	1,903,020
2012	66,031	190,882	256,912	133,765	9,128	55,834	524,154	39,306	583,933	17,486	640,724	1,363,604	1,620,515
2013	1,668,899	78,948	1,747,847	1,539,235	79,494	54,809	202,169	3,798	99,873	0	103,671	1,979,370	3,727,216
2014	697,452	204,010	901,461	257,672	450,736	158,082	142,954	0	47,241	0	47,241	1,056,685	1,958,145
2015	131,991	174,763	306,751	36,968	184,382	486,886	201,491	7,331	6,122	0	13,453	923,179	1,229,930
2016	13,831	2,697,909	2,711,740	0	47,031	465,316	476,733	5,219	23,855	0	29,075	1,018,152	3,729,891
2017	1,882,711	714,523	2,597,235	1,913,960	43,271	129,983	236,985	10,728	0	0	10,728	2,334,927	4,932,162
2018	3,386,857	344,435	3,731,291	2,336,554	348,938	148,290	161,410	0	9,306	0	9,306	3,004,495	6,735,784
Stepovak Bay													
1989	267,791	114,335	382,127	245,657	14,727	13,898	0	0	0	0	0	274,280	656,409
1990	680,510	128,590	809,103	793,942	6,962	23,206	14,727	3,883	6,158	0	10,041	848,878	1,657,978
1991	170,885	19,489	190,373	216,341	4,071	25,759	12,640	0	6,158	0	6,158	264,969	455,342
1992	209,362	15,530	224,892	183,775	6,204	27,937	6,985	0	0	0	0	224,900	449,791
1993	8,906	3,883	12,789	9,296	0	3,079	0	0	3,079	0	3,079	15,454	28,243
1994	30,446	0	30,446	30,290	0	0	0	0	0	0	0	30,290	60,736
1996	35,568	0	35,568	32,004	0	0	0	0	0	0	0	32,004	67,572
1997	9,643	0	9,643	23,048	0	0	0	0	0	0	0	23,048	32,692
1998	36,665	0	36,665	43,862	0	0	0	0	0	0	0	43,862	80,527
1999	34,025	0	34,025	53,839	0	0	0	0	0	0	0	53,839	87,865
2000	168,177	0	168,177	179,301	0	0	0	0	0	0	0	179,301	347,480
2001	276,563	0	276,563	278,539	3,415	0	0	0	0	0	0	281,955	558,518
2002	28,474	11,159	39,633	46,174	11,639	2,480	0	0	0	0	0	60,293	99,926
2003	33,770	0	33,770	37,037	0	0	930	0	0	0	0	37,967	71,738

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Table 10.—Page 7 of 10.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
2004	62,485	992	63,477	81,486	688	992	0	0	0	0	0	83,166	146,643
2005	358,179	930	359,108	466,461	4,969	992	0	0	0	0	0	472,422	831,530
2006	938,817	8,397	947,214	1,254,409	34,902	5,761	0	0	0	0	0	1,295,072	2,242,286
2007	341,670	24,047	365,717	406,983	63,342	15,853	0	0	0	0	0	486,177	851,895
2008	149,567	11,295	160,863	126,217	71,453	28,082	6,639	992	0	0	992	233,383	394,245
2009	44,951	4,151	49,101	56,933	7,515	25,021	4,681	0	835	0	835	94,988	144,089
2010	29,109	860	29,969	29,977	4,603	17,862	33,745	12,236	0	0	12,236	98,422	128,391
2011	96,677	3,720	100,396	109,749	2,324	1,240	3,534	0	2,480	0	2,480	119,326	219,721
2012	59,065	3,664	62,729	57,083	992	4,433	8,319	0	992	0	992	71,818	134,547
2013	270,287	992	271,279	299,751	1,162	688	0	0	0	0	0	301,602	572,880
2014	45,249	1,984	47,233	33,618	5,121	1,523	4,352	0	688	835	1,523	46,138	93,371
2015	41,084	0	41,084	49,459	3,842	688	930	0	0	0	0	54,919	96,003
2016	8,783	0	8,783	12,963	0	1,600	0	0	0	0	0	14,564	23,347
2017	256,095	2,480	258,575	278,265	2,168	2,090	0	0	0	0	0	282,524	541,099
2018	1,323,834	5,439	1,329,272	1,220,936	510,015	4,112	822	0	0	0	0	1,735,886	3,065,158
WESTERN SECTION TOTALS ^a													
1988	655,064	682,880	1,337,943	356,667	436,324	423,727	400,868	164,004	59,282	22,345	245,629	1,863,217	3,201,164
1989	4,721,216	1,266,074	5,987,290	4,270,586	1,203,839	432,260	195,923	43,932	5,349	0	49,281	6,151,889	12,139,181
1990	4,228,164	1,816,847	6,045,012	3,234,293	1,199,867	872,169	448,448	112,963	75,217	4,651	192,831	5,947,608	11,992,623
1991	2,603,615	1,130,557	3,734,173	2,327,506	570,628	492,588	550,612	93,458	156,927	161	250,548	4,191,880	7,926,061
1992	887,540	1,037,688	1,925,222	562,033	595,792	412,875	341,316	72,083	61,232	2,482	135,798	2,047,813	3,973,035
1993	464,188	829,117	1,293,304	321,376	258,452	560,630	506,802	96,473	86,195	1,383	184,055	1,831,311	3,124,617
1994	215,360	535,474	750,832	143,388	119,095	196,627	285,474	33,847	58,355	1,217	93,419	838,003	1,588,839
1996	1,035,974	252,293	1,288,266	811,385	133,955	81,161	115,920	30,207	32,547	201	62,954	1,205,376	2,493,640
1997	355,889	149,743	505,630	206,087	209,470	188,505	132,999	44,181	9,881	483	54,544	791,599	1,297,230
1998	1,465,551	2,204,237	3,669,786	772,260	1,475,103	1,813,544	550,770	87,283	88,779	5,616	181,680	4,793,356	8,463,138
1999	342,123	636,464	978,586	153,560	345,278	831,308	1,038,408	124,154	81,266	2,768	208,186	2,576,745	3,555,330
2000	1,725,651	1,140,758	2,866,408	1,706,813	313,433	741,061	1,052,210	627,452	116,675	2,811	746,940	4,560,458	7,426,864
2001	2,758,213	479,387	3,237,599	2,185,718	997,972	435,439	496,140	280,453	120,306	13,810	414,565	4,529,841	7,767,438
2002	3,380,746	1,925,983	5,306,728	2,311,625	1,896,190	1,207,571	598,898	100,232	252,261	5,882	358,374	6,372,654	11,679,381
2003	1,216,984	2,126,305	3,343,288	557,569	1,501,580	1,218,251	580,657	38,984	117,228	1,136	157,348	4,015,403	7,358,695
2004	1,644,531	1,907,190	3,551,721	1,338,815	611,591	1,932,875	2,463,697	278,326	162,396	6,288	447,009	6,793,984	10,345,703
2005	1,759,147	3,992,843	5,751,990	1,271,290	535,709	695,595	1,421,092	483,433	214,650	2,649	700,731	4,624,416	10,376,407
2006	19,805,345	2,524,801	22,330,149	18,426,745	1,025,587	921,121	1,262,073	286,592	264,774	19,419	570,786	22,206,312	44,536,456

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Table 10.—Page 8 of 10.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	>165 mm			
2007	18,952,019	5,215,098	24,167,122	11,654,288	8,839,057	2,694,444	2,604,023	548,998	222,204	11,256	782,456	26,574,264	50,741,385
2008	4,563,668	16,817,109	21,380,778	1,919,813	9,343,053	16,555,586	3,090,583	856,067	285,175	41,372	1,182,615	32,091,647	53,472,427
2009	1,095,990	4,360,666	5,456,657	664,300	960,884	4,880,916	10,815,400	719,821	42,876	24,579	787,276	18,108,768	23,565,421
2010	493,507	5,729,826	6,223,332	463,601	111,093	815,733	4,465,616	7,267,488	467,808	347,435	8,086,451	13,942,496	20,165,828
2011	850,560	2,695,145	3,545,703	835,954	74,081	204,060	1,499,612	1,395,568	2,701,168	338,692	4,435,426	7,049,136	10,594,832
2012	700,678	931,702	1,632,381	726,293	122,702	187,197	613,482	93,138	1,497,304	134,076	1,724,521	3,374,196	5,006,576
2013	8,339,999	194,935	8,534,930	8,590,809	449,389	89,969	199,301	72,276	609,927	48,319	730,524	10,059,997	18,594,928
2014	3,875,188	1,842,475	5,717,662	2,551,115	1,378,113	1,063,026	948,134	3,471	1,230,800	117,115	1,351,386	7,291,772	13,009,434
2015	2,275,530	2,467,076	4,742,605	784,980	2,475,996	3,692,457	1,380,328	166,049	184,775	2,727	353,550	8,687,313	13,429,919
2016	193,971	3,249,119	3,443,087	172,476	219,657	1,681,658	2,883,549	114,098	421,968	1,025	537,093	5,494,431	8,937,519
2017	703,840	410,471	1,114,311	722,294	55,659	232,435	631,092	60,791	40,699	483	101,973	1,743,455	2,857,767
2018	13,713,436	792,722	14,506,159	10,945,677	773,751	470,077	710,237	133,886	55,062	0	188,948	13,088,694	27,594,847
EASTERN SECTION TOTALS ^b													
1988	519,966	928,187	1,448,150	424,999	258,112	484,680	412,423	185,621	84,204	65,785	335,610	1,915,828	3,363,984
1989	1,698,199	2,202,687	3,900,888	1,431,355	586,769	397,126	366,186	83,983	60,053	13,946	157,979	2,939,412	6,840,306
1990	2,403,623	2,660,387	5,064,014	2,291,826	528,996	683,099	389,067	79,945	115,007	12,666	207,619	4,100,607	9,164,622
1991	1,226,637	700,103	1,926,735	1,234,918	125,340	306,036	278,829	48,760	78,876	4,066	131,702	2,076,832	4,003,566
1992	533,686	437,095	970,777	400,981	180,080	187,164	152,453	34,454	24,738	0	59,192	979,872	1,950,649
1993	165,692	220,355	386,046	130,834	168,922	581,383	261,900	41,911	31,473	1,897	75,280	1,218,313	1,604,358
1994	99,662	172,545	272,208	70,347	75,216	128,519	189,369	64,355	33,621	0	97,976	561,432	833,636
1996	1,169,738	61,513	1,231,253	1,180,715	62,238	51,393	79,181	15,413	10,561	980	26,954	1,400,475	2,631,730
1997	533,601	382,879	916,479	332,617	412,537	271,761	84,436	5,258	34,385	899	40,544	1,141,891	2,058,373
1998	371,629	374,530	746,166	206,427	332,834	566,935	479,285	12,107	58,005	0	70,113	1,655,590	2,401,759
1999	177,341	172,736	350,077	221,179	81,848	175,113	190,578	85,555	9,463	0	95,018	763,735	1,113,809
2000	2,158,630	289,964	2,448,595	2,038,772	245,941	179,274	286,602	99,669	31,915	0	131,585	2,882,178	5,330,772
2001	2,407,509	364,494	2,771,999	2,026,095	556,714	331,563	195,968	43,606	29,816	0	73,423	3,183,764	5,955,761
2002	2,016,038	852,713	2,868,749	1,798,150	1,153,211	1,193,837	554,258	50,660	57,313	1,225	109,196	4,808,651	7,677,402
2003	334,624	566,390	901,015	209,515	371,869	599,376	481,949	55,166	89,622	921	145,708	1,808,407	2,709,424
2004	701,116	645,138	1,346,251	697,581	224,187	784,269	596,010	154,429	120,594	3,060	278,079	2,580,123	3,926,375
2005	3,874,685	523,812	4,398,495	4,517,914	441,203	390,487	547,389	54,352	75,552	0	129,904	6,026,888	10,425,382
2006	9,128,151	1,533,556	10,661,707	7,915,504	3,589,094	1,508,177	747,170	37,315	100,216	980	138,510	13,898,454	24,560,160
2007	3,635,722	4,589,749	8,225,469	2,452,481	4,911,124	3,649,778	1,474,214	121,658	109,660	1,148	232,466	12,720,060	20,945,533
2008	3,689,775	11,571,924	15,261,700	1,359,617	6,996,968	7,552,433	4,016,065	523,400	68,184	8,057	599,643	20,524,726	35,786,424
2009	2,069,821	14,345,425	16,415,244	1,364,586	2,749,723	7,266,215	9,584,893	2,563,833	345,517	35,918	2,945,270	23,910,686	40,325,930

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Table 10.—Page 9 of 10.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
2010	911,949	5,465,094	6,377,045	701,172	628,124	1,893,650	4,808,305	3,152,013	896,085	60,444	4,108,541	12,139,787	18,516,835
2011	624,920	1,451,088	2,076,005	660,450	226,825	501,618	1,760,187	274,879	1,419,359	46,440	1,740,674	4,889,751	6,965,756
2012	760,149	654,088	1,414,233	882,169	66,546	324,364	1,356,852	84,690	1,377,527	29,019	1,491,235	4,121,159	5,535,393
2013	9,446,774	461,092	9,907,862	9,775,032	929,912	204,637	424,393	50,352	225,602	1,625	277,579	11,611,542	21,519,400
2014	2,547,669	631,271	3,178,943	1,536,972	2,039,162	1,007,520	496,988	28,744	269,063	4,999	302,808	5,383,452	8,562,392
2015	400,951	808,029	1,208,973	271,230	834,929	2,053,631	1,055,129	44,106	94,153	1,035	139,293	4,354,206	5,563,181
2016	276,553	2,989,178	3,265,733	312,354	109,944	953,843	1,140,495	67,818	154,131	7,650	229,599	2,746,232	6,011,963
2017	2,577,569	866,360	3,443,929	2,628,082	114,934	234,130	388,856	32,900	14,605	0	47,506	3,413,504	6,857,433
2018	11,773,184	731,345	12,504,526	10,375,222	1,221,298	443,215	375,220	15,940	30,421	0	46,361	12,461,321	24,965,844
SOUTH PENINSULA DISTRICT TOTALS													
1988	1,175,030	1,611,067	2,786,093	781,666	694,436	908,407	813,291	349,625	143,486	88,130	581,239	3,779,047	6,565,148
1989	6,419,415	3,468,761	9,888,178	5,701,941	1,790,608	829,386	562,109	127,915	65,402	13,946	207,260	9,091,300	18,979,487
1990	6,631,787	4,477,234	11,109,026	5,526,119	1,728,863	1,555,268	837,515	192,908	190,224	17,317	400,450	10,048,216	21,157,245
1991	3,830,252	1,830,660	5,660,908	3,562,424	695,968	798,624	829,441	142,218	235,803	4,227	382,250	6,268,716	11,929,627
1992	1,421,226	1,474,783	2,895,999	963,014	775,872	600,039	493,769	106,537	85,970	2,482	194,990	3,027,682	5,923,684
1993	629,880	1,049,472	1,679,350	452,210	427,374	1,142,013	768,702	138,384	117,668	3,280	259,335	3,049,626	4,728,975
1994	315,022	708,019	1,023,040	213,735	194,311	325,146	474,843	98,202	91,976	1,217	191,395	1,399,438	2,422,475
1996	2,205,712	313,806	2,519,519	1,992,100	196,193	132,554	195,101	45,620	43,108	1,181	89,908	2,605,851	5,125,370
1997	889,490	532,622	1,422,109	538,704	622,007	460,266	217,435	49,439	44,266	1,382	95,088	1,933,490	3,355,603
1998	1,837,180	2,578,767	4,415,952	978,687	1,807,937	2,380,479	1,030,055	99,390	146,784	5,616	251,793	6,448,946	10,864,897
1999	519,464	809,200	1,328,663	374,739	427,126	1,006,421	1,228,986	209,709	90,729	2,768	303,204	3,340,480	4,669,139
2000	3,884,281	1,430,722	5,315,003	3,745,585	559,374	920,335	1,338,812	727,121	148,590	2,811	878,525	7,442,636	12,757,636
2001	5,165,722	843,881	6,009,598	4,211,813	1,554,686	767,002	692,108	324,059	150,122	13,810	487,988	7,713,605	13,723,199
2002	5,396,784	2,778,696	8,175,477	4,109,775	3,049,401	2,401,408	1,153,156	150,892	309,574	7,107	467,570	11,181,305	19,356,783
2003	1,551,608	2,692,695	4,244,303	767,084	1,873,449	1,817,627	1,062,606	94,150	206,850	2,057	303,056	5,823,810	10,068,119
2004	2,345,647	2,552,328	4,897,972	2,036,396	835,778	2,717,144	3,059,707	432,755	282,990	9,348	725,088	9,374,107	14,272,078
2005	5,633,832	4,516,655	10,150,485	5,789,204	976,912	1,086,082	1,968,481	537,785	290,202	2,649	830,635	10,651,304	20,801,789
2006	28,933,496	4,058,357	32,991,856	26,342,249	4,614,681	2,429,298	2,009,243	323,907	364,990	20,399	709,296	36,104,766	69,096,616
2007	22,587,741	9,804,847	32,392,591	14,106,769	13,750,181	6,344,222	4,078,237	670,656	331,864	12,404	1,014,922	39,294,324	71,686,918
2008	8,253,443	28,389,033	36,642,478	3,279,430	16,340,021	24,108,019	7,106,648	1,379,467	353,359	49,429	1,782,258	52,616,373	89,258,851
2009	3,165,811	18,706,091	21,871,901	2,028,886	3,710,607	12,147,131	20,400,293	3,283,654	388,393	60,497	3,732,546	42,019,454	63,891,351
2010	1,405,456	11,194,920	12,600,377	1,164,773	739,217	2,709,383	9,273,921	10,419,501	1,363,893	407,879	12,194,992	26,082,283	38,682,663
2011	1,475,480	4,146,233	5,621,708	1,496,404	300,906	705,678	3,259,799	1,670,447	4,120,527	385,132	6,176,100	11,938,887	17,560,588

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Table 10.—Page 10 of 10.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
2012	1,460,827	1,585,790	3,046,614	1,608,462	189,248	511,561	1,970,334	177,828	2,874,831	163,095	3,215,756	7,495,355	10,541,969
2013	17,786,773	656,027	18,442,792	18,365,841	1,379,301	294,606	623,694	122,628	835,529	49,944	1,008,103	21,671,539	40,114,328
2014	6,422,857	2,473,746	8,896,605	4,088,087	3,417,275	2,070,546	1,445,122	32,215	1,499,863	122,114	1,654,194	12,675,224	21,571,826
2015	2,676,481	3,275,105	5,951,578	1,056,210	3,310,925	5,746,088	2,435,457	210,155	278,928	3,762	492,843	13,041,519	18,993,100
2016	470,524	6,238,297	6,708,820	484,830	329,601	2,635,501	4,024,044	181,916	576,099	8,675	766,692	8,240,663	14,949,482
2017	3,281,409	1,276,831	4,558,240	3,350,376	170,593	466,565	1,019,948	93,691	55,304	483	149,479	5,156,959	9,715,200
2018	25,486,620	1,524,067	27,010,685	21,320,899	1,995,049	913,292	1,085,457	149,826	85,483	0	235,309	25,550,015	52,560,691

^a Western Section of the South Peninsula District includes Sanak Island, Morzhovoi Bay, and Cold Bay/Belkofski Bay.

^b Eastern Section of the South Peninsula District includes Pavlof Bay/Volcano Bay, Beaver Bay/Balboa Bay/Unga Strait, West Nagai Strait, and Stepovak Bay.

Table 11.—Predominant species by weight in the Eastern Aleutian Tanner crab districts large-mesh bottom trawl survey, 2018.

Common name	Species name	% of catch by weight
Arrowtooth flounder	<i>Atheresthes stomias</i>	41.9
Flathead sole	<i>Hippoglossoides elassodon</i>	11.9
Walleye pollock	<i>Gadus chalcogrammus</i>	11.8
Tanner crab	<i>Chionoecetes bairdi</i>	6.7
Pacific halibut	<i>Hippoglossus stenolepis</i>	5.3
Rex sole	<i>Glyptocephalus zachirus</i>	4.7
Pacific cod	<i>Gadus macrocephalus</i>	2.6
Anemone	Order: Actinaria	2.5
Southern rock sole	<i>Lepidopsetta bilineata</i>	1.2
Sunflower seastar	<i>Pycnopodia helianthoides</i>	1.0
Hermit crab	Family: Paguridae	1.0
Bering skate	<i>Bathyraja interrupta</i>	0.9
Oregon triton	<i>Fusitriton oregonensis</i>	0.8
Yellow Irish lord	<i>Hemilepidotus jordani</i>	0.8
Northern rock sole	<i>Lepidopsetta polyxystra</i>	0.6
Jellyfish	Class: Schyphozoa	0.6
Sea Urchin	<i>Strongylocentrotus</i> spp.	0.6
Basket star	<i>Gorgonocephalus</i> sp.	0.5
English sole	<i>Parophrys vetulus</i>	0.5
Pacific ocean perch	<i>Sebastes alutus</i>	0.4
All others	(84 species)	3.9
		100.0

Table 12.—Tanner crab abundance estimates from large-mesh bottom trawl surveys in the Eastern Aleutian District, 1990–2018.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70-91 mm	92-114 mm	>114 mm		<165 mm	≥165 mm			
Akutan Bay Section													
1990	460,092	771,965	1,232,057	614,180	912,058	447,122	146,025	15,190	0	0	15,190	2,134,574	3,366,629
1991	745,088	578,259	1,323,344	812,184	351,737	523,188	371,614	13,291	13,291	0	26,583	2,085,307	3,408,651
1994	949	2,893	3,843	2,893	7,641	15,418	33,911	2,848	949	0	3,798	63,662	67,505
1995	19,077	5,696	24,774	12,477	8,206	31,785	98,796	949	8,727	0	9,676	160,938	185,712
1999	121,515	677,297	798,812	19,867	143,040	701,089	1,030,550	210,330	4,363	0	214,692	2,109,239	2,908,051
2000	9,075	243,581	252,656	8,028	12,224	166,337	323,573	86,368	17,064	0	103,431	613,593	866,248
2003	56,558	675,379	731,937	37,957	139,174	413,879	121,041	21,013	71,664	4,151	96,828	808,878	1,540,816
2004	132,417	988,764	1,121,181	73,039	227,615	290,497	223,425	10,328	23,213	1,990	35,530	850,108	1,971,288
2005	127,291	501,657	628,948	84,899	196,246	188,560	270,776	50,446	9,752	1,187	61,384	801,864	1,430,812
2006	60,197	202,302	262,498	55,313	104,266	256,803	338,154	7,754	89,730	0	97,484	852,019	1,114,519
2007	131,796	353,409	485,203	108,103	216,470	332,576	316,383	9,721	4,975	0	14,696	988,226	1,473,430
2008	13,220	149,953	163,173	5,875	32,024	121,009	217,775	33,493	42,206	0	75,699	452,382	615,555
2009	39,211	915,000	954,210	13,675	32,400	137,412	372,548	62,948	62,610	1,957	127,514	683,550	1,637,760
2010	168,557	228,100	396,657	84,701	77,073	128,810	309,505	30,008	65,134	0	95,142	695,234	1,091,891
2011	19,187	288,006	307,193	20,498	16,328	65,460	188,518	3,798	15,072	0	18,870	309,673	616,866
2012	27,138	379,431	406,568	34,685	36,764	119,177	123,230	14,286	7,960	0	22,246	336,104	742,672
2013	409,654	69,112	478,767	381,318	100,839	125,669	68,880	3,705	12,644	0	16,350	693,054	1,171,822
2014	340,816	1,644,330	1,985,146	255,599	171,315	274,810	408,723	16,674	41,685	0	58,359	1,168,806	3,153,952
2015	187,696	193,663	381,360	209,008	62,030	13,202	13,017	0	0	0	0	297,258	678,616
2016	56,251	414,309	470,559	28,842	180,149	294,404	73,860	0	995	0	995	578,250	1,048,807
2017	179,563	3,888,787	4,068,350	127,266	187,266	285,861	98,239	0	8,723	0	8,723	707,353	4,775,704
2018	82,982	892,825	975,807	45,581	88,616	141,518	38,820	0	1,877	0	1,877	316,414	1,292,222
Unalaska/Kalekta Bay Section													
1990	1,120,173	359,538	1,479,709	664,933	59,141	78,357	42,847	11,544	793	2,002	14,339	859,617	2,339,327
1991	981,240	137,467	1,118,707	920,709	167,932	41,207	25,026	8,906	0	1,001	9,907	1,164,780	2,283,487
1994	17,484	1,465	18,950	17,485	949	0	1,982	949	1,549	0	2,498	22,914	41,867
1995	23,706	7,595	31,300	17,863	3,387	10,847	1,899	1,309	0	0	1,309	35,306	66,607
1999	230,687	194,469	425,157	141,403	95,640	253,997	313,785	123,839	43,171	1,356	168,366	973,189	1,398,346
2000	248,548	952,496	1,201,044	31,132	195,166	243,495	148,668	35,059	12,573	738	48,370	666,834	1,867,878
2003	72,717	7,654	80,371	82,917	6,985	55,771	390,915	99,369	175,774	6,561	281,704	818,293	898,664
2004	347,648	136,331	483,979	338,119	127,521	52,962	26,311	68,737	5,855	8,008	82,600	627,510	1,111,488
2005	854,570	212,211	1,066,782	652,400	241,781	90,170	47,959	20,182	6,616	2,730	29,529	1,061,843	2,128,625
2006	152,412	372,418	524,829	133,520	262,003	138,544	185,052	42,346	460,626	35,311	538,282	1,257,405	1,782,234

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Table 12.—Page 2 of 5.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70-91 mm	92-114 mm	>114 mm		<165 mm	≥165 mm			
2007	436,607	1,997,302	2,433,907	255,144	109,448	308,033	304,795	104,411	211,536	17,922	333,869	1,311,287	3,745,195
2008	324,108	1,990,322	2,314,430	210,497	217,649	246,376	554,496	98,765	64,243	1,254	164,262	1,393,282	3,707,714
2009	176,340	1,306,064	1,482,403	80,051	54,218	122,947	284,196	108,250	105,576	2,988	216,814	758,229	2,240,631
2010	200,948	386,350	587,298	131,427	27,375	30,870	7,382	1,973	1,187	0	3,160	200,215	787,512
2011	25,900	253,899	279,797	29,250	24,995	64,648	40,142	2,167	6,223	1,112	9,502	168,538	448,334
2012	170,447	503,998	674,443	123,914	64,170	169,249	380,611	20,623	215,056	9,546	245,225	983,166	1,657,610
2013	1,295,974	690,495	1,986,468	660,240	225,539	149,244	128,209	6,738	20,450	0	27,188	1,190,420	3,176,887
2014	290,482	157,233	447,717	313,882	771,861	718,719	186,156	8,170	1,786	0	9,955	2,000,573	2,448,288
2015	408,740	94,026	502,766	308,172	117,455	140,342	156,817	18,733	0	0	18,733	741,522	1,244,287
2016	33,078	8,843	41,922	23,949	9,495	51,148	13,270	1,595	0	0	1,595	99,458	141,378
2017	314,108	56,016	370,124	215,568	5,086	16,914	52,304	12,012	1,001	0	13,013	302,887	673,011
2018	328,884	398,981	727,865	180,726	57,799	59,636	194,377	24,324	34,748	0	59,072	551,612	1,279,479
Makushin/Skan Bay Section													
1990	436,275	312,831	749,107	364,641	81,416	75,879	124,445	6,890	22,707	0	29,597	675,979	1,425,087
1991	88,736	148,942	237,678	75,775	84,849	51,819	70,174	5,911	29,119	2,576	37,607	320,225	557,904
1994	147,313	155,633	302,945	126,475	19,046	94,473	105,286	34,931	1,581	0	36,512	381,793	684,740
1995	124,369	84,783	209,153	91,971	24,957	37,454	49,905	2,748	8,366	0	11,114	215,403	424,557
1999	533,823	78,127	611,953	482,041	37,346	49,059	39,597	4,719	9,194	0	13,914	621,957	1,233,910
2000	550,513	151,362	701,878	437,255	120,829	42,435	17,909	2,334	0	0	2,334	620,762	1,322,639
2003	65,930	1,142,007	1,207,935	47,632	80,167	265,981	477,210	190,192	74,237	1,159	265,590	1,136,578	2,344,513
2004	156,453	683,603	840,058	160,706	51,556	218,704	365,270	357,930	50,813	7,787	416,529	1,212,765	2,052,824
2005	315,191	227,137	542,327	340,307	23,280	34,802	306,036	158,760	208,820	6,667	374,247	1,078,670	1,620,999
2006	607,078	137,178	744,256	557,140	37,877	33,140	100,740	22,650	115,266	6,759	144,675	873,574	1,617,831
2007	3,301,201	994,288	4,295,493	1,667,147	762,538	427,116	137,992	9,453	163,912	1,734	175,099	3,169,894	7,465,386
2008	399,175	1,384,630	1,783,806	284,038	312,862	322,728	165,870	3,359	155,220	4,591	163,169	1,248,668	3,032,473
2009	266,405	1,754,159	2,020,562	216,307	166,619	477,432	208,790	7,698	33,556	0	41,255	1,110,405	3,130,968
2010	158,522	165,485	324,008	114,236	21,102	83,603	208,500	49,236	16,968	0	66,207	493,648	817,656
2011	192,552	251,856	444,409	129,393	28,940	65,061	220,388	25,163	58,782	0	83,945	527,729	972,136
2012	177,070	293,261	470,330	119,538	96,849	57,403	100,816	7,599	20,165	2,316	30,080	404,690	875,020
2013	436,106	779,459	1,215,565	313,584	44,298	125,020	129,427	10,117	37,061	2,925	50,103	662,434	1,877,998
2014	287,464	690,641	978,102	146,459	162,857	167,488	185,768	11,774	72,882	2,000	86,656	749,232	1,727,334
2015	314,241	454,918	769,160	291,192	72,972	145,617	143,173	38,162	21,779	0	59,941	712,900	1,482,059
2016	171,647	1,002,700	1,174,348	89,723	49,441	60,260	112,474	4,676	32,768	819	38,262	350,163	1,524,511
2017	1,791,483	660,675	2,452,158	1,481,760	210,669	200,709	185,735	1,376	105,755	0	107,131	2,186,005	4,638,162

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Table 12.—Page 3 of 5.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70-91 mm	92-114 mm	>114 mm		<165 mm	≥165 mm			
2018	798,103	1,673,815	2,471,918	445,736	550,279	149,211	172,215	6,210	72,310	0	78,520	1,395,961	3,867,880
Beaver Inlet													
1990	943,425	190,116	1,133,540	931,192	229,362	97,860	27,006	3,088	767	0	3,855	1,289,273	2,422,812
1991	468,593	135,739	604,330	445,942	177,808	72,225	21,813	2,114	0	0	2,114	719,903	1,324,235
1994	38,944	51,504	90,449	33,987	6,696	41,015	47,599	17,014	767	0	17,781	147,078	237,528
1995	702,632	28,569	731,200	555,875	15,770	6,518	8,459	3,681	0	0	3,681	590,303	1,321,504
1999	159,645	14,596	174,242	145,888	7,207	5,851	1,534	0	1,534	0	1,534	162,014	336,256
2000	249,885	19,436	269,322	215,525	19,500	11,892	2,577	0	0	0	0	249,491	518,813
2003	70,873	94,779	165,650	135,143	109,191	51,213	5,409	0	0	0	0	300,956	466,607
2006	369,585	62,136	431,720	323,375	19,289	31,636	13,844	829	0	0	829	388,974	820,694
2009	228,442	69,778	298,220	207,989	35,479	87,445	14,992	1,003	0	0	1,003	346,907	645,128
2012	334,008	11,153	345,161	304,359	2,508	6,042	8,550	0	1,161	0	1,161	322,619	667,781
2015	30,257	65,922	96,178	27,473	17,206	32,770	7,702	0	0	0	0	85,151	181,330
2018	165,431	14,611	180,040	161,260	3,482	2,508	2,770	0	0	0	0	170,019	350,059
Us of Bay													
1990	97,777	24,414	122,190	97,607	96,108	28,041	1,957	541	0	0	541	224,252	346,442
1991	84,679	69,979	154,658	219,357	245,549	63,800	26,863	4,396	2,625	0	7,021	562,591	717,249
1994	15,007	3,500	18,507	13,151	8,412	5,957	7,601	875	0	0	875	35,995	54,501
1995	32,329	3,301	35,630	40,438	9,693	6,681	4,375	0	2,625	0	2,625	63,812	99,442
1999	76,557	10,787	87,344	67,910	12,590	2,405	0	0	0	0	0	82,905	170,250
2000	50,848	7,689	58,537	47,161	4,465	4,465	0	0	0	0	0	56,089	114,626
2003	29,595	67,884	97,479	32,895	85,721	148,258	29,458	0	873	0	873	297,204	394,683
Akun Bay													
1990	1,991	1,063	3,055	0	0	0	0	0	0	0	0	0	3,055
1991	0	0	0	928	0	0	0	0	0	0	0	928	928
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0	0	0	0	0	0	0
1999	4,253	1,063	5,317	0	4,253	4,253	0	0	0	0	0	8,506	13,823
2000	3,158	5,317	8,474	6,348	3,190	0	0	0	0	0	0	9,537	18,012
2003	0	3,055	3,055	0	1,063	2,127	0	0	0	0	0	3,190	6,245
Pumicestone Bay													
1990	48,373	0	48,373	48,114	668	0	0	0	0	0	0	48,783	97,156
1991	23,621	228	23,849	18,668	5,696	1,139	0	0	228	0	228	25,732	49,580
1994	6,350	896	7,246	5,635	5,225	5,149	668	0	0	0	0	16,678	23,924

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Table 12.—Page 4 of 5.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70-91 mm	92-114 mm	>114 mm		<165 mm	≥165 mm			
1995	10,055	3,493	13,550	9,289	3,903	3,698	1,337	0	0	0	0	18,228	31,777
1999	12,836	0	12,836	8,408	1,153	0	1,485	743	743	0	1,485	12,531	25,367
2000	3,253	1,485	4,738	342	743	0	2,970	743	0	0	743	4,798	9,536
2003	225,266	20,529	245,795	276,451	76,811	25,134	2,673	668	0	0	668	381,738	627,533
2004	49,246	873	50,120	31,511	1,747	2,673	668	0	0	0	0	36,601	86,719
2005	45,475	19,382	64,857	41,520	19,382	48,790	7,352	1,337	668	0	2,005	119,050	183,907
2006	35,646	10,532	46,178	51,545	17,266	17,393	6,912	0	456	0	456	93,571	139,748
2007	230,825	2,570	233,394	224,319	29,987	2,570	0	0	0	0	0	256,876	490,270
2008	42,835	4,466	47,301	67,083	128,050	32,195	1,936	0	0	0	0	229,263	276,565
2009	10,273	1,181	11,453	9,137	5,026	9,347	1,437	0	0	0	0	24,948	36,401
2010	17,943	4,614	22,557	20,896	11,032	11,431	5,526	0	0	0	0	48,883	71,441
2011	251,840	513	252,353	231,496	2,563	0	0	1,376	0	0	1,376	235,436	487,789
2012	97,844	9,741	107,585	87,508	13,586	3,076	769	256	0	0	256	105,194	212,779
2013	59,780	15,525	75,305	33,502	14,468	8,780	2,021	1,352	0	0	1,352	60,122	135,427
2014	17,919	655	18,575	13,589	2,877	655	655	0	0	0	0	17,777	36,352
Cape Idak													
1990	3,255	3,662	6,917	0	2,713	0	2,713	0	3,255	0	3,255	8,680	15,597
1991	119,622	2,848	122,470	122,470	3,797	949	1,898	0	0	0	0	129,114	251,585
1994	0	949	949	2,848	5,697	0	0	0	0	0	0	8,545	9,494
1995	0	0	0	0	1,898	0	0	0	0	0	0	1,898	1,898
1999	949	2,848	3,798	3,798	3,798	1,898	0	0	0	0	0	9,494	13,292
2000	12,342	5,697	18,039	18,038	19,937	9,493	949	0	0	0	0	48,419	66,456
2003	0	6,646	6,646	1,898	9,493	18,038	0	0	0	0	0	29,431	36,076
Inanudak Bay													
1990	4,462	0	4,462	0	0	2,936	949	0	0	0	0	3,885	8,347
1994	2,904	0	2,904	1,452	0	0	0	0	0	0	0	1,452	4,356
EASTERN ALEUTIAN DISTRICT TOTALS													
1990	3,115,823	1,663,589	4,779,410	2,720,667	1,381,466	730,195	345,942	37,253	27,522	2,002	66,777	5,245,043	10,024,452
1991	2,511,579	1,073,462	3,585,036	2,616,033	1,037,368	754,327	517,388	34,618	45,263	3,577	83,460	5,008,580	8,593,619
1994	228,951	216,840	445,793	203,926	53,666	162,012	197,047	56,617	4,846	0	61,464	678,117	1,123,915
1995	912,168	133,437	1,045,607	727,913	67,814	96,983	164,771	8,687	19,718	0	28,405	1,085,888	2,131,497
1999	1,140,265	979,187	2,119,459	869,315	305,027	1,018,552	1,386,951	339,631	59,005	1,356	399,991	3,979,835	6,099,295
2000	1,127,622	1,387,063	2,514,688	763,829	376,054	478,117	496,646	124,504	29,637	738	154,878	2,269,523	4,784,208
2003	520,939	2,017,933	2,538,868	614,893	508,605	980,401	1,026,706	311,242	322,548	11,871	645,663	3,776,268	6,315,137

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Table 12.—Page 5 of 5.

Year	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
	Juvenile	Mature	Total	<70 mm	70-91 mm	92-114 mm	>114 mm		<165 mm	≥165 mm			
EASTERN ALEUTIAN DISTRICT TOTALS (continued)													
2004	685,764	1,809,571	2,495,338	603,375	408,439	564,836	615,674	436,995	79,881	17,785	534,659	2,726,984	5,222,319
2005	1,342,527	960,387	2,302,914	1,119,126	480,689	362,322	632,123	230,725	225,856	10,584	467,165	3,061,427	5,364,343
2006	1,224,918	784,566	2,009,481	1,120,893	440,701	477,516	644,702	73,579	666,078	42,070	781,726	3,465,543	5,475,026
2007	4,100,429	3,347,569	7,447,997	2,254,713	1,118,443	1,070,295	759,170	123,585	380,423	19,656	523,664	5,726,283	13,174,281
2008	779,338	3,529,371	4,308,710	567,493	690,585	722,308	940,077	135,617	261,669	5,845	403,130	3,323,595	7,632,307
2009	720,671	4,046,182	4,766,848	527,159	293,742	834,583	881,963	179,899	201,742	4,945	386,586	2,924,039	7,690,888
2010	545,970	784,549	1,330,520	351,260	136,582	254,714	530,913	81,217	83,289	0	164,509	1,437,980	2,768,500
2011	489,479	794,274	1,283,752	410,637	72,826	195,169	449,048	32,504	80,077	1,112	113,693	1,241,376	2,525,125
2012	806,507	1,197,584	2,004,087	670,004	213,877	354,947	613,976	42,764	244,342	11,862	298,968	2,151,773	4,155,862
2013	2,201,514	1,554,591	3,756,105	1,388,644	385,144	408,713	328,537	21,912	70,155	2,925	94,993	2,606,030	6,362,134
2014	936,681	2,492,859	3,429,540	729,529	1,108,910	1,161,672	781,302	36,618	116,353	2,000	154,970	3,936,388	7,365,926
2015	940,934	808,529	1,749,464	835,845	269,663	331,931	320,709	56,895	21,779	0	78,674	1,836,831	3,586,292
2016	260,976	1,425,852	1,686,829	142,514	239,085	405,812	199,604	6,271	33,763	819	40,852	1,027,871	2,714,696
2017	2,285,154	4,605,478	6,890,632	1,824,594	403,021	503,484	336,278	13,388	115,479	0	128,867	3,196,245	10,086,877
2018	1,375,400	2,980,232	4,355,630	833,303	700,176	352,873	408,182	30,534	108,935	0	139,469	2,434,006	6,789,640

Note: Beaver Inlet, Us of Bay, Akun Bay, Pumicestone Bay, Cape Idak, and Inanudak Bay are part of the General Section of the Eastern Aleutian Tanner crab District. There are no mature male abundance threshold levels or minimum fishery GHLs established for the General Section.

Table 13.—Skate catch in kilograms and number caught by sex and species from the large-mesh bottom trawl survey, 2018.

Species	Weight (kg)	Unsexed	Male	Female	Total count
Bering skate	2,018	1	654	597	1,252
longnose skate	4,046	1	391	382	774
big skate	9,263		158	600	758
Aleutian skate	1,301		41	118	159
Alaska skate	324		34	35	69
Grand Total	16,952	2	1,278	1,732	3,012

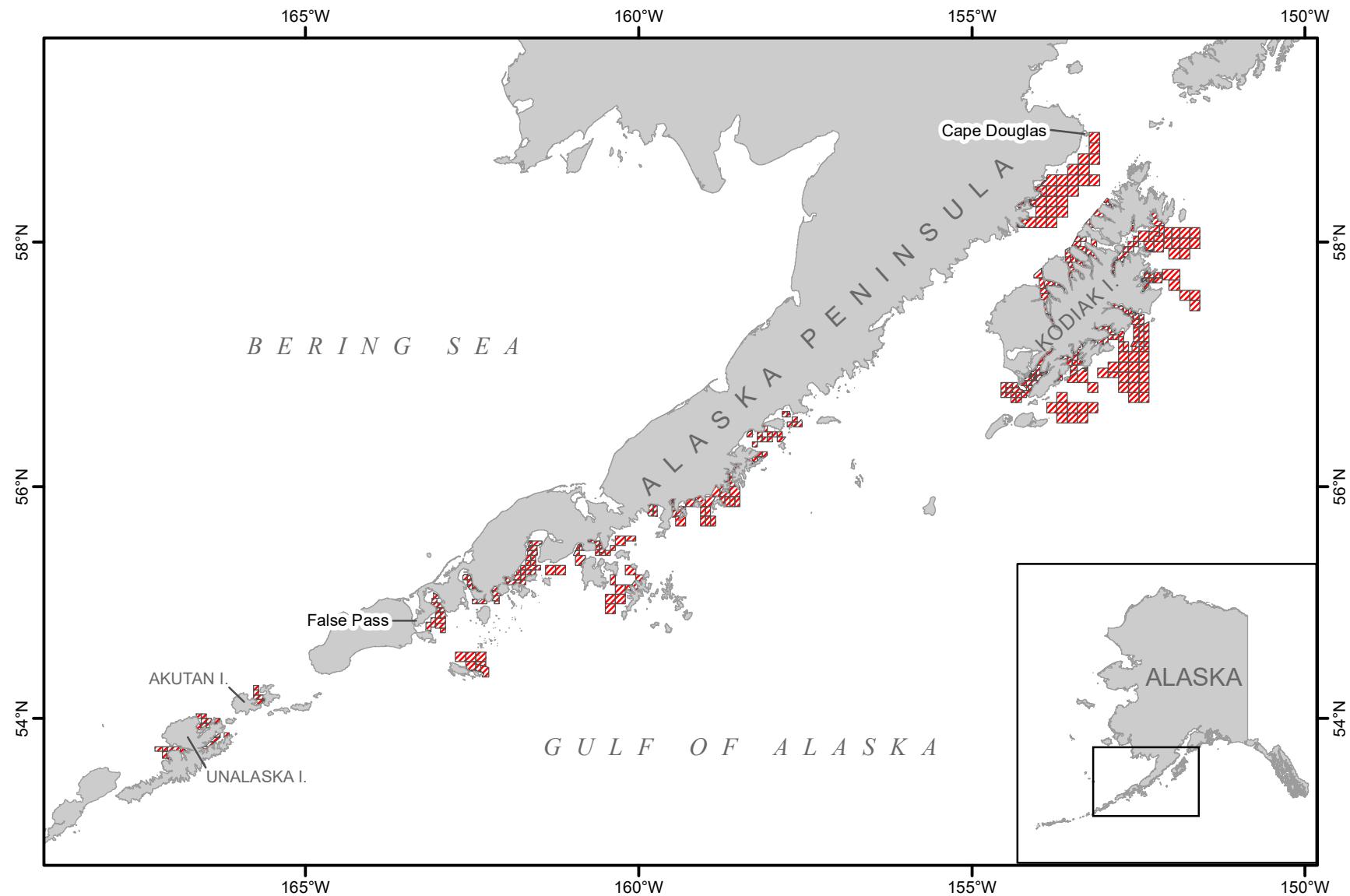


Figure 1.—Large-mesh bottom trawl survey stations, 2018.

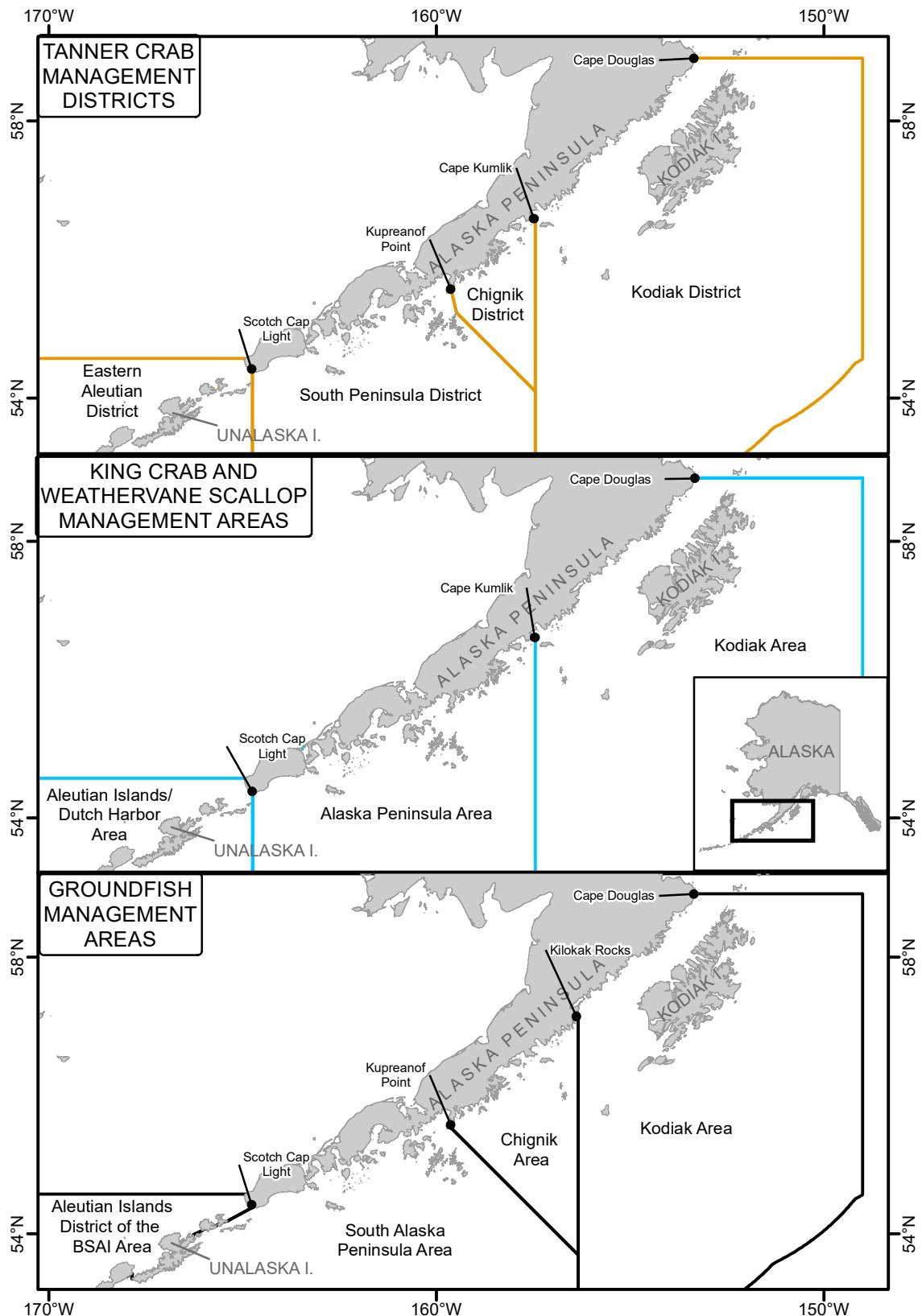


Figure 2.—Tanner crab, king crab, weathervane scallop, and groundfish management units in the bottom trawl survey area.

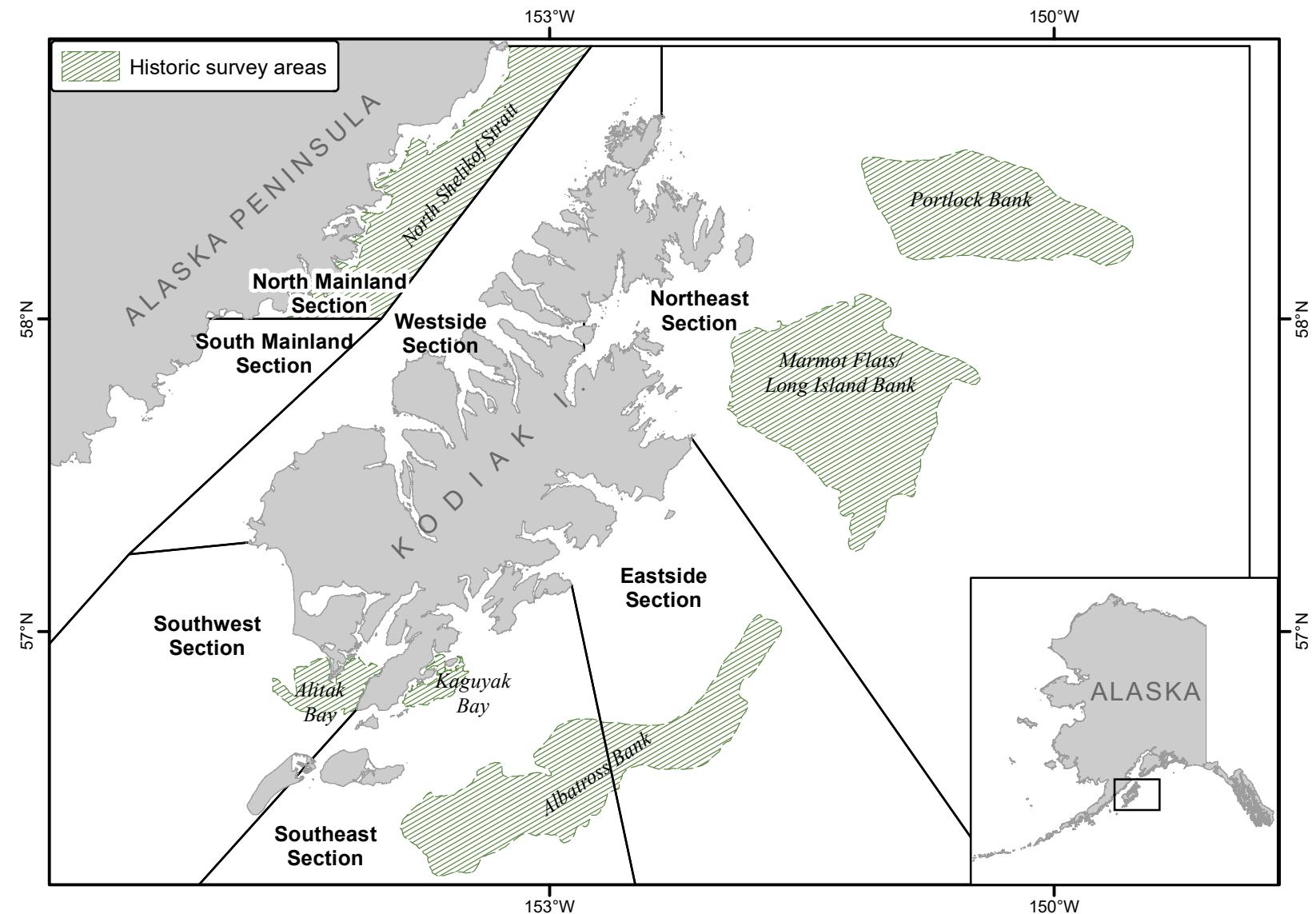


Figure 3.—Historic trawl survey areas and current Tanner crab management sections in the Kodiak District.

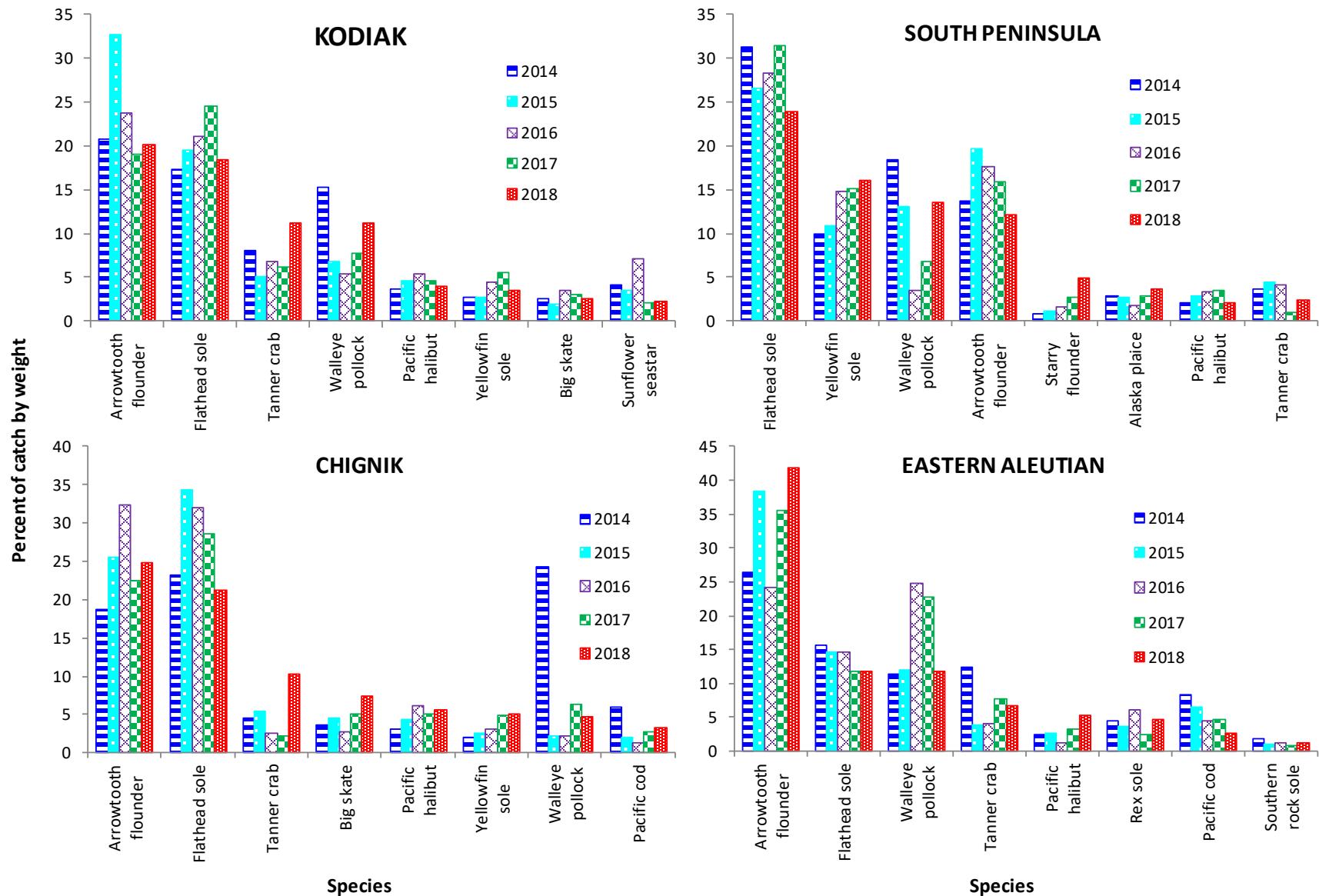


Figure 4.—Top species caught by weight in the large-mesh bottom trawl surveys by district, 2014–2018.

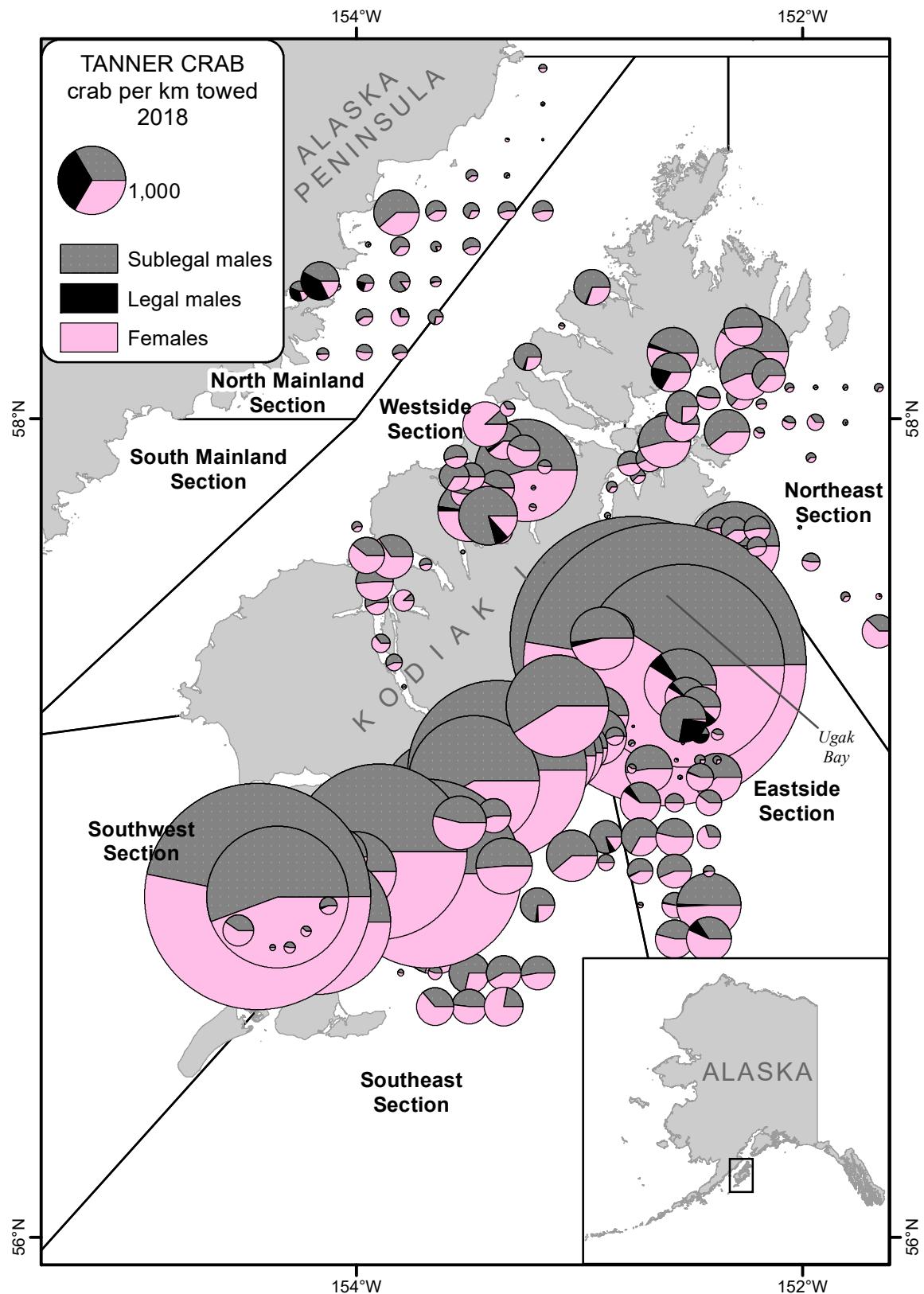


Figure 5.—Number of Tanner crab per kilometer towed in the 2018 Kodiak District large-mesh bottom trawl survey.

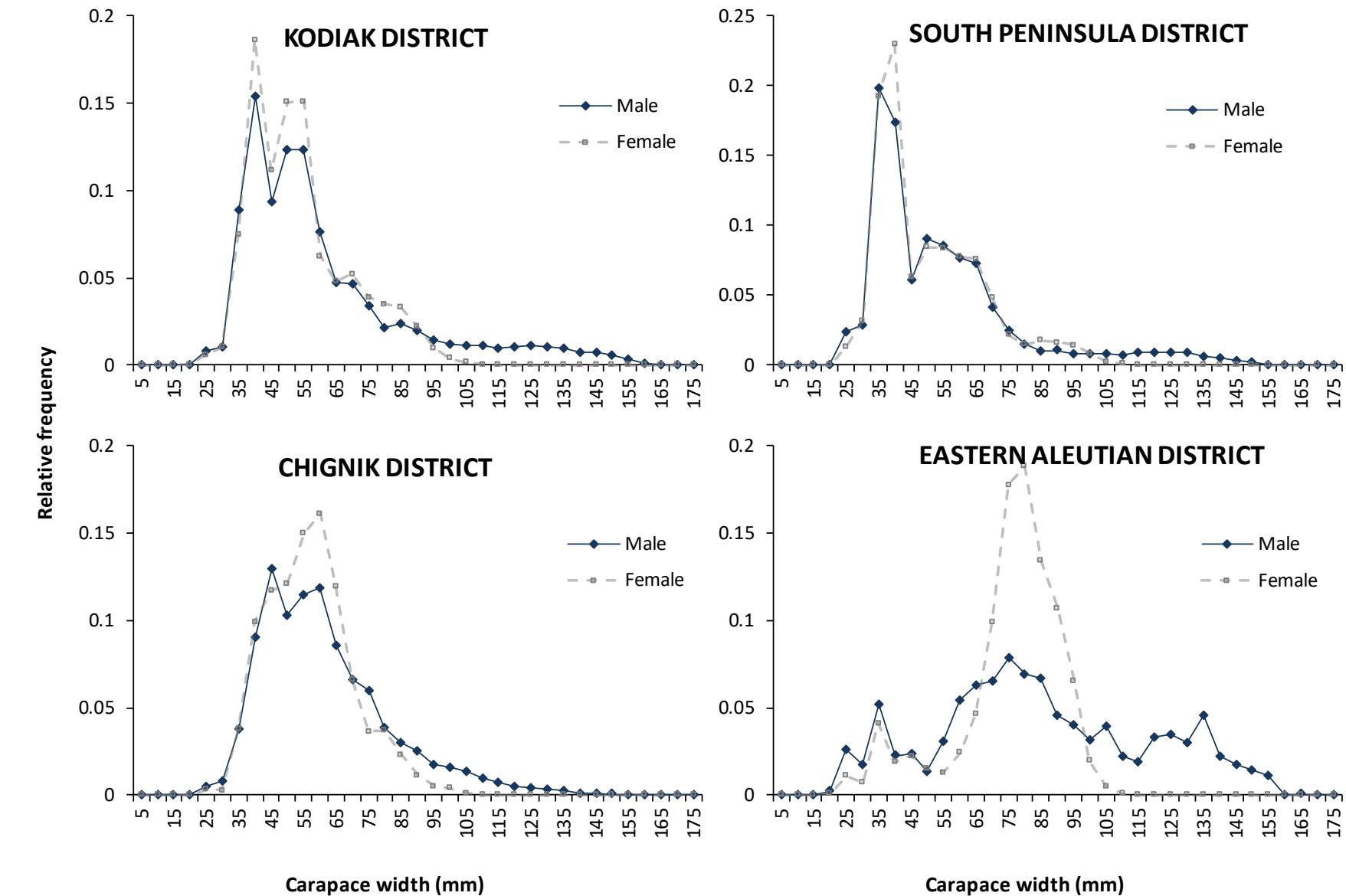


Figure 6.—Tanner crab relative size frequency by sex and district from the 2018 large-mesh bottom trawl survey.

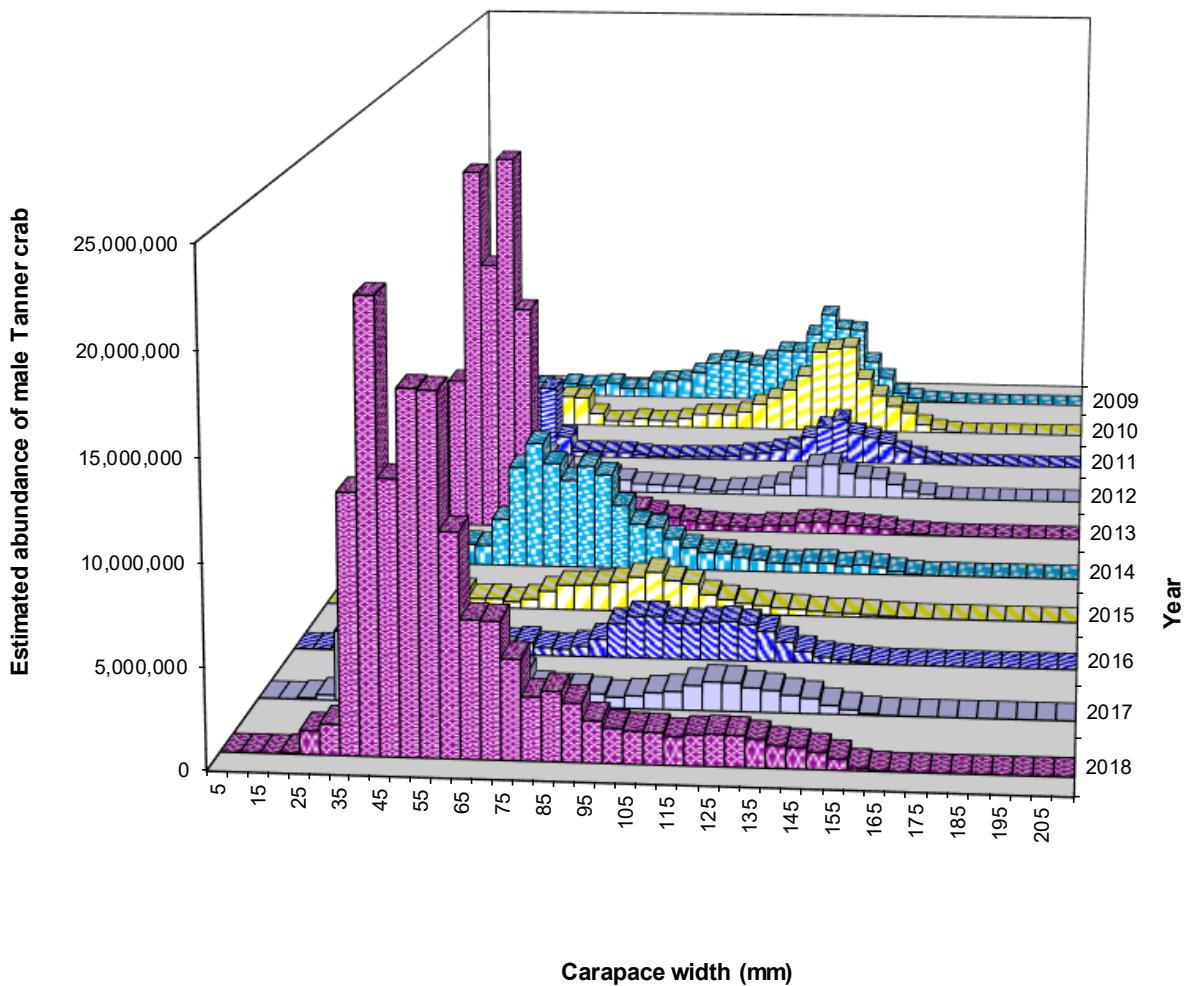


Figure 7.—Tanner crab male abundance estimate by carapace width in the Kodiak District large-mesh bottom trawl surveys, 2009–2018.

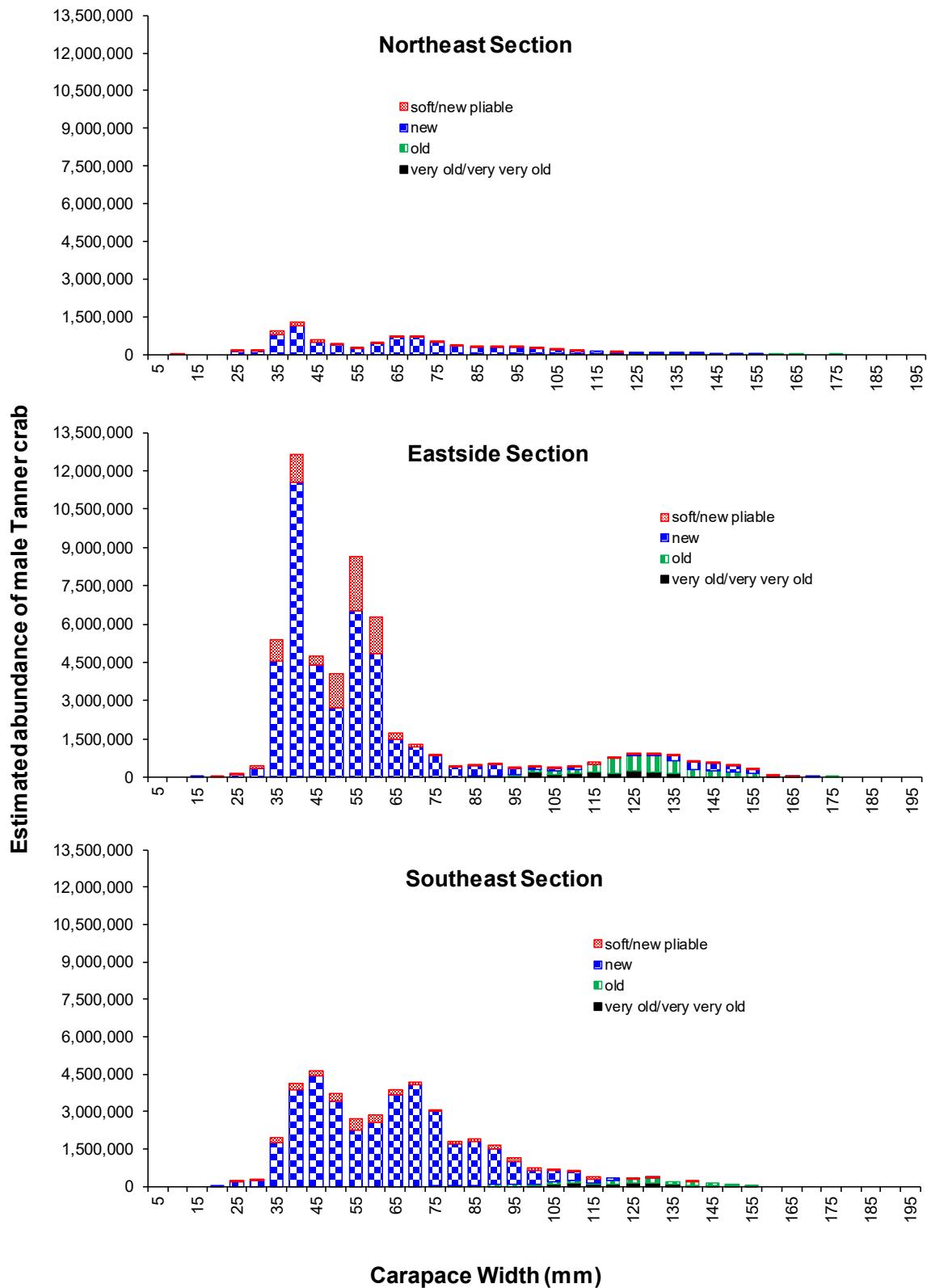


Figure 8.—Tanner crab male abundance estimate by carapace width and shell condition from the Northeast, Eastside, and Southeast sections of the 2018 Kodiak District large-mesh bottom trawl survey.

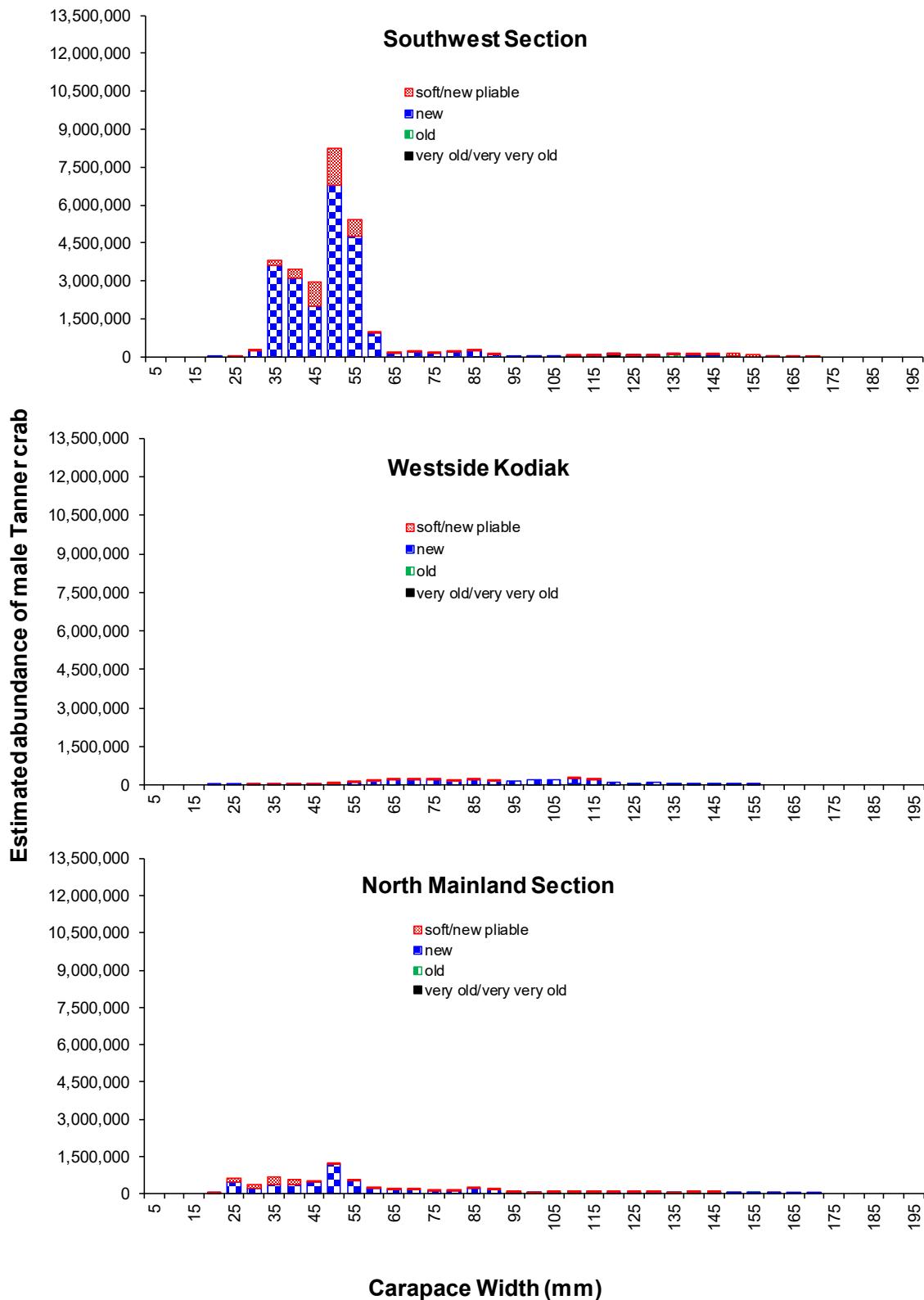


Figure 9.—Tanner crab male abundance estimate by carapace width and shell condition from the Southwest, Westside, and North Mainland sections of the 2018 Kodiak District large-mesh bottom trawl survey.

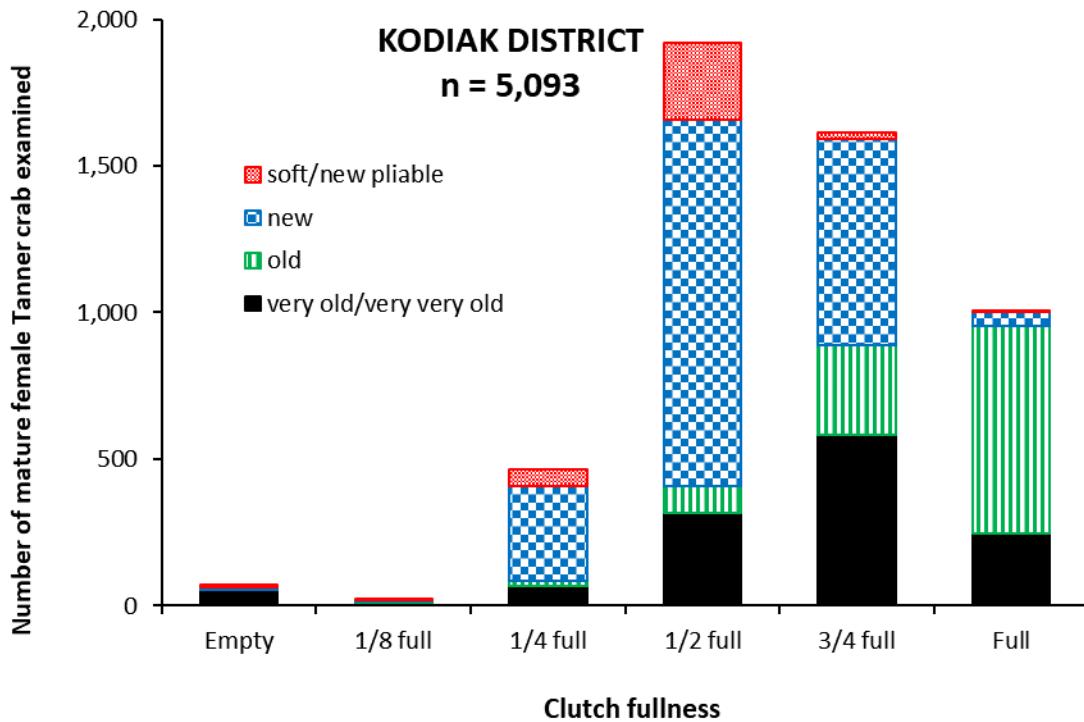


Figure 10.—Tanner crab mature female egg clutch fullness by shell condition in the Kodiak District large-mesh bottom trawl survey, 2018.

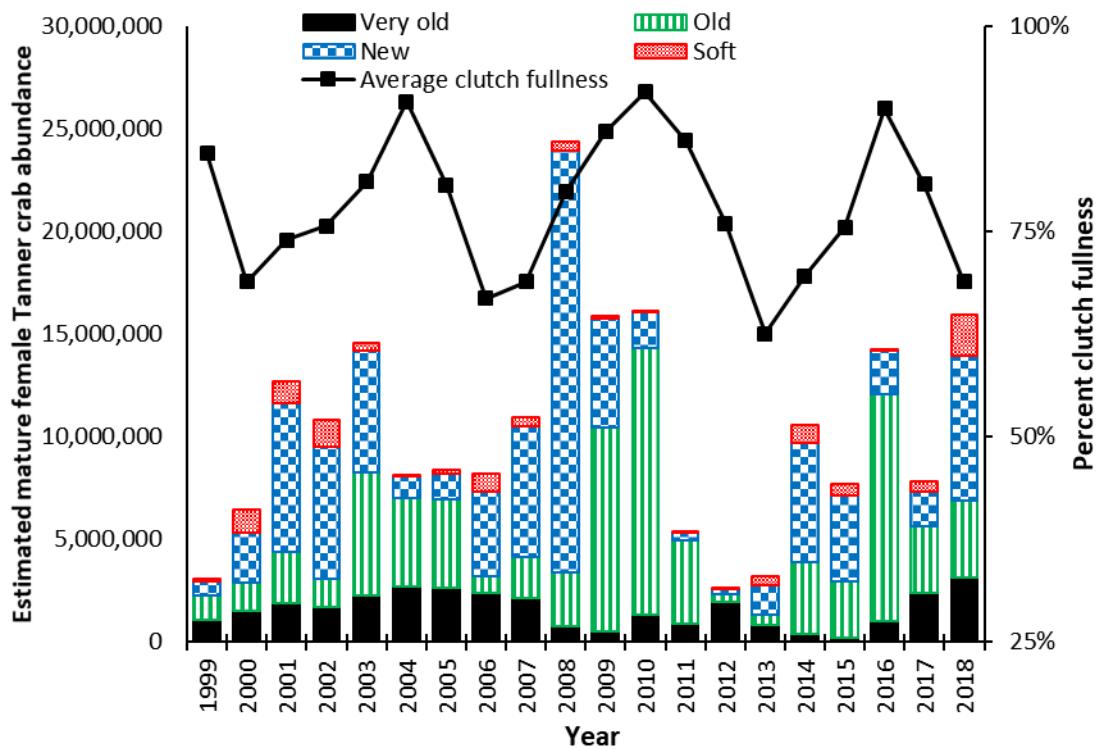


Figure 11.—Tanner crab mature female abundance by shell condition and average clutch fullness for the Kodiak District from the 1999–2018 large-mesh bottom trawl surveys.

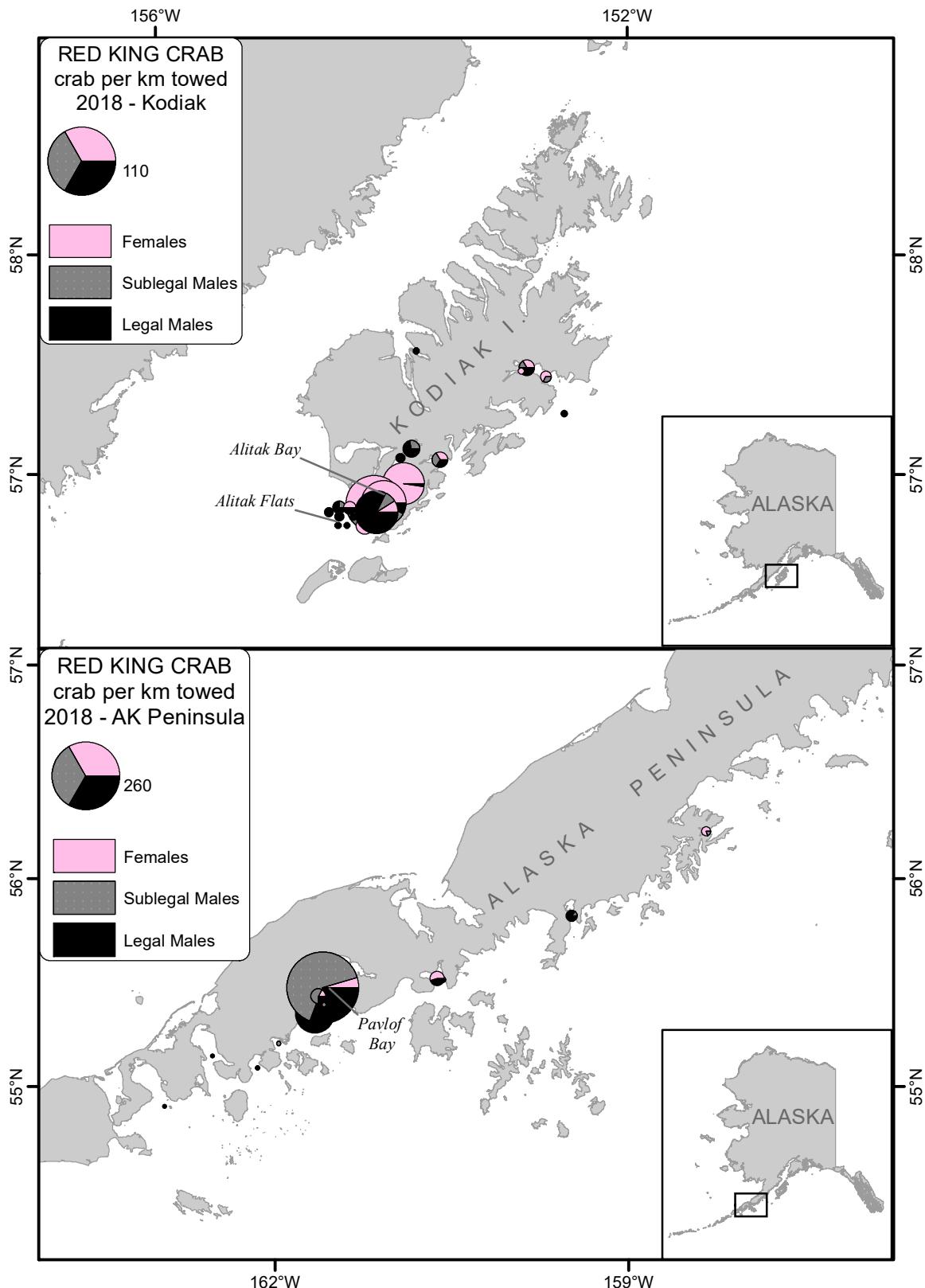


Figure 12.—Number of red king crab per kilometer towed in the 2018 Kodiak (upper) and Alaska Peninsula (lower) areas large-mesh bottom trawl survey.

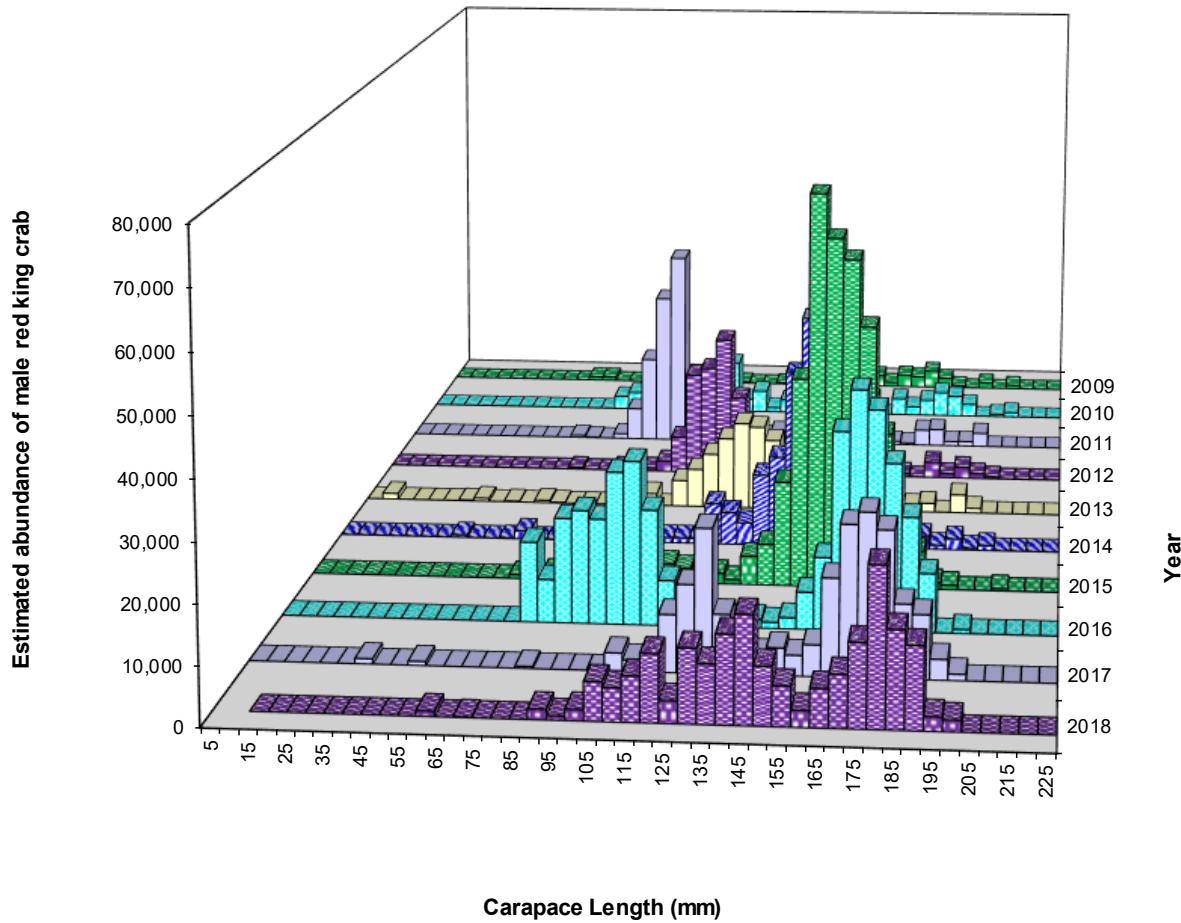


Figure 13.—Red king crab male abundance estimate by carapace length in the Kodiak Area large-mesh bottom trawl surveys, 2009–2018.

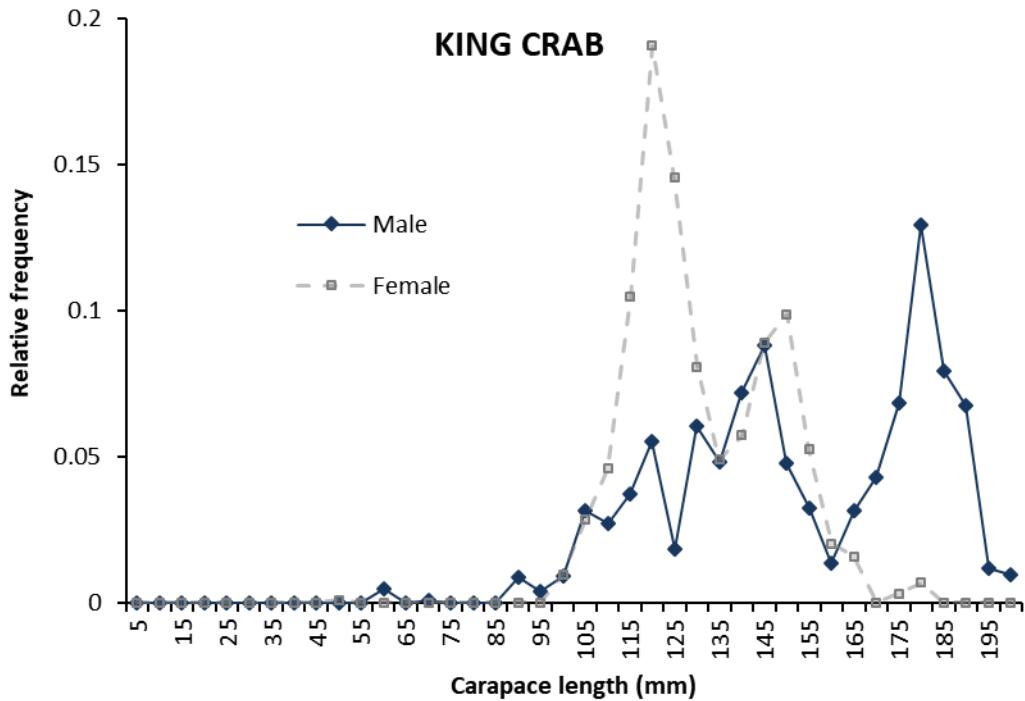


Figure 14.—Red king crab relative size frequency by sex from the Kodiak Area large-mesh bottom trawl survey, 2018.

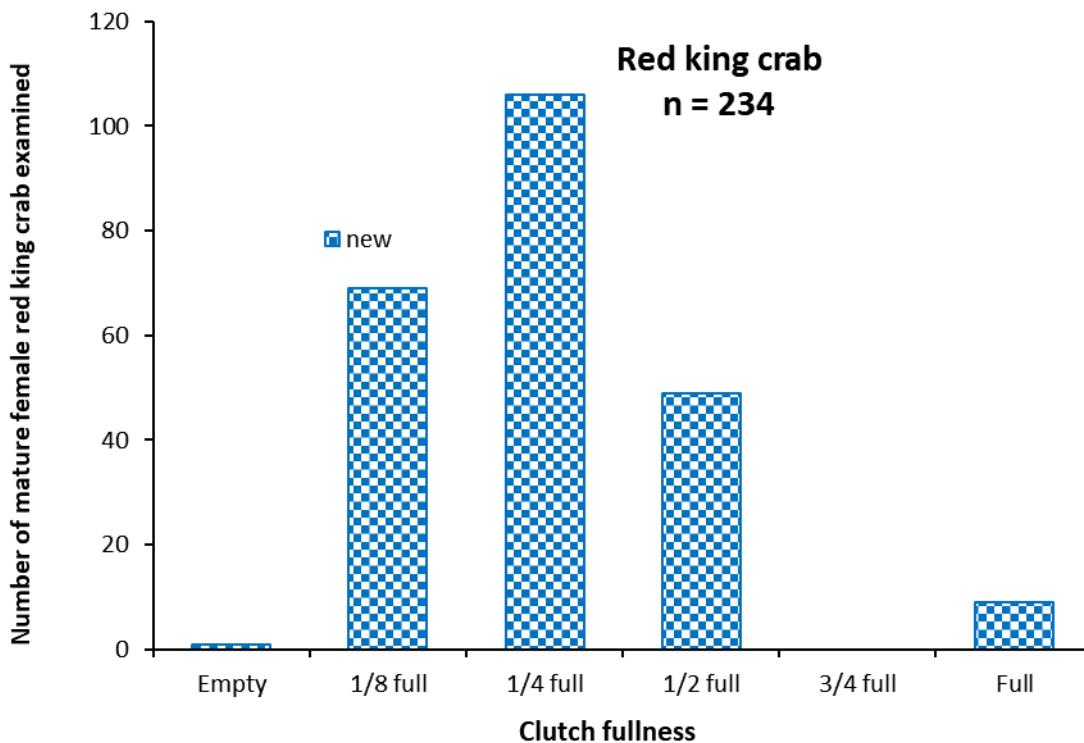


Figure 15.—Red king crab mature female egg clutch fullness by shell condition in the Kodiak Area large-mesh bottom trawl survey, 2018.

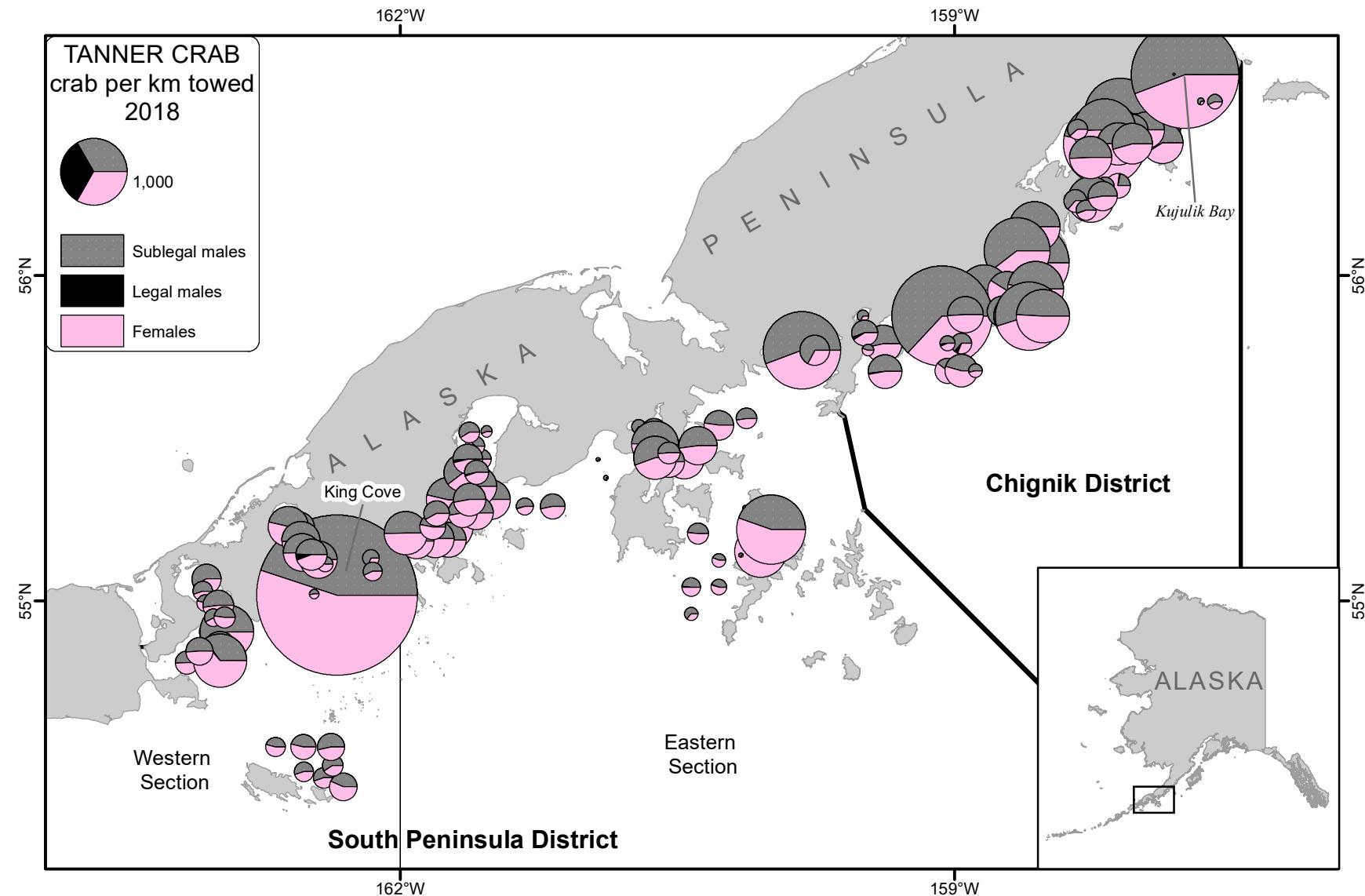


Figure 16.—Number of Tanner crab per kilometer towed in the 2018 South Peninsula and Chignik districts large-mesh bottom trawl survey.

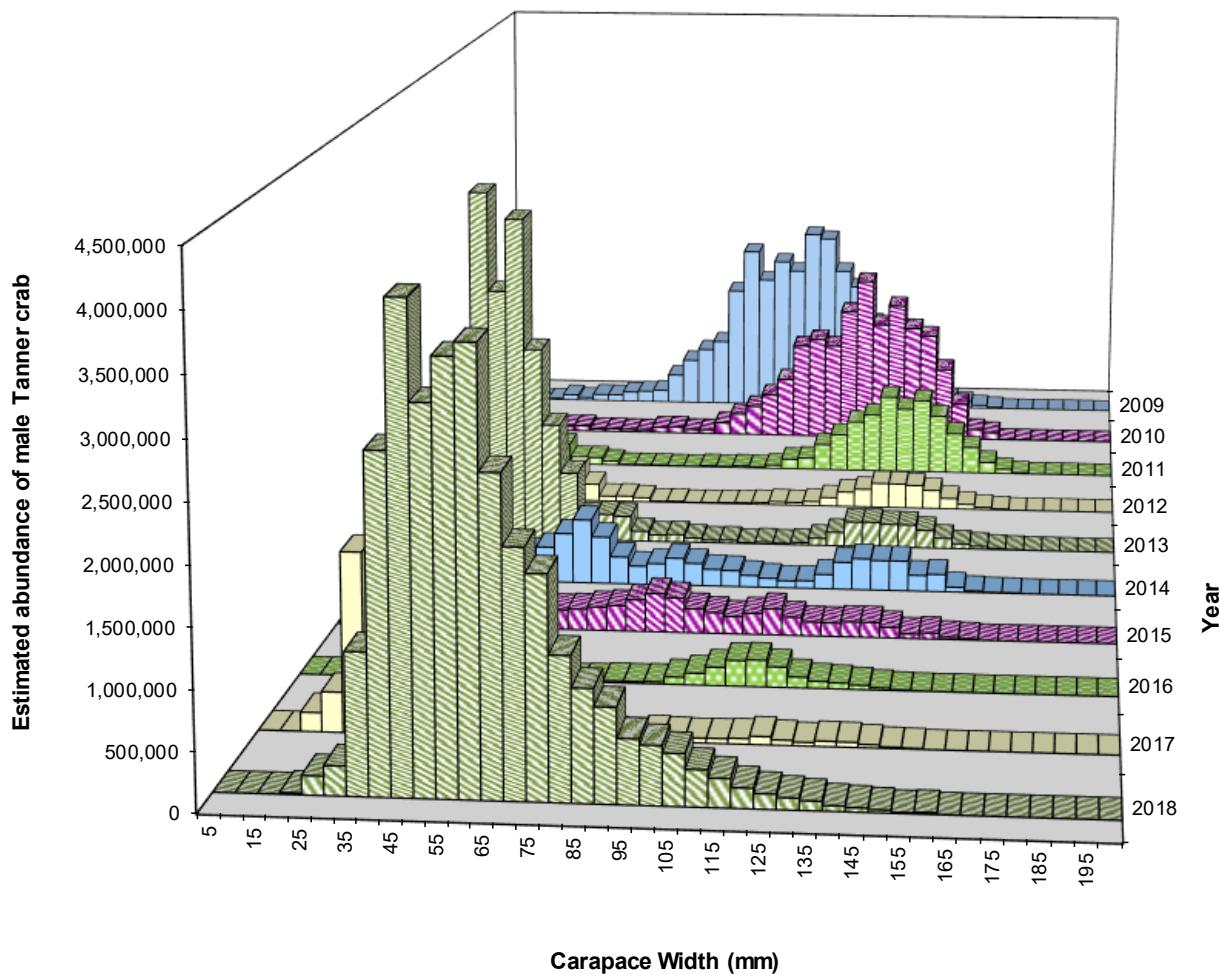


Figure 17.—Tanner crab male abundance estimate by carapace width in the Chignik District large-mesh bottom trawl surveys, 2009–2018.

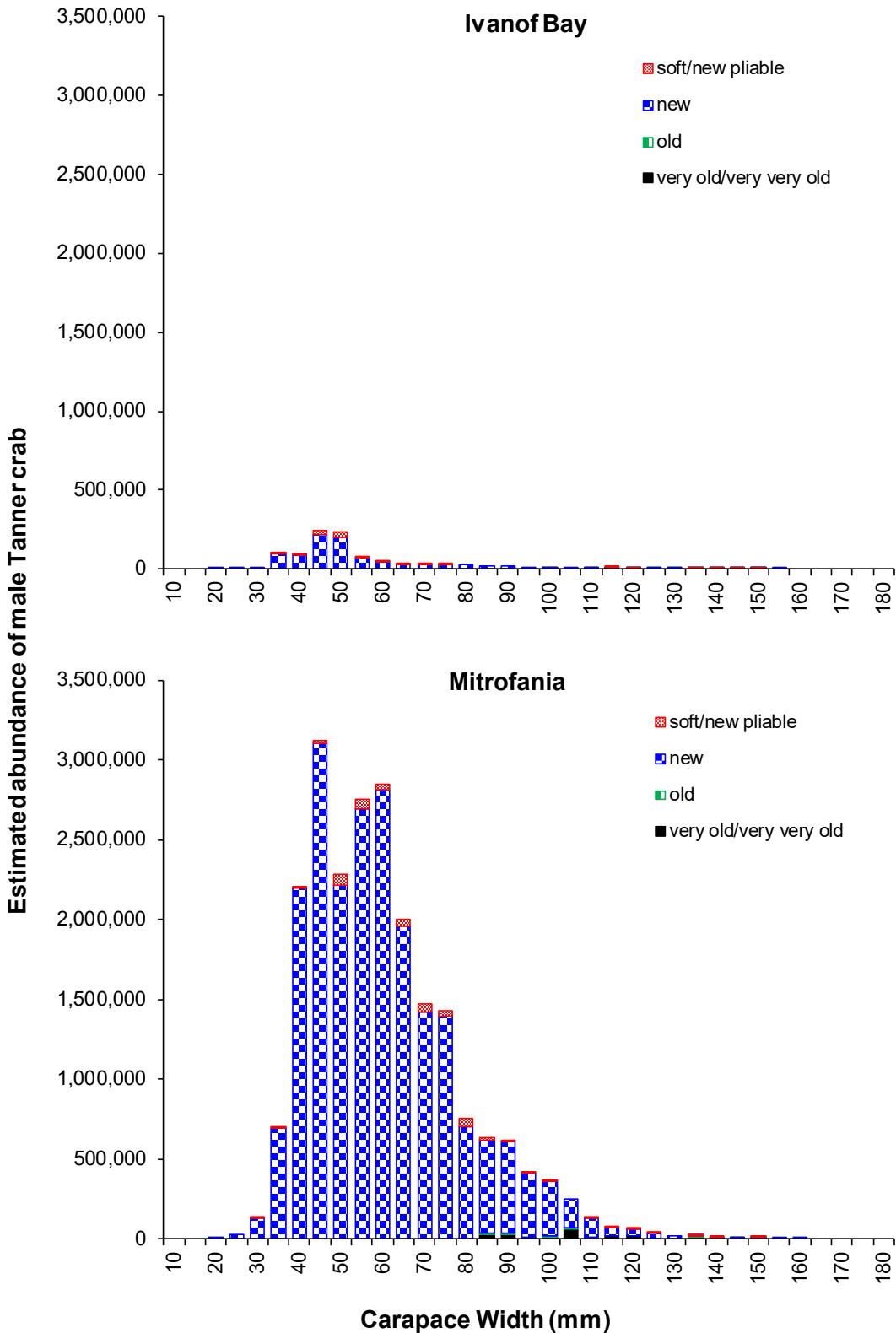


Figure 18.—Tanner crab male abundance estimate by carapace width and shell condition from Ivanof Bay and Mitrofania in the 2018 Chignik District large-mesh bottom trawl survey.

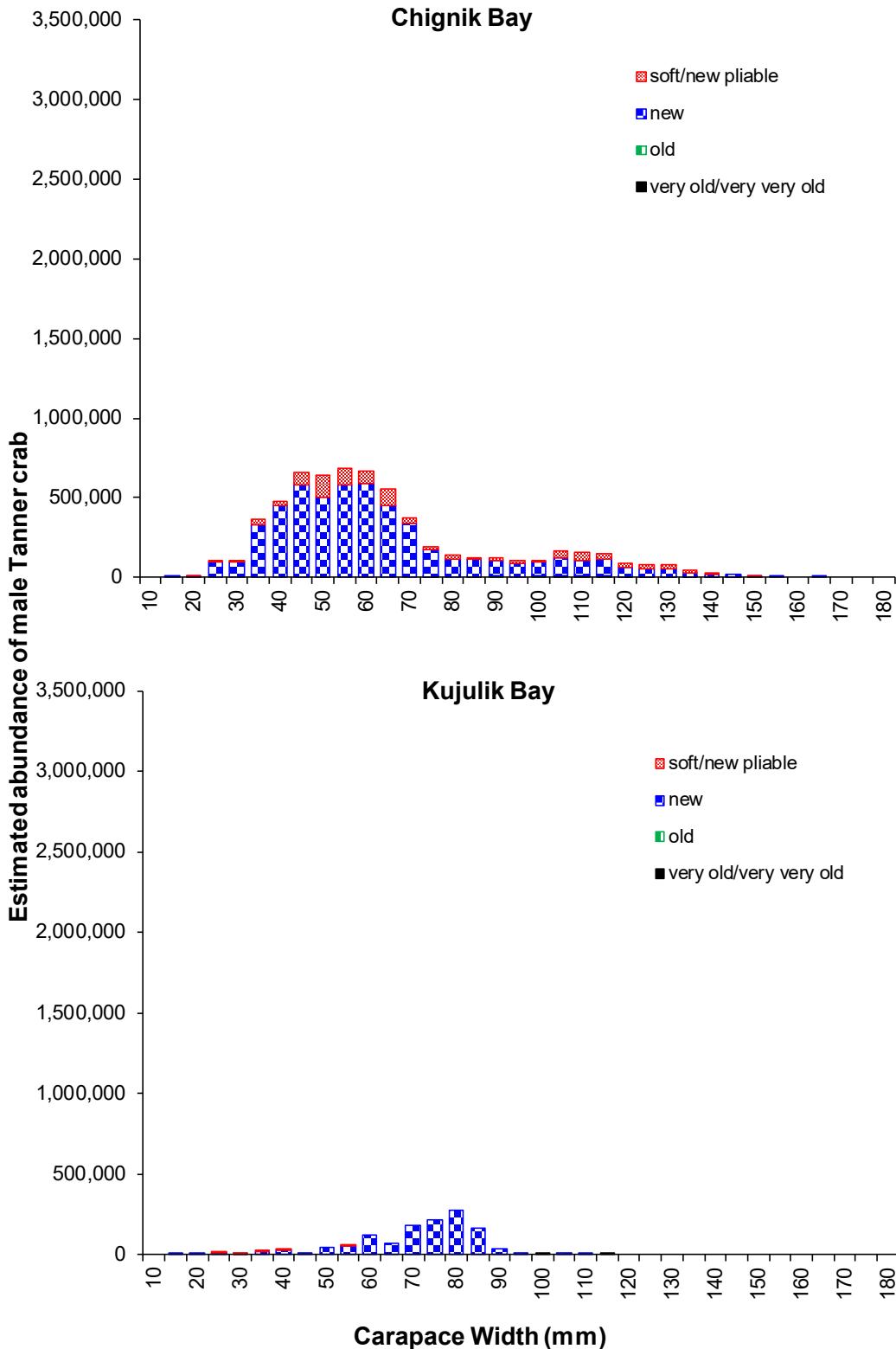


Figure 19.—Tanner crab male abundance estimate by carapace width and shell condition from Chignik Bay and Kujulik Bay in the 2018 Chignik District large-mesh bottom trawl survey.

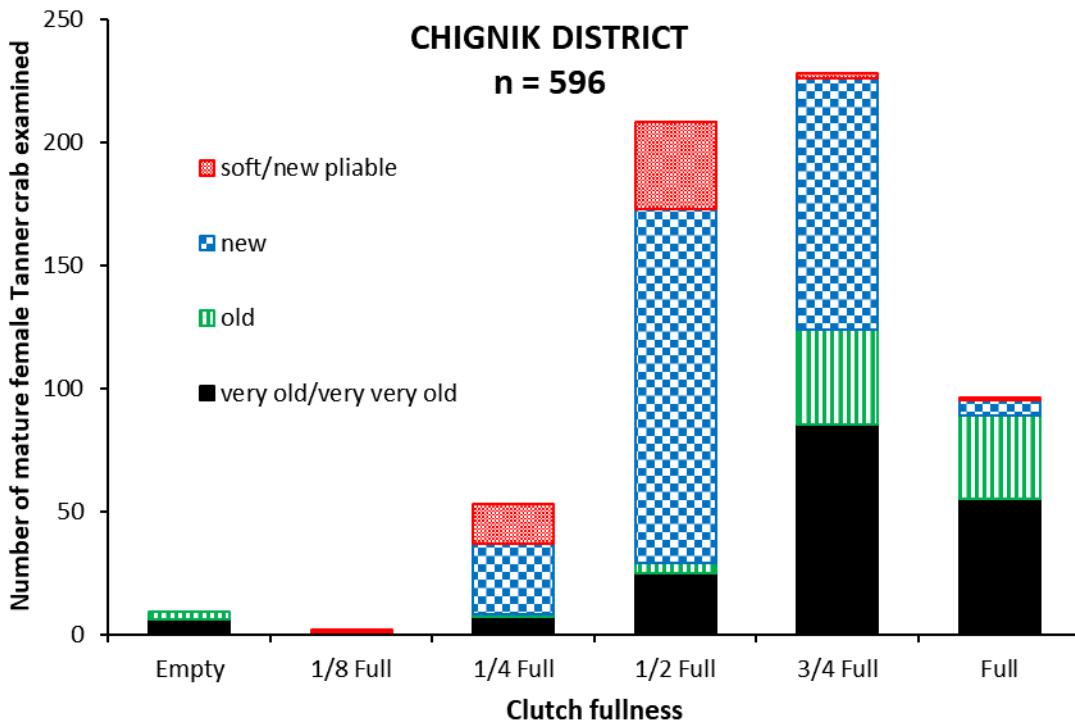


Figure 20.—Tanner crab mature female egg clutch fullness by shell condition in the Chignik District large-mesh bottom trawl survey, 2018.

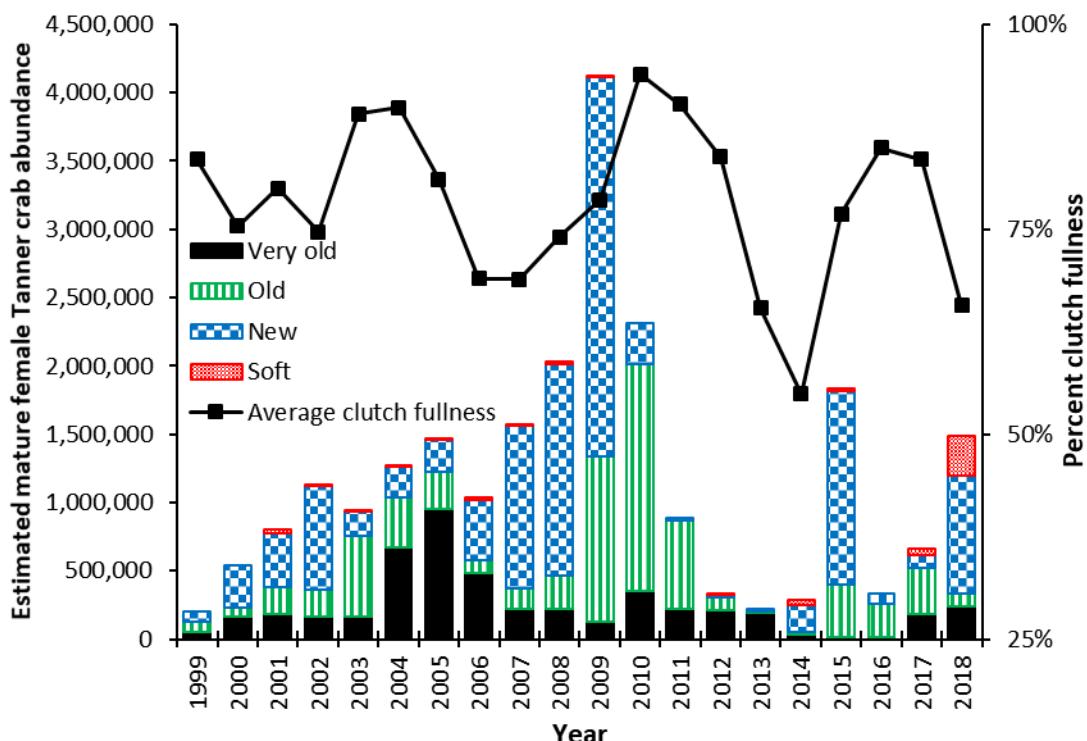


Figure 21.—Tanner crab mature female abundance by shell condition and average clutch fullness for the Chignik District from the 1999–2018 large-mesh bottom trawl surveys.

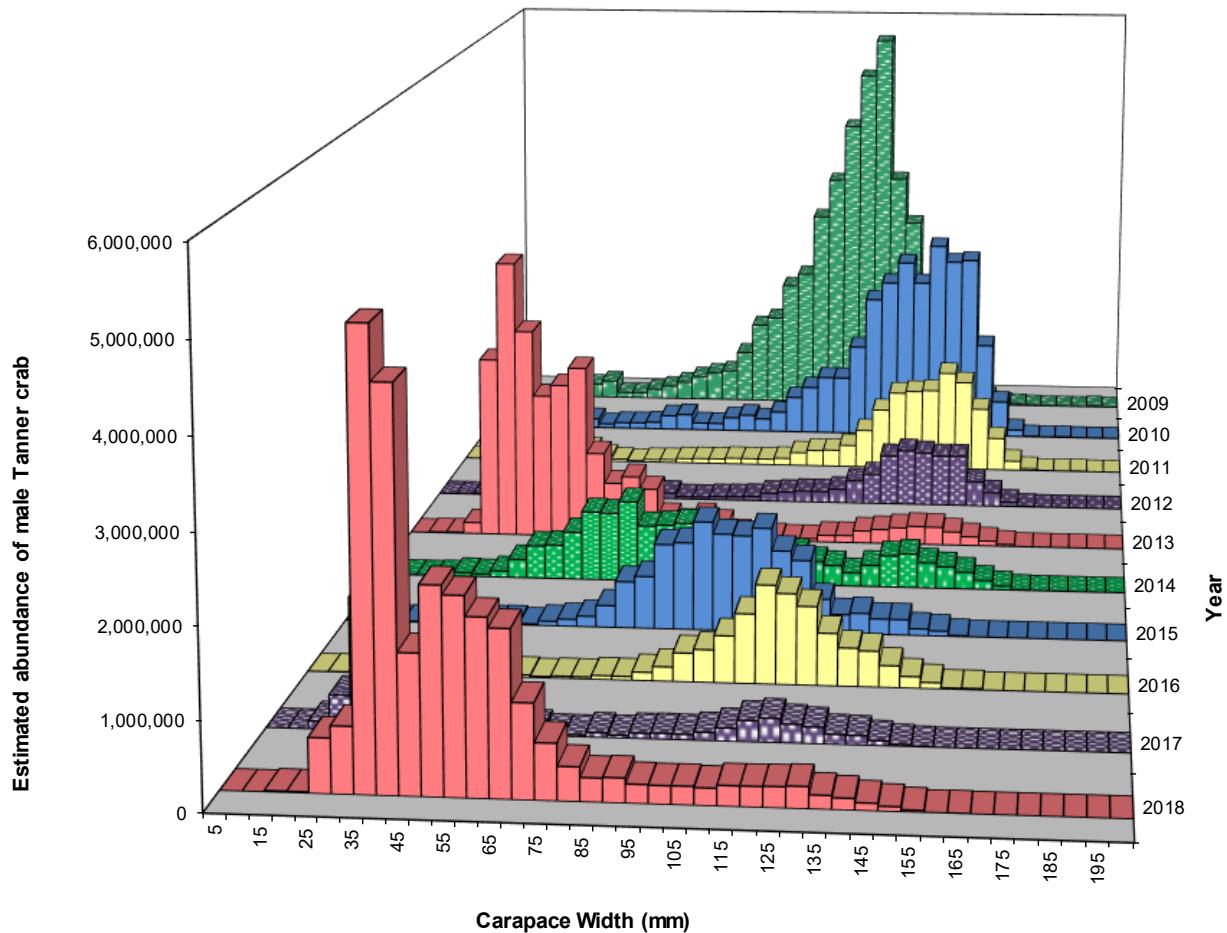


Figure 22.—Tanner crab male abundance estimate by carapace width in the South Peninsula District large-mesh bottom trawl surveys, 2009–2018.

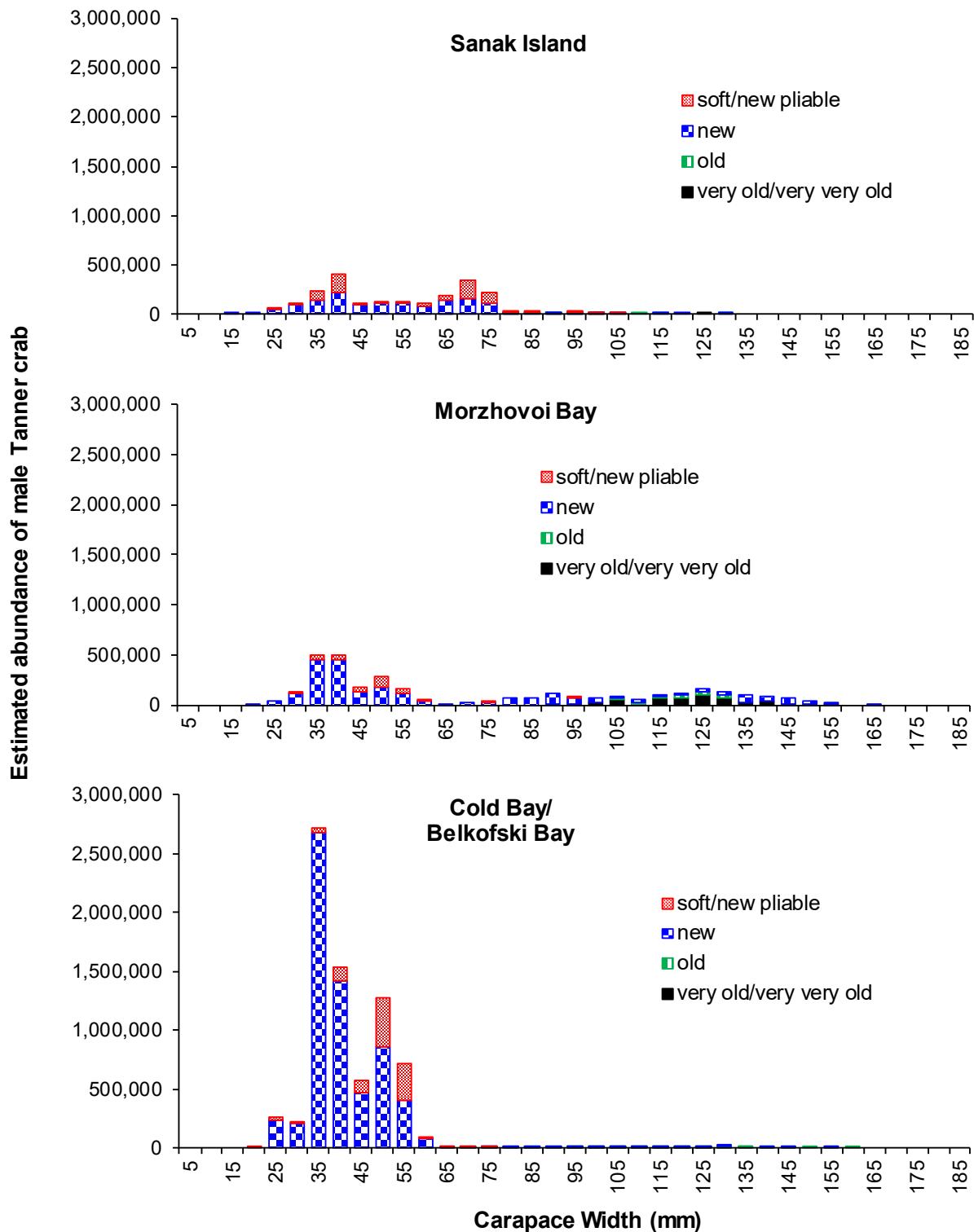


Figure 23.—Tanner crab male abundance estimate by carapace width and shell condition from Sanak Island, Morzhovoi Bay, and Cold Bay/Belkofski Bay in the Western Section of the 2018 South Peninsula District large-mesh bottom trawl survey.

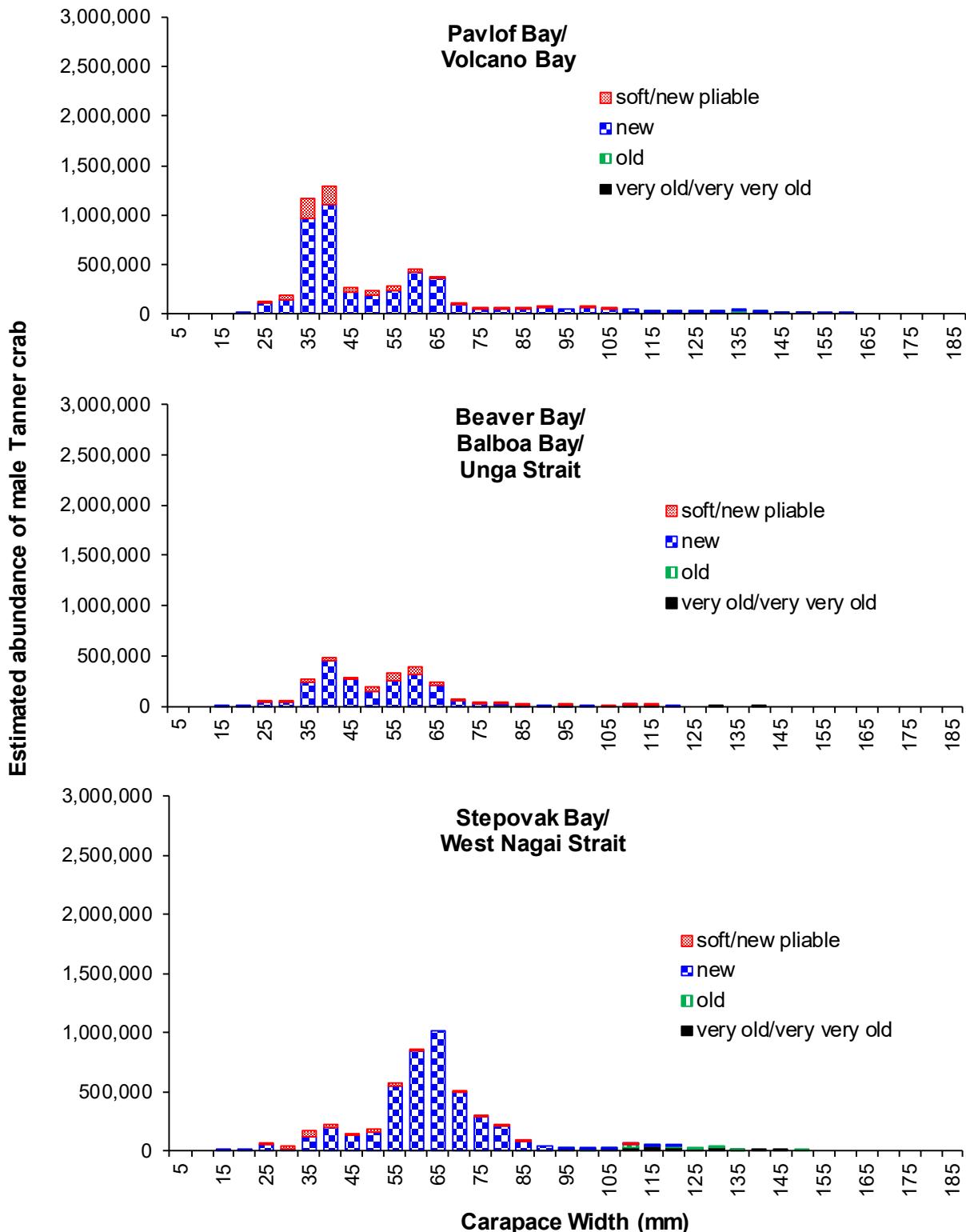


Figure 24.—Tanner crab male abundance estimate by carapace width and shell condition from Pavlof Bay/Volcano Bay, Beaver Bay/Balboa Bay/Unga Strait, and Stepovak Bay/West Nagai Strait in the Eastern Section of the 2018 South Peninsula District large-mesh bottom trawl survey.

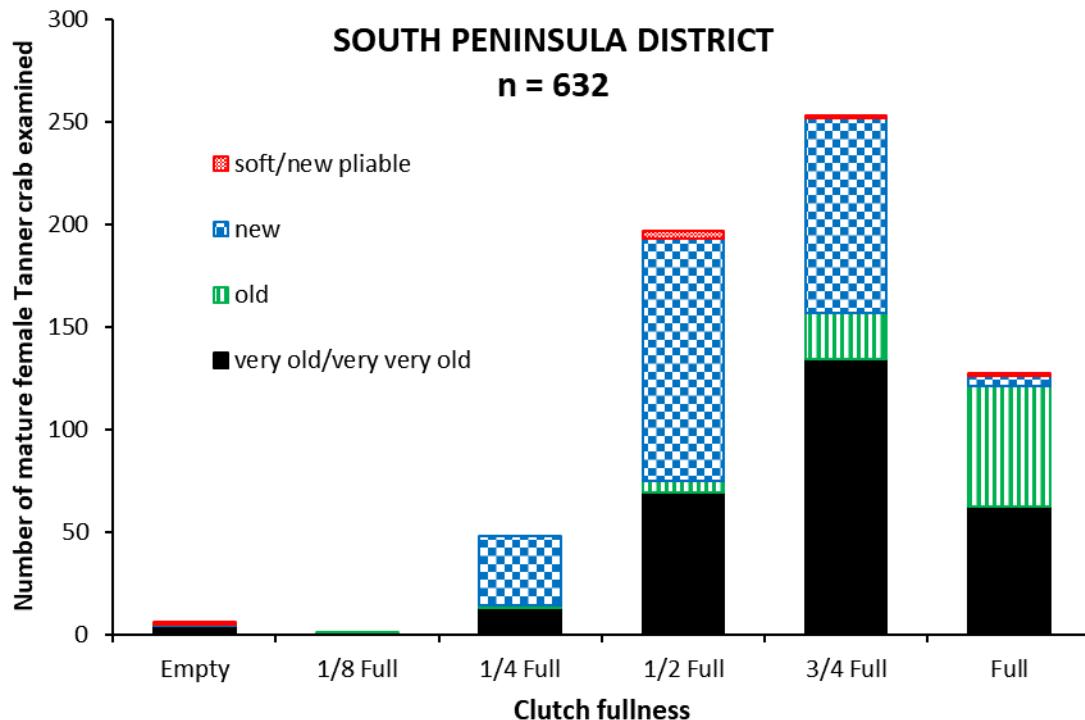


Figure 25.—Tanner crab mature female egg clutch fullness by shell condition in the South Peninsula District large-mesh bottom trawl survey, 2018.

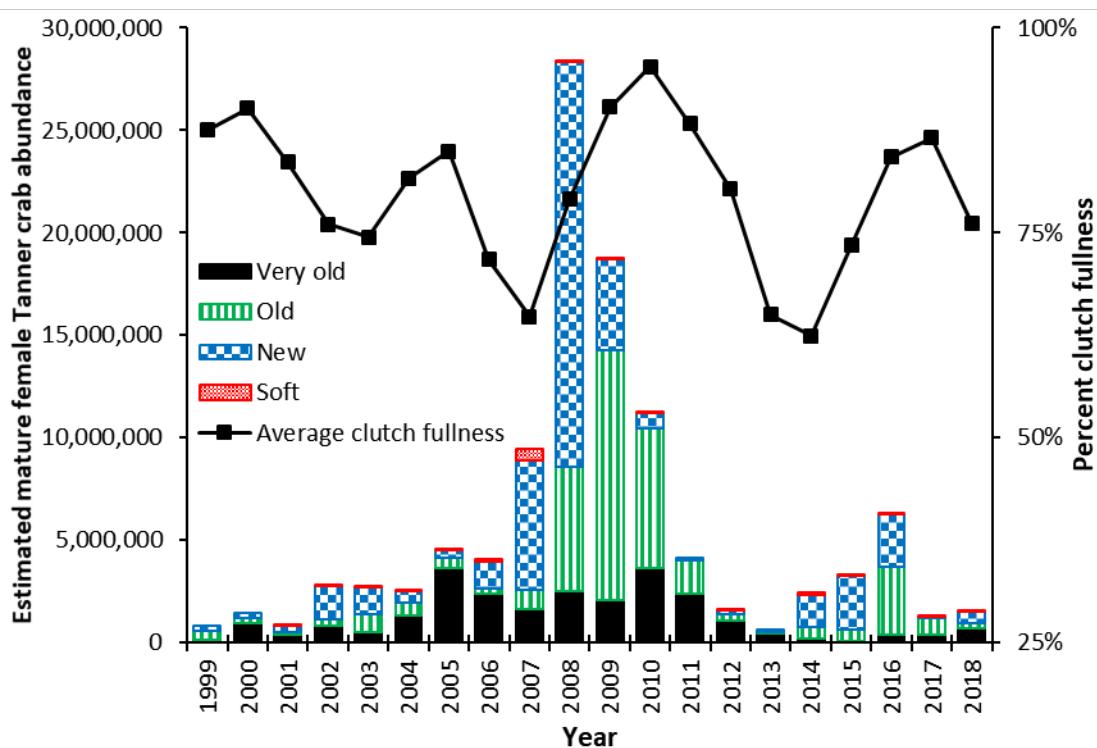


Figure 26.—Tanner crab mature female abundance by shell condition and average clutch fullness for the South Peninsula District from the 1999–2018 large-mesh bottom trawl surveys.

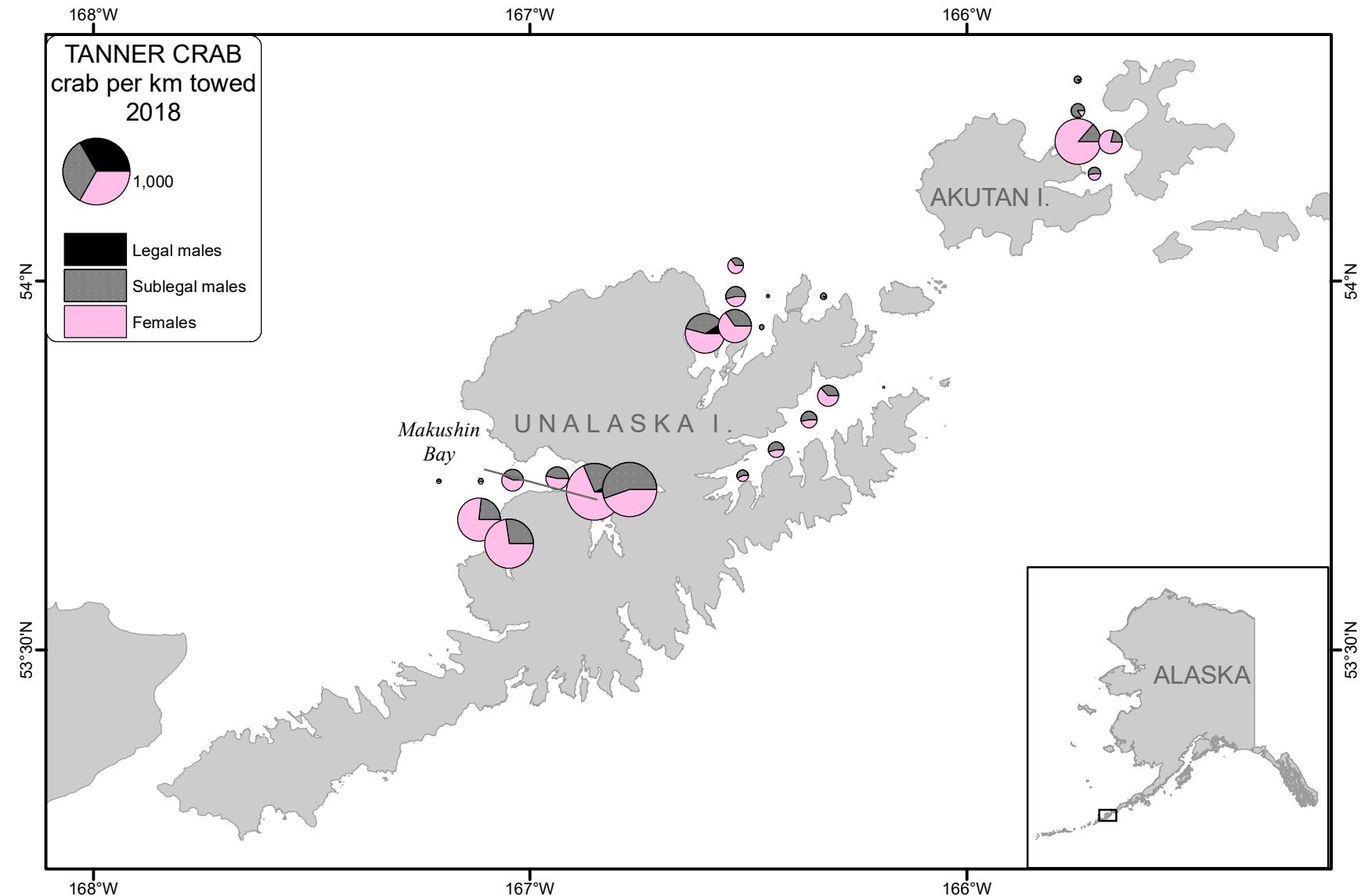


Figure 27.—Number of Tanner crab per kilometer towed in the 2018 Eastern Aleutian District large-mesh bottom trawl survey.

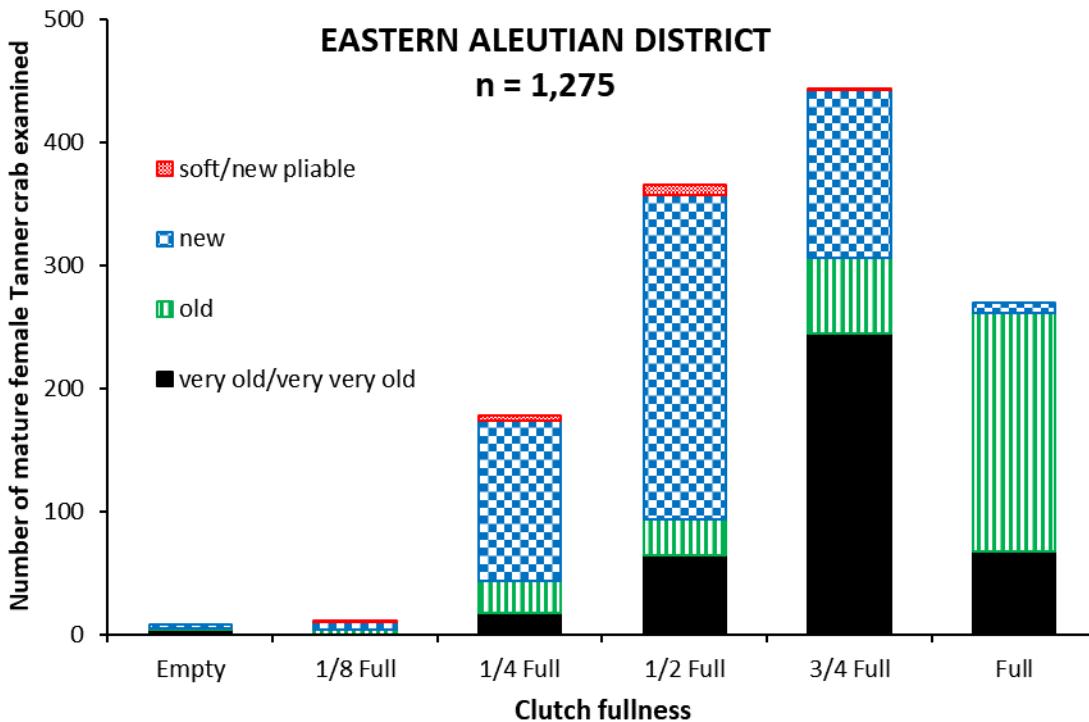


Figure 28.—Tanner crab mature female egg clutch fullness by shell condition in the Eastern Aleutian District large-mesh bottom trawl survey, 2018.

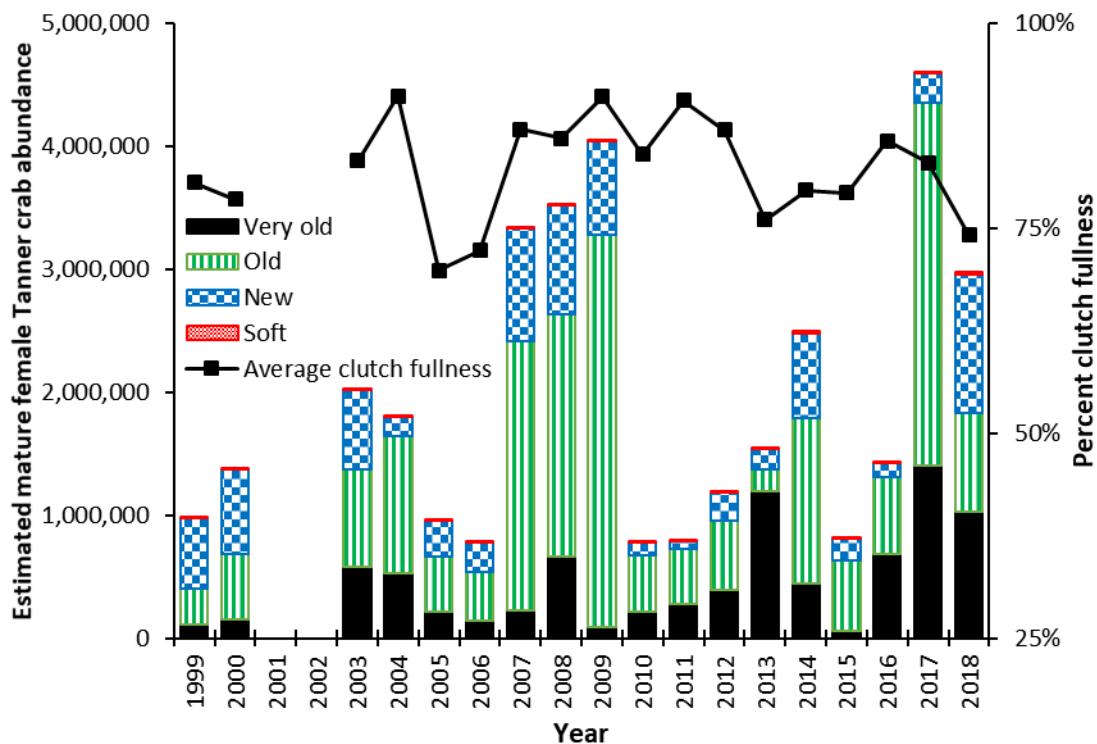


Figure 29.—Tanner crab mature female abundance by shell condition and average clutch fullness for the Eastern Aleutian District from the 1999–2018 large-mesh bottom trawl surveys.

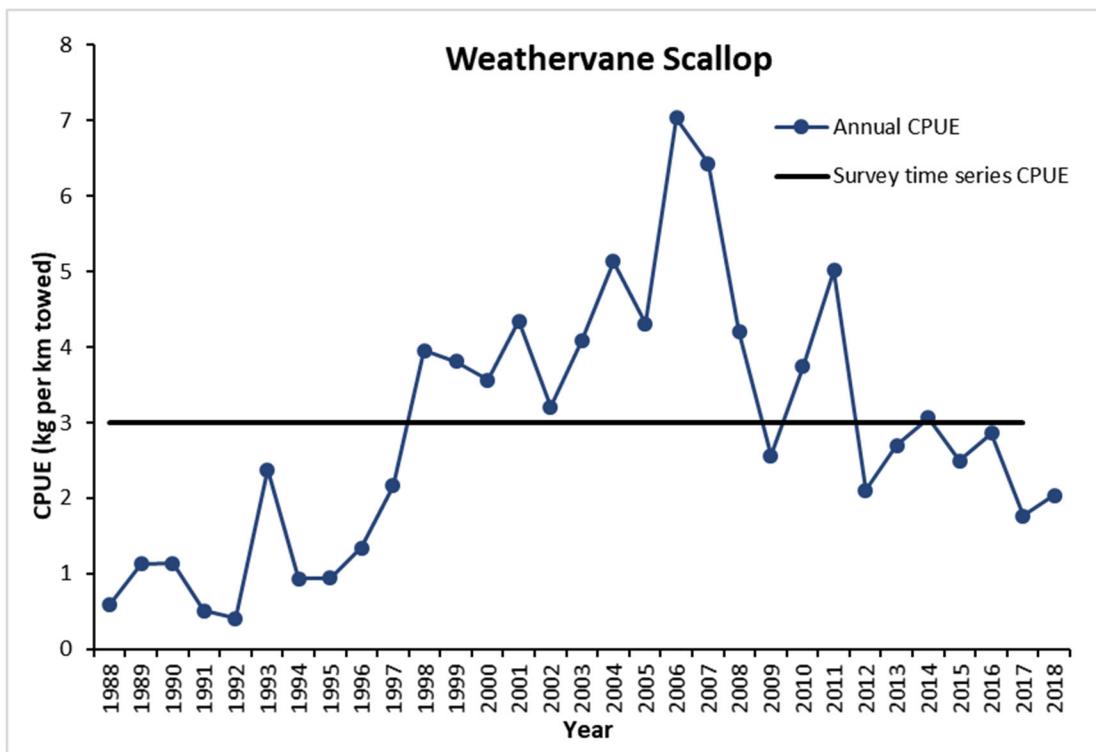


Figure 30.—Weathervane scallop annual CPUE in kilograms per kilometer towed from the 1988–2018 large-mesh bottom trawl surveys.

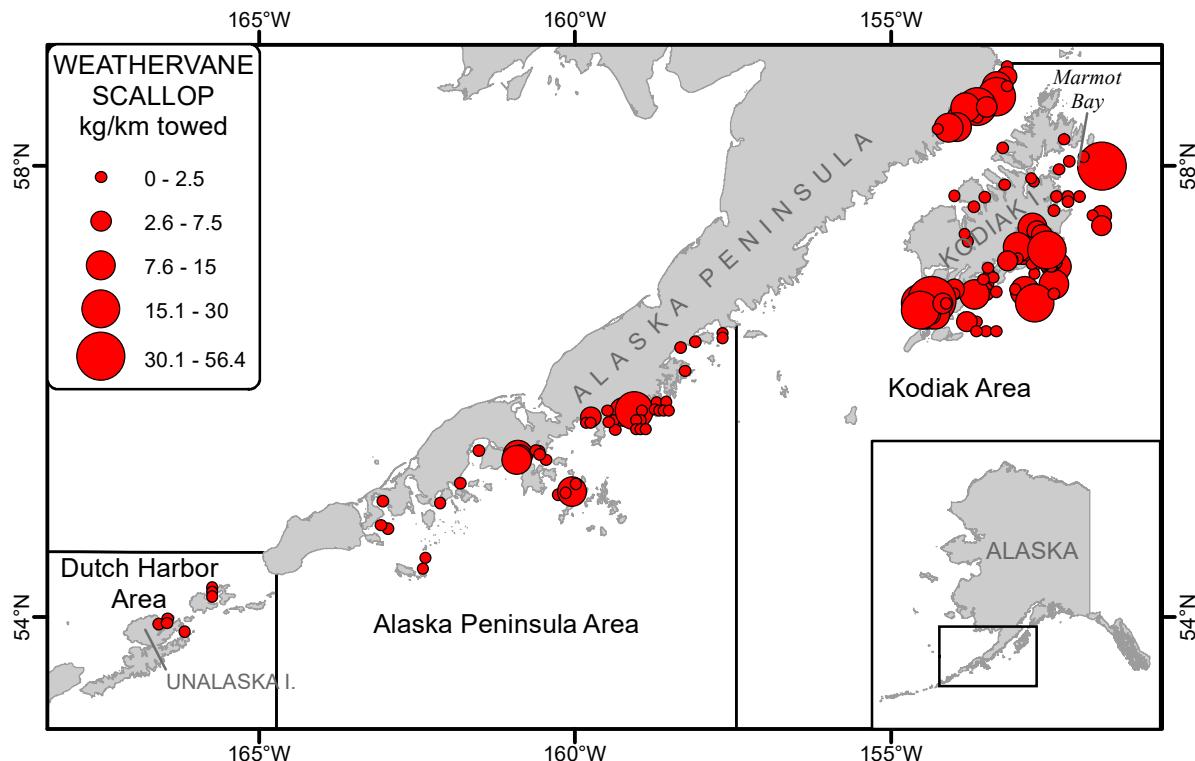


Figure 31.—Weathervane scallop station CPUE in kilograms per kilometer towed from the 2018 large-mesh bottom trawl survey.

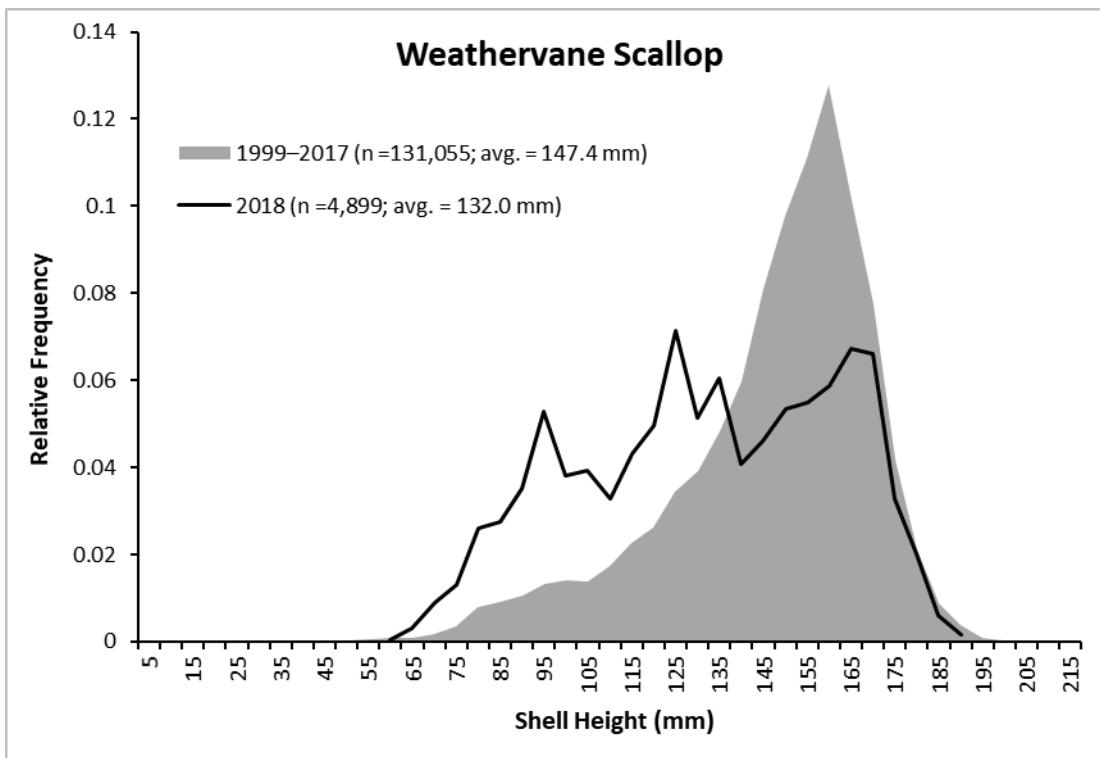


Figure 32.—Weathervane scallop shell height frequency from the large-mesh bottom trawl surveys, 1999–2018.

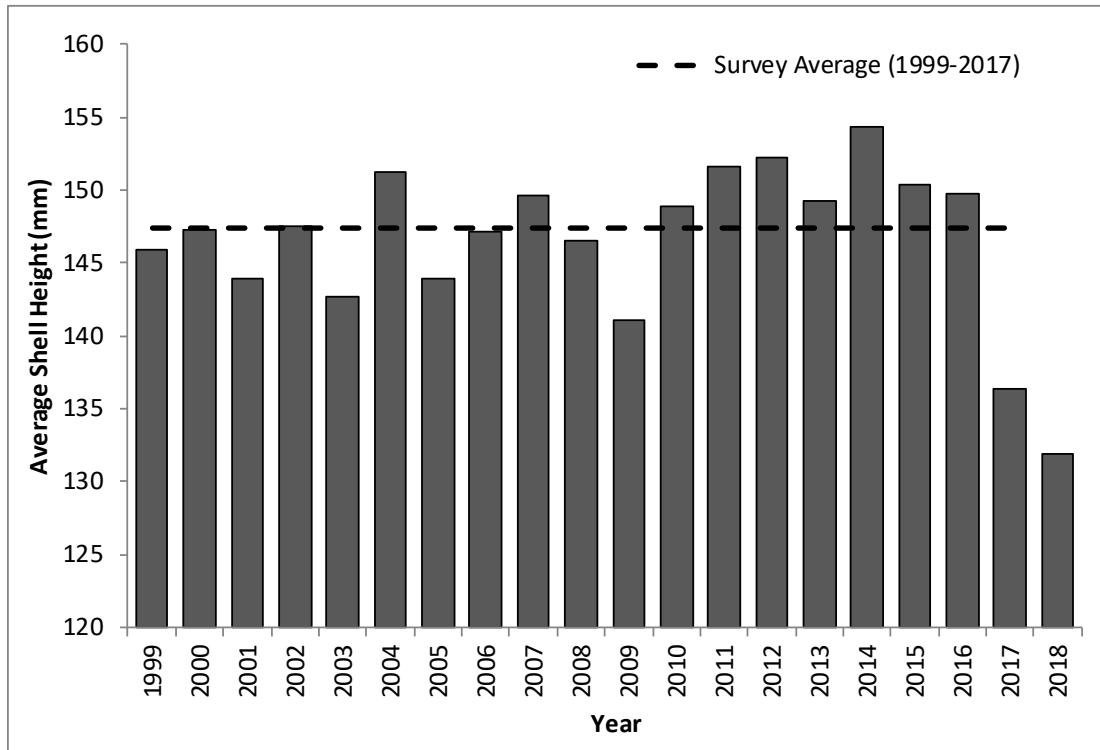


Figure 33.—Average weathervane scallop shell height from scallops caught on the large-mesh bottom trawl surveys, 1999–2018.

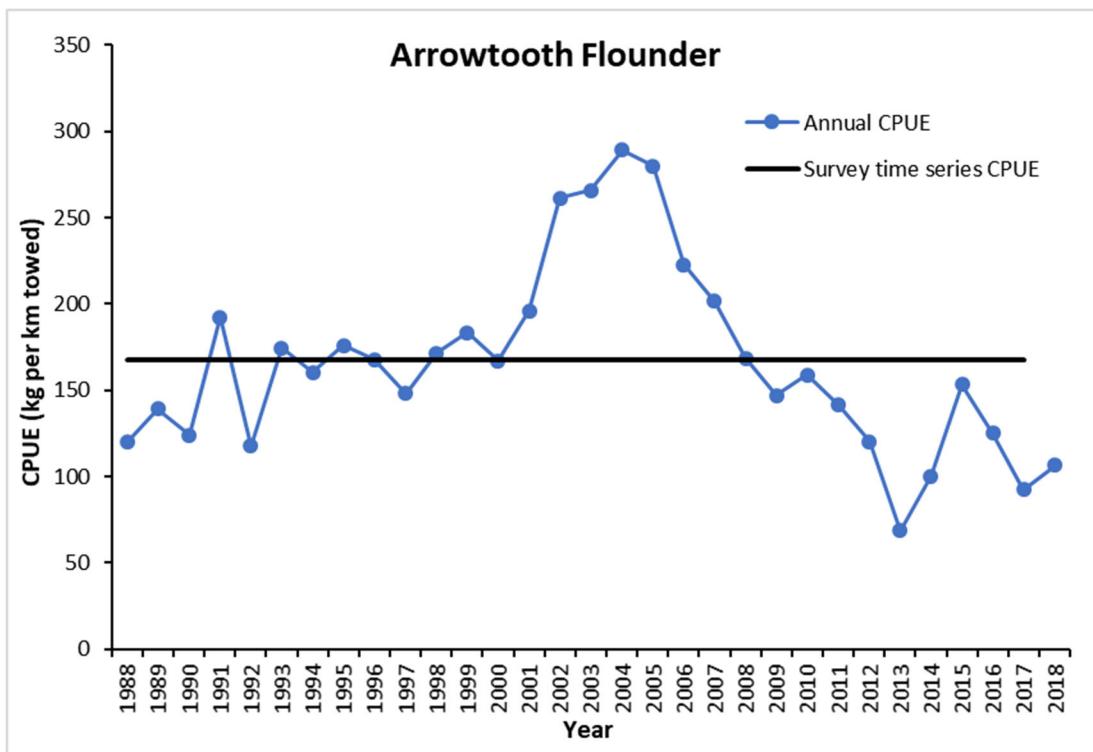


Figure 34.—Arrowtooth flounder annual CPUE in kilograms per kilometer towed from the 1988–2018 large-mesh bottom trawl surveys.

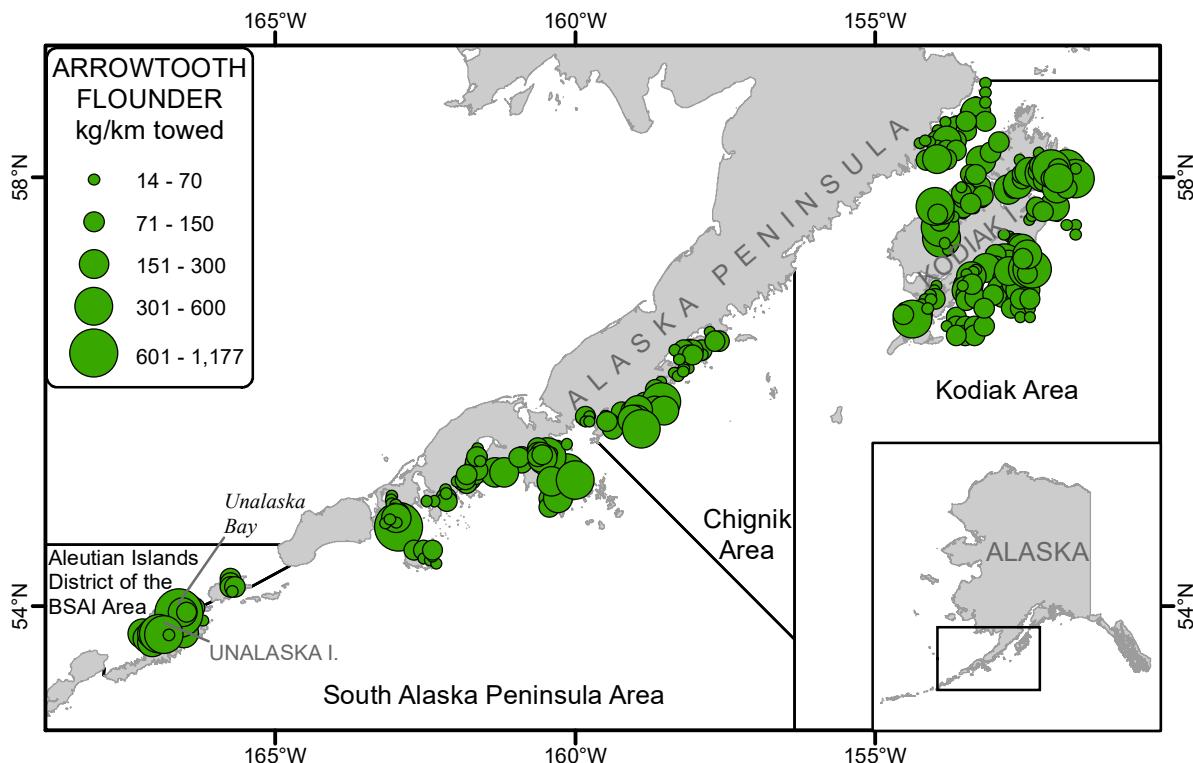


Figure 35.—Arrowtooth flounder station CPUE in kilograms per kilometer towed from the 2018 large-mesh bottom trawl survey.

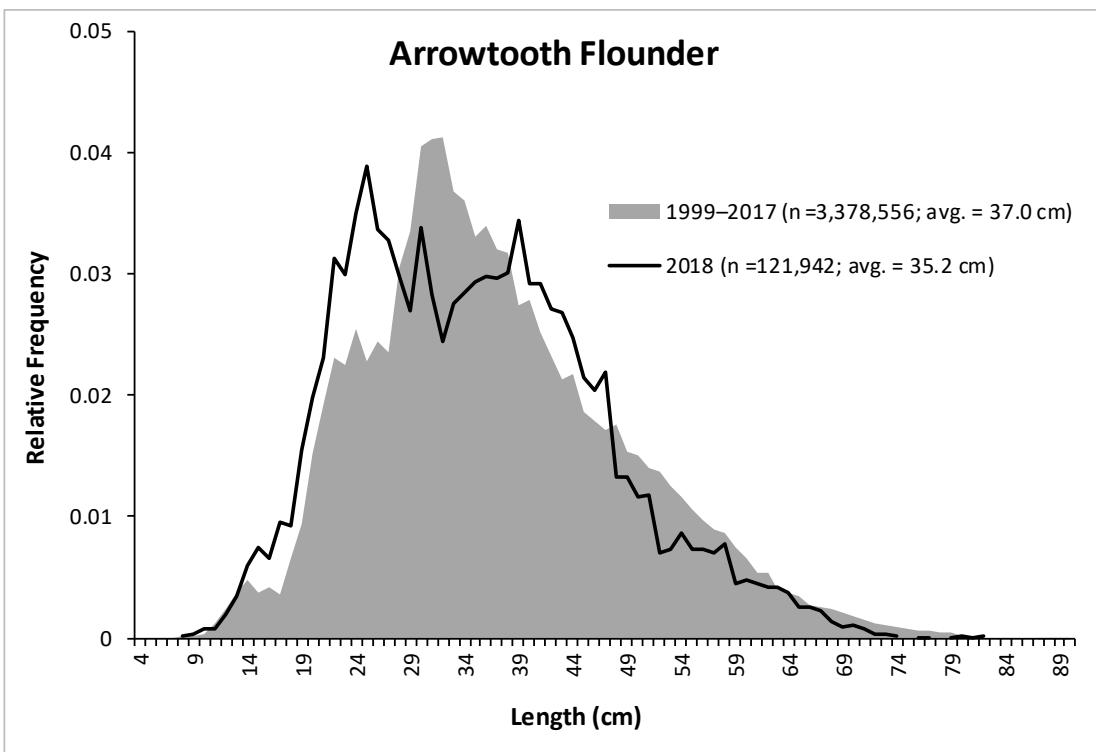


Figure 36.—Arrowtooth flounder length frequency from the large-mesh bottom trawl surveys, 1999–2018.

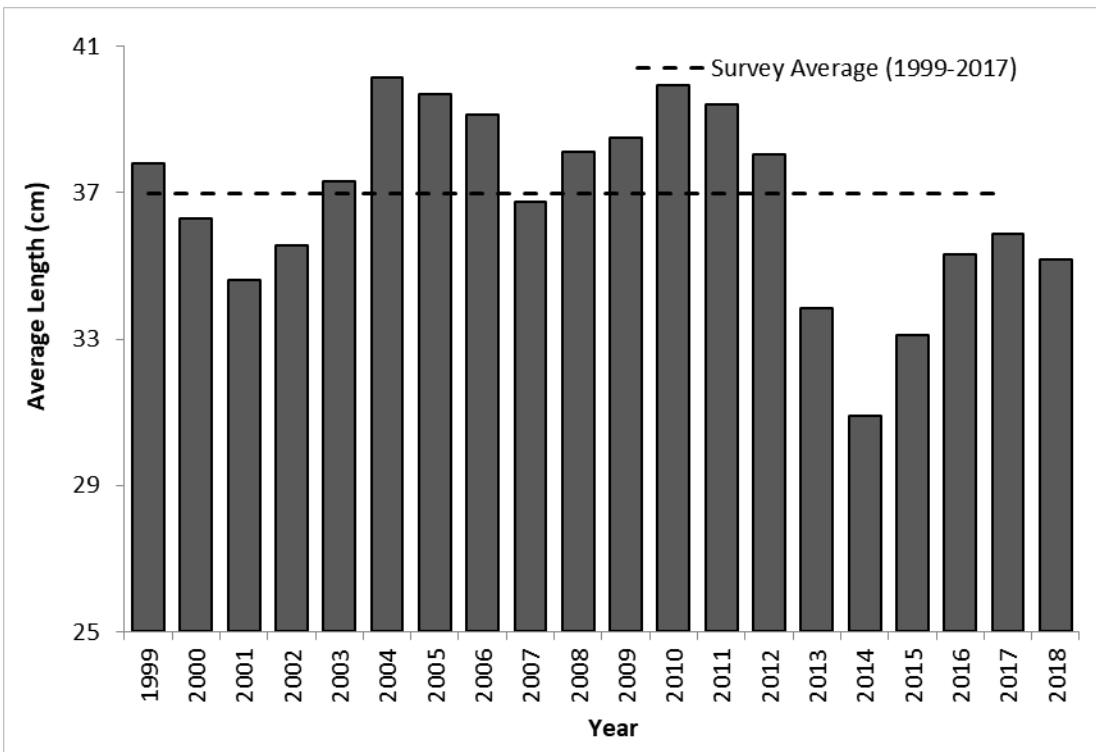


Figure 37.—Average arrowtooth flounder length from fish caught on the large-mesh bottom trawl surveys, 1999–2018.

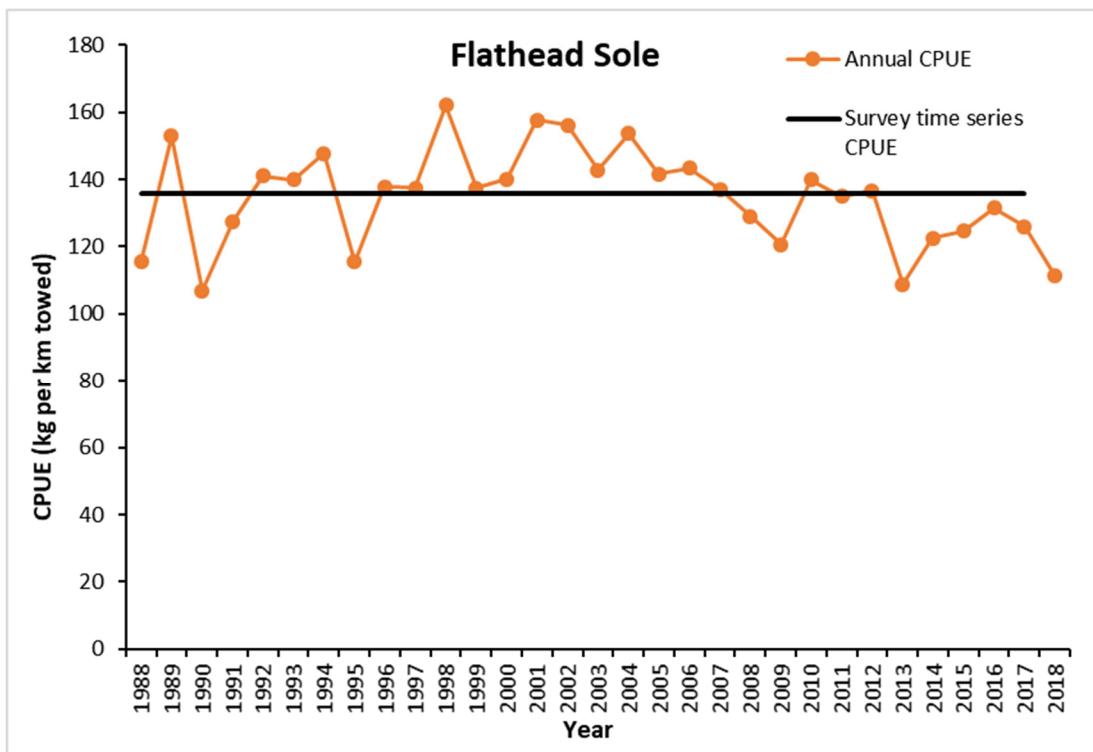


Figure 38.—Flathead sole annual CPUE in kilograms per kilometer towed from the 1988–2018 large-mesh bottom trawl surveys.

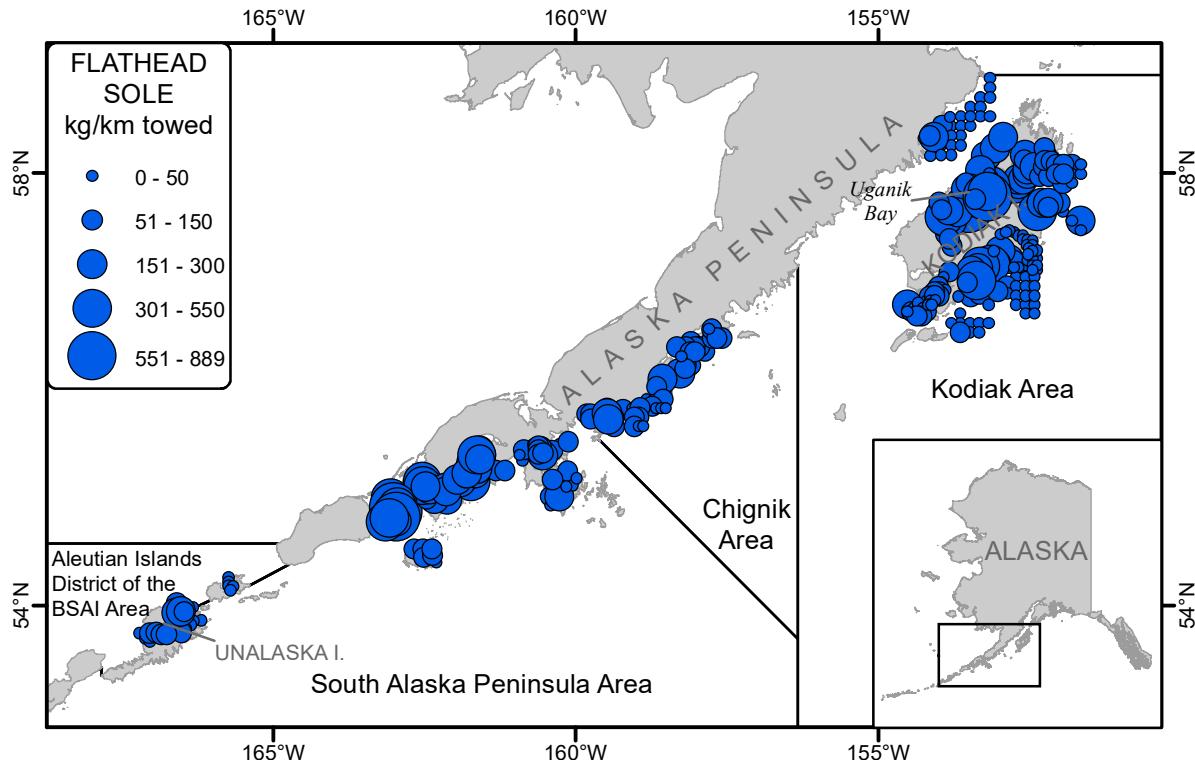


Figure 39.—Flathead sole station CPUE in kilograms per kilometer towed from the 2018 large-mesh bottom trawl survey.

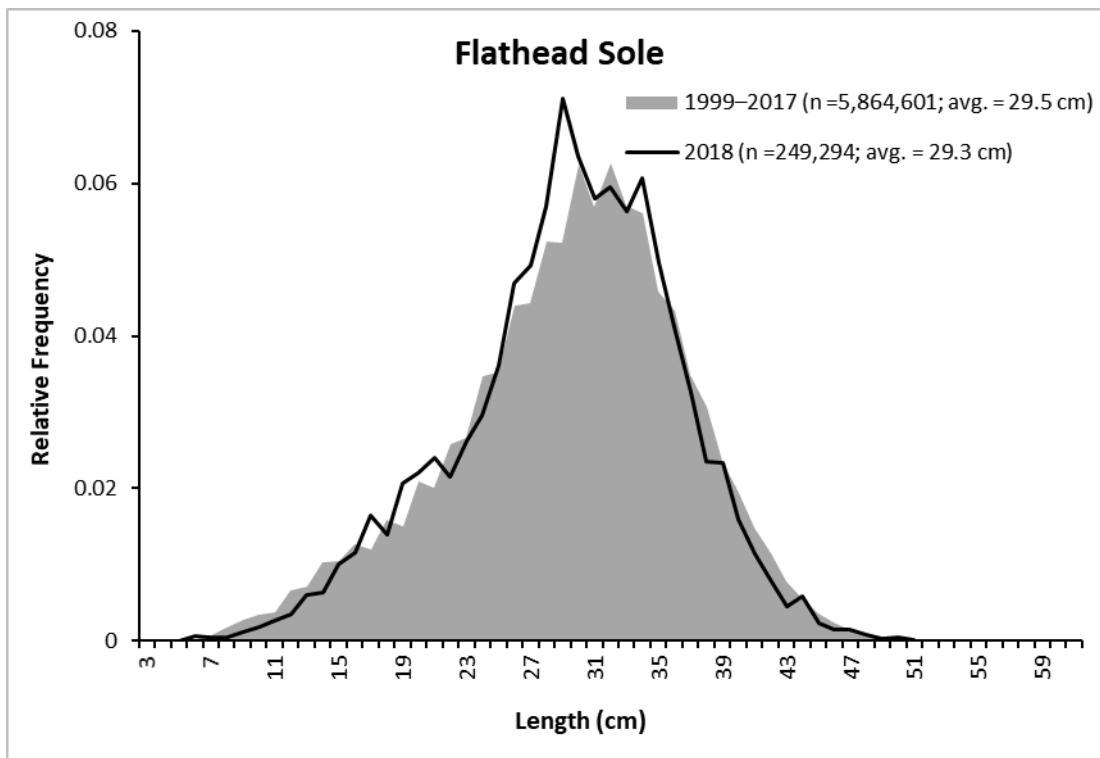


Figure 40.—Flathead sole length frequency from the large-mesh bottom trawl surveys, 1999–2018.

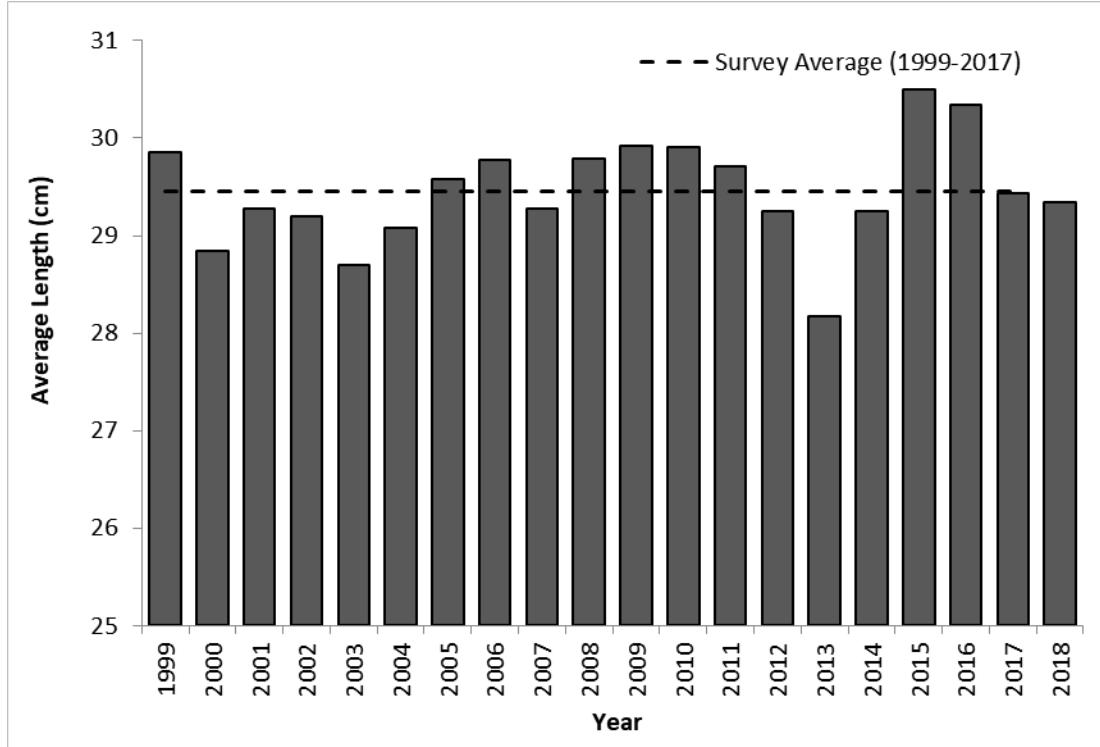


Figure 41.—Average flathead sole length from fish caught on the large-mesh bottom trawl surveys, 1999–2018.

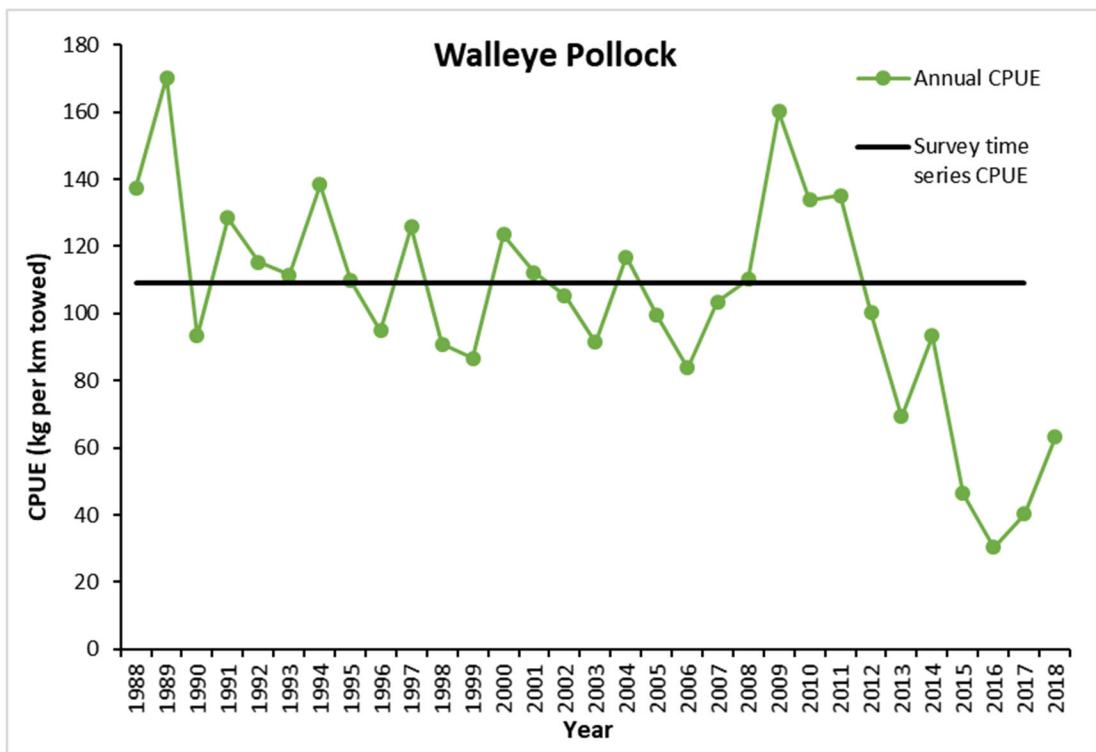


Figure 42.—Walleye pollock annual CPUE in kilograms per kilometer towed from the 1988–2018 large-mesh bottom trawl surveys.

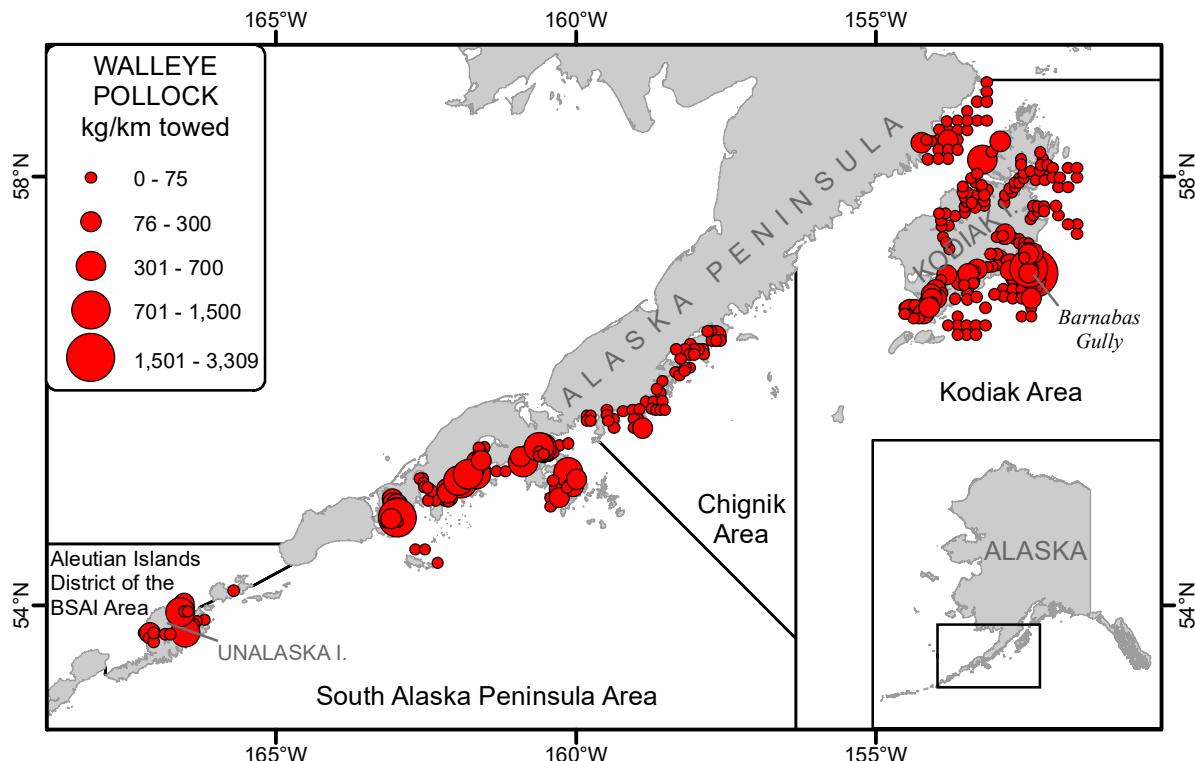


Figure 43.—Walleye pollock station CPUE in kilograms per kilometer towed from the 2018 large-mesh bottom trawl survey.

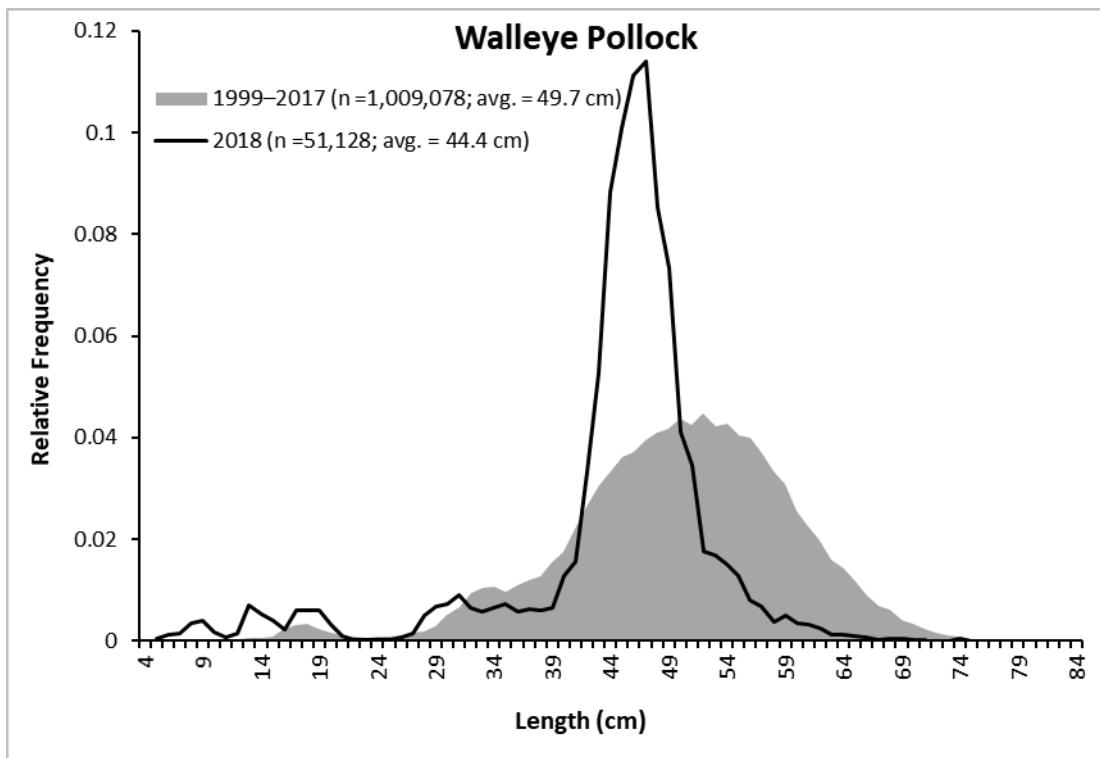


Figure 44.—Walleye pollock length frequency from the large-mesh bottom trawl surveys, 1999–2018.

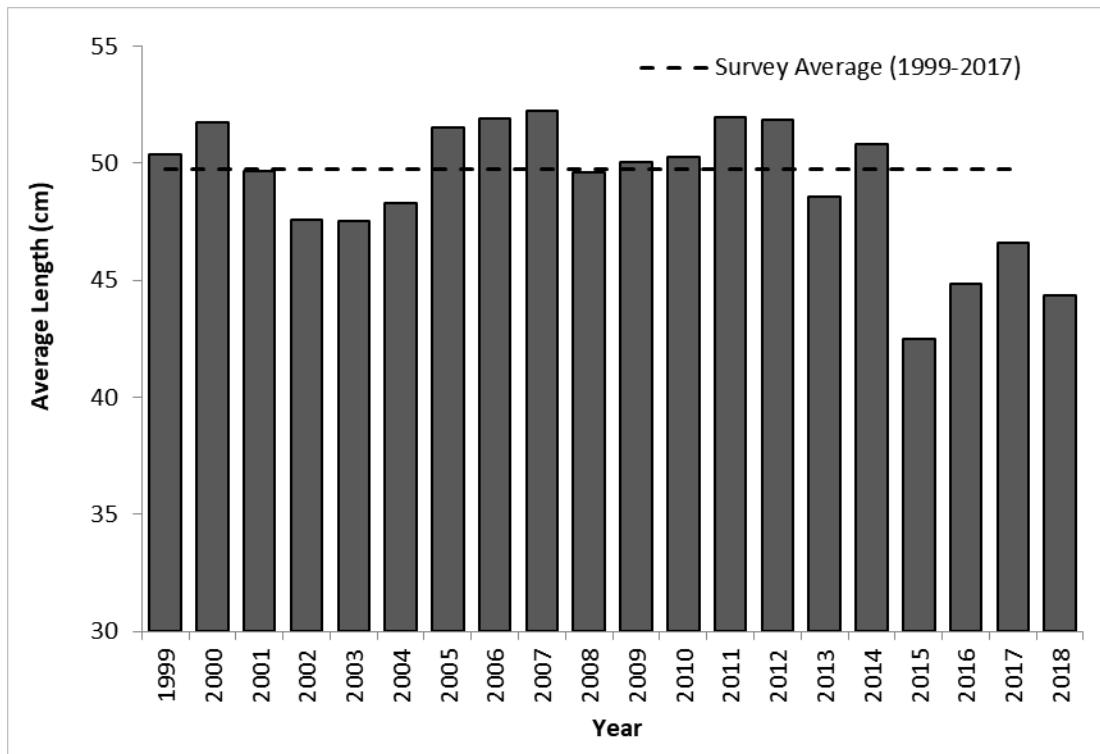


Figure 45.—Average walleye pollock length from fish caught on the large-mesh bottom trawl surveys, 1999–2018.

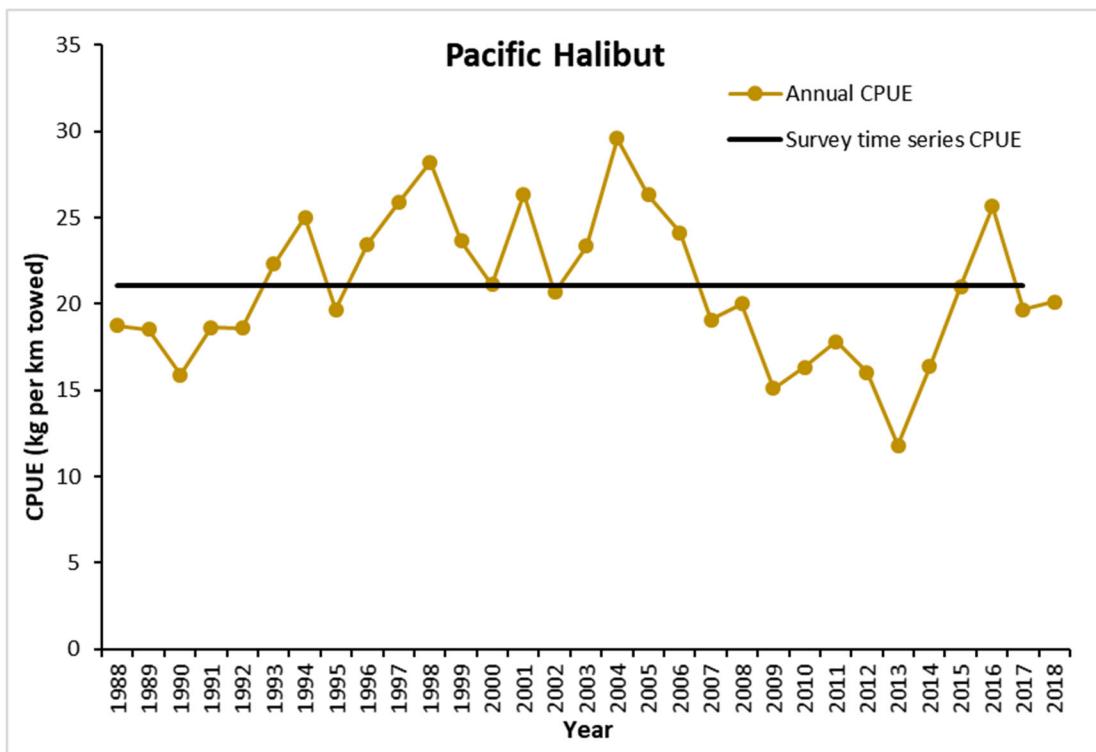


Figure 46.—Pacific halibut annual CPUE in kilograms per kilometer towed from the 1999–2018 large-mesh bottom trawl surveys.

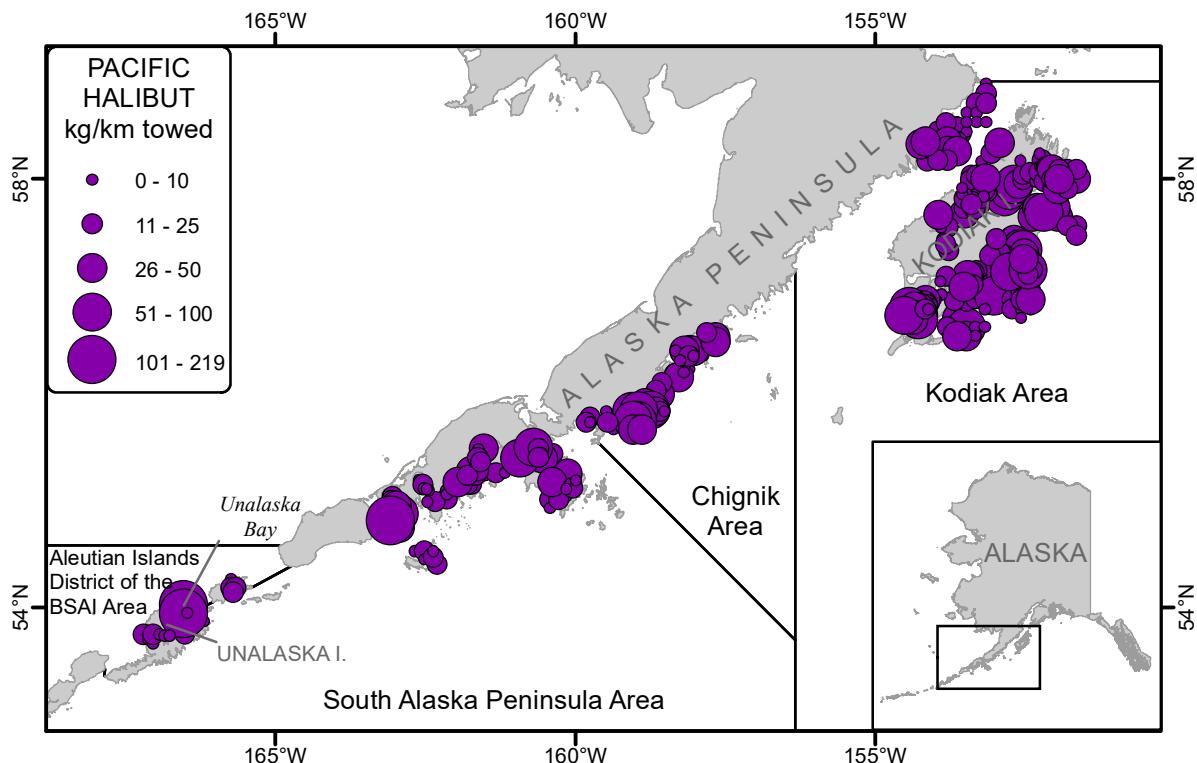


Figure 47.—Pacific halibut station CPUE in kilograms per kilometer towed from the 2018 large-mesh bottom trawl survey.

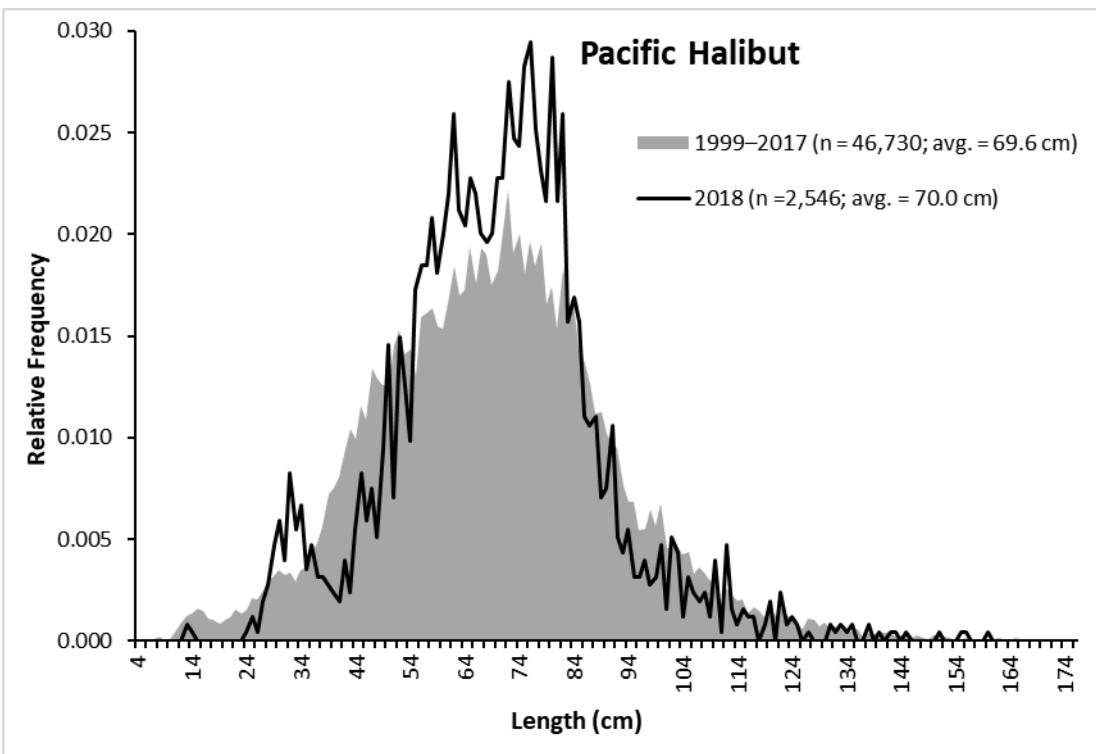


Figure 48.—Pacific halibut length frequency from the large-mesh bottom trawl surveys, 1999–2018.

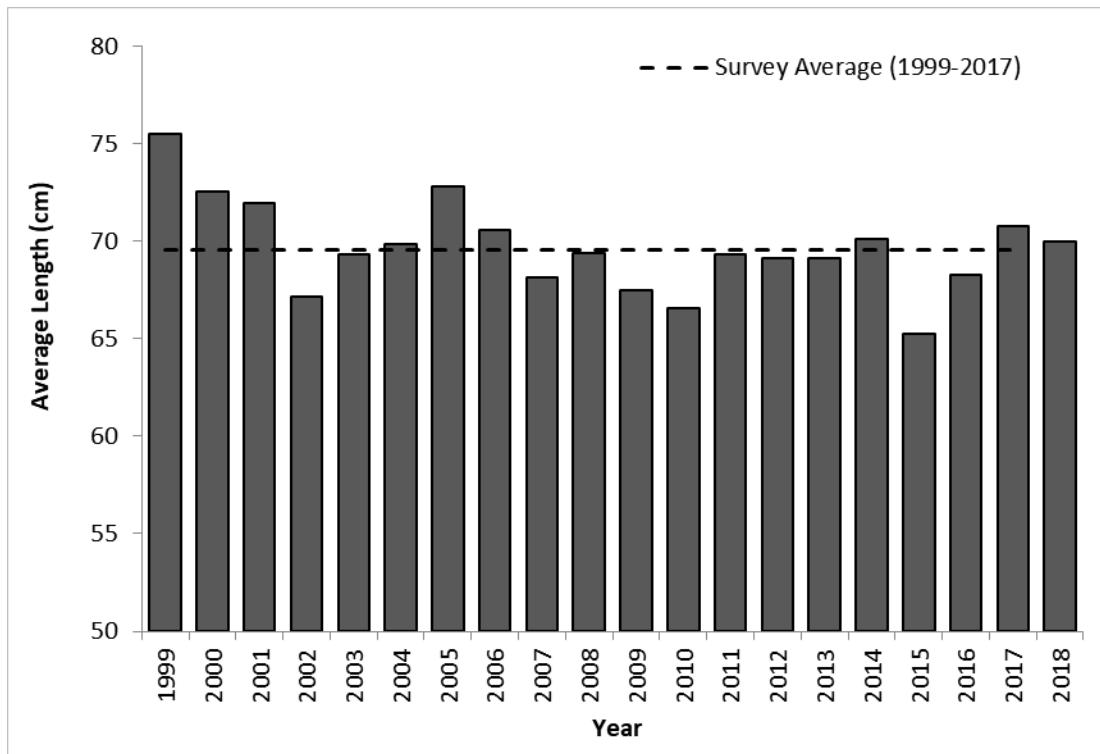


Figure 49.—Average Pacific halibut length from fish caught on the large-mesh bottom trawl surveys, 1999–2018.

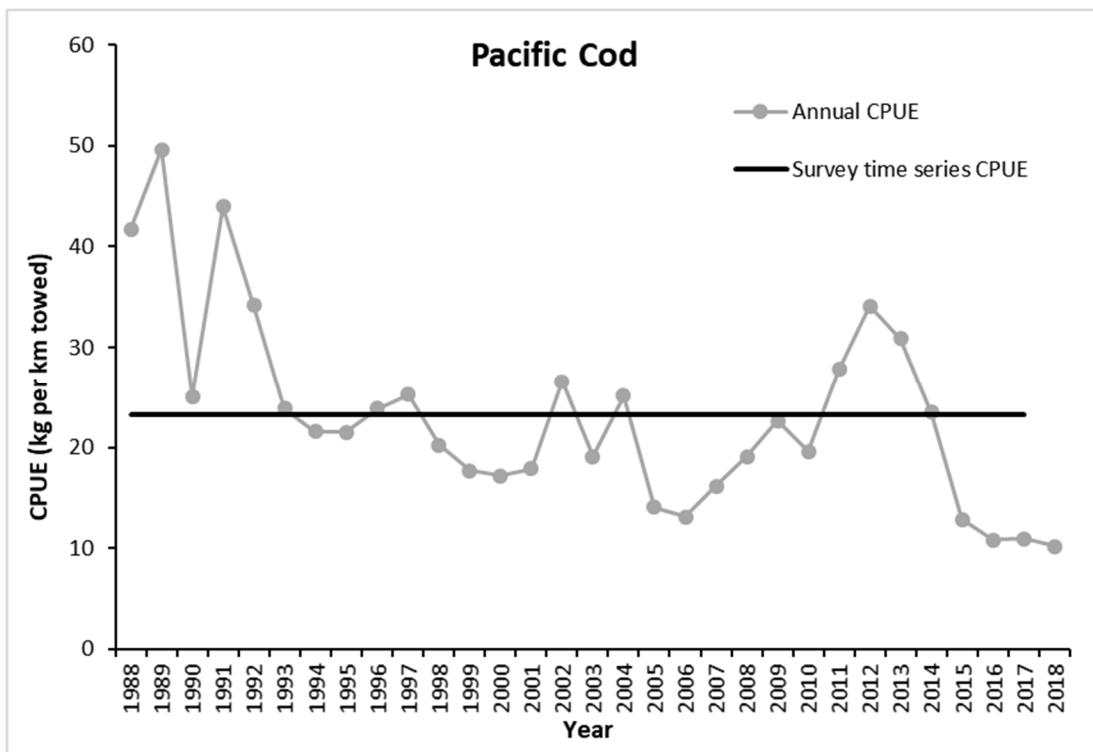


Figure 50.—Pacific cod annual CPUE in kilograms per kilometer towed from the 1988–2018 large-mesh bottom trawl surveys.

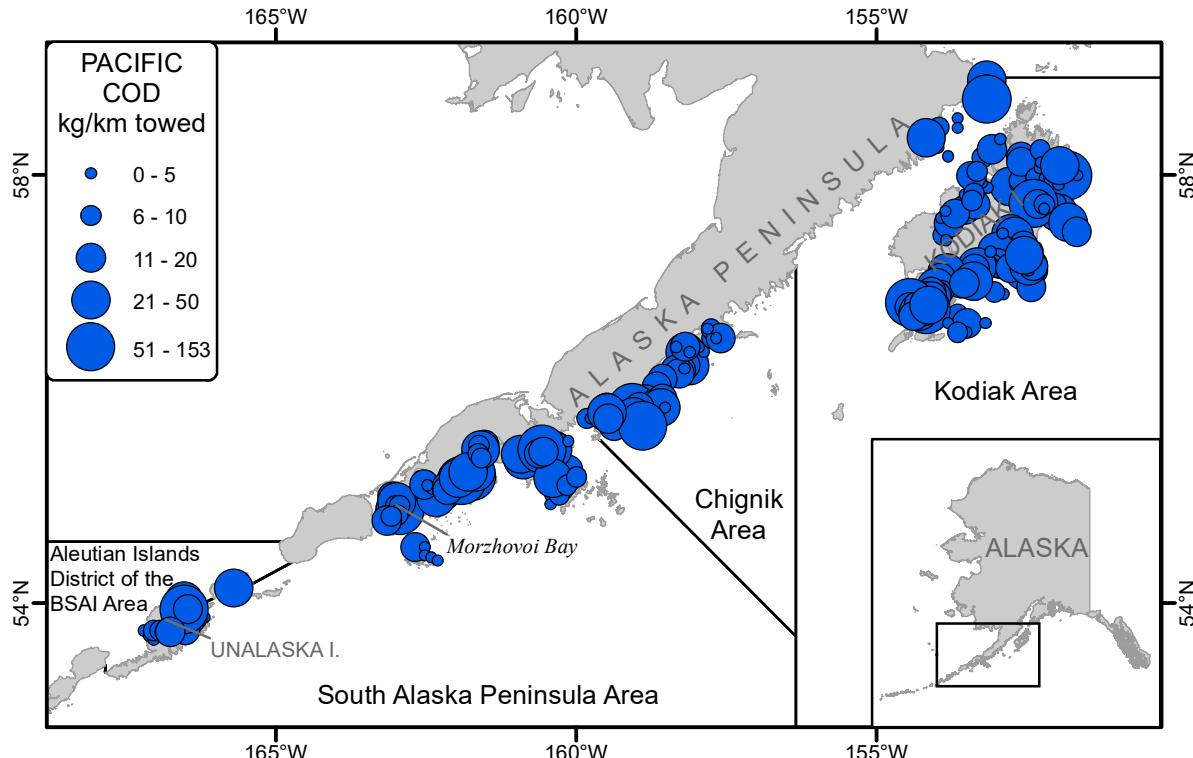


Figure 51.—Pacific cod station CPUE in kilograms per kilometer towed from the 2018 large-mesh bottom trawl survey.

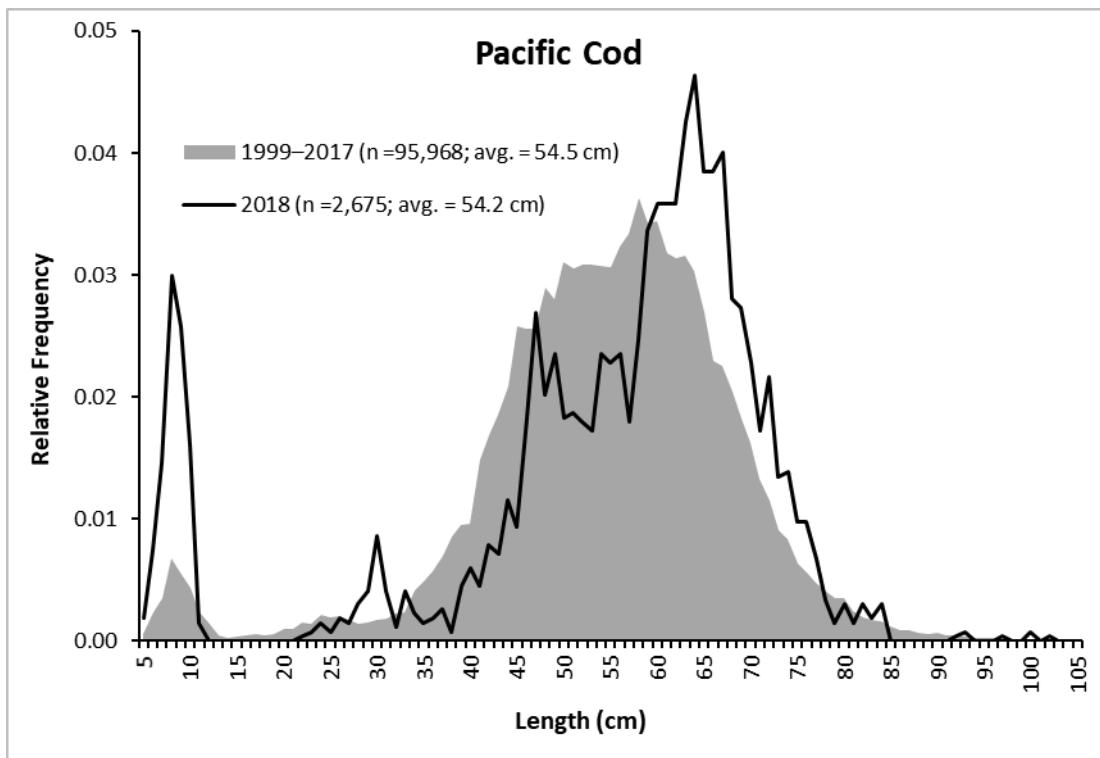


Figure 52.—Pacific cod length frequency from the large-mesh bottom trawl surveys, 1999–2018.

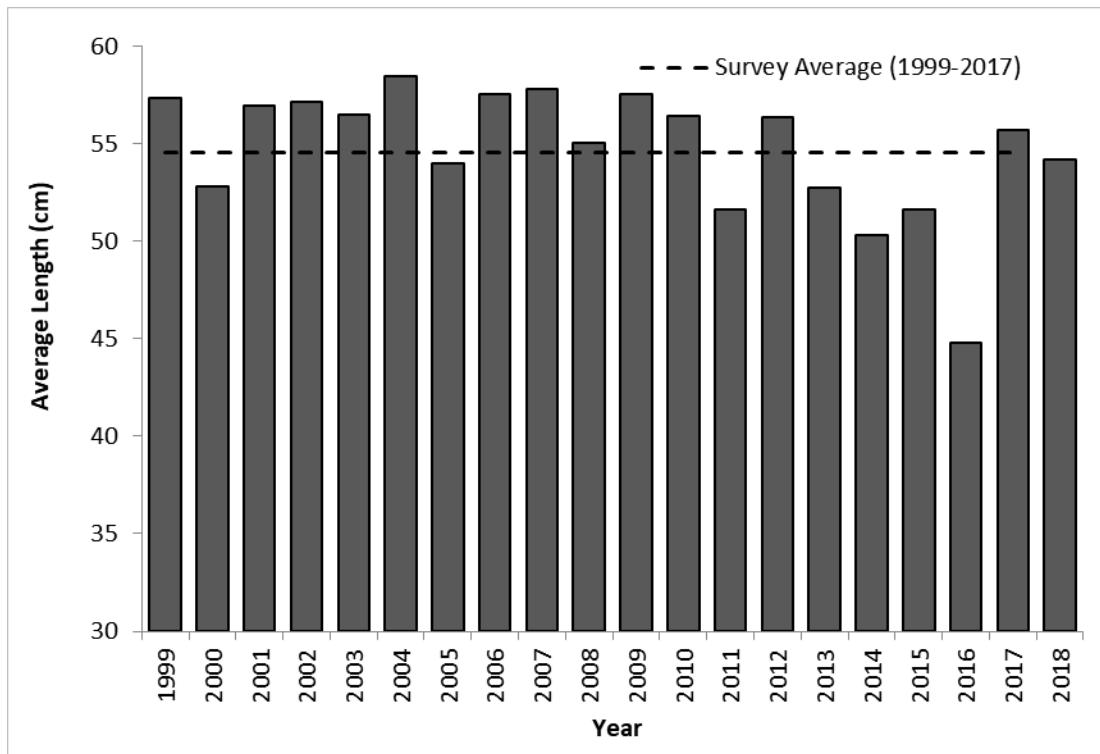


Figure 53.—Average Pacific cod length from fish caught on the large-mesh bottom trawl surveys, 1999–2018.

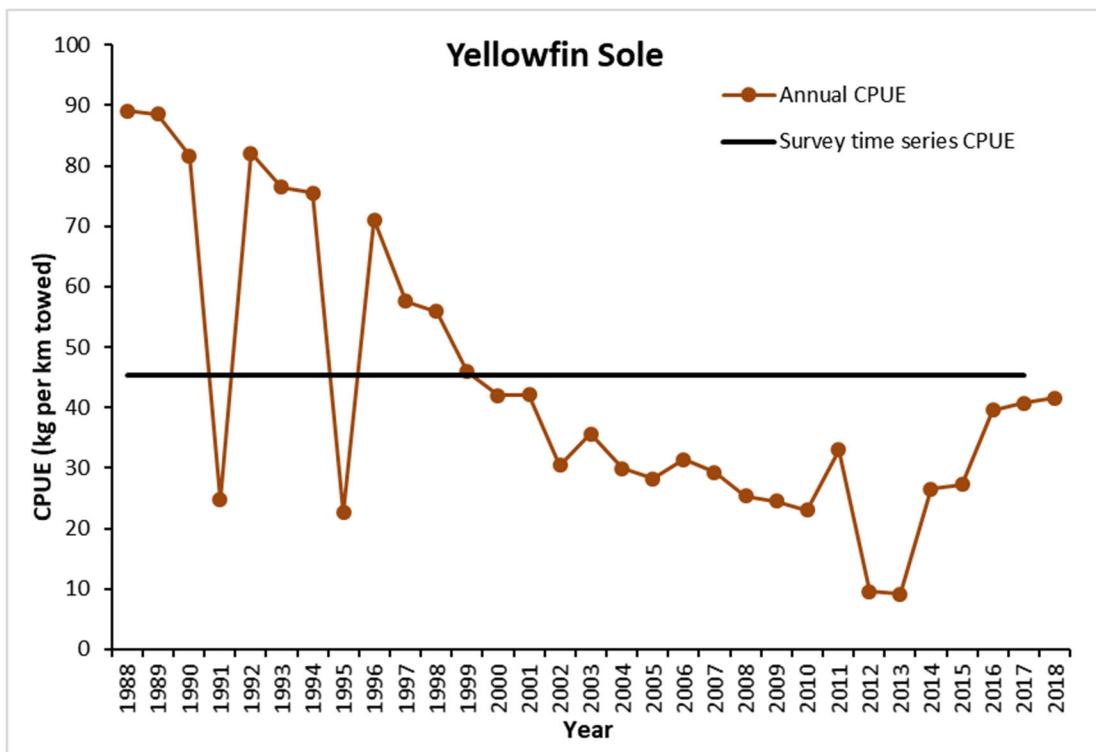


Figure 54.—Yellowfin sole annual CPUE in kilograms per kilometer towed from the 1988–2018 large-mesh bottom trawl surveys.

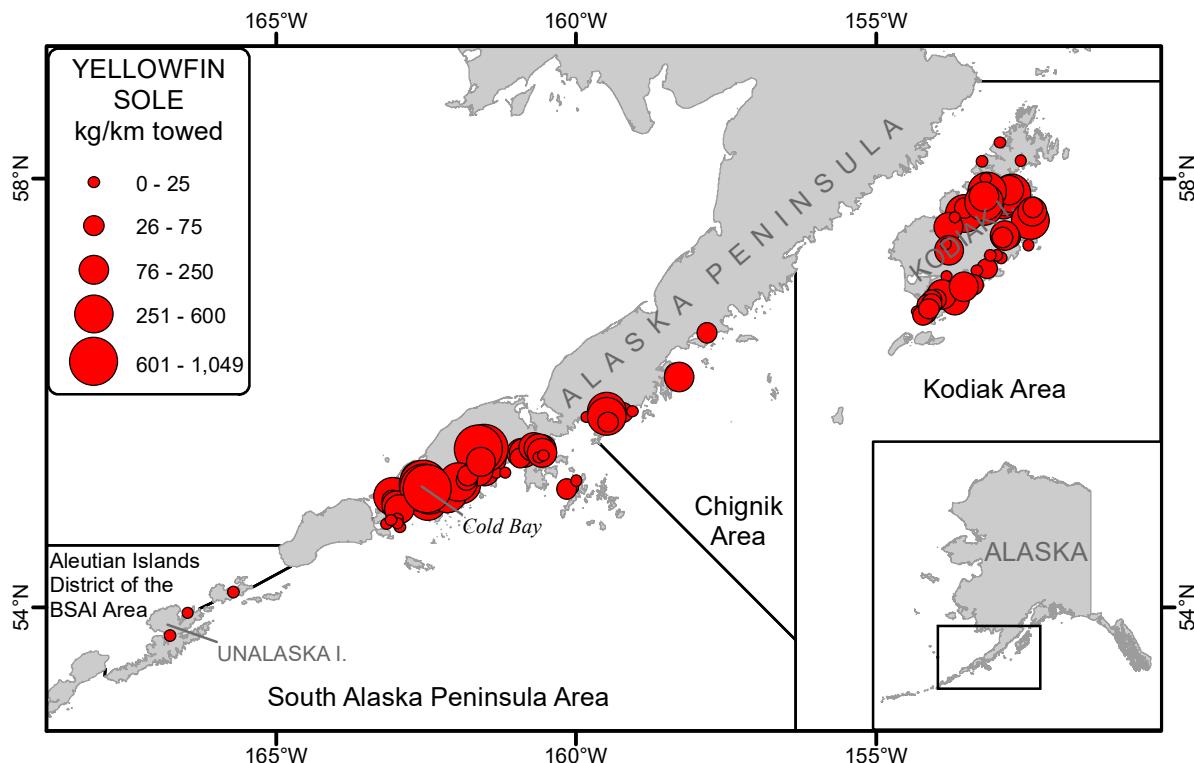


Figure 55.—Yellowfin sole station CPUE in kilograms per kilometer towed from the 2018 large-mesh bottom trawl survey.

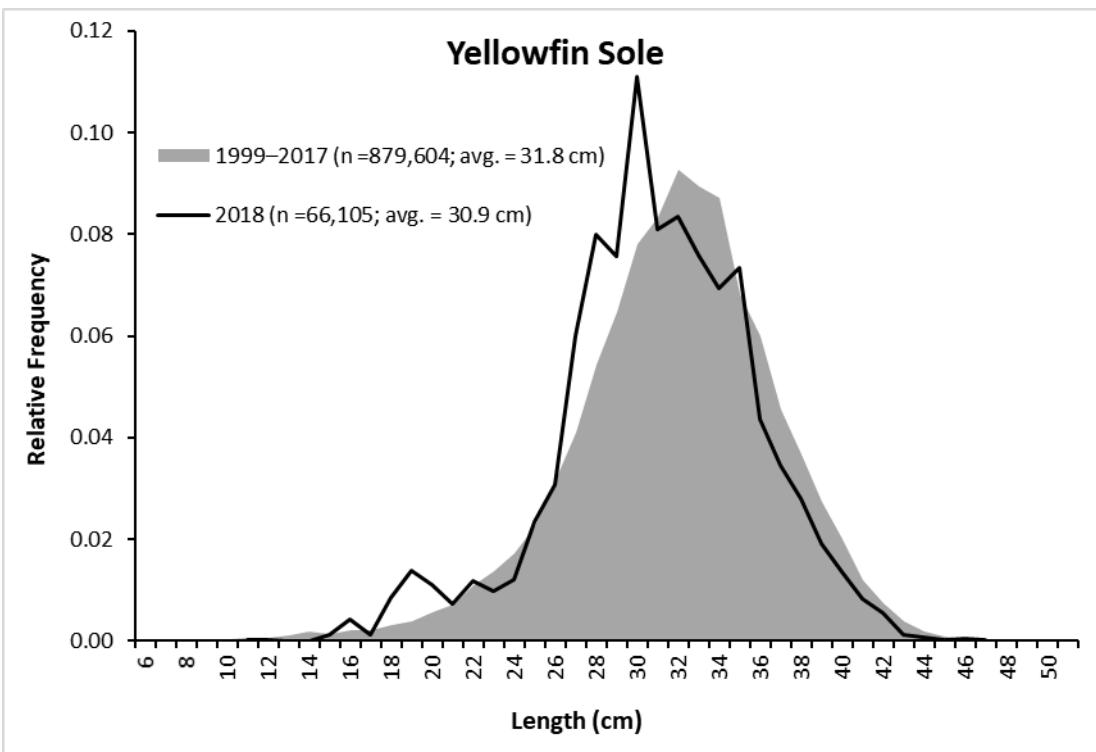


Figure 56.—Yellowfin sole length frequency from the large-mesh bottom trawl surveys, 1999–2018.

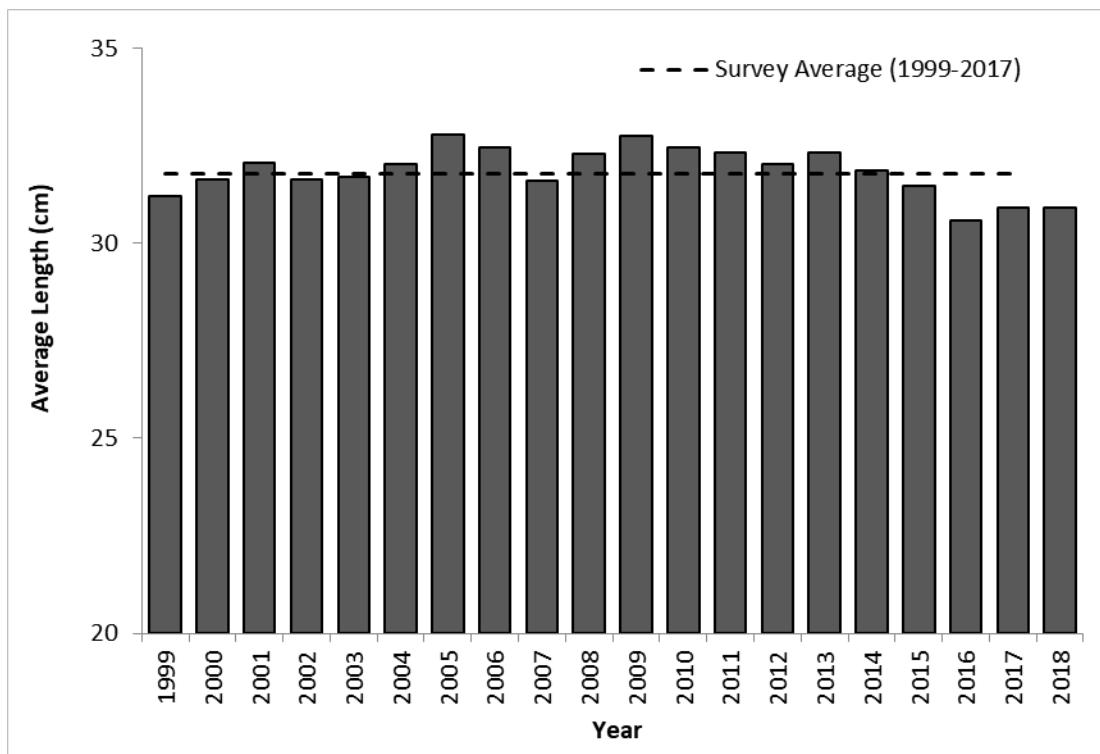


Figure 57.—Average yellowfin sole length from fish caught on the large-mesh bottom trawl surveys, 1999–2018.

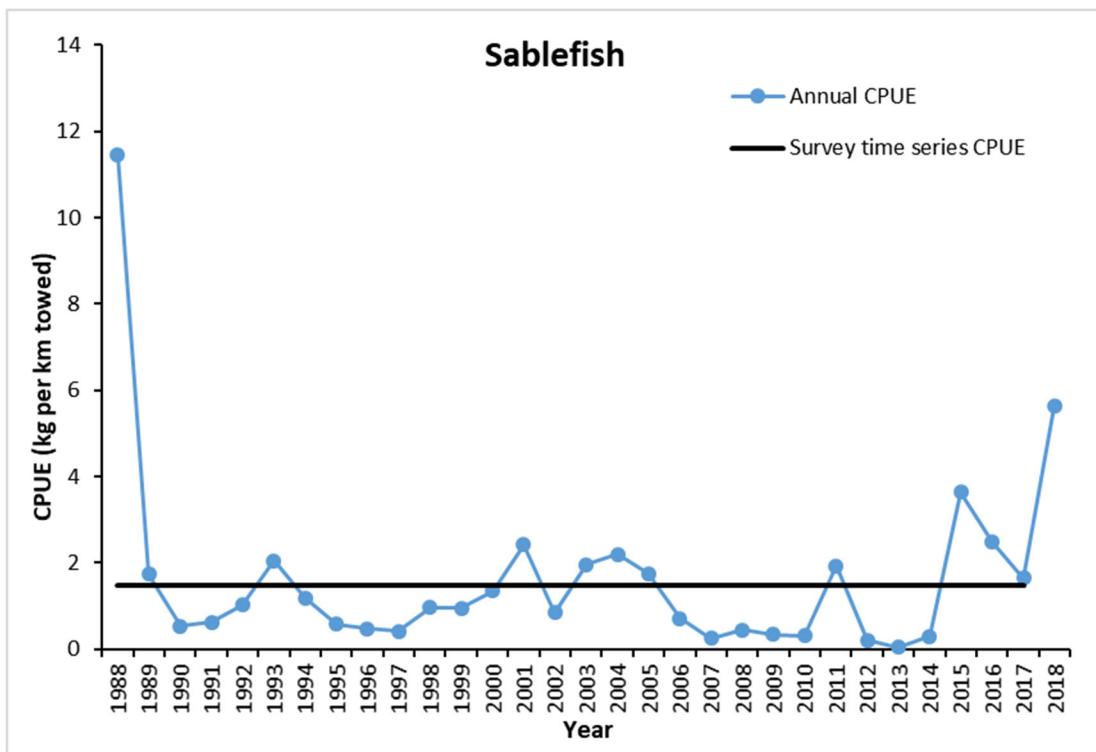


Figure 58.—Sablefish annual CPUE in kilograms per kilometer towed from the 1988–2018 large-mesh bottom trawl surveys.

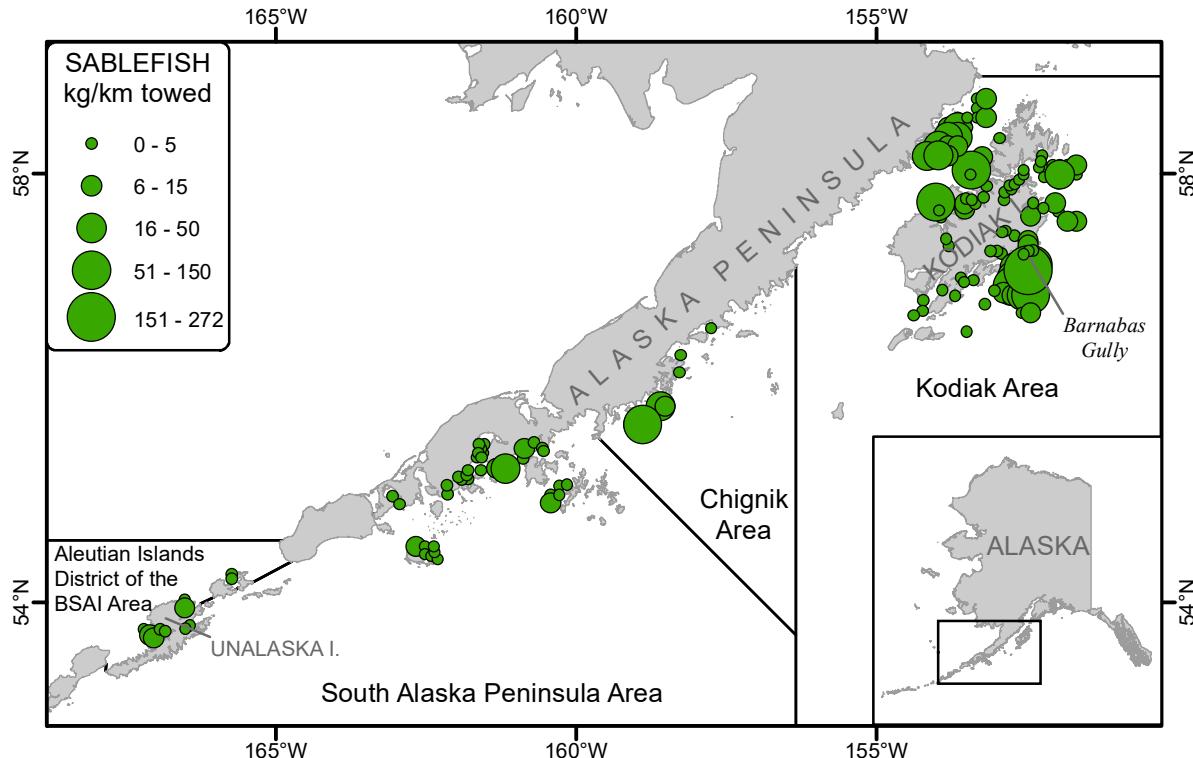


Figure 59.—Sablefish station CPUE in kilograms per kilometer towed from the 2018 large-mesh bottom trawl survey.

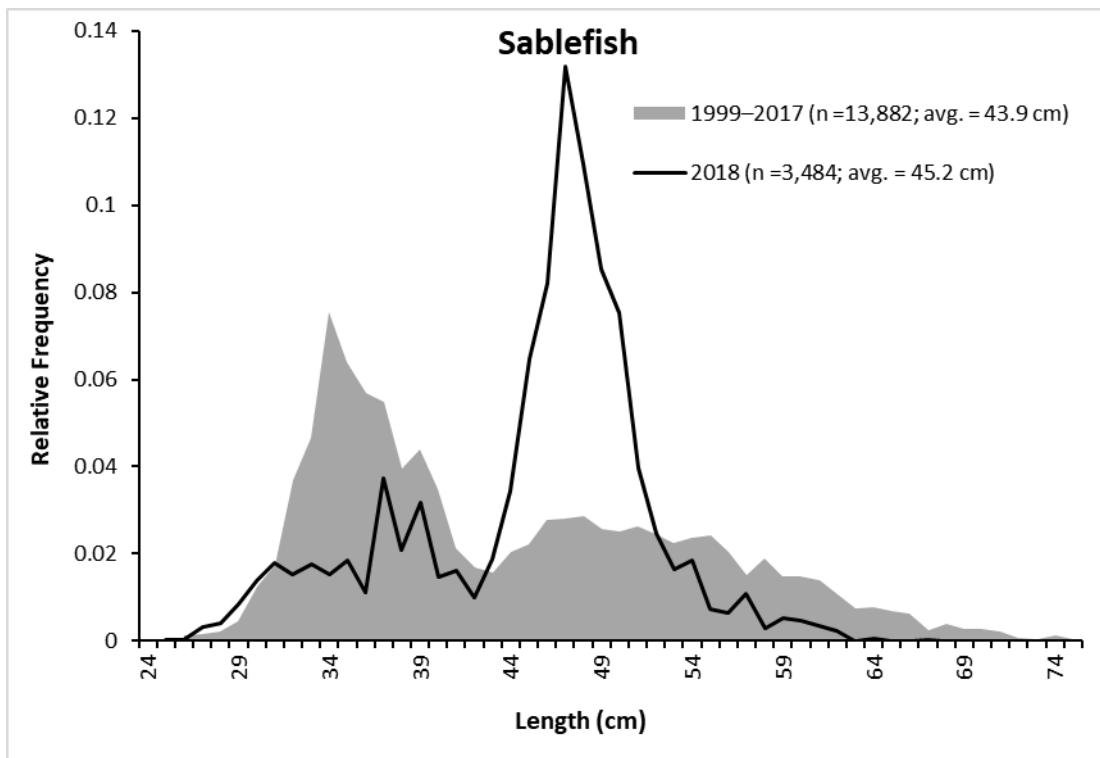


Figure 60.—Sablefish length frequency from the large-mesh bottom trawl surveys, 1999–2018.

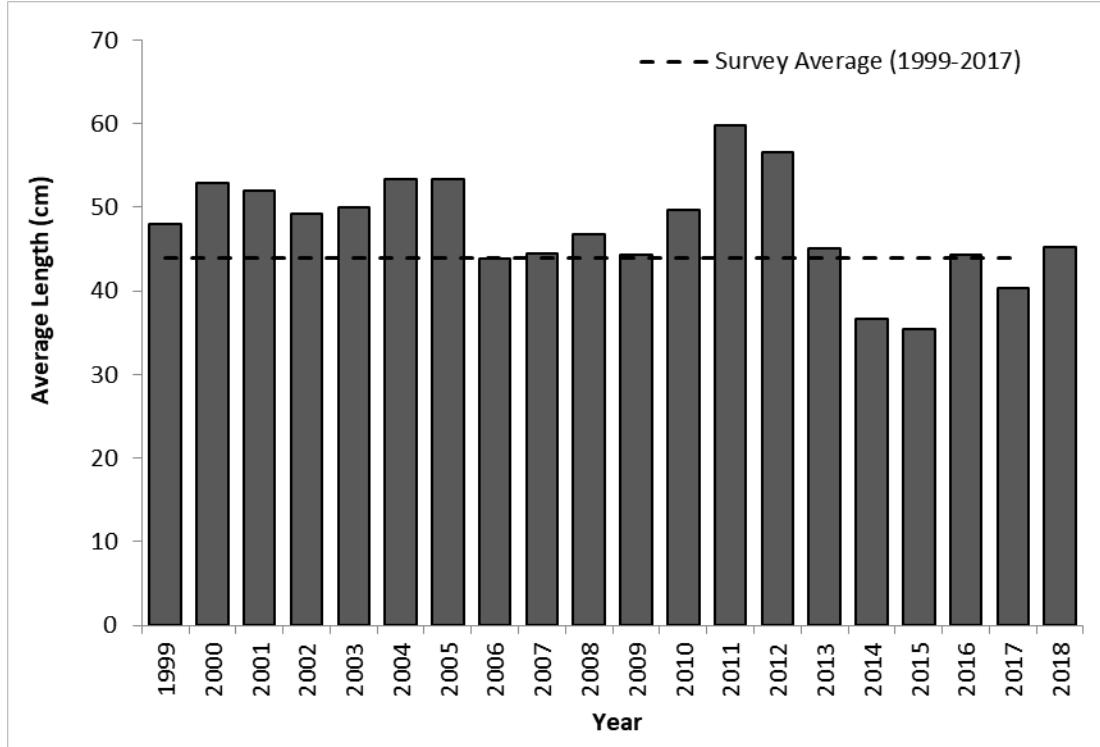


Figure 61.—Average sablefish length from fish caught on the large-mesh bottom trawl surveys, 1999–2018.

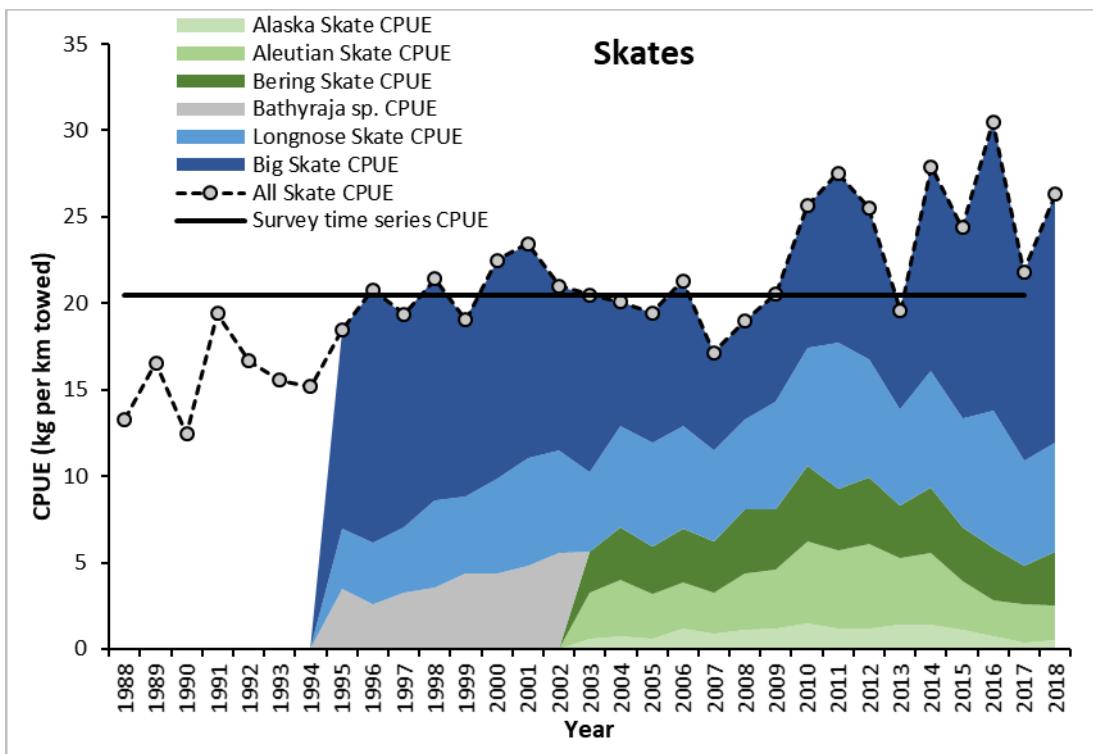


Figure 62.—Annual skate CPUE in kilograms per kilometer towed from the 1988–2018 large-mesh bottom trawl surveys.

Note: Skates were identified to genus starting in 1995, and to species starting in 2003.

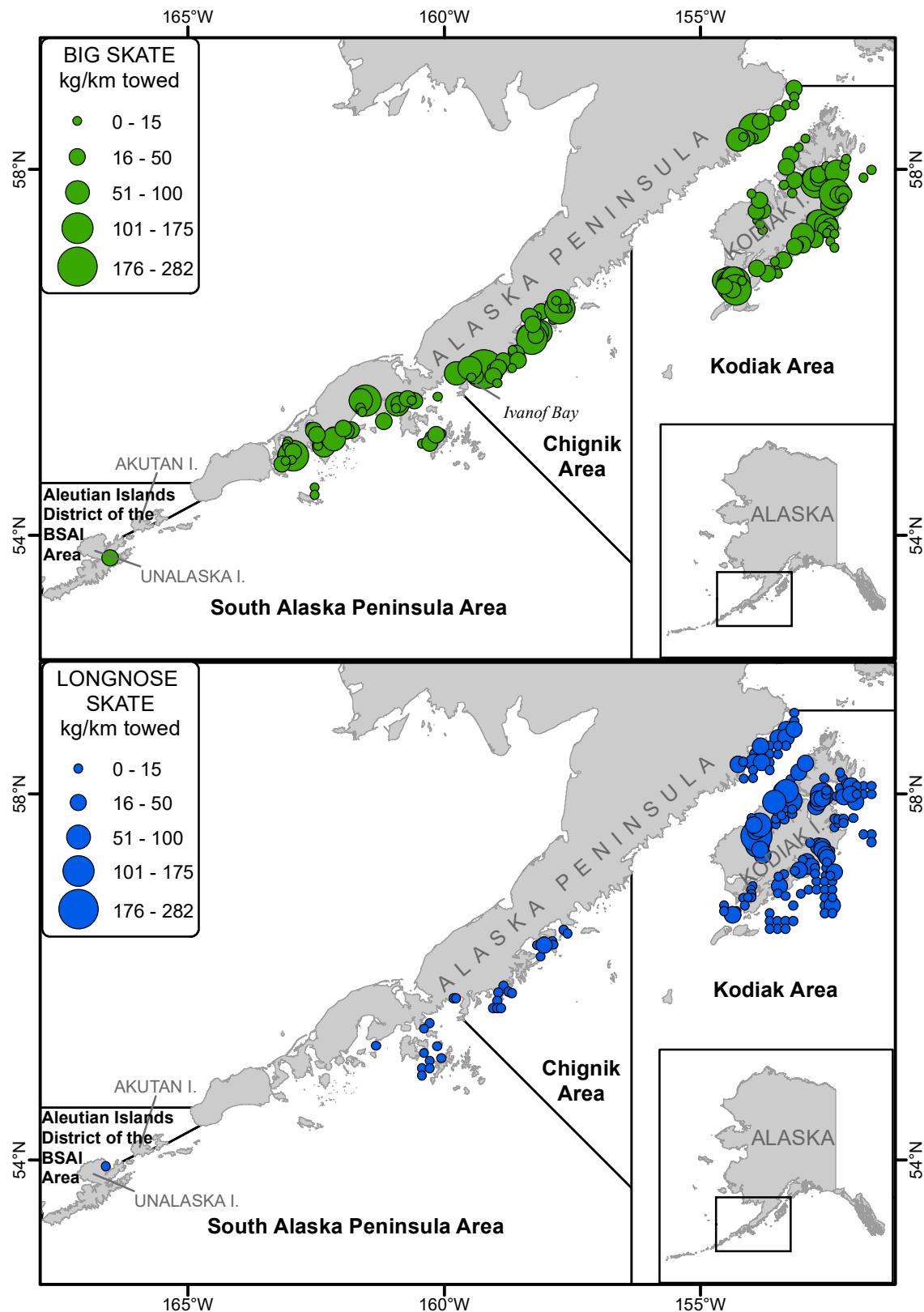


Figure 63.—Big and longnose skate catch in kilograms per kilometer towed from the 2018 large-mesh bottom trawl survey.

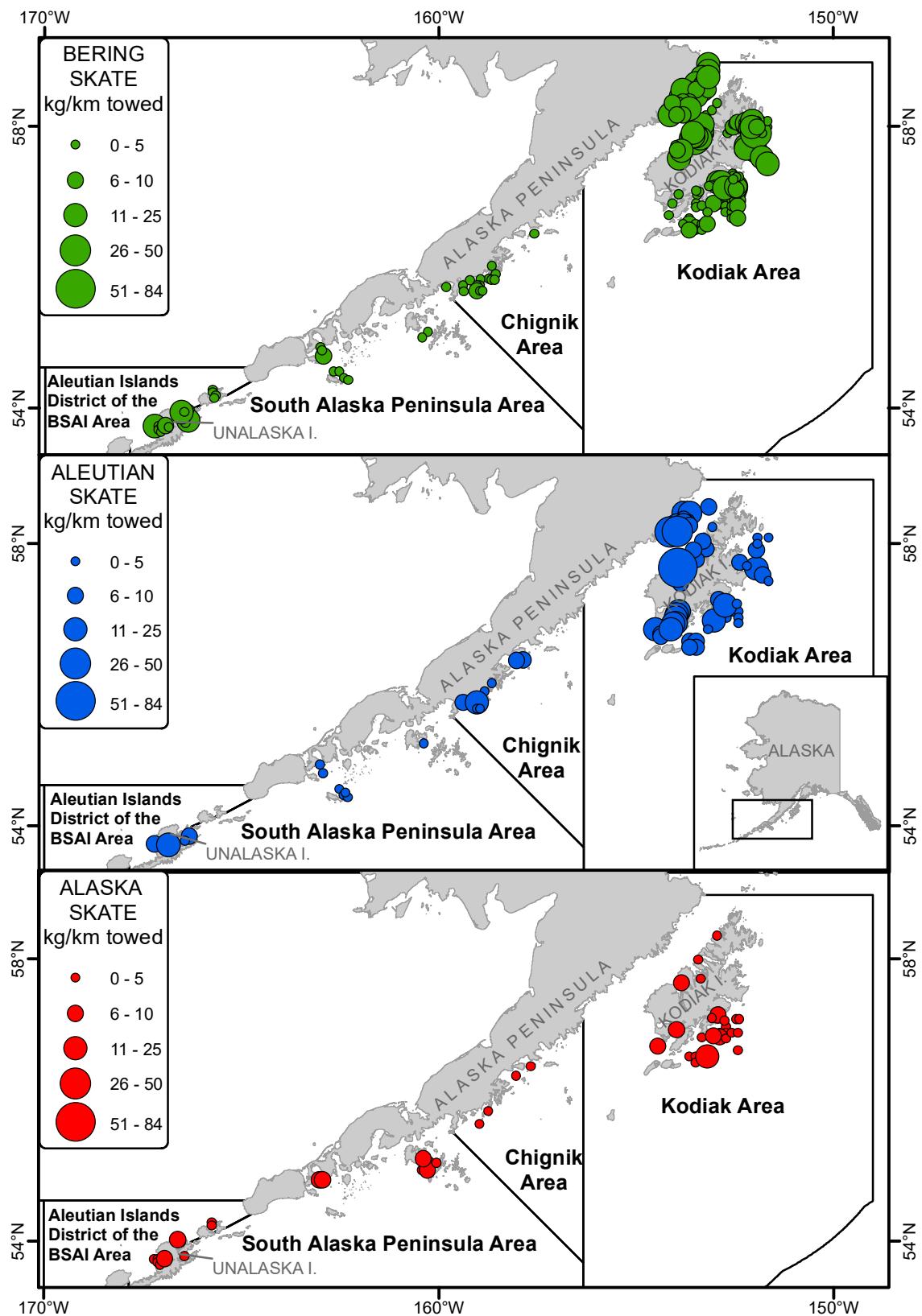


Figure 64.—Bering, Aleutian, and Alaska skate catch in kilograms per kilometer towed from the 2018 large-mesh bottom trawl survey.

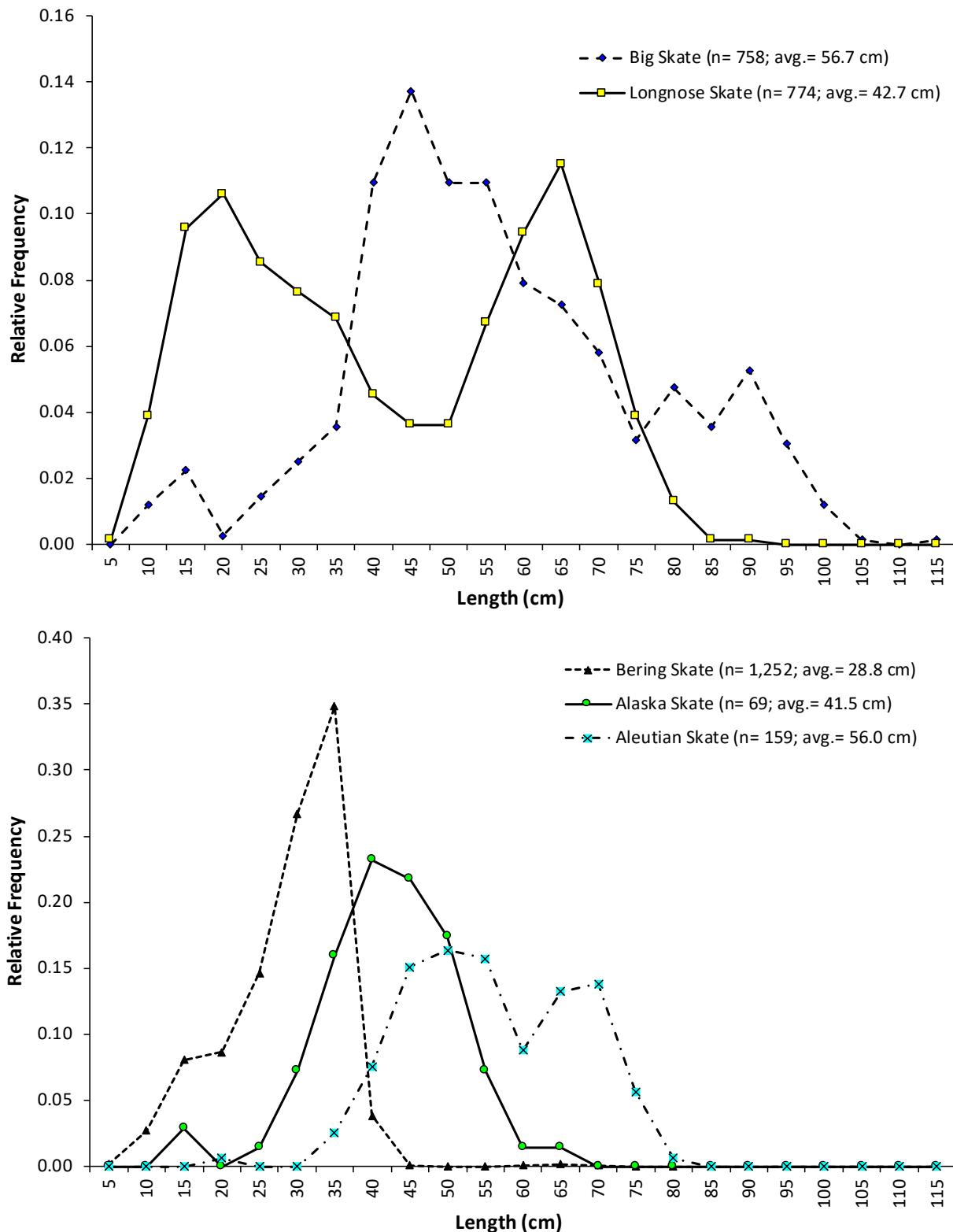


Figure 65.—Big, longnose, Bering, Alaska, and Aleutian skate relative size frequencies (snout to anterior notch of pectoral fin) from the 2018 large-mesh bottom trawl survey.

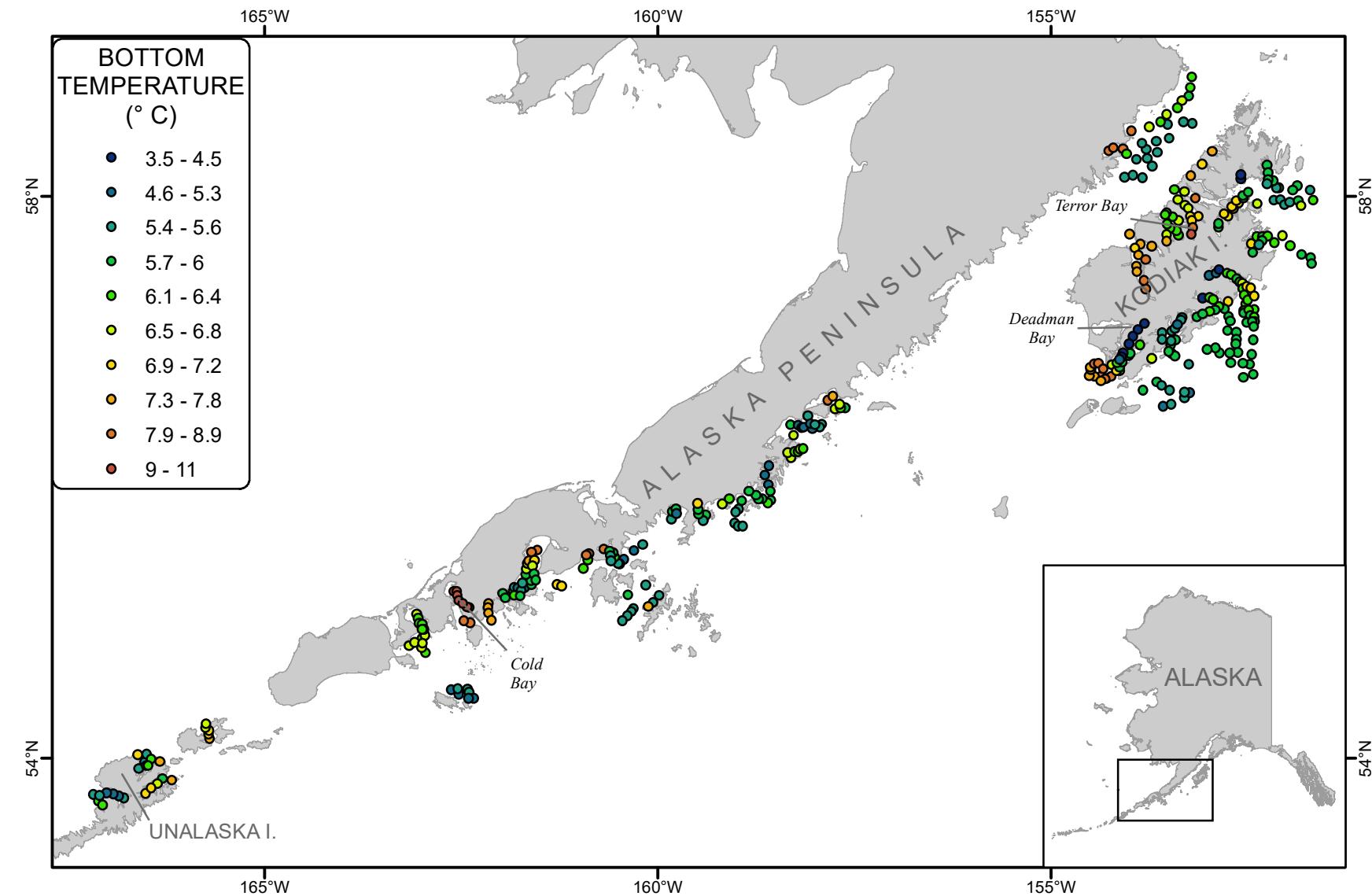


Figure 66.—Near-bottom water temperatures from the 2018 large-mesh bottom trawl survey.

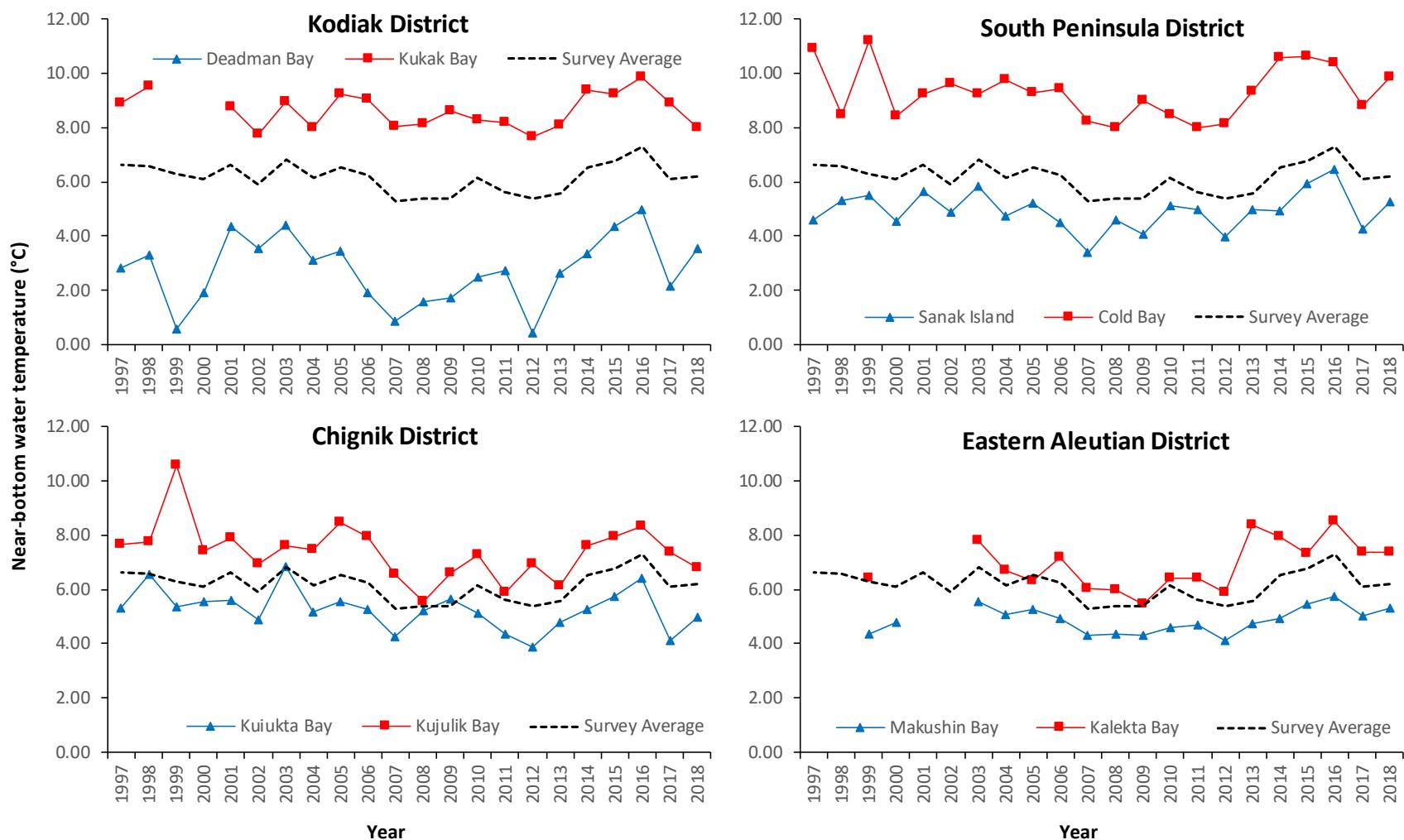


Figure 67.—Near-bottom water temperature ($^{\circ}\text{C}$) for warmest and coldest bays during the 2018 large-mesh bottom trawl survey and the average water temperature in those bays from 1997–2018 surveys.

Note: Temperatures presented are the average temperature of all hauls within the area of interest (bay, district, or entire survey).

APPENDIX A. GLOSSARY

Appendix A1.—Definition of terms in large-mesh trawl survey report.

Large-mesh trawl survey: Definitions of terms

Crab Terms

<i>abdominal flap</i>	Crab abdomen folded underneath body. Can be lifted to reveal reproductive appendages. Shape of abdominal flap used to identify crab sex; males have a triangular shaped abdominal flap, and females are more rounded.
<i>anterolateral spines</i>	Spines on the margin of anterior half of carapace.
<i>bitter crab disease</i>	Disease lethal to crabs caused by a parasitic dinoflagellate of the genus <i>Hematodinium</i> known to infect <i>Chionoecetes</i> spp. crabs. Live crab in later stages of infection have an exaggerated pink carapace or legs and white opaque hemolymph that can be observed if a leg is cracked. Crab infected with this parasite are unmarketable because of an astringent aspirin aftertaste.
<i>black mat</i>	A systemic fungal infection (<i>Trichomaris invadens</i>) that forms non-discrete blotches of a black, tar-like mass on the carapace and legs. Black mat has a fibrous like texture when scraped.
<i>carapace</i>	Main part of crab shell which covers body of crab. It is divided into the gastric, branchial, and cardiac regions.
<i>carapace length</i>	The biological size measurement of all species of king crabs taken as the straight-line distance from the posterior margin of the right eye orbit to the medial-posterior carapace margin.
<i>carapace width</i>	Crab measurement taken as the greatest straight-line distance perpendicular to a line midway between the eyes to the medial-posterior margin. Biological measurements do not include spines.
<i>chela height</i>	Measurement of the right claw of a crab taken at the greatest height, excluding spines.
<i>clutch</i>	Eggs beneath a female abdominal flap.
<i>eyed eggs</i>	Stage of egg development when dark eyespots are present and visible to the human eye.
<i>juvenile</i>	An animal that has not reached sexual maturity.
<i>lateral margin</i>	The outer edge of the crab carapace.
<i>legal size</i>	The minimum size of an animal that may be retained by state regulation. For Tanner crab males in Kodiak, Chignik, South Peninsula, and Eastern Aleutian districts legal size is 5.5 inches (140 mm) carapace width including the lateral margin spines. For king crab males minimum legal size is 7.0 inches (177.8 mm) carapace width in the Kodiak Area and 6.5 inches (165.1 mm) carapace width in the Alaska Peninsula and Aleutian Islands areas, including the lateral margin spines. For Dungeness crab the minimum legal size is 6.5 inches (165.1 mm) carapace width, immediately anterior to the tenth anterolateral spine.
<i>mature female</i>	A female animal that has reached sexual maturity. For Tanner crab, mature females have a circular abdominal flap that covers most of the ventral surface of the crab, whereas a juvenile female abdominal flap covers only about $\frac{2}{3}$ of the ventral surface. For red king crab, mature females include ovigerous females of any size, all females >115 mm CL in the Kodiak area, and all females >99 mm CL in the Alaska Peninsula and Aleutian Islands areas.

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<i>mature male</i>	A male animal that has reached sexual maturity. For Tanner crab, mature males are considered to be all males that are >114 mm carapace width.
<i>medial-posterior edge</i>	The middle of the back edge of the carapace.
<i>midline</i>	The median plane of the body of an animal. For crabs this is an imaginary line running along the carapace from between the eyes to the medial-posterior edge.
<i>multiparous female</i>	A female crab that has produced more than one clutch of eggs. For Tanner crab they may be identified by the presence of discolored grasping marks on legs.
<i>nemertean worms</i>	Egg parasites in clutch of mature female crab that prey on developing embryos. Worms are small, red in color, often S-shaped during early stages of development, and are most obvious in clutch with a high number of dead embryos.
<i>new shell</i>	Carapace and chela are hard and will crack when pressure is applied. Legs are not easily compressed when pinched and will break if bent. Colors are bright. Iridescence, particularly on the chelae, is often visible. Ventral surface can be any variation of white or pink. Spines, chela tips, chela teeth, and dactyl tips are sharp. Abdomen, coxae, and legs have little or no scratches and abrasions. Slight fouling may be present, including but not limited to leech egg cases, small barnacles, and encrusting bryozoans. On Tanner crab females, subtle grasping mark imprints may be present on the first 2 pairs of legs.
<i>old shell</i>	Colors are dull. Iridescence on the chelae may be visible. Ventral surface typically appears yellow to brown. Spines, chela tips, chela teeth, and dactyl tips may show wear. Abdomen, coxae, and legs have few to numerous scratches and abrasions, which may be slightly darker than the shell. Slight fouling may be present, including but not limited to leech egg cases, barnacles, bryozoans, tubeworm casings, and anemones. On Tanner crab females, grasping marks are often present and discolored on the first 2 pairs of legs.
<i>ovigerous</i>	Bearing eggs.
<i>parasitic barnacle</i>	The rhizocephalan barnacle <i>Briarosaccus callosus</i> exclusively parasitizes king crab species. The visible externa of the parasite is located in the abdominal flap of both sexes and varies in size from as small as a jellybean to as large as a chicken egg and in color from pale yellow to deep red. It causes castration in infected crabs and is uncommon around Kodiak and along the Alaska Peninsula.
<i>postrecruit male</i>	Male crab that have been legal size for more than 1 year. Tanner crab postrecruit males are 140–164 mm CW and old or very old/very very old shell and all males ≥165 mm CW. Red king crab postrecruit males are all legal-size crab that are old or very old/very very old, all males ≥164 mm CL in the Kodiak area, and all males ≥152 mm CL in the Alaska Peninsula and Aleutian Islands areas.
<i>prerecruit male</i>	Male crab not legal size. Prerecruit crab are often divided into size groups. For red king crab prerecruit IV are crab <95 mm CL in the Kodiak Area and <79 mm CL in the Alaska Peninsula and Aleutian Islands areas. Prerecruit III are crab 95–112 mm CL in the Kodiak Area and 79–95 mm CL in the Alaska Peninsula and Aleutian Islands areas. Prerecruit II are crab 113–130 mm CL in the Kodiak Area and 96–115 mm CL in the Alaska Peninsula and Aleutian Islands areas. Prerecruit I are crab >130 mm CL in the Kodiak Area and >115 mm CL in the Alaska Peninsula and Aleutian Islands areas.

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<i>primiparous female</i>	A female crab that is carrying its first clutch of eggs. For Tanner crab they may be identified by being soft/new pliable or new shell mature females.
<i>recruit male</i>	Male crab that became legal size in the last year. For Tanner crab a recruit is soft/new pliable and new shell, 140–164 mm CW. For red king crab in the Kodiak Area a recruit is legal-size, soft/new pliable, and ≤164 mm CL. For red king crab in the Alaska Peninsula and Aleutian Islands areas a recruit is legal-size, soft/new pliable, and ≤152 mm CL.
<i>shell condition</i>	A description of the appearance of a crab's exoskeleton, and is determined by examining characteristics that show wear with time. The ADF&G trawl survey program recognizes 4 shell condition categories: soft/new pliable, new, old, and very old/very very old.
<i>soft/new pliable shell</i>	1) The exoskeleton is soft, flaccid, similar in texture to skin, and loses shape out of water. No scratches, abrasions, or epibionts are present. OR 2) Carapace and chela are firm, but thin and flexible and can be easily indented with slight thumb pressure. Legs are easily compressed when pinched. Colors are bright. Iridescence is common. Abdominal flap may appear translucent. Spines, chela tips, chela teeth, and dactyl tips are sharp if not pliable. No scratches, abrasions, or epibionts are present.
<i>spines</i>	Pointed processes along the edge of a crab carapace.
<i>very old/very very old shell</i>	1) Colors are dull and often dark on the dorsal surface. Ventral surface typically appears yellow to brown with darker areas. Spines, chela tips, chela teeth, and dactyl tips are heavily worn. Legs are commonly damaged or missing. Abdomen, coxae, and legs have numerous scratches and abrasions, which are typically darker than the shell. Slight to moderate fouling is common, including—but not limited to—leech egg cases, large barnacles, bryozoans, hydroids, tubeworm casings, and anemones. On Tanner crab females, multiple grasping marks are often present and discolored on the first 2 pairs of legs. OR 2) Carapace may be soft and spongy because of decay. Colors are dark overall. Spines, chela tips, chela teeth, and dactyl tips are heavily worn. Legs are commonly damaged or missing. Moderate to extensive fouling is common.

Trawl Net Terms

<i>codend</i>	The trailing end of a tapered trawl net where catch accumulates during towing.
<i>dandy lines</i>	Also called bridles. Cables between trawl door and side of trawl net.
<i>doors</i>	Steel boards attached between vessel and trawl net, positioned to create hydrodynamic forces while towing that push them apart and spread the opening of the net.
<i>footrope</i>	The line running along lower mouth of net. Net used during large-mesh trawl survey has footrope weighted with chain to keep it on bottom.
<i>headrope</i>	The line running along upper mouth of net with floats attached to keep the net open.
<i>mesh</i>	An open fabric of line or cord, the intersections of which are looped or knotted into various sized spaces and sewn together to form a net.

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<i>net performance</i>	A rating given by the skipper describing problems encountered with the net during a haul.
<i>sweep</i>	The width net covers when towed over the seafloor.
<i>wing</i>	The portion of the trawl net forward of the main body of the net.
<u>Sampling Terms</u>	
<i>catch</i>	Quantity of animals caught in trawl net. Measured in numbers or weight of animals.
<i>catch weight database</i>	The onboard database used to enter weights of all species identified during the haul. All information is entered upon completion of catch sampling. Data from the shellfish and fish measurement databases are incorporated into the catch weight database after each haul.
<i>cruise leader</i>	Biologist in charge of coordinating biological sampling activities during the survey and responsible for the quality of collected data while on the vessel.
<i>debris</i>	Contents of the trawl net that are not identified or sampled, including rocks, empty shells, seaweed, previously dead organisms, or human made objects.
<i>fish measurement database</i>	The onboard database used to collect fish measurements. Measurements can be entered directly from the magnetic fish measuring board, or entered into the database manually using a networked input program from a network connected device.
<i>haul</i>	From the time trawl net reaches bottom and is towed in an attempt to fish to the time the vessel stops moving and begins retrieving the net.
<i>haul database</i>	The onboard database to store information associated with the fishing process for each haul. Data from skipper trawl record forms are manually entered at the end of each day
<i>onboard databases</i>	Databases in use during the trawl survey include: fish measurement database, shellfish measurement database, catch weight database, and haul database.
<i>on-deck sorting bin</i>	An area located on the back deck of the survey vessel contained by removable boards where the catch from the codend is emptied after every haul, prior to sorting and removal of the subsample.
<i>shellfish measurement database</i>	Onboard database used to enter crab measurements and biological information. Measurements and crab information are entered directly using electronic calipers and the crab keyboard, or by using a standard keyboard.
<i>sorting table</i>	Table located on the forward part of deck where the subsample is sorted for species composition, weighing, and measuring.
<i>species composition sampling</i>	Sorting, identification, and weighing of organisms in the catch to determine proportion and total weight of each species.
<i>station</i>	Survey area sampling unit. Each station is towed once during the annual survey.
<i>subsample</i>	A representative and random subset of the total haul catch.
<i>subsampling net</i>	The net used to obtain the subsample. This net is tied into the on-deck sorting bin and the haul catch is emptied into the bin. The subsampling net is then untied and lifted through the catch to capture a representative subsample that is sorted at the sorting table.

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<i>whole-haul</i>	When 100% of the trawl catch of a specific species is accounted for by weight, count, or measurement, or a combination. In instances when there is a small total catch, when 100% of the total trawl catch is sorted and weighed.
<hr/>	
<u>Management Terms</u>	
<i>abundance threshold</i>	Level of mature male Tanner crab abundance described in state regulation that must be met in order to consider opening a commercial fishery.
<i>GHL</i>	Guideline Harvest Level. Catch quota established prior to the beginning of each fishing season. GHLs for Tanner crab are based on large-mesh trawl survey data.
<i>legal male</i>	Crab that may be retained by state regulation; only male crab of specific size are considered legal to retain.
<i>long-term average abundance</i>	Average abundance of mature male Tanner crab from 1967–1998 as determined using a combination of trawl survey data, commercial catch history, and pot survey catches, and used to establish regulatory abundance thresholds.
<i>management district</i>	Regulatory unit to facilitate resource management.
<i>management section</i>	Management districts are divided into sections to facilitate management of the Tanner crab fisheries and are based on local distributions and migration patterns. Each section has a separate GHL.
<i>molting mature male crab</i>	Estimated abundance of 100% newshell and 15% oldshell male Tanner crab that are >114 mm carapace width.
<hr/>	
<u>Other Biological Terms</u>	
<i>anterior</i>	Toward the front, near the head, or rostral end of a crab.
<i>caudal fin</i>	The tail of a fish.
<i>claspers</i>	A paired organ of male sharks and skates. Assists transfer of spermatozoa into the body of a female during copulation.
<i>dorsal</i>	The back or part of an organism away from the ground. Refers to the hinge area of a scallop shell.
<i>inclement weather</i>	Severe, rough, harsh, or stormy.
<i>pectoral fin</i>	Either of a pair of fins situated behind the head, one on each side of the body.
<i>posterior</i>	The rear, away from the head.
<i>shell height</i>	The straight-line distance from the umbo to the outer scallop shell margin, perpendicular to the hinge. Scallop shell heights are measured on the left (top) valve.
<i>umbo</i>	Beak-like projections at the dorsal part of a shell; it is the oldest part of a bivalve shell.
<i>valve</i>	One of the 2 parts of a bivalve shell, 2 valves make up one shell.
<hr/>	
<u>Data Analysis Terms</u>	
<i>area swept</i>	The sea floor area sampled by the trawl during a haul.
<i>catchability</i>	The relationship between the proportion of a population available to the survey gear and the proportion of the population in the trawl path retained by the survey net.

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<i>density</i>	The number or weight of a species present per unit of area.
<i>distance towed/haul length</i>	Distance the vessel travels between the time the trawl net footrope contacts bottom and the time the center of footrope leaves bottom.
<i>escapement</i>	The act of an organism in the trawl path evading capture by the trawl net.
<i>relative abundance indices</i>	Indices that track change in population size, but do not estimate actual population size.
<i>size selectivity</i>	The consequence of fishing gear capturing organisms of different sizes at different rates.
<i>true abundance</i>	The actual number of animals present in the area of interest.

APPENDIX B. FISHING LOG AND TRAWL STATIONS SAMPLED

Appendix B1.—2018 large-mesh bottom trawl survey fishing log.

Haul	1	2	3	4	5	6	7	8	9	10	11	12	13
Location	NE Kod.												
Month/Day/Year	6/14/2018	6/14/2018	6/14/2018	6/14/2018	6/15/2018	6/15/2018	6/15/2018	6/15/2018	6/19/2018	6/19/2018	6/19/2018	6/19/2018	6/19/2018
Station	CHJ	CHK	CHL	CHG	CHE	CHF	CHB	CHA	KZG	KZE	KZC	KZA	KZB
Longitude Start (°W)	152.3777	152.3087	152.2463	152.1572	152.4502	152.3153	152.3568	152.4332	152.6175	152.6795	152.7467	152.8678	152.8658
Latitude Start (°N)	57.7273	57.7268	57.7297	57.685	57.6777	57.6975	57.6713	57.6168	57.9525	57.9137	57.8618	57.7897	57.8137
Heading, Degrees	128	104	76	25	44	47	56	32	268	16	52	15	24
Average Depth (m)	91.43	157.2	179.2	144.4	16.45	133.4	126.1	45.71	128	102.4	67.66	42.06	51.2
Distance Fished (km)	1.85	1.80	1.85	1.85	0.93	1.85	1.85	1.85	1.85	1.48	1.39	1.11	1.11
Bottom Temp. (°C)	6.16	5.98	6.15	6.33	6.83	5.78	5.62	5.8	6.98	6.93	7.1	5.8	5.98
Haul	14	15	16	17	18	19	20	21	22	23	24	25	26
Location	NE Kod.												
Month/Day/Year	6/20/2018	6/20/2018	6/20/2018	6/20/2018	6/20/2018	6/20/2018	6/20/2018	6/20/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018
Station	KZD	KZF	KZJ	KZK	KZO	MONX	KZR	KZS	MOEX	MOGX	283A	313	283B
Longitude Start (°W)	152.7948	152.7002	152.6423	152.5522	152.5603	152.4917	152.586	152.5825	152.374	152.1622	152.0773	152.0265	151.965
Latitude Start (°N)	57.8788	57.9278	57.9683	57.9865	58.0012	58.0272	58.1185	58.1447	57.9477	57.9725	57.9737	57.94	57.9593
Heading, Degrees	42	30	59	46	30	26	358	180	72	19	147	109	58
Average Depth (m)	95.09	135.3	131.6	179.2	186.5	190.1	118.8	98.75	124.3	175.5	173.7	201.1	186.5
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.85	1.48	1.48	1.85	1.85	1.85	1.85	1.85
Bottom Temp. (°C)	7.2	7.15	6.91	5.79	5.79	5.71	4.36	4.46	6.51	5.61	5.56	5.63	5.58
Haul	27	28	29	30	31	32	33	34	35	36	37	38	39
Location	NE Kod.												
Month/Day/Year	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018	6/23/2018
Station	284	314	285	257	MOXA	MOXB	256	255B	255A	MOLB	MOLA	MOPA	MOPB
Longitude Start (°W)	151.8552	151.816	151.665	151.699	152.25	152.2423	151.867	151.9272	152.1013	152.1307	152.1718	152.2367	152.2532
Latitude Start (°N)	57.9683	57.9335	57.9715	58.0407	58.2103	58.1567	58.0685	58.0393	58.055	58.0553	58.1027	58.1098	58.0838
Heading, Degrees	261	104	348	339	175	134	125	317	323	182	331	221	221
Average Depth (m)	138.9	56.69	98.75	151.7	142.6	171.8	137.1	135.3	171.8	149.9	195.6	168.2	166.4
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.48	1.85	1.85
Bottom Temp. (°C)	5.85	6.64	6.37	5.64	5.8	5.75	5.76	5.79	5.68	5.63	5.64	5.67	5.63
Haul	40	41	42	43	44	45	46	47	48	49	50	51	52
Location	NE Kod.	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.				
Month/Day/Year	6/28/2018	6/28/2018	6/28/2018	6/28/2018	6/28/2018	6/29/2018	6/29/2018	6/29/2018	6/29/2018	6/29/2018	6/29/2018	6/29/2018	6/29/2018
Station	369X	395	420	421	444	UGAC	UGAD	UGAA	UGB	UGC	UGD	UGE	UGF
Longitude Start (°W)	152.0535	151.9598	151.8135	151.6988	151.6835	152.9872	152.9005	152.858	152.7555	152.7093	152.6358	152.599	152.5682
Latitude Start (°N)	57.7327	57.6635	57.6015	57.5833	57.5415	57.4617	57.476	57.4983	57.4737	57.4633	57.4353	57.4165	57.4043
Heading, Degrees	0	287	165	160	210	55	84	140	183	117	125	165	189
Average Depth (m)	109.7	208.4	144.4	120.6	159	34.74	64	73.14	87.77	91.43	100.5	91.43	87.77
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.11	1.85	1.85	1.85	1.85	1.85	1.85	1.11
Bottom Temp. (°C)	6.77	6.07	5.97	5.98	5.95	4.95	4.56	4.47	6.02	6.02	5.99	6.02	6.73

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Haul	53	54	55	56	57	58	59	60	61	62	63	64	65
Location	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.						
Month/Day/Year	6/30/2018	6/30/2018	6/30/2018	6/30/2018	6/30/2018	6/30/2018	6/30/2018	7/1/2018	7/1/2018	7/1/2018	7/1/2018	7/1/2018	7/1/2018
Station	UGI	UGG	UGJ	UGM	510D	486A	486B	511B	KLD	510C	534BX	511A	535A
Longitude Start (°W)	152.5578	152.5068	152.4588	152.5422	152.5247	152.4958	152.4097	152.4148	152.747	152.5462	152.5457	152.4855	152.4635
Latitude Start (°N)	57.3705	57.385	57.3738	57.3273	57.2638	57.2917	57.3205	57.2243	57.2798	57.2193	57.2032	57.2228	57.1838
Heading, Degrees	151	65	189	200	328	19	157	193	211	222	188	141	160
Average Depth (m)	96.92	65.83	69.49	100.5	96.92	100.5	73.14	76.8	23.77	91.43	98.75	100.5	137.1
Distance Fished (km)	1.11	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.30	1.85	1.85	1.85	1.85
Bottom Temp. (°C)	6.14	7.01	7.08	6.37	6.22	6.34	7.02	6.33	7.21	5.89	5.82	6.17	5.94
Haul	66	67	68	69	70	71	72	73	74	75	76	77	78
Location	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.						
Month/Day/Year	7/1/2018	7/1/2018	7/2/2018	7/2/2018	7/2/2018	7/2/2018	7/2/2018	7/2/2018	7/2/2018	7/2/2018	7/3/2018	7/3/2018	7/3/2018
Station	535B	535D	533A	534DX	535C	561	589	621	656	696	533B	560	588
Longitude Start (°W)	152.4142	152.4073	152.7422	152.5087	152.4368	152.416	152.427	152.4427	152.4683	152.4267	152.7217	152.6432	152.6423
Latitude Start (°N)	57.1742	57.1427	57.1763	57.1367	57.1417	57.107	57.0165	56.9137	56.8465	56.7747	57.1467	57.068	57.0193
Heading, Degrees	170	189	150	29	173	217	187	201	200	210	89	165	212
Average Depth (m)	131.6	140.8	140.8	128	148.1	148.1	137.1	162.7	173.7	177.3	144.4	151.7	153.6
Distance Fished (km)	1.85	1.30	1.30	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
Bottom Temp. (°C)	6.02	5.81	5.77	5.8	5.78	5.79	5.78	5.81	5.8	5.81	5.78	5.79	5.8
Haul	79	80	81	82	83	84	85	86	87	88	89	90	91
Location	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.	E Kod.						
Month/Day/Year	7/3/2018	7/3/2018	7/3/2018	7/3/2018	7/3/2018	7/4/2018	7/4/2018	7/4/2018	7/4/2018	7/4/2018	7/4/2018	7/5/2018	7/5/2018
Station	587	559	KLL	KLI	KLH	KLA	KLB	KLC	KLG	KLE	KLF	620	655
Longitude Start (°W)	152.6517	152.7518	152.7888	152.8613	152.91	153.073	152.9818	152.9408	152.98	153.1422	153.0748	152.6258	152.5627
Latitude Start (°N)	56.9887	57.0813	57.2287	57.2453	57.2227	57.3057	57.3102	57.2967	57.2117	57.1752	57.1957	56.9303	56.8538
Heading, Degrees	234	51	138	139	257	87	145	150	238	51	69	140	169
Average Depth (m)	149.9	151.7	135.3	124.3	131.6	91.43	80.46	91.43	115.2	113.3	120.6	151.7	146.2
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.11	1.85	1.85	1.85	1.85	1.85	1.85	1.85
Bottom Temp. (°C)	5.78	5.79	5.81	6.17	5.9	4.16	6.29	6.33	6.02	5.9	5.9	5.78	5.76
Haul	92	93	94	95	96	97	98	99	100	101	102	103	104
Location	E Kod.	E Kod.	E Kod.	SE Kod.	SE Kod.	SE Kod.	SE Kod.	SE Kod.	SE Kod.	SE Kod.	SE Kod.	SE Kod.	SE Kod.
Month/Day/Year	7/5/2018	7/5/2018	7/5/2018	7/5/2018	7/5/2018	7/6/2018	7/6/2018	7/6/2018	7/6/2018	7/6/2018	7/6/2018	7/6/2018	7/6/2018
Station	695	654	619	618A	586	585X	THH	THDX	614	651	615	THCX	THA
Longitude Start (°W)	152.5555	152.7133	152.7273	152.8525	152.9075	153.0125	153.4162	153.477	153.4632	153.2478	153.4235	153.4992	153.7162
Latitude Start (°N)	56.7553	56.8542	56.9243	56.9253	56.9602	56.9495	57.0183	56.981	56.9225	56.8462	56.905	56.9373	56.8865
Heading, Degrees	197	305	302	18	236	132	352	186	173	133	351	2	58
Average Depth (m)	144.4	100.5	135.3	120.6	129.8	135.3	98.75	129.8	138.9	173.7	140.8	129.8	49.37
Distance Fished (km)	1.85	1.85	1.74	1.67	1.67	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.30
Bottom Temp. (°C)	5.76	5.86	5.76	5.82	5.78	5.81	5.81	5.72	5.69	5.56	5.77	5.66	6.46

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Haul	105	106	107	108	109	110	111	112	113	114	115	116	117
Location	SE Kod.												
Month/Day/Year	7/7/2018	7/7/2018	7/7/2018	7/7/2018	7/7/2018	7/7/2018	7/7/2018	7/7/2018	7/8/2018	7/8/2018	7/8/2018	7/8/2018	7/8/2018
Station	688	726	759	760	761	729	728	727	THI	THFA	THG	THJ	THN
Longitude Start (°W)	153.6545	153.5888	153.5707	153.47	153.3027	153.2303	153.3005	153.486	153.5875	153.5825	153.4682	153.4612	153.3342
Latitude Start (°N)	56.7207	56.6968	56.5513	56.5662	56.6122	56.6482	56.652	56.6665	57.0673	57.0213	57.0093	57.0758	57.1703
Heading, Degrees	106	158	194	45	92	36	239	352	121	76	54	163	191
Average Depth (m)	149.9	151.7	146.2	131.6	138.9	142.6	144.4	148.1	91.43	76.8	122.5	111.5	109.7
Distance Fished (km)	1.67	1.85	1.48	1.48	1.48	1.48	1.46	1.48	1.30	1.48	1.85	1.85	1.48
Bottom Temp. (°C)	5.7	5.62	5.24	5.35	5.38	5.01	5.44	5.37	5.4	5.51	5.52	5.5	5.34
Haul	118	119	120	121	122	123	124	125	126	127	128	129	130
Location	SE Kod.	SE Kod.	SE Kod.	SW Kod.									
Month/Day/Year	7/8/2018	7/8/2018	7/8/2018	7/9/2018	7/9/2018	7/9/2018	7/9/2018	7/9/2018	7/9/2018	7/9/2018	7/9/2018	7/10/2018	7/10/2018
Station	THM	THK	THL	684A	683B	683A	682B	646C	645B	646A	646B	ALD	ALA
Longitude Start (°W)	153.3495	153.4265	153.3907	154.2882	154.3662	154.4483	154.5102	154.4933	154.4997	154.4502	154.3963	154.2242	154.1315
Latitude Start (°N)	57.153	57.094	57.1227	56.746	56.7602	56.7607	56.7653	56.8073	56.8248	56.8503	56.853	56.8417	56.799
Heading, Degrees	210	16	203	246	260	270	303	38	35	57	185	131	216
Average Depth (m)	120.6	117	120.6	64	62.17	64	69.49	64	64	62.17	60.34	38.4	67.66
Distance Fished (km)	1.481	1.481	1.481	1.852	1.852	1.852	1.759	1.852	1.852	1.852	1.852	1.666	1.852
Bottom Temp. (°C)	5.27	5.33	5.26	7.88	7.82	7.49	7.43	7.62	7.63	7.99	8.14	6.78	6.15
Haul	131	132	133	134	135	136	137	138	139	140	141	142	143
Location	SW Kod.												
Month/Day/Year	7/10/2018	7/10/2018	7/10/2018	7/10/2018	7/10/2018	7/10/2018	7/10/2018	7/11/2018	7/11/2018	7/11/2018	7/11/2018	7/11/2018	7/11/2018
Station	646D	684B	684C	683D	ALBX	ALCA	ALG	ALR	ALQ	ALP	ALO	ALK	ALJ
Longitude Start (°W)	154.335	154.2337	154.3097	154.3642	154.1688	154.1283	154.0948	153.8053	153.893	153.958	154.0072	153.869	154.0158
Latitude Start (°N)	56.814	56.7627	56.742	56.7308	56.7995	56.824	56.8603	57.1278	57.0868	57.0423	56.9882	56.9835	56.9077
Heading, Degrees	264	62	254	114	42	23	49	214	217	221	209	200	226
Average Depth (m)	54.86	76.8	69.49	73.14	40.23	73.14	54.86	115.2	170	155.4	131.6	42.06	71.31
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.85	1.67	1.85	1.85	1.85	1.85	1.30	1.67
Bottom Temp. (°C)	8.01	8.25	8.41	7.5	6.93	5.9	5.75	3.53	3.47	3.49	3.59	6.35	5.7
Haul	144	145	146	147	148	149	150	151	152	153	154	155	156
Location	SW Kod.	SE Kod.	Kujulik	Kujulik	Kujulik	Kujulik	Kujulik	Kujulik	Chignik				
Month/Day/Year	7/11/2018	7/11/2018	7/11/2018	7/12/2018	7/12/2018	7/12/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018
Station	ALM	ALL	ALI	ALF	ALH	725	4298	4308	4302	4301	4290	4296	4286
Longitude Start (°W)	153.9947	154.0862	154.1017	154.1635	154.1302	153.8298	157.7488	157.615	157.6778	157.689	157.8328	157.774	157.9153
Latitude Start (°N)	56.923	56.9242	56.899	56.8568	56.881	56.6668	56.5348	56.5417	56.5408	56.5678	56.5963	56.6225	56.4265
Heading, Degrees	40	40	33	7	37	49	80	147	123	164	323	152	101
Average Depth (m)	67.66	85.94	76.8	53.03	62.17	100.5	91.43	138.9	98.75	91.43	27.43	76.8	164.5
Distance Fished (km)	1.67	1.85	1.67	1.85	1.85	1.30	1.85	1.85	1.85	1.85	1.11	1.85	1.85
Bottom Temp. (°C)	5.85	4.22	4.22	6.35	4.89	5.86	6.71	5.92	6.04	6.63	8.11	7.44	5.41

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Haul	157	158	159	160	161	162	163	164	165	166	167	168	169
Location	Chignik												
Month/Day/Year	7/23/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018
Station	4287	4265	4964	4264	4271	4270	4312	4262	4256	4266	4267	4274	4278
Longitude Start (°W)	157.9348	158.3058	158.3465	158.26	158.214	158.1868	158.1493	158.2712	158.3068	158.2108	158.169	158.1453	158.0353
Latitude Start (°N)	56.4032	56.1913	56.2247	56.235	56.2328	56.2498	56.2547	56.3487	56.421	56.4198	56.4017	56.4055	56.3928
Heading, Degrees	68	26	98	190	58	65	78	140	276	95	307	98	312
Average Depth (m)	188.3	54.86	67.66	76.8	95.09	102.4	126.1	78.63	95.09	149.9	128	162.7	190.1
Distance Fished (km)	1.85	1.67	1.85	1.85	1.85	1.85	1.85	1.85	1.67	1.85	1.85	1.85	1.85
Bottom Temp. (°C)	5.48	6.79	6.69	6.19	6.3	6.47	6.31	6.71	5.64	4.77	5.1	4.73	5.03
Haul	170	171	172	173	174	175	176	177	178	179	180	181	182
Location	Chignik	Chignik	Chignik	Mitro.									
Month/Day/Year	7/25/2018	7/25/2018	7/25/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/27/2018	7/27/2018
Station	4272	4277	4282	4063	4048	4064	4065	4066B	4066A	4050B	4050A	4049	4035
Longitude Start (°W)	158.0927	158.0582	158.0012	158.5823	158.6338	158.593	158.566	158.5567	158.5978	158.6653	158.7185	158.7542	158.8433
Latitude Start (°N)	56.487	56.4295	56.4212	56.1325	56.0637	55.9965	55.9492	55.8872	55.8685	55.895	55.8943	55.9217	55.9517
Heading, Degrees	146	155	83	221	185	345	173	178	348	170	302	290	101
Average Depth (m)	124.3	186.5	197.5	146.2	182.8	164.5	104.2	120.6	117	118.8	138.9	142.6	140.8
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.78	1.76	1.85	1.85	1.85
Bottom Temp. (°C)	5.59	5.23	5.34	4.77	4.75	5.15	5.81	5.81	6.26	5.96	5.73	5.85	5.86
Haul	183	184	185	186	187	188	189	190	191	192	193	194	195
Location	Mitro.	Mitro.	Mitro.	Mitro.	Mitro.	Mitro.	Ivanof	Mitro.	Ivanof	Ivanof	Ivanof	Ivanof	Ivanof
Month/Day/Year	7/27/2018	7/27/2018	7/27/2018	7/27/2018	7/27/2018	7/27/2018	7/28/2018	7/28/2018	7/28/2018	7/28/2018	7/28/2018	7/28/2018	7/28/2018
Station	4036	4037	4025	4026	4038A	4038B	4915	4024	4007	4008	4000Y	4000X	4900X
Longitude Start (°W)	158.9313	158.9657	159.008	159.0212	158.9735	158.9203	159.1815	159.093	159.3915	159.4203	159.4788	159.489	159.4952
Latitude Start (°N)	55.8825	55.8258	55.8023	55.7245	55.7023	55.7035	55.8607	55.8975	55.7808	55.7402	55.7893	55.8203	55.8628
Heading, Degrees	198	178	184	200	29	183	221	102	189	177	126	154	63
Average Depth (m)	128	129.8	122.5	142.6	146.2	149.9	54.86	82.29	91.43	102.4	82.29	73.14	42.06
Distance Fished (km)	1.85	1.85	1.85	1.78	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.11
Bottom Temp. (°C)	5.81	5.31	5.56	5.46	5.47	5.57	6.58	6.17	5.73	5.41	5.84	5.72	7.06
Haul	196	197	198	199	200	201	202	203	204	205	206	207	208
Location	Stepovak	Stepovak	Stepovak	Stepovak	Beaver								
Month/Day/Year	7/29/2018	7/29/2018	7/29/2018	7/29/2018	7/29/2018	7/29/2018	7/29/2018	7/30/2018	7/30/2018	7/30/2018	7/30/2018	7/30/2018	7/30/2018
Station	STD	STA	STB	STE	368A	348	329B	329C	311C	311B	BAF	BAD	BAA
Longitude Start (°W)	159.8253	159.814	159.771	159.7658	160.1897	160.2992	160.4293	160.4883	160.5038	160.5855	160.5528	160.5722	160.6833
Latitude Start (°N)	55.753	55.8062	55.8258	55.7928	55.5695	55.5233	55.4627	55.429	55.4335	55.4567	55.4777	55.5097	55.535
Heading, Degrees	29	5	159	180	225	58	50	67	272	97	341	326	318
Average Depth (m)	118.8	96.92	107.8	118.8	179.2	201.1	182.8	131.6	131.6	131.6	82.29	93.26	29.25
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.11
Bottom Temp. (°C)	5.32	5.97	5.85	5.09	5.28	5.18	4.99	5.51	5.37	4.96	6.23	5.84	8.89

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Haul	209	210	211	212	213	214	215	216	217	218	219	220	221
Location	Beaver	Beaver	Beaver	W. Nagai	Beaver								
Month/Day/Year	7/30/2018	7/30/2018	7/31/2018	7/31/2018	7/31/2018	7/31/2018	7/31/2018	7/31/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/2/2018
Station	BAC	BAE	311A	371	393	373B	373A	353	354	334	335	332B	BVC
Longitude Start (°W)	160.6155	160.6022	160.5942	160.1503	159.98	160.0562	160.1233	160.3092	160.3323	160.3853	160.4483	160.375	160.8907
Latitude Start (°N)	55.5203	55.488	55.4503	55.2763	55.1985	55.1497	55.1177	55.1042	55.0827	55.0533	55.0153	55.2023	55.4587
Heading, Degrees	172	168	4	334	343	328	309	220	219	238	237	9	253
Average Depth (m)	100.5	118.8	122.5	131.6	73.14	76.8	27.43	146.2	140.8	148.1	131.6	162.7	85.94
Distance Fished (km)	1.85	1.85	1.85	1.85	1.48	1.85	1.48	1.85	1.85	1.85	1.85	1.85	1.85
Bottom Temp. (°C)	5.7	5.33	5.35	5.63	5.57	5.55	7.71	5.53	5.6	5.62	5.59	5.65	6.32
Haul	222	223	224	225	226	227	228	229	230	231	232	233	234
Location	Beaver	Beaver	Beaver	Pavlof	Morzhov.	Morzhov.	Morzhov.						
Month/Day/Year	8/2/2018	8/2/2018	8/2/2018	8/3/2018	8/3/2018	8/3/2018	8/3/2018	8/3/2018	8/3/2018	8/3/2018	8/4/2018	8/4/2018	8/4/2018
Station	BVB	BVA	278	VOLX	VOPX	VOM	VOFB	VOG	VOH	VON	MOB	MOD	MOF
Longitude Start (°W)	160.8742	160.907	160.945	161.9713	161.9393	161.8375	161.8215	161.7803	161.6955	161.7352	163.0692	163.0487	163.0328
Latitude Start (°N)	55.5012	55.4935	55.3985	55.2135	55.1828	55.2285	55.2593	55.2537	55.2565	55.236	55.0648	55.0335	54.9977
Heading, Degrees	195	204	189	114	52	348	43	110	68	239	183	175	169
Average Depth (m)	38.4	45.71	107.8	74.97	82.29	87.77	96.92	104.2	107.8	118.8	76.8	91.43	80.46
Distance Fished (km)	1.85	1.48	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
Bottom Temp. (°C)	8.43	8.79	6.1	5.8	5.69	5.54	5.37	5.19	5.18	5.27	6.52	6.21	6.18
Haul	235	236	237	238	239	240	241	242	243	244	245	246	247
Location	Morzhov.	Morzhov.	Morzhov.	Morzhov.	Morzhov.	Akutan	Akutan	Akutan	Akutan	Akutan	Unalaska	Unalaska	Unalaska
Month/Day/Year	8/4/2018	8/4/2018	8/4/2018	8/4/2018	8/4/2018	8/6/2018	8/6/2018	8/6/2018	8/6/2018	8/6/2018	8/7/2018	8/7/2018	8/7/2018
Station	MOG	MOK	MOL	MOI	MOH	AKA	AKC	AKD	AKG	AKL	UNC	UNF	UNI
Longitude Start (°W)	162.9962	162.9937	162.9563	162.968	162.9978	165.7007	165.712	165.705	165.7487	165.743	166.6032	166.5237	166.6143
Latitude Start (°N)	54.9918	54.8872	54.911	54.9532	54.9545	54.1467	54.1782	54.207	54.2257	54.254	53.9187	53.9697	54.0273
Heading, Degrees	119	26	346	169	177	22	358	165	347	352	5	28	127
Average Depth (m)	91.43	126.1	137.1	113.3	98.75	69.49	87.77	84.12	96.92	104.2	137.1	149.9	95.09
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.48	1.85	1.85	1.85	1.85	1.85	1.85	1.48
Bottom Temp. (°C)	6.18	6.28	6.43	6.5	6.18	7.27	7.09	7.01	6.74	6.66	5.55	5.42	6.98
Haul	248	249	250	251	252	253	254	255	256	257	258	259	260
Location	Unalaska	Unalaska	Unalaska	Unalaska	Unalaska	Makush.							
Month/Day/Year	8/7/2018	8/7/2018	8/8/2018	8/8/2018	8/8/2018	8/9/2018	8/9/2018	8/9/2018	8/10/2018	8/10/2018	8/10/2018	8/10/2018	8/10/2018
Station	UNJ	UNG	UNE	UND	KAA	MKK	MKN	MKP	MKB	MKC	MKE	MKF	MKJ
Longitude Start (°W)	166.4972	166.441	166.5032	166.4793	166.3297	167.1772	167.1125	167.0613	166.7855	166.8525	166.9235	167.012	167.0992
Latitude Start (°N)	54.029	53.991	53.943	53.9438	53.9727	53.7278	53.6765	53.6468	53.7007	53.7162	53.7308	53.7395	53.7188
Heading, Degrees	184	236	357	7	22	134	313	307	308	278	280	248	92
Average Depth (m)	164.5	91.43	109.7	78.63	82.29	117	131.6	113.3	95.09	173.7	195.6	192	124.3
Distance Fished (km)	1.85	1.85	1.30	1.85	1.67	1.85	1.85	0.93	1.67	1.85	1.85	1.67	0.78
Bottom Temp. (°C)	5.38	6.14	5.49	6.03	7.34	5.49	6.11	6.24	5.62	5.08	5.09	5.19	5.32

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Haul	261	262	263	264	265	266	267	268	269	270	271	272	273
Location	Beav. In.	Sanak I.	Morzhov.										
Month/Day/Year	8/13/2018	8/13/2018	8/13/2018	8/13/2018	8/13/2018	8/14/2018	8/15/2018	8/15/2018	8/15/2018	8/15/2018	8/15/2018	8/15/2018	8/15/2018
Station	BIN	BIK	BIG	BIB	BID	113	126	125	137	138A	138C	138B	87D
Longitude Start (°W)	166.1788	166.3005	166.365	166.513	166.439	162.6262	162.528	162.5408	162.418	162.3972	162.3433	162.4075	162.9513
Latitude Start (°N)	53.8337	53.846	53.8068	53.7338	53.7748	54.5083	54.4747	54.5175	54.5117	54.4898	54.4468	54.446	54.7803
Heading, Degrees	322	240	242	57	60	122	301	115	146	153	138	301	136
Average Depth (m)	69.49	287.1	254.1	175.5	250.5	137.1	138.9	146.2	144.4	142.6	142.6	144.4	89.6
Distance Fished (km)	1.11	1.85	1.85	1.85	1.85	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.85
Bottom Temp. (°C)	7.77	5.83	6.56	7.07	6.85	5.18	5.22	5.27	5.37	5.39	5.21	5.2	6.14
Haul	274	275	276	277	278	279	280	281	282	283	284	285	286
Location	Morzhov.	Morzhov.	Morzhov.	Morzhov.	Cold B.								
Month/Day/Year	8/16/2018	8/16/2018	8/16/2018	8/16/2018	8/16/2018	8/16/2018	8/17/2018	8/17/2018	8/17/2018	8/17/2018	8/17/2018	8/17/2018	8/17/2018
Station	MORX	MOSX	87AX	MOOX	COOX	COM	COB	COC	COE	COF	COH	COGB	COGA
Longitude Start (°W)	163.1632	163.0948	163.0043	162.9868	162.3853	162.4655	162.5955	162.5548	162.5465	162.5255	162.3983	162.4277	162.4743
Latitude Start (°N)	54.8315	54.8568	54.816	54.8522	55.0013	55.0158	55.2277	55.2283	55.1998	55.1615	55.1102	55.1153	55.143
Heading, Degrees	100	48	49	349	99	97	154	171	153	132	292	328	329
Average Depth (m)	91.43	95.09	84.12	95.09	102.4	76.8	51.2	45.71	65.83	95.09	43.88	53.03	95.09
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.11	1.30	1.30	1.48	1.85	1.48	1.48	1.85
Bottom Temp. (°C)	6.7	6.62	6.76	6.66	7.86	7.94	9.85	9.94	9.75	9.83	9.87	9.86	9.88
Haul	287	288	289	290	291	292	293	294	295	296	297	298	299
Location	Cold B.	Cold B.	Cold B.	Cold B.	Pavlof								
Month/Day/Year	8/18/2018	8/18/2018	8/18/2018	8/18/2018	8/19/2018	8/19/2018	8/19/2018	8/19/2018	8/19/2018	8/19/2018	8/19/2018	8/19/2018	8/19/2018
Station	BEBX	BECX	BEE	BEF	VOQ	VOR	VOI	VOBX	VOA	PAU	PARA	PAOB	PALX
Longitude Start (°W)	162.1493	162.1598	162.1497	162.113	161.824	161.7455	161.6093	161.6098	161.7225	161.6742	161.6717	161.655	161.636
Latitude Start (°N)	55.1415	55.1122	55.0713	55.0193	55.1987	55.1965	55.282	55.3097	55.2918	55.3528	55.3925	55.4343	55.4508
Heading, Degrees	198	191	169	178	78	311	57	256	23	9	11	21	42
Average Depth (m)	65.83	78.63	82.29	95.09	93.26	118.8	106	96.92	109.7	128	104.2	91.43	91.43
Distance Fished (km)	1.67	1.67	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.67	1.48
Bottom Temp. (°C)	7.47	7.51	7.49	7.55	6.03	5.76	5.72	5.71	5.6	5.93	6.45	7.23	7.29
Haul	300	301	302	303	304	305	306	307	308	309	310	311	312
Location	Pavlof	W Kod.	W Kod.	W Kod.	N Main.	N Main.							
Month/Day/Year	8/20/2018	8/20/2018	8/20/2018	8/20/2018	8/20/2018	8/20/2018	8/20/2018	8/20/2018	9/4/2018	9/4/2018	9/4/2018	9/5/2018	9/5/2018
Station	PAIX	PAH	PAP	PARB	PAV	VOD	228	245	KUD	KUF	KUG	222	223
Longitude Start (°W)	161.529	161.6042	161.5697	161.5915	161.5753	161.5518	161.2808	161.2203	153.1642	153.304	153.4325	154.0638	153.9573
Latitude Start (°N)	55.5278	55.5132	55.4563	55.415	55.3553	55.314	55.2792	55.2697	57.985	58.0288	58.0423	58.1293	58.1397
Heading, Degrees	181	178	251	174	179	64	98	304	266	273	179	27	49
Average Depth (m)	38.4	54.86	74.97	82.29	95.09	111.5	82.29	82.29	40.23	142.6	74.97	250.5	204.8
Distance Fished (km)	1.30	1.11	1.30	1.85	1.85	1.85	1.85	1.85	0.93	1.85	1.85	1.85	1.85
Bottom Temp. (°C)	7.91	8.12	7.11	6.49	5.78	5.78	6.91	6.82	7.87	6.57	6.39	5.54	5.52

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Haul	313	314	315	316	317	318	319	320	321	322	323	324	325
Location	N Main.												
Month/Day/Year	9/5/2018	9/5/2018	9/5/2018	9/5/2018	9/5/2018	9/5/2018	9/6/2018	9/6/2018	9/6/2018	9/6/2018	9/6/2018	9/6/2018	9/6/2018
Station	224	200	174	173	199	198	171A	171C	171D	172B	145	146	147
Longitude Start (°W)	153.833	153.714	153.65	153.789	153.7767	153.9077	154.2608	154.2053	154.0852	154.0385	153.8418	153.6603	153.497
Latitude Start (°N)	58.1247	58.2008	58.2932	58.3125	58.2528	58.2457	58.3033	58.325	58.3165	58.2842	58.3553	58.3658	58.387
Heading, Degrees	357	65	14	214	237	227	66	73	110	51	244	57	32
Average Depth (m)	195.6	190.1	179.2	199.3	192	219.4	107.8	106	91.43	131.6	224.9	170	181
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
Bottom Temp. (°C)	5.5	5.44	5.48	5.48	5.47	5.54	7.95	8.09	7.86	6.21	5.55	5.52	5.54
Haul	326	327	328	329	330	331	332	333	334	335	336	337	338
Location	N Main.	W Kod.											
Month/Day/Year	9/6/2018	9/7/2018	9/7/2018	9/7/2018	9/7/2018	9/7/2018	9/7/2018	9/7/2018	9/7/2018	9/8/2018	9/8/2018	9/8/2018	9/8/2018
Station	119	2	31	61	60	91	90	118	117	144	120	121	PMA
Longitude Start (°W)	153.5122	153.2057	153.2237	153.2443	153.3315	153.394	153.525	153.6047	153.7493	153.9742	153.3135	153.1997	152.9505
Latitude Start (°N)	58.4812	58.7943	58.724	58.6697	58.6373	58.5935	58.547	58.498	58.4665	58.4368	58.4992	58.4898	58.301
Heading, Degrees	71	165	186	203	220	192	227	225	235	65	86	215	324
Average Depth (m)	149.9	137.1	140.8	148.1	120.6	124.3	122.5	131.6	117	85.94	173.7	171.8	131.6
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.67	1.85	1.85	1.85
Bottom Temp. (°C)	5.62	6.23	6.1	5.9	6.63	6.34	6.58	6.26	6.76	8.41	5.48	5.47	7.43
Haul	339	340	341	342	343	344	345	346	347	348	349	350	351
Location	W Kod.												
Month/Day/Year	9/9/2018	9/9/2018	9/9/2018	9/9/2018	9/9/2018	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/10/2018	9/10/2018
Station	MAA	RAA	KUI	KUJ	KUK	KUM	KULA	KULB	KUYA	KUYB	KUNX	KUP	KUQ
Longitude Start (°W)	153.0765	153.2192	153.3877	153.2953	153.2517	153.121	153.2238	153.207	153.1955	153.2137	153.3802	153.4497	153.5248
Latitude Start (°N)	58.2167	58.1367	57.9737	57.9367	57.9177	57.8635	57.8622	57.834	57.7863	57.742	57.8368	57.8578	57.8862
Heading, Degrees	283	143	288	303	302	291	326	7	188	23	299	296	326
Average Depth (m)	131.6	104.2	252.3	162.7	131.6	64	102.4	78.63	69.49	21.94	133.4	162.7	181
Distance Fished (km)	1.85	1.85	1.85	1.85	1.85	1.85	1.67	1.85	1.11	1.11	1.85	1.85	1.85
Bottom Temp. (°C)	6.97	7.48	6.54	6.56	6.56	7.07	7.09	7.18	8.35	10.9	6.44	6.29	6.23
Haul	352	353	354	355	356	357	358	359	360	361	362	363	364
Location	W Kod.												
Month/Day/Year	9/10/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018
Station	KUS	KUXB	KUXA	KUU	KUV	KUW	KUT	UYBX	UYHX	UYFX	UYEX	UYKX	UYO
Longitude Start (°W)	153.5472	153.3795	153.4065	153.4827	153.529	153.5262	153.5198	153.9982	153.7212	153.8585	153.9283	153.8872	153.7968
Latitude Start (°N)	57.8733	57.7365	57.7683	57.7838	57.7393	57.6945	57.811	57.7428	57.6618	57.6745	57.6463	57.6005	57.5695
Heading, Degrees	151	352	308	308	1	162	347	167	270	279	352	319	327
Average Depth (m)	186.5	104.2	124.3	153.6	85.94	64	181	137.1	93.26	164.5	186.5	137.1	85.94
Distance Fished (km)	1.85	1.85	1.67	1.85	1.67	1.30	1.85	1.85	1.67	1.67	1.85	1.85	1.85
Bottom Temp. (°C)	6.25	6.01	6	6.19	6.52	7.54	6.26	7.32	7.55	7.52	6.98	7.36	7.99

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Haul	365	366	367	368
Location	W Kod.	W Kod.	W Kod.	W Kod.
Month/Day/Year	9/12/2018	9/12/2018	9/13/2018	9/13/2018
Station	UYMX	UYQX	UYT	UYSS
Longitude Start (°W)	153.9113	153.9052	153.7962	153.817
Latitude Start (°N)	57.5225	57.4862	57.3692	57.4268
Heading, Degrees	178	340	346	178
Average Depth (m)	138.9	153.6	42.06	71.31
Distance Fished (km)	1.67	1.85	1.30	1.85
Bottom Temp. (°C)	7.56	7.54	8.23	7.98

Appendix B2.—2018 bottom trawl survey locations, stations, and station areas by district and section.

KODIAK DISTRICT										
Northeast Section						Eastside Section				
Chiniak Gully			Chiniak Bay			Ugak Bay		Barnabas Gully		
Station	KM ²	NM ²	Station	KM ²	NM ²	Station	KM ²	NM ²	Station	KM ²
395	85.8	25.0	CHA	5.5	1.6	UGAA	16.0	4.7	486A	25.0
420	83.3	24.3	CHB	7.9	2.3	UGAC	3.2	0.9	486B	29.4
421	83.3	24.3	CHE	20.6	6.0	UGAD	4.4	1.3	510C	21.5
444	83.5	24.3	CHF	12.7	3.7	UGB	5.8	1.7	510D	38.0
369X	142.8	41.6	CHG	32.8	9.6	UGC	17.5	5.1	511A	42.0
Total	478.6	139.5	CHJ	11.3	3.3	UGD	11.0	3.2	511B	42.9
			CHK	8.6	2.5	UGE	12.7	3.7	533A	42.9
Marmot Bay			CHL	14.1	4.1	UGF	15.8	4.6	533B	42.9
Station	KM ²	NM ²	Total	113.4	33.1	UGG	11.0	3.2	534BX	20.8
MOEX	36.2	10.6				UGI	22.3	6.5	534DX	29.0
MOGX	65.9	19.2	Kizhuyak Bay			UGJ	21.0	6.1	535A	21.1
MOLA	28.0	8.2	Station	KM ²	NM ²	UGM	16.8	4.9	535B	21.4
MOLB	44.8	13.1	KZA	11.7	3.4	Total	157.4	45.9	535C	21.1
MONX	75.5	22.0	KZB	2.7	0.8				535D	21.4
MOPA	27.8	8.1	KZC	12.3	3.6	Kiliuda Bay			559	85.8
MOPB	19.9	5.8	KZD	23.7	6.9	Station	KM ²	NM ²	85.8	25.0
MOXA	13.0	3.8	KZE	25.8	7.5	KLA	20.9	6.1	560	85.8
MOXB	29.5	8.6	KZF	20.1	5.9	KLB	9.3	2.7		25.0
256	82.1	24.0	KZG	21.2	6.2	KLC	19.6	5.7		85.8
257	82.1	24.0	KZJ	21.4	6.3	KLD	18.2	5.3		25.0
284	82.4	24.0	KZK	21.4	6.3	KLE	8.2	2.4		85.8
285	82.4	24.0	KZO	21.4	6.3	KLF	15.1	4.4		25.0
313	85.8	25.0	KZR	10.8	3.1	KLG	16.5	4.8		85.8
314	82.5	24.1	KZS	3.1	0.9	KLH	16.8	4.9		25.0
255A	64.4	18.8	Total	195.7	57.1	KLI	21.4	6.25		85.8
255B	63.9	18.6				KLL	21.4	6.25		25.0
283A	67.9	19.8				Total	167.4	48.8	695	85.8
283B	64.0	18.7							696	85.8
Total	1,098.1	281.7							Total	1,619.9
										472.3
Southeast Section										
South Sitkalidak Strait			Offshore Twoheaded			Southwest Section				
Station	KM ²	NM ²	Station	KM ²	NM ²	Alitak Flats			Alitak Bay	
THA	15.1	4.4	618A	42.9	12.5	Station	KM ²	NM ²	Station	KM ²
THCX	19.6	5.7	585X	78.8	23.0	645B	34.3	10.0	ALA	3.1
THDX	28.6	8.3	614	61.2	17.8	646A	27.1	7.9	ALBX	12.8
THFA	22.3	6.5	615	99.5	29.0	646B	16.5	4.8	ALCA	8.1
THG	21.1	6.2	651	85.8	25.0	646C	27.9	8.1	ALD	13.0
THH	19.2	5.6	Total	368.1	107.3	646D	37.4	10.9	ALF	21.4
THI	21.6	6.3	Horse's Head			682B	21.7	6.3	ALG	19.9
THJ	17.8	5.2	Station	KM ²	NM ²	683A	22.2	6.5	ALH	16.1
THK	16.5	4.8	586	85.8	25.0	683B	20.9	6.1	ALI	16.6
THL	9.3	2.7	688	85.8	25.0	683D	9.3	2.7	ALJ	15.1
THM	10.6	3.1	725	85.8	25.0	684A	21.7	6.3	ALK	9.9
THN	5.1	1.5	726	85.8	25.0	684B	10.3	3.0	ALL	8.2
Total	206.8	60.3	727	85.8	25.0	684C	8.6	2.5	ALM	16.1
			728	85.8	25.0	Total	257.9	75.2	ALO	16.8
			729	85.8	25.0				ALP	18.4
			759	85.8	25.0				ALQ	14.4
			760	85.8	25.0				ALR	13.4
			761	85.8	25.0				Total	223.5
			Total	857.5	250.0					65.2

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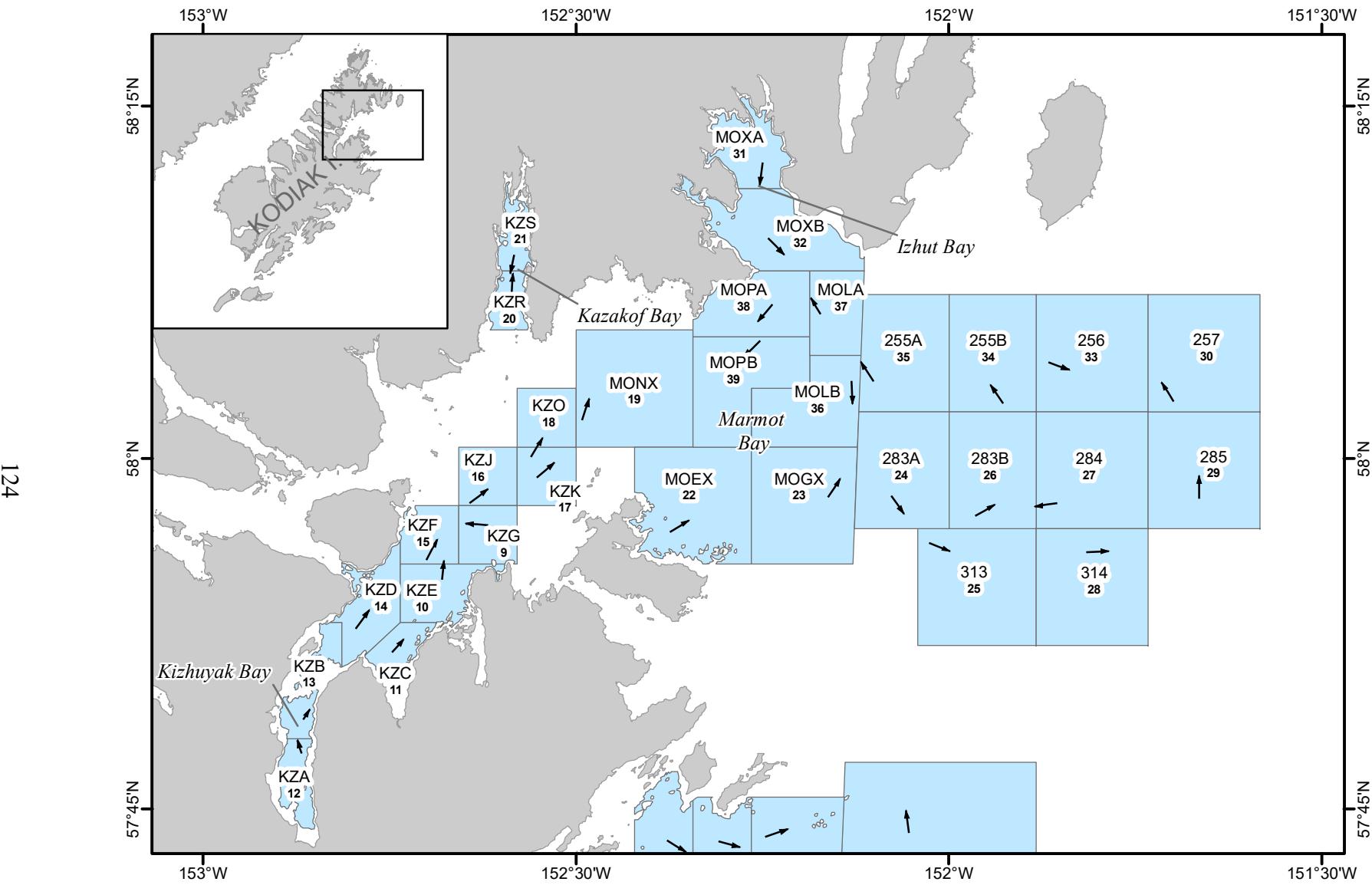
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KODIAK DISTRICT (Continued)											
Westside Section											
Uganik Bay			Uyak Bay			Kupreanof-Viekoda			North Mainland Section		
Station	KM ²	NM ²	Station	KM ²	NM ²	Station	KM ²	NM ²	Station	KM ²	NM ²
KUNX	10.6	3.1	UYBX	21.5	6.3	KUD	27.1	7.9	2	85.6	25.0
KUP	13.3	3.9	UYEX	29.9	8.7	KUF	11.3	3.3	31	83.7	24.4
KUQ	20.6	6.0	UYFX	22.1	6.4	KUG	15.4	4.5	60	85.8	25.0
KUS	12.1	3.5	UYHX	4.1	1.2	KUI	6.4	1.9	61	85.8	25.0
KUT	9.4	2.7	UYKX	13.9	4.0	KUJ	17.0	5.0	90	80.3	23.4
KUU	13.7	4.0	UYMX	20.8	6.1	KUK	14.1	4.1	91	85.8	25.0
KUV	4.1	1.2	UYO	3.4	1.0	KULB	2.7	0.8	117	97.8	28.5
KUW	5.2	1.5	UYQX	7.7	2.2	KULA	2.1	0.6	118	85.8	25.0
KUXB	4.1	1.2	UYSS	6.0	1.8	KUM	10.5	3.1	119	85.8	25.0
KUXA	5.6	1.6	UYT	2.8	0.8	KUYA	4.1	1.2	120	85.8	25.0
Total	98.6	28.8	Total	132.1	38.5	KUYB	2.6	0.8	121	85.8	25.0
						Total	113.2	33.0	144	60.7	17.7
									145	85.8	25.0
West Afognak											
Station	KM ²	NM ²									
MAA	10.5	3.1									
PMA	15.1	4.4									
RAA	6.7	2.0									
Total	32.3	9.4									
			KODIAK DISTRICT TOTALS								
						KM ²	NM ²				
						1,753.8	511.3				
						1,944.7	567.0				
						1,432.4	417.6				
						481.4	140.4				
						376.3	109.7				
						2,096.1	611.1				
						Kodiak District	8,084.8	2,357.1			
									200	85.8	25.0
									222	103.2	30.1
									223	85.8	25.0
									224	85.8	25.0
									Total	2,096.1	611.1
CHIGNIK DISTRICT											
Chignik Bay			Ivanof Bay			Kujulik Bay			Mitrofania Island		
Station	KM ²	NM ²	Station	KM ²	NM ²	Station	KM ²	NM ²	Station	KM ²	NM ²
4256	22.5	6.6	4000Y	15.8	4.6	4290	21.3	6.2	4038A	43.7	12.8
4262	21.4	6.3	4000X	5.6	1.6	4296	10.3	3.0	4038B	43.7	12.8
4264	19.7	5.8	4900X	10.4	3.0	4298	19.0	5.5	4050A	25.9	7.6
4265	6.6	1.9	4007	37.2	10.9	4301	21.4	6.2	4050B	42.9	12.5
4266	19.6	5.7	4008	42.1	12.3	4302	18.2	5.3	4066A	43.6	12.7
4267	21.4	6.3	4915	51.0	14.9	4308	17.2	5.0	4066B	43.6	12.7
4270	17.1	5.0	Total	162.1	47.3	Total	107.3	31.3	4024	57.6	16.8
4271	10.0	2.9							4025	43.7	12.7
4272	15.9	4.6							4026	43.7	12.8
4274	21.4	6.3							4035	59.3	17.3
4277	21.4	6.3							4036	64.9	18.9
4278	21.4	6.3				KM ²	NM ²		4037	43.7	12.7
4282	21.4	6.3	Chignik Bay			321.5	93.7		4048	14.7	4.3
4286	21.4	6.3	Ivanof Bay			162.1	47.3		4049	57.2	16.7
4287	28.5	8.3	Kujulik Bay			107.3	31.3		4063	35.2	10.3
4312	21.9	6.4	Mitrofania Island			783.9	228.5		4064	40.5	11.8
4964	9.6	2.8	Chignik District			1,374.7	400.8		4065	80.0	23.3
Total	321.5	93.7							Total	783.9	228.5

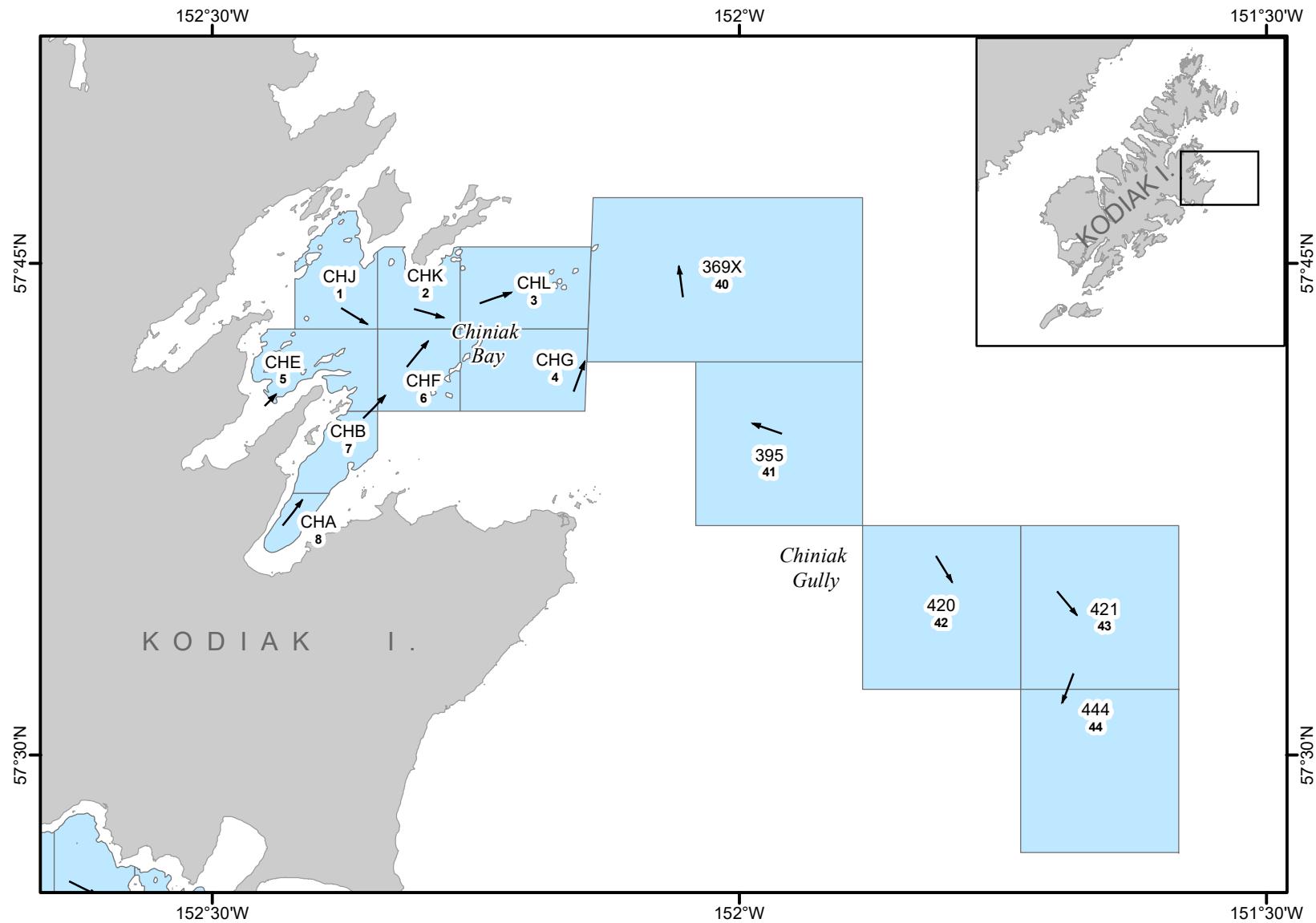
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Appendix B2.–Page 3 of 3.

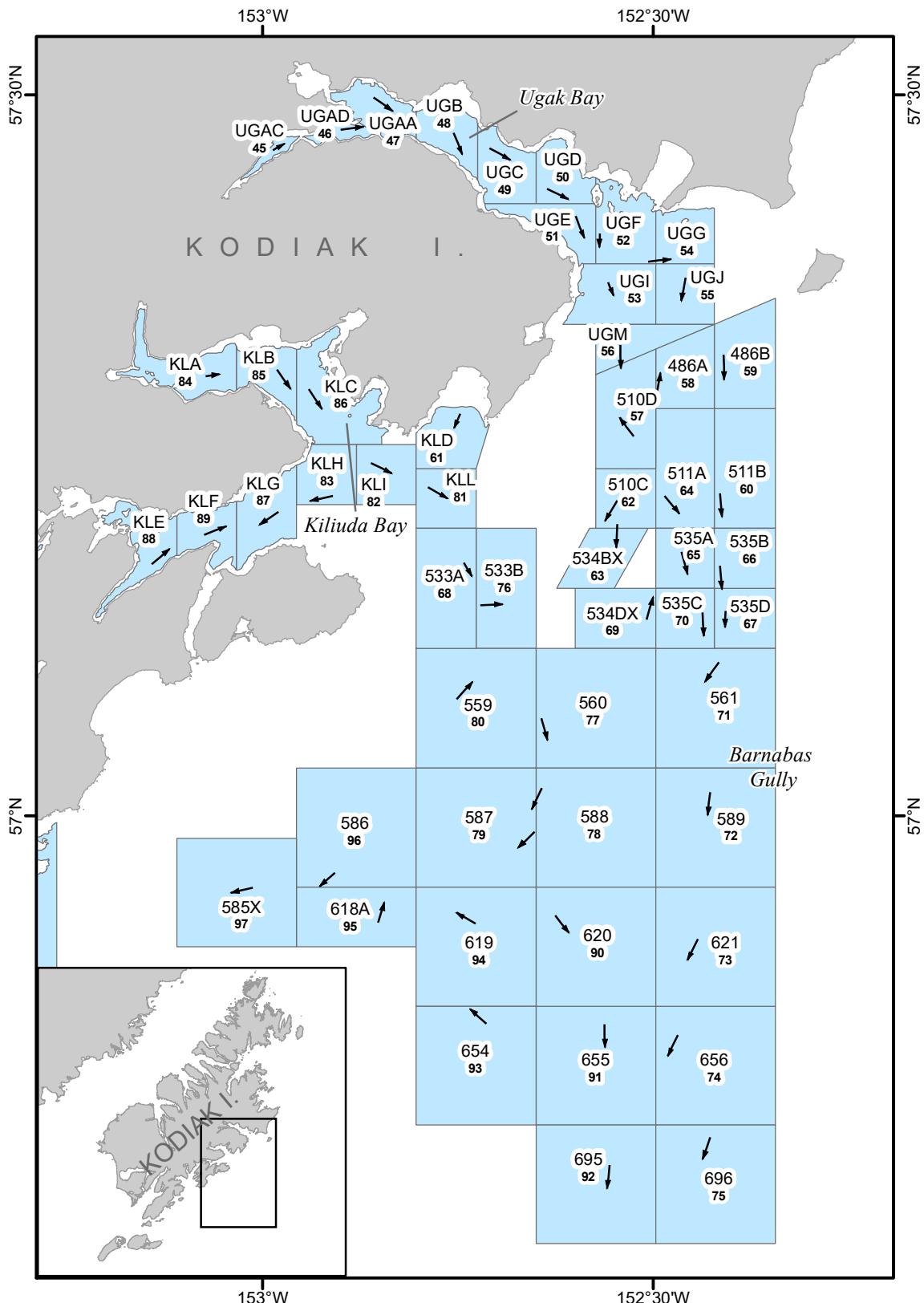
APPENDIX C. TRAWL MAPS



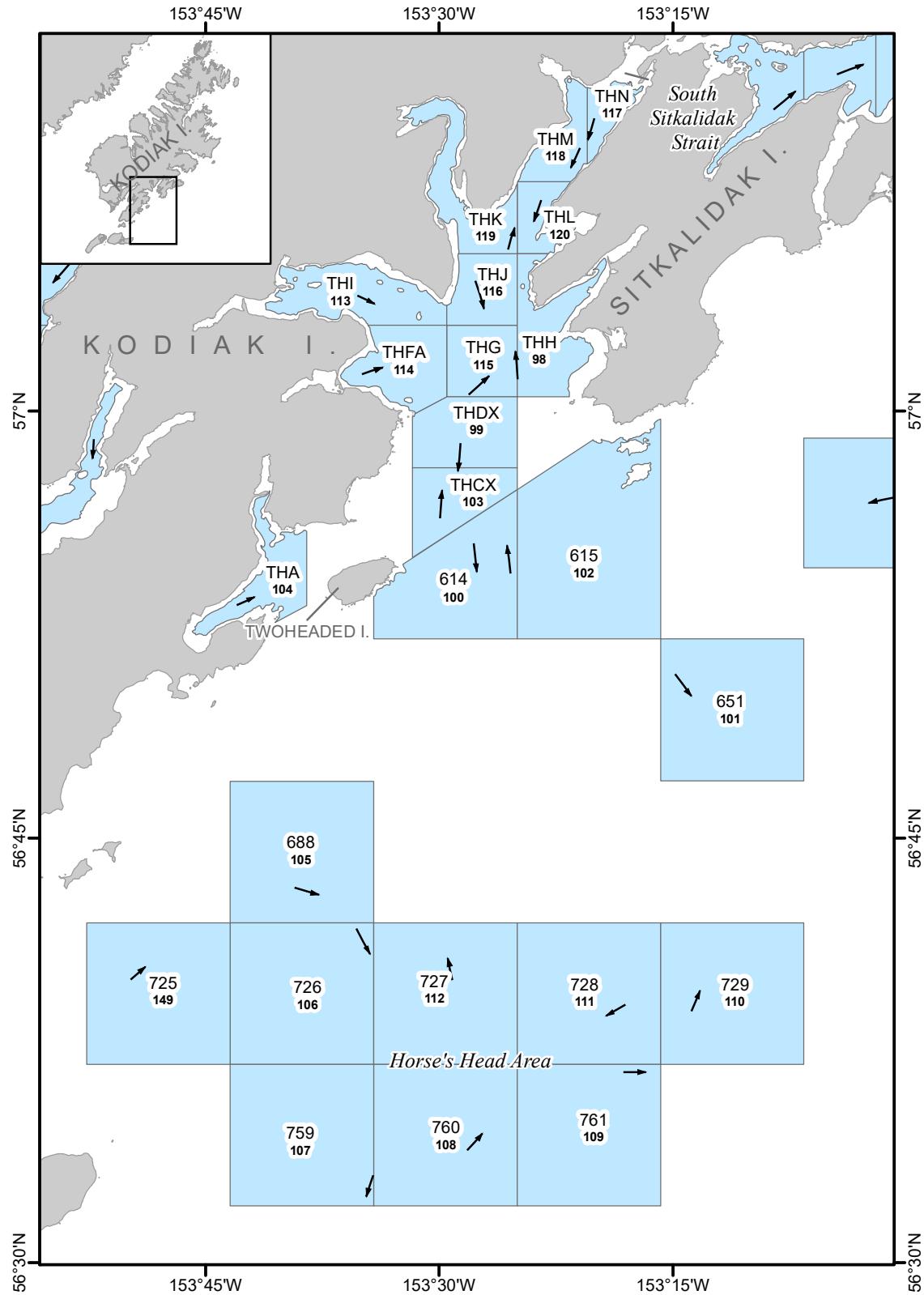
Appendix C1.—Izhut Bay, Kazakof Bay, Kizhuyak Bay, and Marmot Bay station boundaries with station name, trawl haul number (**bold**), and haul location and direction (arrow), June 2018.



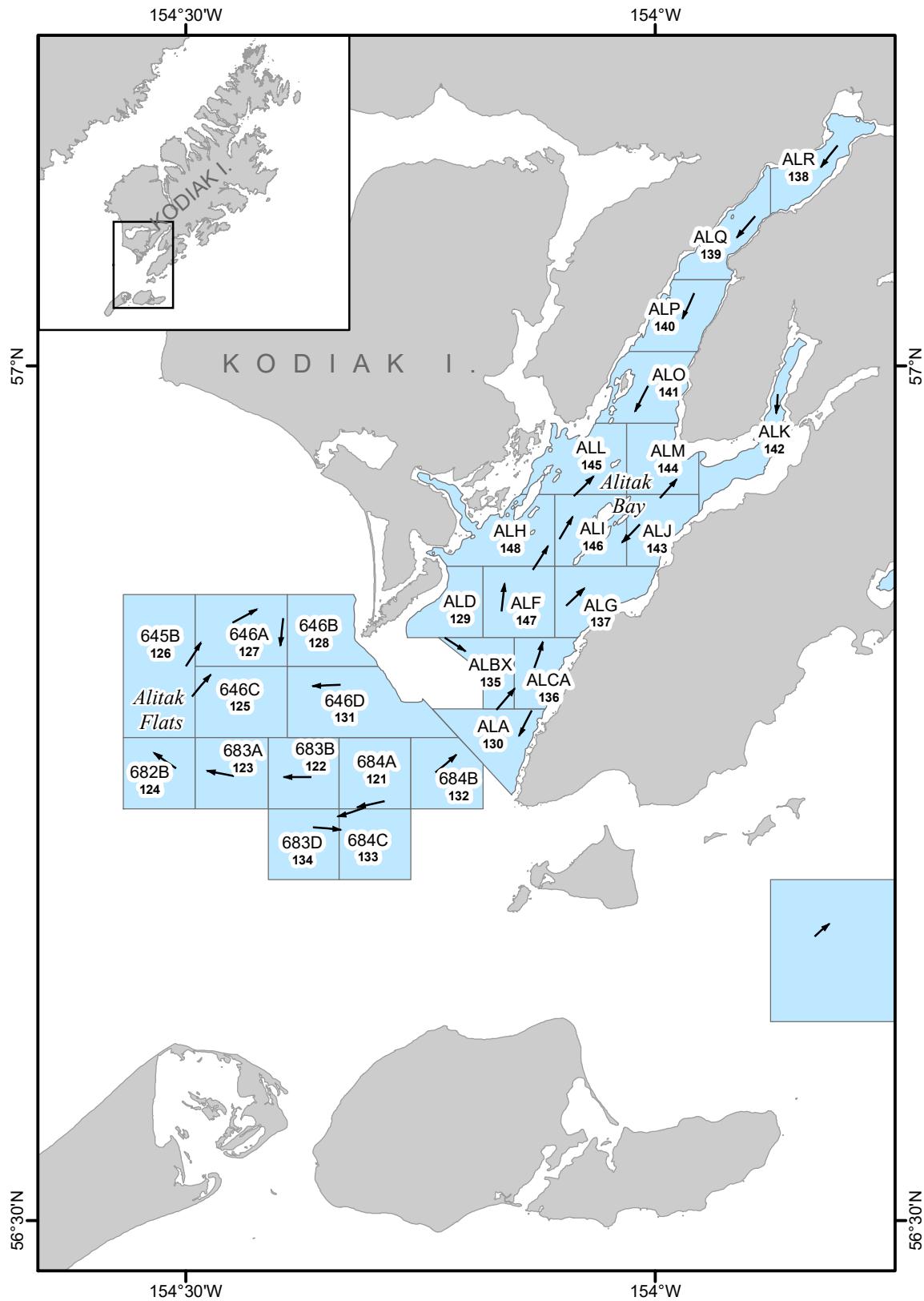
Appendix C2.—Chiniak Bay and Chiniak Gully station boundaries with station name, trawl haul number (**bold**), and haul location and direction (arrow), June 2018.



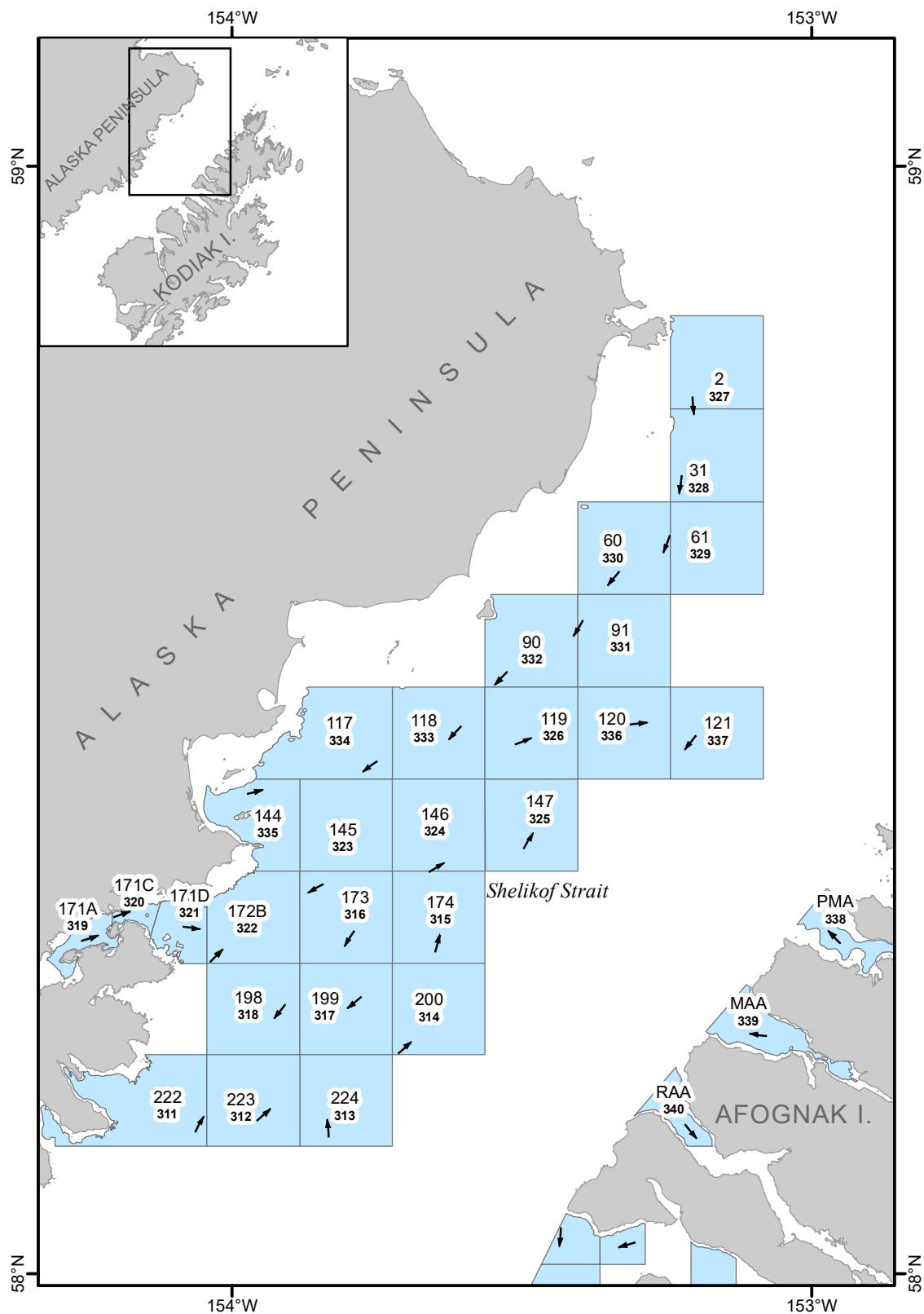
Appendix C3.—Ugak Bay, Kiliuda Bay, and Barnabas Gully station boundaries with station name, trawl haul number (**bold**), and haul location and direction (arrow), June and July 2018.



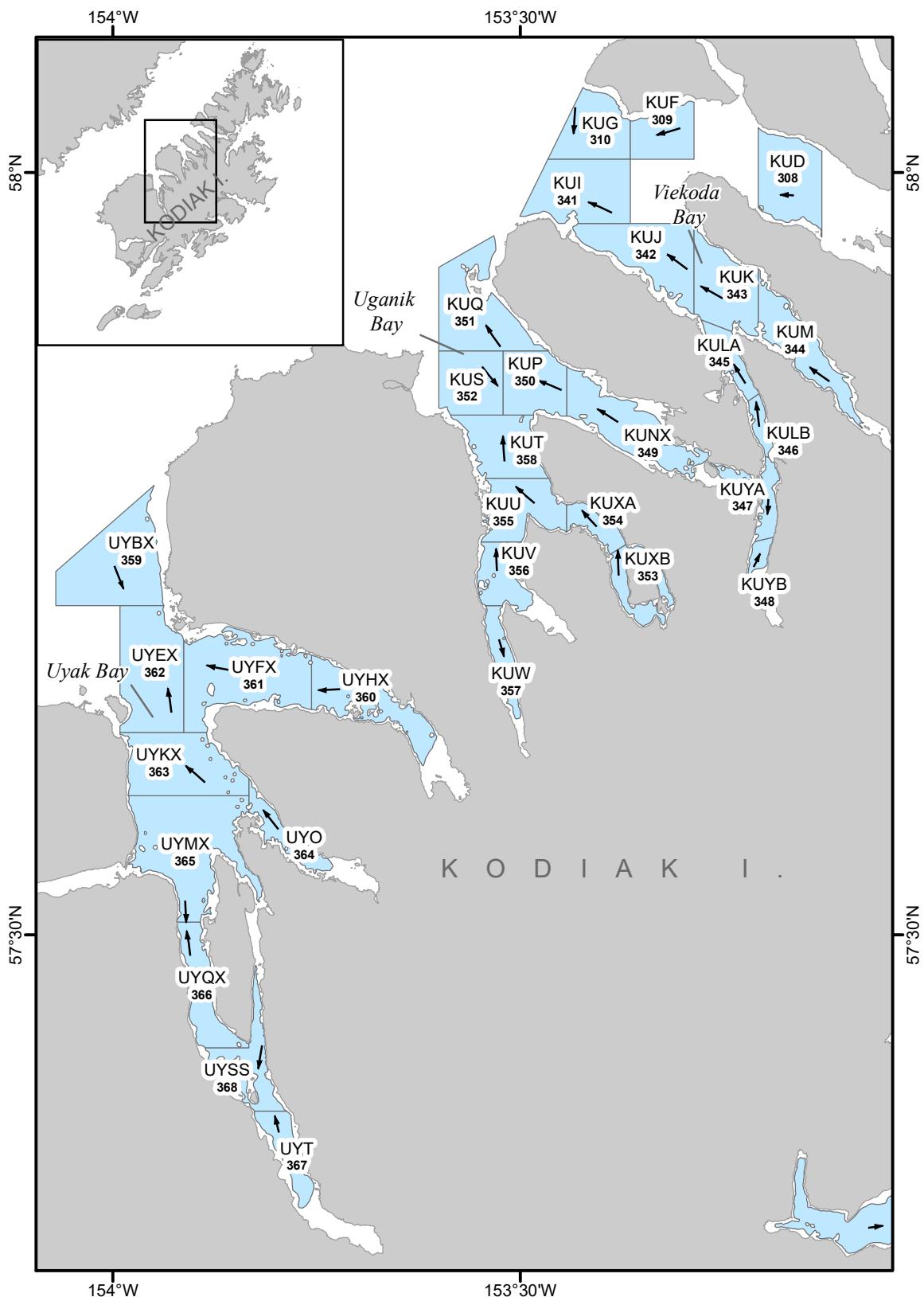
Appendix C4.—South Sitkalidak Strait, Twoheaded Island, and Horse's Head area station boundaries with station name, trawl haul number (**bold**), and haul location and direction (arrow), July 2018.



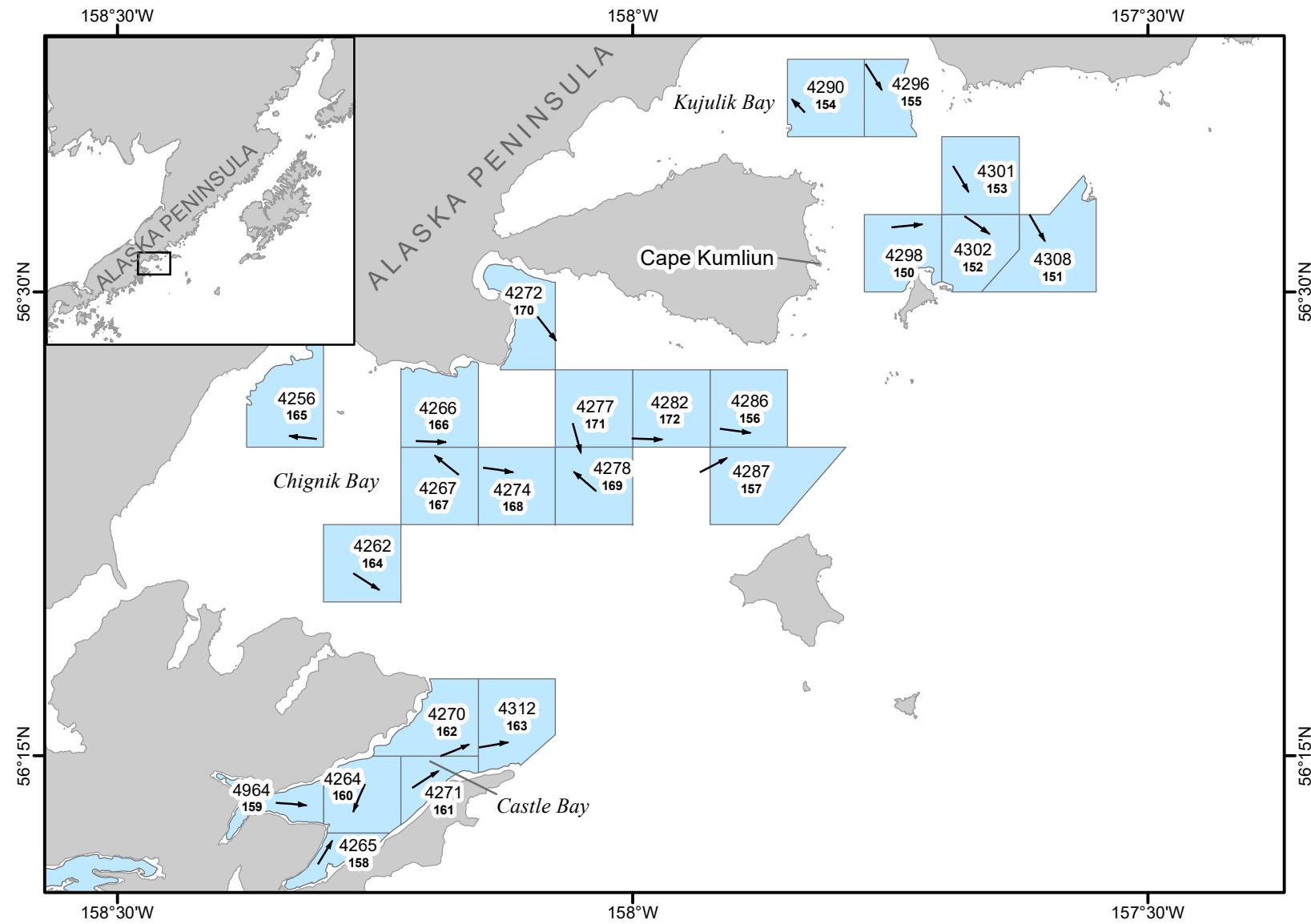
Appendix C5.—Alitak Bay and Alitak Flats station boundaries with station name, trawl haul number (bold), and haul location and direction (arrow), July 2018.



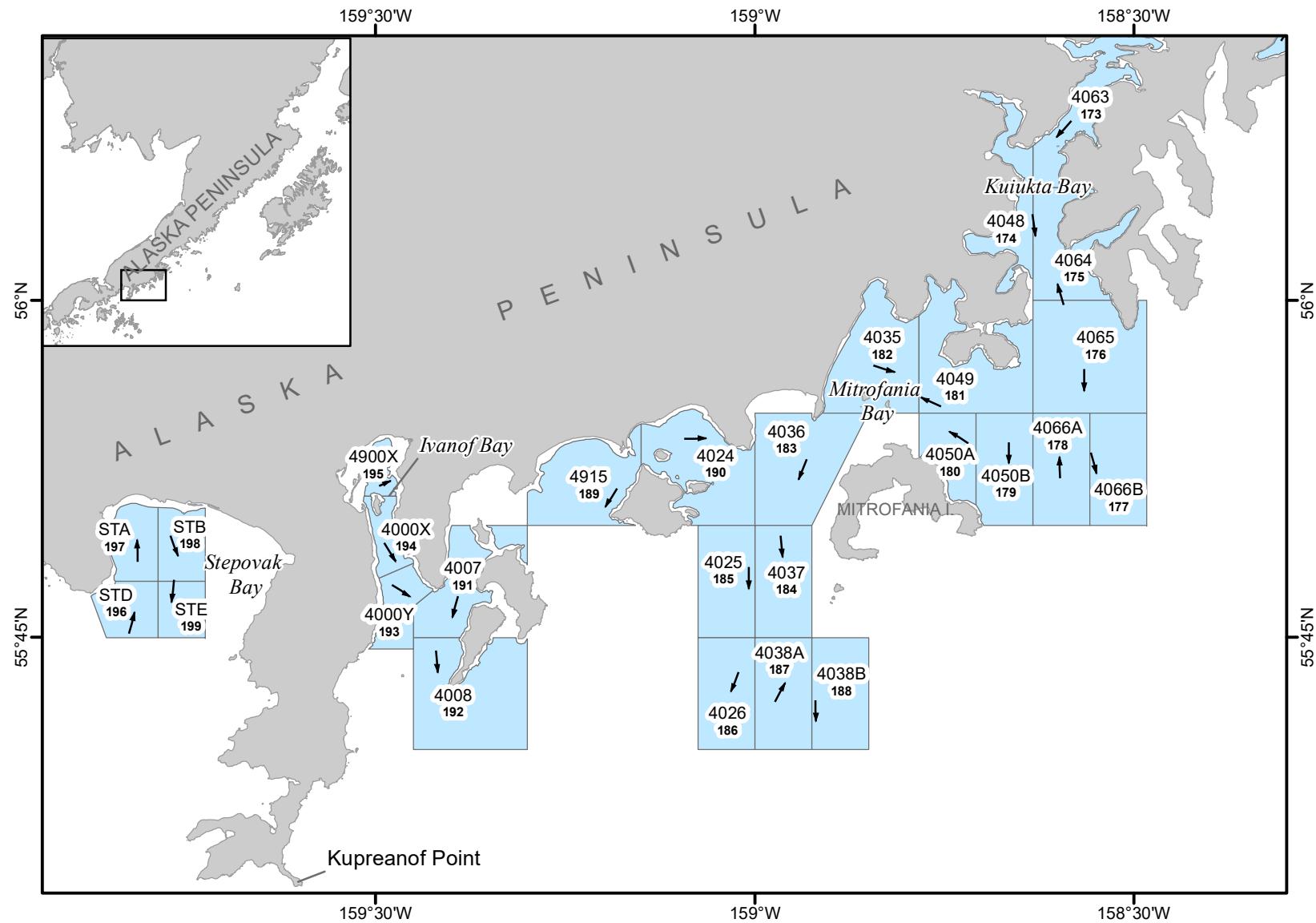
Appendix C6.—Shelikof Strait and Afognak Island station boundaries with station name, trawl haul number (bold), and haul location and direction (arrow), September 2018.



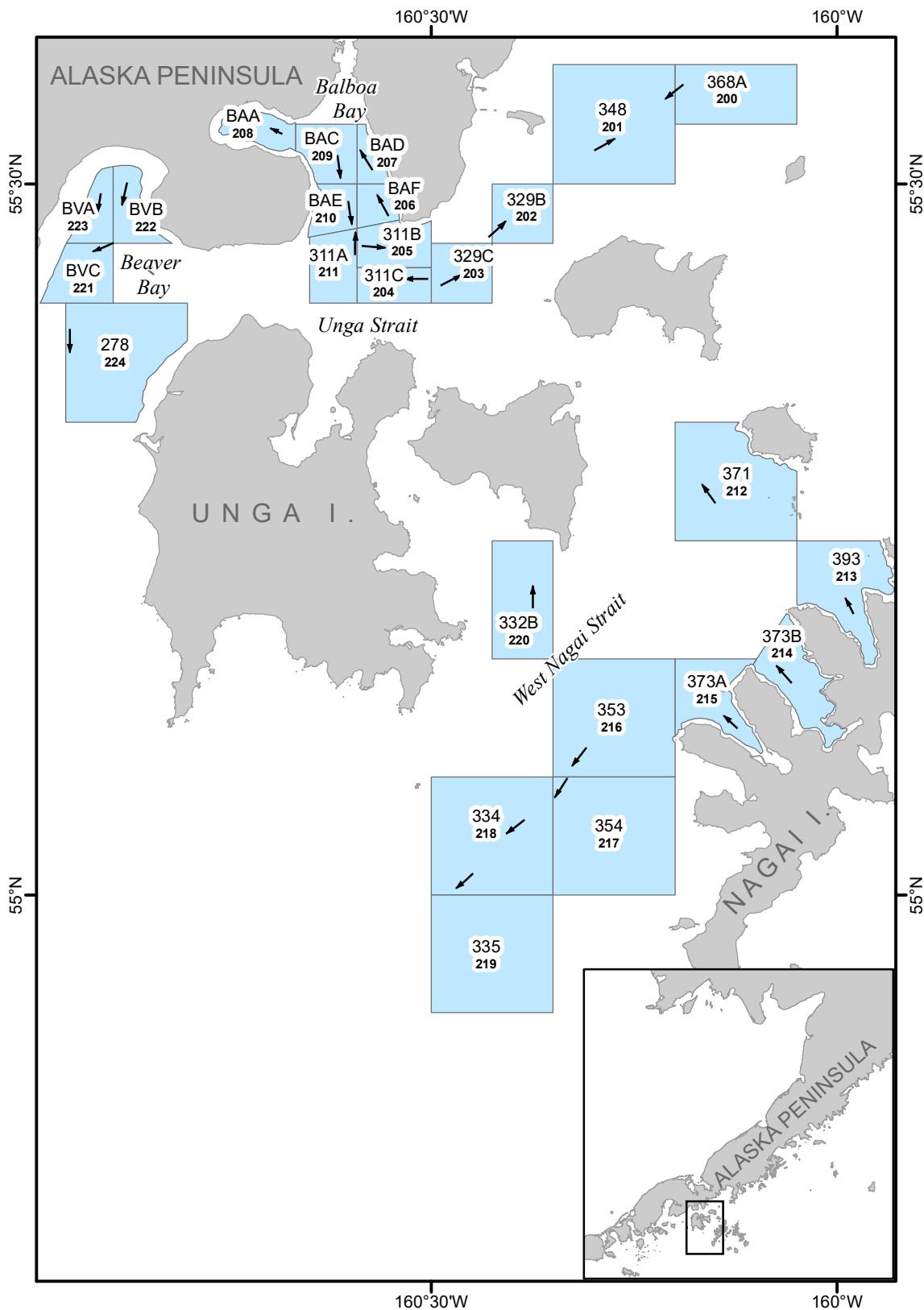
Appendix C7.—Uyak Bay, Uganik Bay, and Viekoda Bay station boundaries with station name, trawl haul number (bold), and haul location and direction (arrow), September 2018.



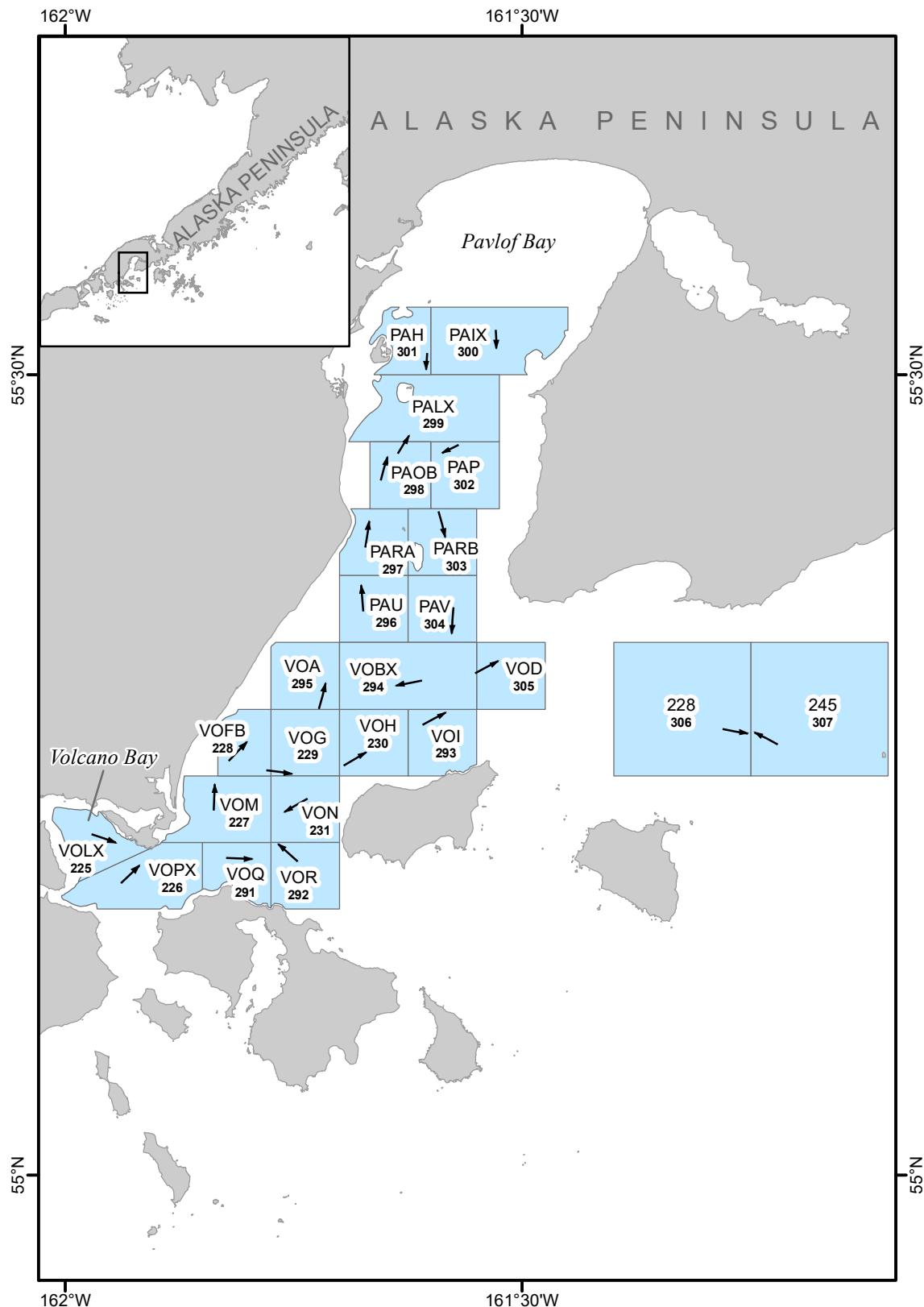
Appendix C8.—Kujulik Bay, Chignik Bay, and Castle Bay station boundaries with station name, trawl haul number (**bold**), and haul location and direction (arrow), July 2018.



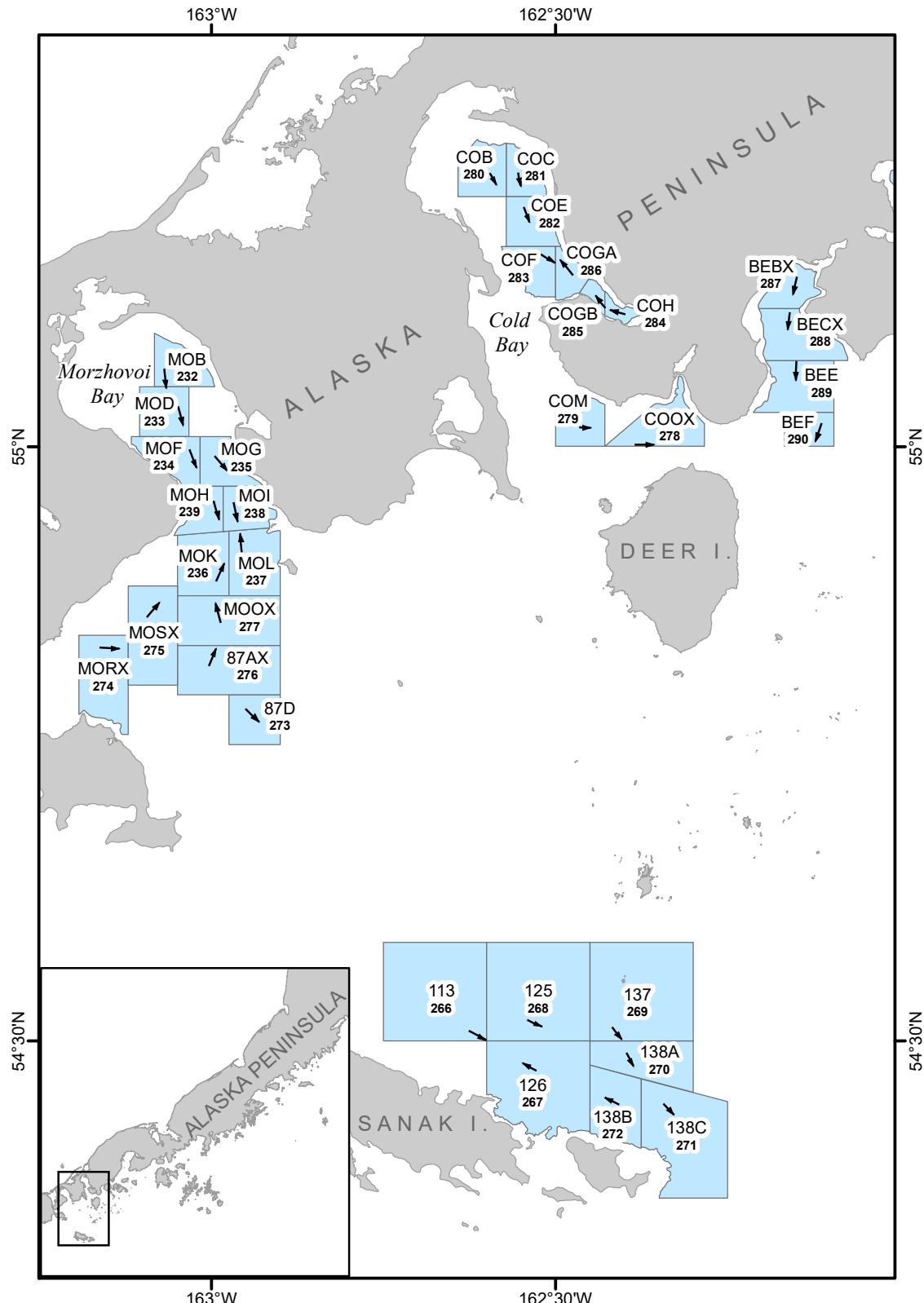
Appendix C9.—Stepovak Bay, Ivanof Bay, Kuiukta Bay, and Mitrofania Bay station boundaries with station name, trawl haul number (bold), and haul location and direction (arrow), July 2018.



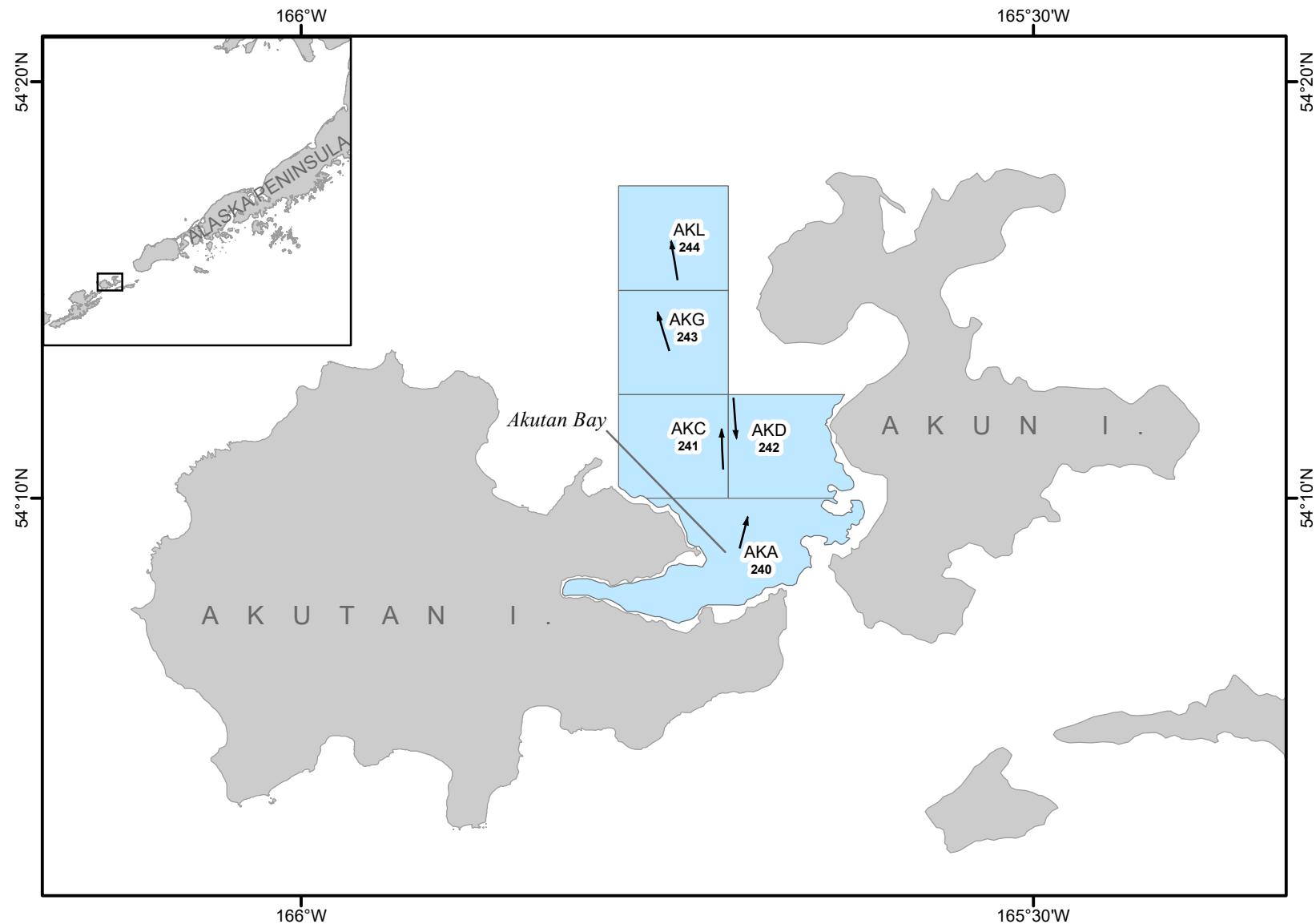
Appendix C10.—Unga Strait, Beaver Bay, Balboa Bay, and West Nagai Strait station boundaries with station name, trawl haul number (bold), and haul location and direction (arrow), July 2018.



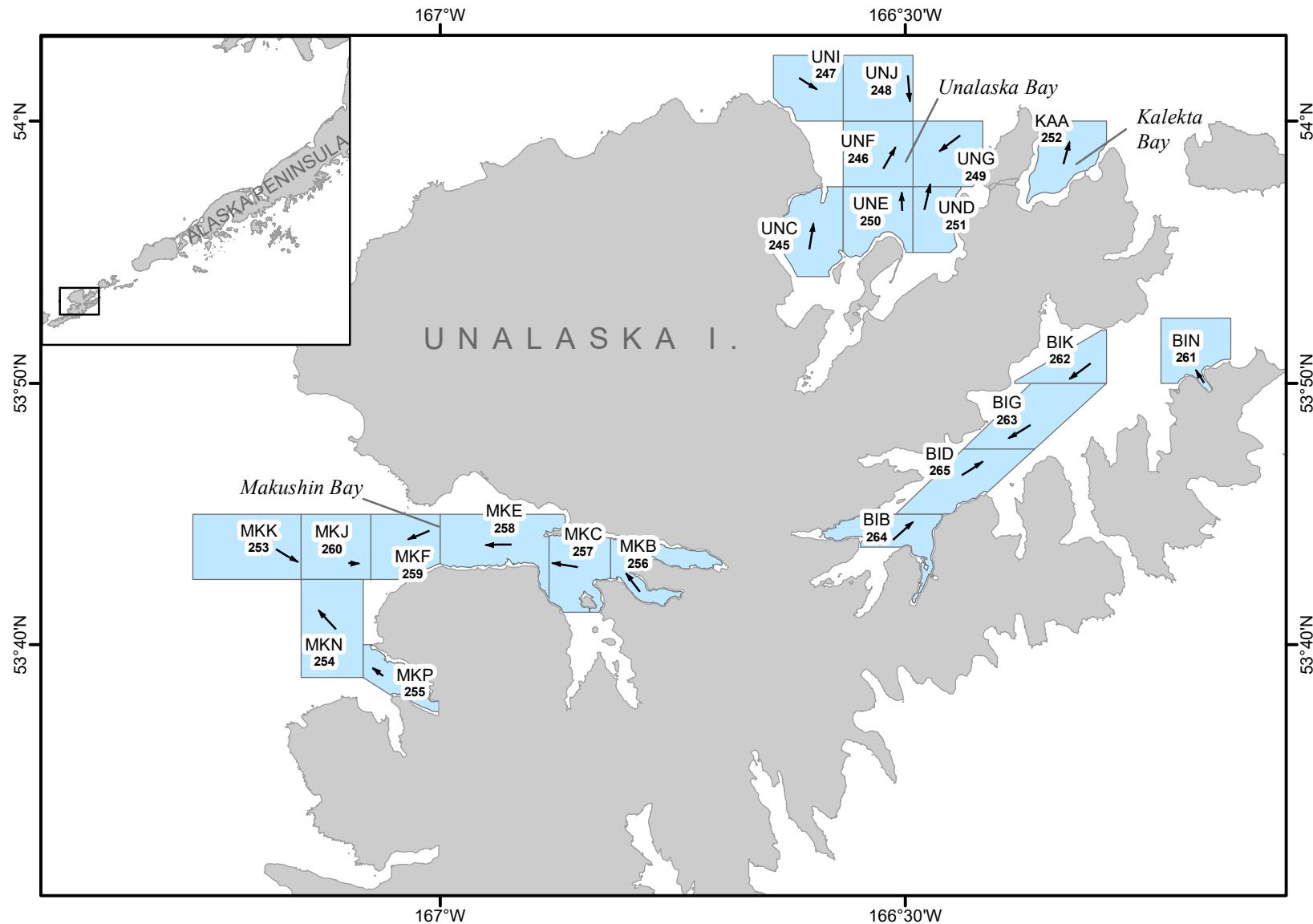
Appendix C11.—Pavlof Bay and Volcano Bay station boundaries with station name, trawl haul number (bold), and haul location and direction (arrow), July 2018.



Appendix C12.—Morzhovoi Bay, Cold Bay, Belkofski Bay, Deer Island, and Sanak Island station boundaries with station name, trawl haul number (bold), and haul location and direction (arrow), July and August 2018.



Appendix C13.—Akutan Bay station boundaries with station name, trawl haul number (**bold**), and haul location and direction (arrow), August 2018.



Appendix C14.—Unalaska Bay, Kalekta Bay, and Makushin Bay station boundaries with station name, trawl haul number (bold), and haul location and direction (arrow), August 2018.

**APPENDIX D. TANNER CRAB ABUNDANCE ESTIMATES
BY STATION**

Appendix D1.—Tanner crab abundance estimates in the Kodiak District by station and section, 2018.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab	
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm				
NORTHEAST Section															
256	33	14,552	0	14,552	18,190	0	7,276	0	0	0	0	0	25,466	40,018	
257	30	10,914	25,466	36,380	58,208	0	3,638	0	0	0	0	0	61,846	98,226	
284	27	3,647	3,647	7,294	3,647	7,294	21,883	0	0	0	0	0	32,824	40,118	
313	25	30,380	22,785	53,165	41,773	26,583	11,393	3,798	0	0	0	0	83,545	136,710	
395	41	239,243	26,583	265,825	201,268	26,583	3,798	0	0	0	0	0	231,648	497,473	
420	42	44,258	3,688	47,946	66,386	22,129	0	0	0	0	0	0	88,515	136,461	
421	43	36,881	3,688	40,569	14,753	0	0	0	0	0	0	0	14,753	55,322	
444	44	950,617	88,309	1,038,926	558,284	44,367	29,578	0	0	0	0	0	632,229	1,671,155	
255A	35	34,232	2,853	37,085	39,938	11,411	5,705	0	0	0	0	0	57,054	94,139	
255B	34	8,490	0	8,490	11,320	0	0	2,830	0	0	0	0	14,149	22,639	
283A	24	30,076	90,229	120,305	18,046	30,076	24,061	21,053	0	3,008	0	3,008	96,244	216,549	
283B	26	2,836	195,682	198,518	14,180	19,852	36,868	36,868	0	0	0	0	107,767	306,285	
369X	40	12,650	0	12,650	6,325	6,325	0	0	0	0	0	0	12,650	25,300	
CHA	8	4,132	0	4,132	9,236	0	0	0	0	0	0	0	9,236	13,367	
CHB	7	24,107	2,096	26,203	33,889	12,577	11,180	699	0	0	0	0	58,345	84,548	
CHE	5	1,823	0	1,823	0	0	0	0	0	0	0	0	0	1,823	
CHF	6	515,522	171,841	687,363	341,380	555,465	248,802	11,572	0	0	0	0	1,157,220	1,844,582	
CHG	4	97,193	1,451	98,644	117,502	5,803	0	0	0	0	0	0	0	123,305	221,949
CHJ	1	40,603	501	41,104	42,608	1,003	501	0	0	0	0	0	44,112	85,216	
CHK	2	24,664	19,183	43,847	21,532	28,971	11,745	2,349	0	0	0	0	64,597	108,444	
CHL	3	77,849	1,246	79,094	79,094	8,096	623	0	0	0	0	0	87,813	166,908	
KZA	12	1,722	0	1,722	0	5,165	0	861	0	0	0	0	6,025	7,747	
KZB	13	2,025	0	2,025	3,646	203	0	0	0	0	0	0	3,848	5,873	
KZC	11	19,686	0	19,686	32,081	0	0	0	0	0	0	0	32,081	51,768	
KZD	14	117,388	2,096	119,485	132,062	1,048	4,192	0	0	0	0	0	137,302	256,787	
KZE	10	141,358	0	141,358	179,910	7,139	0	0	0	0	0	0	187,050	328,408	
KZF	15	66,760	1,780	68,540	59,639	8,901	4,451	890	0	0	0	0	73,881	142,421	
KZG	9	427,530	57,645	485,175	275,075	216,130	70,172	8,421	0	0	0	0	569,798	1,054,973	
KZJ	16	84,494	0	84,494	123,419	949	949	0	0	0	0	0	125,318	209,812	
KZK	17	4,130	271,189	275,319	4,747	38,924	71,203	62,659	3,798	3,798	0	7,595	185,128	460,447	
KZO	18	85,444	18,988	104,431	92,486	121,293	68,227	21,226	1,516	0	0	1,516	304,749	409,181	
KZR	20	22,060	76,315	98,374	18,674	19,657	57,989	41,280	24,571	35,383	983	60,937	198,537	296,911	
KZS	21	51,601	27,520	79,121	30,487	25,031	3,851	5,135	963	2,888	0	3,851	68,355	147,476	

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Appendix D1.–Page 2 of 7.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
MOEX	22	495,513	25,808	521,321	523,406	152,996	108,707	20,131	0	0	0	0	805,240	1,326,561
MOGX	23	64,163	20,415	84,578	43,747	5,833	5,833	0	0	0	0	0	55,413	139,991
MOLA	37	176,846	27,923	204,769	193,212	103,897	51,037	16,405	0	0	0	0	364,551	569,319
MOLB	36	41,628	0	41,628	39,646	3,965	1,982	0	0	0	0	0	45,593	87,221
MONX	19	26,734	364,256	390,991	20,051	43,443	86,887	183,799	0	10,025	0	10,025	344,205	735,196
MOPA	38	574,068	11,597	585,666	728,971	14,507	14,507	3,627	0	0	0	0	761,611	1,347,277
MOPB	39	76,649	19,382	96,031	106,603	44,051	14,096	0	0	0	0	0	164,751	260,782
MOXA	31	131,785	35,031	166,817	120,215	49,867	7,124	0	0	0	0	0	177,207	344,023
MOXB	32	1,121,689	603,986	1,725,675	959,464	168,962	60,344	0	0	0	0	0	1,188,769	2,914,445
Total		5,937,942	2,223,179	8,161,121	5,385,100	1,838,496	1,048,602	443,603	30,848	55,102	983	86,932	8,802,730	16,963,851
EASTSIDE Section														
559	80	384,497	1,153,491	1,537,988	225,460	194,000	99,622	367,027	0	146,811	0	146,811	1,032,920	2,570,908
560	77	265,825	0	265,825	235,445	22,785	3,798	7,595	0	0	0	0	269,623	535,448
561	71	300,003	307,598	607,600	197,470	72,153	45,570	91,140	0	3,798	0	3,798	410,130	1,017,730
587	79	645,575	94,938	740,513	703,707	457,410	232,223	91,482	0	0	0	0	1,484,822	2,225,335
588	78	965,875	177,172	1,143,048	753,568	127,226	53,826	48,933	0	0	0	0	983,553	2,126,600
589	72	41,773	550,638	592,410	22,785	64,558	79,748	91,140	0	3,798	0	3,798	262,028	854,438
619	94	274,713	153,516	428,229	222,194	113,117	96,957	133,316	0	12,120	0	12,120	577,705	1,005,934
620	90	774,690	7,595	782,285	914,650	40,204	10,051	40,204	0	5,026	0	5,026	1,010,135	1,792,420
621	73	45,570	45,570	91,140	3,798	15,190	15,190	60,760	0	3,798	0	3,798	98,735	189,875
654	93	22,785	3,798	26,583	15,190	0	0	7,595	0	0	0	0	22,785	49,368
655	91	444,308	75,950	520,258	284,813	30,380	60,760	87,343	0	11,393	0	11,393	474,688	994,945
656	74	2,988,461	174,857	3,163,317	2,710,498	63,035	173,346	236,381	31,517	47,276	0	78,794	3,262,053	6,425,370
695	92	970,115	260,275	1,230,390	808,516	108,145	46,348	87,546	0	5,150	0	5,150	1,055,705	2,286,095
696	75	954,800	807,240	1,762,040	642,357	13,244	39,733	364,223	0	284,756	0	284,756	1,344,315	3,106,355
486A	58	66,441	17,718	84,159	16,049	0	80,243	407,634	138,018	22,468	0	160,486	664,411	748,569
486B	59	0	0	0	1,300	0	2,601	0	0	0	0	0	3,901	3,901
510C	62	0	952	952	952	0	0	0	0	0	0	0	952	1,905
510D	57	20,215	10,107	30,322	0	0	82,724	965,112	248,172	124,086	0	372,257	1,420,093	1,450,416
511A	64	0	1,861	1,861	3,722	0	7,443	76,292	145,140	3,722	0	148,862	236,318	238,179
511B	60	56,963	1,899	58,861	39,874	1,899	1,899	0	0	0	0	0	43,671	102,533
533A	68	37,975	0	37,975	13,563	0	2,713	8,138	0	0	0	0	24,413	62,388

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Appendix D1.—Page 3 of 7.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
533B	76	668,717	140,150	808,867	524,452	257,625	36,804	92,009	4,600	9,201	0	13,801	924,691	1,733,559
534BX	63	2,766	0	2,766	922	0	0	0	0	0	0	0	922	3,688
534DX	69	2,570	0	2,570	2,570	2,570	1,285	0	0	0	0	0	6,425	8,996
535A	65	8,394	2,798	11,192	8,394	6,529	3,731	14,923	1,865	0	0	1,865	35,441	46,633
535B	66	6,646	0	6,646	1,899	2,848	7,595	6,646	0	0	0	0	18,988	25,633
535C	70	116,583	42,903	159,486	56,893	23,317	21,451	24,249	1,865	1,865	0	3,731	129,641	289,126
535D	67	320,682	41,436	362,119	225,778	209,258	55,068	57,821	0	0	0	0	547,925	910,044
KLA	84	1,641,609	0	1,641,609	2,344,273	0	0	0	0	0	0	0	2,344,273	3,985,881
KLB	85	78,335	3,691	82,026	91,484	78,927	4,485	2,691	0	0	0	0	177,586	259,612
KLC	86	477,135	26,778	503,913	194,734	299,313	68,517	75,730	3,606	75,730	3,606	82,942	721,236	1,225,149
KLD	61	0	0	0	1,150	0	0	0	0	0	0	0	1,150	1,150
KLE	88	737,869	0	737,869	764,455	7,683	0	0	0	0	0	0	772,138	1,510,008
KLF	89	673,964	7,094	681,059	738,055	216,145	26,359	5,272	0	0	0	0	985,831	1,666,890
KLG	87	340,165	100,952	441,118	258,960	120,702	24,140	15,362	4,389	19,751	0	24,140	443,305	884,423
KLH	83	467,224	21,788	489,012	361,488	28,728	7,182	28,728	31,121	40,697	0	71,819	497,943	986,955
KLI	82	57,912	0	57,912	67,872	2,381	0	0	0	0	0	0	70,254	128,166
KLL	81	4,747	949	5,696	8,544	949	0	0	0	0	0	0	9,494	15,190
UGAA	47	77,322	4,966	82,287	33,245	11,082	15,514	62,058	319,154	0	4,433	323,587	445,486	527,774
UGAC	45	2,354	0	2,354	3,532	0	0	3,296	1,413	0	0	1,413	8,241	10,595
UGAD	46	144,185	1,407	145,592	144,840	17,040	852	3,408	6,816	852	0	7,668	173,809	319,400
UGB	48	2,856,282	0	2,856,282	3,557,376	0	0	0	0	0	0	0	3,557,376	6,413,659
UGC	49	6,763,044	0	6,763,044	8,399,342	86,147	43,074	0	0	0	0	0	8,528,562	15,291,606
UGD	50	5,306,049	0	5,306,049	5,837,020	33,827	25,211	13,040	2,608	0	0	2,608	5,911,705	11,217,754
UGE	51	9,663,634	48,806	9,712,440	8,618,802	111,210	12,262	14,715	8,992	0	0	8,992	8,765,982	18,478,422
UGF	52	6,925,335	34,115	6,959,450	4,811,337	24,674	24,674	0	24,674	0	0	24,674	4,885,357	11,844,808
UGG	54	486	1,458	1,944	486	0	486	0	0	0	0	0	972	2,916
UGI	53	19,218	1,236,362	1,255,580	0	13,042	221,712	491,243	113,029	34,778	0	147,808	873,805	2,129,385
UGJ	55	928	0	928	0	0	0	0	0	0	0	0	0	928
UGM	56	10,395	295,516	305,911	4,148	5,185	32,146	147,251	15,555	9,333	0	24,887	213,617	519,528
Total		46,635,134	5,856,344	52,491,477	44,877,962	2,882,528	1,767,343	4,230,303	1,102,534	866,409	8,039	1,976,984	55,735,111	108,226,590
SOUTHEAST Section														
586	96	126,583	126,583	253,167	237,889	337,648	291,605	437,408	0	92,086	0	92,086	1,396,636	1,649,803

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Appendix D1.—Page 4 of 7.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	>165 mm			
614	100	1,279,450	208,283	1,487,733	663,883	346,805	148,631	69,361	0	69,361	0	69,361	1,298,040	2,785,773
615	102	2,114,899	611,858	2,726,757	1,321,661	1,205,471	159,761	203,332	0	43,571	0	43,571	2,933,797	5,660,553
651	101	68,355	379,750	448,105	194,938	661,398	257,597	222,787	0	41,772	0	41,772	1,378,492	1,826,597
688	105	1,780,638	493,642	2,274,281	1,999,500	2,582,688	722,042	138,854	0	0	0	0	5,443,083	7,717,364
725	149	27,125	5,425	32,550	21,700	5,425	0	0	0	0	0	0	27,125	59,675
726	106	159,495	7,595	167,090	75,950	22,785	26,583	3,798	0	0	0	0	129,115	296,205
727	112	465,194	275,319	740,513	503,972	1,017,107	274,894	36,652	0	9,163	0	9,163	1,841,788	2,582,300
728	111	355,715	423,013	778,728	360,522	504,731	187,472	33,649	0	0	0	0	1,086,373	1,865,101
729	110	645,575	180,381	825,956	441,459	213,609	194,622	71,203	0	4,747	0	4,747	925,641	1,751,597
759	107	1,365,603	20,484	1,386,087	764,247	9,494	23,734	0	0	0	0	0	797,475	2,183,562
760	108	930,388	61,709	992,097	731,019	128,166	61,709	4,747	0	0	0	0	925,641	1,917,738
761	109	625,737	1,197,063	1,822,800	263,473	158,084	91,018	9,581	0	0	0	0	522,156	2,344,956
585X	97	1,006,290	445,825	1,452,115	1,120,098	725,518	330,938	114,555	0	12,728	0	12,728	2,303,837	3,755,952
618A	95	69,621	35,865	105,486	61,182	10,549	14,768	18,987	0	0	0	0	105,486	210,972
THA	104	4,520,978	0	4,520,978	5,263,812	0	0	0	0	0	0	0	5,263,812	9,784,790
THCX	103	764,980	176,177	941,157	414,545	369,594	149,836	54,940	0	24,973	0	24,973	1,013,887	1,955,044
THDX	99	570,439	35,652	606,092	561,729	84,068	64,962	42,034	0	11,464	0	11,464	764,258	1,370,349
THFA	114	594,756	30,977	625,733	287,596	189,068	42,607	18,640	0	2,663	0	2,663	540,574	1,166,307
THG	115	189,012	3,743	192,755	130,063	17,778	15,907	4,679	0	0	0	0	168,427	361,182
THH	98	152,562	26,923	179,485	94,056	49,216	57,965	15,312	0	5,468	0	5,468	222,017	401,502
THI	113	3,575,041	21,799	3,596,840	3,748,899	87,184	0	0	0	0	0	0	3,836,083	7,432,923
THJ	116	187,386	19,562	206,949	126,681	36,469	11,516	9,597	0	7,678	0	7,678	191,941	398,889
THK	119	2,066,827	74,963	2,141,790	2,425,113	494,290	46,340	15,447	0	0	0	0	2,981,189	5,122,979
THL	120	932,334	28,396	960,730	1,025,445	107,314	23,848	47,695	0	17,886	0	17,886	1,222,187	2,182,917
THM	118	2,410,806	26,639	2,437,444	2,695,880	880,287	146,715	18,339	0	0	0	0	3,741,221	6,178,665
THN	117	666,846	3,318	670,164	708,525	330,290	31,964	10,655	0	0	0	0	1,081,433	1,751,597
Total		27,652,635	4,920,944	32,573,582	26,243,837	10,575,036	3,377,034	1,602,252	0	343,560	0	343,560	42,141,714	74,715,292
SOUTHWEST Section														
645B	126	408,611	0	408,611	361,706	0	1,836	11,016	0	3,672	0	3,672	378,231	786,842
646A	127	13,383,712	0	13,383,712	11,618,855	58,681	0	117,362	0	0	0	0	11,794,898	25,178,610
646B	128	2,641,535	16,107	2,657,642	3,222,217	112,778	0	0	0	0	0	0	3,334,995	5,992,637
646C	125	1,288,050	0	1,288,050	1,276,336	0	6,613	26,453	0	13,226	0	13,226	1,322,628	2,610,678

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Appendix D1.—Page 5 of 7.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
646D	131	2,152,423	0	2,152,423	1,918,245	10,657	0	0	0	0	0	0	1,928,902	4,081,325
682B	124	221,917	1,104	223,021	149,019	1,014	0	1,014	0	0	0	0	151,046	374,067
683A	123	366,164	0	366,164	291,381	0	1,464	0	0	1,464	0	1,464	294,309	660,473
683B	122	394,727	0	394,727	349,422	0	0	1,756	0	0	0	0	351,178	745,905
683D	134	2,871	0	2,871	3,281	0	0	0	0	0	0	0	3,281	6,152
684A	121	5,778	0	5,778	9,630	0	0	0	0	0	0	0	9,630	15,409
684B	132	11,848	0	11,848	7,291	0	0	0	0	0	0	0	7,291	19,139
684C	133	10,253	380	10,633	8,734	0	0	380	0	0	0	0	9,114	19,747
ALA	130	553,539	0	553,539	602,238	18,722	0	3,120	0	0	0	0	624,081	1,177,620
ALCA	136	17,280	1,800	19,080	11,160	360	720	11,160	360	720	0	1,080	24,480	43,560
ALD	129	5,772	0	5,772	4,489	0	0	0	0	0	0	0	4,489	10,262
ALF	147	855,051	35,463	890,514	837,927	4,169	0	0	0	0	0	0	842,096	1,732,609
ALG	137	166,415	4,895	171,309	115,512	979	0	0	0	0	0	0	116,490	287,800
ALH	148	128,632	56,276	184,908	135,636	4,265	2,559	15,355	0	7,677	853	8,531	166,346	351,254
ALI	146	126,060	18,827	144,887	59,997	88,566	18,570	61,425	9,999	52,854	0	62,854	291,412	436,299
ALJ	143	913,425	0	913,425	715,696	82,208	14,507	9,672	0	0	0	0	822,083	1,735,508
ALK	142	2,553,699	0	2,553,699	3,036,373	0	0	0	0	0	0	0	3,036,373	5,590,072
ALL	145	155,433	4,974	160,406	81,709	188,084	20,042	12,333	4,625	3,083	0	7,708	309,876	470,282
ALM	144	613,980	0	613,980	496,365	186,577	21,122	3,520	0	0	0	0	707,584	1,321,564
ALO	141	29,772	744	30,517	19,352	744	6,699	50,613	2,977	44,659	744	48,380	125,788	156,305
ALP	140	39,969	0	39,969	51,389	4,894	3,263	7,341	14,683	0	0	14,683	81,570	121,540
ALQ	139	12,760	638	13,398	1,126	1,126	0	28,146	194,772	2,252	2,252	199,275	229,673	243,070
ALR	138	9,479	2,962	12,441	7,109	0	1,185	11,848	89,454	4,739	1,777	95,970	116,112	128,553
Total		27,069,155	144,170	27,213,324	25,392,195	763,824	98,580	372,514	316,870	134,346	5,626	456,843	27,083,956	54,297,282
WESTSIDE Section														
KUF	309	17,991	11,494	29,485	10,495	3,998	1,499	0	0	0	0	0	15,992	45,477
KUG	310	684	684	1,367	0	0	0	0	0	0	0	0	0	1,367
KUI	341	46,272	159,382	205,654	11,646	11,930	4,261	0	0	0	0	0	27,837	233,492
KUJ	342	96,770	68,649	165,419	51,280	74,356	97,432	21,794	7,692	3,846	0	11,538	256,400	421,819
KUK	343	104,505	46,210	150,715	75,358	31,762	5,605	2,491	0	623	0	623	115,839	266,554
KULA	345	142,845	38,458	181,303	37,522	103,187	58,368	18,761	1,042	0	0	1,042	218,881	400,184
KULB	346	360	0	360	480	120	0	0	0	0	0	0	600	960

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Appendix D1.—Page 6 of 7.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
KUM	344	19,057	0	19,057	15,804	465	0	0	0	0	0	0	16,268	35,326
KUNX	349	120,932	15,626	136,558	64,681	31,106	4,444	494	494	494	0	987	101,712	238,270
KUP	350	3,536	91,353	94,889	2,947	7,072	35,362	29,469	0	11,787	0	11,787	86,638	181,527
KUQ	351	58,330	30,988	89,317	41,924	18,228	39,190	11,848	911	0	0	911	112,102	201,419
KUS	352	9,141	54,310	63,452	2,483	29,792	67,031	25,447	0	0	0	0	124,752	188,204
KUT	358	34,129	17,481	51,610	19,562	15,816	7,908	1,249	0	0	0	0	44,534	96,144
KUU	355	28,686	439,850	468,536	4,781	59,766	198,422	184,078	9,563	14,344	0	23,906	470,954	939,489
KUV	356	203	608	810	203	0	0	203	0	0	0	0	405	1,215
KUW	357	0	0	0	655	0	328	0	0	0	0	0	983	983
KUXA	354	13,529	32,132	45,661	28,734	54,087	103,104	86,202	23,663	1,690	0	25,353	297,481	343,142
KUXB	353	12,111	3,796	15,907	10,123	3,796	10,303	3,073	0	0	0	0	27,295	43,202
KUYA	347	1,808	301	2,109	301	904	0	301	0	0	0	0	1,506	3,615
MAA	339	3,264	933	4,197	1,865	466	466	0	0	0	0	0	2,798	6,995
PMA	338	88,224	18,046	106,269	44,206	86,086	77,943	34,900	3,490	0	0	3,490	246,625	352,894
RAA	340	298	25,009	25,307	327	655	25,872	36,680	1,310	655	0	1,965	65,499	90,806
145	UYBX	15,214	0	15,214	22,821	951	0	0	0	0	0	0	23,772	38,987
	UYEX	133,529	292,493	426,022	72,204	184,677	20,828	2,777	0	0	0	0	280,486	706,508
	UYFX	141,038	353,832	494,870	80,416	45,952	95,734	38,294	3,829	2,553	0	6,382	268,055	762,925
	UYHX	3,848	1,215	5,063	4,861	1,013	203	405	0	0	0	0	6,481	11,544
	UYKX	46,987	118,705	165,693	16,913	48,957	77,442	34,715	1,780	0	0	1,780	179,807	345,500
	UYMX	90,154	4,098	94,252	81,958	16,392	11,269	6,147	1,024	0	0	1,024	116,791	211,043
	UYO	0	23,818	23,818	0	0	1,786	1,489	0	149	0	149	3,424	27,242
	UYQX	10,548	19,735	30,283	3,403	3,062	5,444	4,423	681	0	0	681	17,013	47,296
	UYSS	9,624	3,475	13,100	1,871	12,030	2,941	267	0	0	0	0	17,110	30,210
	UYT	360	0	360	360	0	0	0	0	0	0	0	360	720
	Total	1,253,977	1,872,681	3,126,657	710,184	846,626	953,185	545,507	55,479	36,141	0	91,618	3,148,400	6,275,059
NORTH MAINLAND Section														
2	327	49,269	0	49,269	53,059	0	0	0	0	0	0	0	53,059	102,327
31	328	3,706	0	3,706	18,532	0	0	0	0	0	0	0	18,532	22,238
60	330	15,190	0	15,190	3,798	0	0	0	0	0	0	0	3,798	18,988
61	329	0	0	0	7,595	0	0	0	0	0	0	0	7,595	7,595
90	332	81,753	0	81,753	120,852	7,109	0	0	0	0	0	0	127,961	209,713

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Appendix D1.–Page 7 of 7.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
91	331	15,190	0	15,190	34,178	0	0	0	0	0	0	0	34,178	49,368
117	334	1,419,961	0	1,419,961	2,218,637	10,876	0	0	0	0	0	0	2,229,512	3,649,473
118	333	265,825	0	265,825	391,143	0	0	0	0	0	0	0	391,143	656,968
119	326	113,925	3,798	117,723	269,623	0	0	0	0	0	0	0	269,623	387,345
120	336	227,850	0	227,850	273,420	0	0	0	0	0	0	0	273,420	501,270
121	337	292,408	3,798	296,205	349,370	0	0	0	0	0	0	0	349,370	645,575
144	335	2,987	0	2,987	23,899	0	0	0	0	0	0	0	23,899	26,886
145	323	193,673	0	193,673	284,813	45,570	22,785	3,798	0	0	0	0	356,965	550,638
146	324	30,380	0	30,380	68,355	18,988	7,595	30,380	3,798	3,798	0	7,595	132,913	163,293
147	325	193,673	3,798	197,470	262,028	0	0	0	0	0	0	0	262,028	459,498
173	316	30,380	56,963	87,343	125,318	326,585	56,963	15,190	0	7,595	0	7,595	531,650	618,993
174	315	18,988	60,760	79,748	26,583	34,178	11,393	15,190	0	7,595	0	7,595	94,938	174,685
198	318	87,343	94,938	182,280	83,545	68,355	64,558	45,570	0	3,798	0	3,798	265,825	448,105
199	317	26,583	307,598	334,180	15,190	26,583	18,988	56,963	0	26,583	0	26,583	144,305	478,485
200	314	30,380	60,760	91,140	53,165	136,710	34,178	22,785	0	7,595	0	7,595	254,433	345,573
222	311	41,136	95,984	137,120	63,989	13,712	13,712	31,995	0	4,571	0	4,571	127,979	265,099
223	312	91,140	113,925	205,065	129,115	7,595	18,988	26,583	0	0	0	0	182,280	387,345
224	313	53,165	91,140	144,305	117,723	11,393	41,773	7,595	0	7,595	0	7,595	186,078	330,383
171A	319	16,186	506	16,692	17,198	5,058	3,541	10,117	26,809	506	1,012	28,326	64,240	80,932
171C	320	34,212	1,694	35,906	6,614	22,321	15,708	41,336	72,751	4,960	3,307	81,019	166,997	202,903
171D	321	5,067	5,067	10,135	11,402	0	0	0	0	3,801	0	3,801	15,202	25,337
172B	322	73,910	52,793	126,703	140,781	17,598	10,559	21,117	80,949	17,598	0	98,547	288,601	415,304
Total		3,414,280	953,522	4,367,799	5,169,925	752,631	320,741	328,619	184,307	95,995	4,319	284,620	6,856,524	11,224,319
Kodiak District Total		111,963,123	15,970,840	127,933,960	107,779,203	17,659,141	7,565,485	7,522,798	1,690,038	1,531,553	18,967	3,240,557	143,768,435	271,702,393

Appendix D2.—Tanner crab abundance estimates in the Chignik District by station and sampling locale, 2018.

Station	Haul no.	Females			Number sublegal males by size (CW)					Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm	<165 mm		<165 mm	≥165 mm			
IVANOF BAY															
4007	191	442,102	0	442,102	493,964	9,979	2,495	0	0	0	0	0	0	506,438	948,540
4008	192	349,655	71,567	421,222	297,338	107,697	32,777	25,754	9,365	2,341	0	11,706	475,272	896,494	
4915	189	6,781	0	6,781	0	0	0	0	0	0	0	0	0	0	6,781
4000X	194	27,315	1,230	28,545	28,053	1,969	738	7,628	1,476	738	0	2,215	40,603	69,148	
4000Y	193	22,360	0	22,360	16,770	0	0	699	0	0	0	0	17,469	39,828	
4900X	195	8,410	0	8,410	16,820	0	0	0	0	0	0	0	16,820	25,231	
Total		856,623	72,797	929,420	852,945	119,645	36,010	34,081	10,841	3,079	0	13,921	1,056,602	1,986,022	
MITROFANIA ISLAND															
4024	190	3,955,709	38,219	3,993,928	6,080,684	739,089	0	0	0	0	0	0	6,819,772	10,813,700	
4025	185	71,546	9,668	81,215	44,475	27,072	11,602	13,536	3,867	3,867	0	7,735	104,419	185,634	
4026	186	223,934	4,035	310,683	193,673	6,052	2,017	0	0	0	0	0	201,742	512,425	
4035	182	1,276,069	17,973	1,294,042	1,104,952	326,295	81,574	14,832	0	0	0	0	1,527,652	2,821,694	
4036	183	758,321	0	758,321	785,056	0	7,735	0	0	0	0	0	792,790	1,551,112	
4037	184	104,419	3,867	108,286	71,546	79,281	58,011	11,602	17,403	0	0	17,403	237,844	346,130	
4048	174	393,513	85,261	478,774	207,375	291,053	203,737	25,467	0	0	0	0	727,631	1,206,405	
4049	181	934,786	17,311	952,097	592,920	67,304	3,205	0	0	0	0	0	663,429	1,615,526	
4063	173	532,961	2,638	535,599	795,010	265,003	84,575	11,277	0	5,638	0	5,638	1,161,503	1,697,103	
4064	175	1,254,780	217,495	1,472,276	1,780,997	1,130,546	170,356	46,461	15,487	0	0	15,487	3,143,847	4,616,123	
4065	176	2,442,083	24,421	2,466,504	2,182,725	42,799	0	0	0	0	0	0	2,225,523	4,692,027	
4038A	187	401,679	72,819	474,498	348,611	36,798	13,557	0	0	0	0	0	398,965	873,463	
4038B	188	69,722	0	69,722	69,722	1,937	5,810	0	0	0	0	0	77,469	147,191	
4050A	180	144,502	2,294	146,796	155,700	82,341	50,902	13,474	1,497	0	0	1,497	303,914	450,710	
4050B	179	608,172	12,412	620,583	533,463	249,523	103,251	8,604	0	0	0	0	894,841	1,515,425	
4066A	178	1,546,726	151,310	1,698,036	1,133,169	531,486	350,981	50,140	0	0	0	0	2,065,777	3,763,813	
4066B	177	971,804	210,753	1,182,557	794,583	219,778	112,707	11,271	5,635	0	0	5,635	1,143,974	2,326,531	
Total		15,690,726	870,476	16,643,917	16,874,661	4,096,357	1,260,020	206,664	43,889	9,505	0	53,395	22,491,092	39,135,012	

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Appendix D2.–Page 2 of 2.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
CHIGNIK BAY														
4256	165	64,119	2,211	66,330	97,284	8,844	0	0	0	0	0	0	106,127	172,457
4262	164	310,781	41,437	352,218	200,585	86,851	64,105	8,272	0	0	0	0	359,813	712,031
4264	160	366,751	64,721	431,472	238,341	87,899	5,071	8,452	0	0	0	0	339,762	771,234
4265	158	21,499	0	21,499	26,385	0	0	326	326	0	0	326	27,037	48,535
4266	166	695,043	9,609	704,652	644,709	60,553	10,686	0	0	0	0	0	715,947	1,420,599
4267	167	1,382,984	55,319	1,438,303	1,170,759	91,824	5,739	5,739	0	0	0	0	1,274,061	2,712,364
4270	162	46,237	6,064	52,301	50,027	758	2,274	0	758	0	0	758	53,817	106,117
4271	161	73,819	1,768	75,587	80,007	442	1,326	0	0	0	0	0	81,775	157,362
4272	170	629,220	14,981	644,202	838,163	20,443	4,089	0	0	0	0	0	862,695	1,506,897
4274	168	332,347	24,618	356,965	227,903	36,332	44,590	46,241	0	0	0	0	355,066	712,031
4277	171	130,064	15,190	145,254	116,810	38,547	38,547	39,716	4,672	0	0	4,672	238,293	383,548
4278	169	246,968	50,186	297,154	228,666	43,716	43,716	40,353	1,681	0	1,681	3,363	359,813	656,968
4282	172	202,924	3,090	206,014	128,753	41,845	67,595	90,127	9,656	0	0	9,656	337,977	543,992
4286	156	163,293	26,583	189,875	164,479	70,491	138,632	84,589	11,749	0	0	11,749	469,941	659,816
4287	157	287,266	83,400	370,666	188,055	121,076	136,533	85,011	5,152	0	0	5,152	535,827	906,494
4312	163	46,591	149,479	196,069	29,119	971	11,648	13,589	1,941	1,941	0	3,883	59,209	255,279
4964	159	33,480	0	33,480	54,670	1,271	0	1,271	0	0	0	0	57,213	90,693
Total		5,033,386	548,656	5,582,041	4,484,715	711,863	574,551	423,686	35,935	1,941	1,681	39,559	6,234,373	11,816,417
KUJULIK BAY														
4290	154	0	0	0	1,570	0	0	0	0	0	0	0	1,570	1,570
4296	155	981,578	0	981,578	406,975	790,357	41,287	5,898	0	0	0	0	1,244,517	2,226,095
4298	150	842	0	842	4,208	0	0	0	0	0	0	0	4,208	5,049
4301	153	6,635	0	6,635	7,583	0	0	0	0	0	0	0	7,583	14,218
4302	152	4,033	0	4,033	10,486	0	0	0	0	0	0	0	10,486	14,519
4308	151	28,861	0	28,861	38,735	0	0	0	0	0	0	0	38,735	67,596
Total		1,021,949	0	1,021,949	469,557	790,357	41,287	5,898	0	0	0	0	1,307,099	2,329,047
Chignik District Total		22,602,684	1,491,929	24,177,327	22,681,878	5,718,222	1,911,868	670,329	90,665	14,525	1,681	106,875	31,089,166	55,266,498

Appendix D3.—Tanner crab abundance estimates in the South Peninsula District by station, sampling locale, and section, 2018.

Haul		Females			Number sublegal males by size (CW)				Recruit	Postrecruit males (CW)		Legal	Total	Total
Station	no.	Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm	males	<165 mm	≥165 mm	males	males	crab
SANAK ISLAND														
113	266	293,927	0	293,927	215,318	34,178	0	0	0	0	0	0	249,496	543,422
125	268	474,213	17,089	491,302	324,686	93,988	8,544	0	0	0	0	0	427,219	918,520
126	267	241,156	0	241,156	232,544	60,289	8,613	0	0	0	0	0	301,446	542,602
137	269	503,169	52,216	555,384	417,725	189,875	23,734	23,734	0	0	0	0	655,069	1,210,453
138A	270	100,117	13,477	113,595	92,416	53,909	9,627	7,701	0	0	0	0	163,653	277,248
138B	272	64,237	3,059	67,295	73,413	10,196	0	0	0	0	0	0	83,610	150,905
138C	271	438,118	22,063	460,181	296,281	31,519	18,912	3,152	0	0	0	0	349,864	810,045
Total		2,114,937	107,904	2,222,840	1,652,383	473,954	69,430	34,587	0	0	0	0	2,230,357	4,453,195
MORZHOOVI BAY														
87AX	276	1,079,439	359,813	1,439,253	404,009	36,728	142,831	208,126	8,162	20,404	0	28,566	820,260	2,259,513
87D	273	70,102	6,911	77,013	51,342	18,760	5,924	2,962	0	0	0	0	78,988	156,001
MOB	232	125,500	0	125,500	172,255	0	0	0	0	0	0	0	172,255	297,754
MOD	233	52,831	0	52,831	66,395	0	0	0	0	0	0	0	66,395	119,226
MOF	234	57,464	0	57,464	49,507	0	0	0	0	0	0	0	49,507	106,971
MOG	235	145,435	0	145,435	157,101	778	0	0	0	0	0	0	157,879	303,314
MOH	239	37,513	0	37,513	50,911	0	0	0	0	0	0	0	50,911	88,424
MOI	238	72,787	0	72,787	65,284	0	750	0	0	0	0	0	66,034	138,821
MOK	236	129,115	6,646	135,761	133,862	949	6,646	12,342	7,595	0	0	7,595	161,394	297,154
MOL	237	398,920	37,792	436,712	210,312	158,596	120,671	144,805	86,193	0	0	86,193	720,576	1,157,288
MOOX	277	135,862	220,775	356,637	73,881	57,463	61,568	242,166	28,732	24,627	0	53,359	488,437	845,074
MORX	274	167,066	0	167,066	171,541	0	0	0	0	0	0	0	171,541	338,606
MOSX	275	253,977	1,671	255,648	265,673	0	0	1,671	0	0	0	0	267,344	522,992
Total		2,726,011	633,608	3,359,620	1,872,073	273,274	338,390	612,072	130,682	45,031	0	175,713	3,271,521	6,631,138
COLD BAY/BELKOFSKI BAY														
BEBX	287	25,060	783	25,843	57,952	0	0	0	0	0	0	0	57,952	83,795
BECX	288	74,485	1,262	75,747	94,684	1,262	0	0	0	0	0	0	95,947	171,694
BEE	289	128,166	0	128,166	152,849	949	949	0	0	0	0	0	154,748	282,914
BEF	290	295,981	1,451	297,432	243,037	1,191	0	0	0	0	0	0	244,228	541,660
COB	280	334,566	0	334,566	289,776	1,323	0	0	0	0	0	0	291,099	625,665

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Appendix D3.—Page 2 of 4.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
COC	281	126,077	0	126,077	120,674	0	0	0	0	0	0	0	120,674	246,751
COE	282	266,171	0	266,171	272,096	5,258	0	0	0	0	0	0	277,354	543,525
COF	283	144,746	5,878	150,624	128,962	9,747	6,748	7,498	2,249	0	0	2,249	155,204	305,828
COGA	286	67,337	13,467	80,805	49,200	2,866	15,285	22,451	955	10,031	0	10,986	100,789	181,593
COGB	285	44,883	0	44,883	48,978	245	0	490	0	0	0	0	49,713	94,596
COH	284	11,780	0	11,780	9,906	0	0	0	0	0	0	0	9,906	21,686
COM	279	13,671	1,367	15,038	16,405	0	0	0	0	0	0	0	16,405	31,443
COOX	278	7,339,565	27,002	7,366,567	5,936,702	3,682	39,275	33,139	0	0	0	0	6,012,797	13,379,364
Total		8,872,488	51,210	8,923,699	7,421,221	26,523	62,257	63,578	3,204	10,031	0	13,235	7,586,816	16,510,514
PAVLOF BAY/VOLCANO BAY														
228	306	29,463	2,266	31,729	23,797	0	5,666	8,499	0	567	0	567	38,528	70,257
245	307	113,600	0	113,600	123,843	931	2,793	1,862	0	0	0	0	129,429	243,029
PAH	301	46,117	0	46,117	64,983	0	1,048	0	0	0	0	0	66,031	112,148
PAIX	300	36,358	4,848	41,206	29,087	16,967	4,848	2,424	0	0	0	0	53,326	94,532
PALX	299	149,861	29,077	178,938	58,155	22,367	17,894	6,710	2,237	0	0	2,237	107,363	286,301
PAOB	298	71,315	77,098	148,413	46,259	30,839	53,968	33,730	3,855	5,782	0	9,637	174,434	322,847
PAP	302	38,136	11,835	49,971	28,930	27,615	35,506	17,095	1,315	0	0	1,315	110,462	160,432
PARA	297	203,013	3,060	206,074	265,615	35,936	7,812	3,125	0	0	0	0	312,489	518,562
PARB	303	63,411	38,598	102,008	61,573	3,676	24,813	30,327	1,838	919	0	2,757	123,145	225,154
PAU	296	318,288	6,398	324,686	261,638	14,912	9,489	12,201	2,711	0	0	2,711	300,952	625,638
PAV	304	319,663	4,795	324,458	319,733	3,150	1,575	0	0	0	0	0	324,458	648,917
VOA	295	436,592	0	436,592	352,035	14,442	5,416	7,221	0	1,805	0	1,805	380,920	817,512
VOBX	294	382,433	25,237	407,669	436,566	2,250	6,751	6,751	0	0	0	0	452,319	859,988
VOD	305	339,003	16,316	355,318	252,822	2,661	6,653	6,653	0	0	0	0	268,790	624,108
VOFB	228	68,811	9,633	78,444	86,701	11,010	5,505	6,193	0	688	0	688	110,097	188,541
VOG	229	79,360	9,798	89,158	83,279	8,818	3,919	30,372	0	8,818	0	8,818	135,206	224,364
VOH	230	158,903	5,778	164,681	151,198	16,372	9,630	3,852	0	0	0	0	181,053	345,734
VOI	293	222,216	6,837	229,053	203,514	0	9,691	5,384	0	1,077	0	1,077	219,666	448,719
VOLX	225	296,776	7,532	304,309	304,839	2,917	0	2,917	0	1,459	0	1,459	312,132	616,441
VOM	227	170,486	6,046	176,532	146,304	3,627	3,627	4,836	0	0	0	0	158,395	334,927
VON	231	489,723	10,931	500,655	452,906	16,175	11,554	9,243	0	0	0	0	489,877	990,532
VOPX	226	352,383	16,518	368,901	315,004	13,476	11,792	3,369	1,685	0	0	1,685	345,325	714,226

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Appendix D3.—Page 3 of 4.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
VOQ	291	183,765	896	184,662	216,536	10,478	6,985	0	0	0	0	0	233,999	418,661
VOR	292	222,314	8,805	231,119	212,672	6,897	19,543	0	2,299	0	0	2,299	241,412	472,531
Total		4,791,990	302,302	5,094,293	4,497,989	265,516	266,478	202,764	15,940	21,115	0	37,055	5,269,808	10,364,101
BEAVER BAY/BALBOA BAY/UNGA STRAIT														
278	224	6,328	0	6,328	22,149	0	0	0	0	0	0	0	22,149	28,477
348	201	713,930	26,583	740,513	641,778	15,190	3,798	3,798	0	0	0	0	664,563	1,405,075
311A	211	235,518	2,201	237,719	293,447	1,482	2,964	1,482	0	0	0	0	299,375	537,094
311B	205	83,396	860	84,256	86,835	0	0	0	0	0	0	0	86,835	171,091
311C	204	138,082	6,439	144,521	148,813	2,862	715	0	0	0	0	0	152,391	296,911
329B	202	274,473	2,745	277,217	294,136	4,548	4,548	1,516	0	0	0	0	304,749	581,967
329C	203	284,869	22,729	307,597	302,385	8,894	1,482	1,482	0	0	0	0	314,243	621,841
368A	200	161,505	3,892	165,396	155,667	21,404	1,946	1,946	0	0	0	0	180,963	346,359
BAA	208	15,063	0	15,063	27,469	0	0	0	0	0	0	0	27,469	42,532
BAC	209	85,945	0	85,945	112,102	8,968	0	0	0	0	0	0	121,070	207,015
BAD	207	18,012	0	18,012	17,277	0	0	0	0	0	0	0	17,277	35,289
BAE	210	252,547	12,885	265,432	216,432	32,646	8,464	0	0	0	0	0	257,542	522,973
BAF	206	0	0	0	418	0	418	0	0	0	0	0	835	835
BVA	223	0	0	0	0	0	0	0	0	0	0	0	0	0
BVB	222	0	0	0	0	0	0	0	0	0	0	0	0	0
BVC	221	835	835	1,671	835	835	0	0	0	0	0	0	1,671	3,342
Total		2,270,503	79,169	2,349,670	2,319,743	96,829	24,335	10,224	0	0	0	0	2,451,132	4,800,801
STEPOVAK BAY														
STA	197	35,326	0	35,326	40,904	1,859	0	0	0	0	0	0	42,763	78,089
STB	198	94,406	0	94,406	119,469	3,342	0	0	0	0	0	0	122,811	217,217
STD	196	1,109,465	5,439	1,114,903	978,318	419,279	0	0	0	0	0	0	1,397,597	2,512,500
STE	199	84,637	0	84,637	82,245	85,535	4,112	822	0	0	0	0	172,715	257,352
Total		1,323,834	5,439	1,329,272	1,220,936	510,015	4,112	822	0	0	0	0	1,735,886	3,065,158

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Appendix D3.—Page 4 of 4.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
WEST NAGAI STRAIT														
334	218	189,875	87,343	277,218	125,318	7,595	41,773	94,938	0	3,798	0	3,798	273,420	550,638
335	219	102,533	3,798	106,330	136,710	3,798	26,583	11,393	0	0	0	0	178,483	284,813
353	216	167,758	3,813	171,571	122,006	3,813	7,625	0	0	0	0	0	133,444	305,015
354	217	155,698	60,760	216,458	91,140	7,595	45,570	37,975	0	3,798	0	3,798	186,078	402,535
371	212	10,103	0	10,103	20,206	3,368	0	0	0	0	0	0	23,573	33,676
393	213	1,930,605	154,086	2,084,691	1,487,505	181,403	9,070	0	0	0	0	0	1,677,979	3,762,669
332B	220	182,280	1,899	184,179	140,508	28,481	5,696	0	0	0	0	0	174,685	358,864
373A	215	3,103	0	3,103	6,205	0	0	0	0	0	0	0	6,205	9,308
373B	214	644,902	32,736	677,638	206,956	112,885	11,973	17,104	0	1,710	0	1,710	350,628	1,028,266
Total		3,386,857	344,435	3,731,291	2,336,554	348,938	148,290	161,410	0	9,306	0	9,306	3,004,495	6,735,784
Western Section ^a		13,713,436	792,722	14,506,159	10,945,677	773,751	470,077	710,237	133,886	55,062	0	188,948	13,088,694	27,594,847
Eastern Section ^b		11,773,184	731,345	12,504,526	10,375,222	1,221,298	443,215	375,220	15,940	30,421	0	46,361	12,461,321	24,965,844
South Peninsula District Total		25,486,620	1,524,067	27,010,685	21,320,899	1,995,049	913,292	1,085,457	149,826	85,483	0	235,309	25,550,015	52,560,691

^a Western Section of the South Peninsula District includes Sanak Island, Morzhovoi Bay, and Cold Bay/Belkofski Bay.

^b Eastern Section of the South Peninsula District includes Pavlof Bay/Volcano Bay, Beaver Bay/Balboa Bay/Unga Strait, West Nagai Strait, and Stepovak Bay.

Appendix D4.—Tanner crab abundance estimates in the Eastern Aleutian District by station and sampling locale, 2018.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
AKUTAN BAY SECTION														
AKA	240	27,541	22,033	49,574	18,361	29,377	7,344	0	0	0	0	0	55,083	104,657
AKC	241	22,836	698,118	720,954	5,632	20,652	61,018	25,346	0	1,877	0	1,877	114,527	835,480
AKD	242	27,858	163,171	191,029	14,924	11,939	20,894	3,980	0	0	0	0	51,737	242,767
AKG	243	4,747	7,595	12,342	4,747	16,139	36,076	6,646	0	0	0	0	63,608	75,950
AKL	244	0	949	949	0	3,798	11,393	2,848	0	0	0	0	18,038	18,988
CAA	252	0	959	959	1,917	6,711	4,793	0	0	0	0	0	13,421	14,380
Total		82,982	892,825	975,807	45,581	88,616	141,518	38,820	0	1,877	0	1,877	316,414	1,292,222
UNALASKA/KALEKTA BAY SECTION														
UNC	245	24,875	330,487	355,362	10,424	22,586	36,485	173,740	24,324	34,748	0	59,072	302,308	657,671
UND	251	0	0	0	3,615	0	0	516	0	0	0	0	4,132	4,132
UNE	250	194,831	41,911	236,743	103,079	18,124	2,265	1,133	0	0	0	0	124,601	361,344
UNF	246	62,659	11,393	74,051	43,671	6,646	16,139	18,988	0	0	0	0	85,444	159,495
UNG	249	0	0	0	949	949	0	0	0	0	0	0	1,899	1,899
UNJ	248	46,519	15,190	61,709	18,988	9,494	4,747	0	0	0	0	0	33,228	94,938
Total		328,884	398,981	727,865	180,726	57,799	59,636	194,377	24,324	34,748	0	59,072	551,612	1,279,479
MAKUSHIN BAY SECTION														
MKB	256	166,907	224,460	391,367	175,483	206,733	67,308	31,250	2,404	0	0	2,404	483,179	874,546
MKC	257	42,401	716,572	758,973	3,806	97,048	39,961	129,397	3,806	72,310	0	76,116	346,327	1,105,300
MKE	258	104,337	45,084	149,421	90,168	38,643	2,576	1,288	0	0	0	0	132,676	282,097
MKF	259	79,145	25,696	104,841	55,504	19,529	2,056	2,056	0	0	0	0	79,145	183,986
MKJ	260	4,839	0	4,839	4,839	0	0	0	0	0	0	0	4,839	9,678
MKK	253	9,488	0	9,488	6,325	0	0	0	0	0	0	0	6,325	15,813
MKN	254	251,805	438,957	690,762	74,176	106,628	25,498	2,318	0	0	0	0	208,619	899,382
MKP	255	139,181	223,046	362,227	35,435	81,698	11,812	5,906	0	0	0	0	134,851	497,078
Total		798,103	1,673,815	2,471,918	445,736	550,279	149,211	172,215	6,210	72,310	0	78,520	1,395,961	3,867,880

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Appendix D4.—Page 2 of 2.

Station	Haul no.	Females			Number sublegal males by size (CW)				Recruit males	Postrecruit males (CW)		Legal males	Total males	Total crab
		Juvenile	Mature	Total	<70 mm	70–91 mm	92–114 mm	>114 mm		<165 mm	≥165 mm			
BEAVER INLET														
BIB	264	19,177	0	19,177	23,013	0	767	767	0	0	0	0	24,547	43,724
BID	265	38,710	842	39,552	45,442	0	0	842	0	0	0	0	46,284	85,836
BIG	263	51,130	1,003	52,132	59,150	0	0	0	0	0	0	0	59,150	111,282
BIK	262	55,125	12,766	67,890	33,655	3,482	1,741	1,161	0	0	0	0	40,038	107,928
BIN	261	1,289	0	1,289	0	0	0	0	0	0	0	0	0	1,289
Total		165,431	14,611	180,040	161,260	3,482	2,508	2,770	0	0	0	0	170,019	350,059
Eastern Aleutian District Total		1,375,400	2,980,232	4,355,630	833,303	700,176	352,873	408,182	30,534	108,935	0	139,469	2,434,006	6,789,640