

Fishery Management Report No. 21-14

**Management Report for the Southeast Alaska and
Yakutat Golden King Crab Fisheries, 2017/18–
2019/20**

by

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Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H_A
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	e
hectare	ha	at	@	catch per unit effort	CPUE
kilogram	kg	compass directions:		coefficient of variation	CV
kilometer	km	east	E	common test statistics	(F, t, χ^2 , etc.)
liter	L	north	N	confidence interval	CI
meter	m	south	S	correlation coefficient (multiple)	R
milliliter	mL	west	W	correlation coefficient (simple)	r
millimeter	mm	copyright	©	covariance	cov
		corporate suffixes:		degree (angular)	$^\circ$
Weights and measures (English)		Company	Co.	degrees of freedom	df
cubic feet per second	ft ³ /s	Corporation	Corp.	expected value	E
foot	ft	Incorporated	Inc.	greater than	>
gallon	gal	Limited	Ltd.	greater than or equal to	\geq
inch	in	District of Columbia	D.C.	harvest per unit effort	HPUE
mile	mi	et alii (and others)	et al.	less than	<
nautical mile	nmi	et cetera (and so forth)	etc.	less than or equal to	\leq
ounce	oz	exempli gratia (for example)	e.g.	logarithm (natural)	ln
pound	lb	Federal Information Code	FIC	logarithm (base 10)	log
quart	qt	id est (that is)	i.e.	logarithm (specify base)	log ₂ , etc.
yard	yd	latitude or longitude	lat or long	minute (angular)	'
		monetary symbols (U.S.)	\$, ¢	not significant	NS
Time and temperature		months (tables and figures): first three letters	Jan, ..., Dec	null hypothesis	H_0
day	d	registered trademark	®	percent	%
degrees Celsius	°C	trademark	™	probability	P
degrees Fahrenheit	°F	United States (adjective)	U.S.	probability of a type I error (rejection of the null hypothesis when true)	α
degrees kelvin	K	United States of America (noun)	USA	probability of a type II error (acceptance of the null hypothesis when false)	β
hour	h	U.S.C.	United States Code	second (angular)	"
minute	min	U.S. state	use two-letter abbreviations (e.g., AK, WA)	standard deviation	SD
second	s			standard error	SE
				variance	
Physics and chemistry				population sample	Var var
all atomic symbols					
alternating current	AC				
ampere	A				
calorie	cal				
direct current	DC				
hertz	Hz				
horsepower	hp				
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

FISHERY MANAGEMENT REPORT NO. 21-14

**MANAGEMENT REPORT FOR THE SOUTHEAST ALASKA AND
YAKUTAT GOLDEN KING CRAB FISHERIES, 2017/18–2019/20**

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ABSTRACT

This report reviews the commercial, personal use, and subsistence fisheries for golden king crab in Region I, which includes Registration Area A (Southeast Alaska) and Registration Area D (Yakutat) with updates for the 2017/18, 2018/19, and 2019/20 seasons.

Golden king crab harvest in Southeast Alaska totaled 50,522 lb valued at \$0.44 million during the most recent season (2019/20) with an average dock price of \$9.39/lb. The golden king crab fishery is data limited with management dependent on fishery performance information. The commercial fishery is managed across 7 management areas in Southeast (Icy Strait, Northern, North Stephens Passage, East Central, Mid-Chatham Strait, Lower Chatham Strait, and Southern). Management biologists utilize information from the fishery observer program (1998–2016), logbook/harvest tickets, and biological data from dockside sampling to inform management decisions, including opening or closing an area and setting area guideline harvest levels each season.

Keywords: golden king crab, *Lithodes aequispinus*, Southeast Alaska, Yakutat, fisheries management, invertebrate fisheries, crab, harvest statistics

INTRODUCTION

Golden king crab (*Lithodes aequispinus*) are a deep-water crab species that is widely distributed across the North Pacific (Japan, Russia, Bering Sea, Aleutian Islands, Prince William Sound, Southeast Alaska, and British Columbia; Butler and Hart 1962; Jewett et al. 1985; Nizyaev 2005; Olson et al. 2018; Somerton and Otto 1986; Stevens and Lovrich 2014). The biology of golden king crab is poorly understood, but they are thought to have a 20-month reproductive cycle (Long and Van Sant 2016; Paul and Paul 2001a), asynchronous timing of mating and molting (McBride et al. 1982; Otto 1984; Sloan 1985), and large yolk-rich eggs with low fecundity—about 30,000 (Jewett et al. 1985; Long and Van Sant 2016). Size at morphometric maturity (SMM) for male golden king crab increases by latitude across management areas within Southeast Alaska (Olson et al. 2018). Management areas with the largest SMM include Icy Strait (158.0 mm carapace length [CL]), Northern (147.3 mm CL), Southern (138.5 mm CL), whereas areas with the smallest estimates include North Stephens Passage (131.9 mm CL), and Mid- and Lower Chatham Strait (127.3 mm and 117.9 mm CL, respectively; Olson et al. 2018). Average molt increment of adult male crab is 16.3 mm CL for Southeast Alaska (Koeneman and Buchanan 1985). Genetic variability in populations of golden king crabs does not show a regional difference between western and eastern population groups along the Aleutian Islands, or genetic differences among north-south population groups in Southeast Alaska (Grant and Siddon 2018).

The golden king crab commercial fishery is managed in Registration Area A (Southeast Alaska) and Registration Area D (Yakutat) based on 3-S (sex, size, and season) management that restricts harvest to males-only, a legal-size limit of 7-inch carapace width (CW), and a February–December season. It also limits participation and gear (100 pots), sets seasonal guideline harvest levels (GHLs) across 7 management areas within a defined guideline harvest range (GHR), and allows for closure of management areas if there are stock health concerns. The golden king crab commercial fishery is data limited and fishery dependent, meaning that managers rely on harvest amounts, logbook catch per unit of effort (CPUE), biological information (carapace length [CL], recruit composition, weight, and shell condition) from dockside sampling, and fishery observer (1998–2016) data to inform management decisions. No stock assessment projects have been conducted on golden king crab stocks in Southeast Alaska. Golden king crab are managed in 7 areas: Northern, Icy Strait, North Stephens Passage, East Central, Southern, and Mid- and Lower Chatham Strait (Figures 1 and 2).

A personal use golden king crab fishery occurs in both Southeast Alaska and Yakutat, whereas the subsistence fishery occurs only in Yakutat. Effectively targeting golden king crab in the personal use and subsistence fisheries is difficult due to the great depths that golden king crab inhabit and the heavy pot gear that is necessary. Generally, golden king crab are caught as bycatch when personal use fishermen are targeting red (*Paralithodes camtschaticus*) or blue (*P. platypus*) king crab.

The primary purpose of this report is to provide an overview of the commercial golden king crab fishery in Southeast Alaska with emphasis on the 3 most recent seasons, 2017/18, 2018/19, and 2019/20, and an outlook for the 2020/21 season. Information is presented on historical harvest and effort, regulation development, and available dockside sampling data. This report also describes regulations that govern the commercial golden king crab fishery in Yakutat, and personal use and subsistence fisheries in Southeast Alaska and Yakutat.

FISHERY DEVELOPMENT AND HISTORY

COMMERCIAL FISHERY

The development of the Southeast Alaska golden king crab fishery began in the 1960s and 1970s as a bycatch fishery in the commercial red king crab fishery, which developed into a directed fishery in the 1980s (Stratman et al. 2017). As the directed fishery rapidly developed, harvest peaked in the 1986/87 season at just over 1 million lb, subsequently declining in the following seasons due to lack of recruitment and overexploitation, with harvest reaching a low of 15,845 lb in 1995/96. Between the 2000/01 and 2009/10 seasons, annual harvests improved, averaging 603,171 lb (Table 1).

Harvests in the most recent decade have shown a precipitous decline, like that seen in the early to mid-1990s, averaging 328,798 lb since the 2010/11 season (Table 1) with declines occurring in a majority of the management areas (Table 2–8). Substantial reductions to GHGs began prior to the 2012/13 season and continued through the 2019/20 season in the majority of areas based on information from fish tickets, logbooks, and port sampling. Inseason closures short of fishery area GHGs, and announced preseason closures, have also been prevalent in the fishery in the last 8 seasons based on poor fishery performance, in order to avoid damage to the long-term reproductive potential of the stock.

Regulation development in the golden king crab fishery has generally paralleled that of the red king and Tanner crab (*Chionoecetes bairdi*) fisheries. Limited biological information on golden king crab life history timing suggests that molting and mating are asynchronous, resulting in liberal fishing seasons. By regulation, the fishery starts on the day with the smallest Juneau tidal range between February 10–17, concurrently with the start of the commercial Tanner crab fishery. Recently, fishery areas have closed between March–November, depending upon effort, harvest rates, and recruitment levels, and have closed by emergency order when there are conservation concerns. Weather delay criteria is utilized to delay the fishery start date due to adverse weather conditions. In 2018, the BOF expanded the king crab registration areas in Southeast Alaska and Yakutat by establishing regulations to allow king crab fishing in the exclusive economic zone (EEZ), which is the area 3 to 200 miles offshore under a commissioner's permit.

Commercial vessels participating in the golden king crab fishery are primarily salmon tenders, salmon purse seine vessels, and a few large drift gillnet boats. Fishing gear has gradually evolved to include side-loading king crab pots (7 ft × 7 ft × 30 in) and top-loading conical or pyramid-style

pots. Because of challenging fishing conditions, commercial fishing operators prefer heavier gear and use different line and buoy train set-ups. Soak times are generally longer compared to red king or Tanner crab fishing. Conical pots are more easily moved between areas and when fishery performance allows for shorter soak times, they are competitive with square pots. A recent estimate of pot type fished in the 2019/20 fishery suggests that 100% of the pots fished were cone-type.

Management of the commercial golden king crab fishery in Southeast Alaska is based on a management plan and policies that have been reviewed and approved by the Alaska Board of Fisheries (BOF). Primary elements of the management plan are as follows:

- seasons that open concurrently with the Tanner crab fishery
- harvest of only male crab with a minimum legal CW
- gear limits of 100 pots per vessel
- 7 separate management areas
- GHRs by management area based on historical harvest levels

Before 1986, commercial fishing for golden king crab in Yakutat was allowed under an exploratory fishery opened by emergency order with other exploratory areas in Southeast Alaska. The Yakutat registration area, Registration Area D, was split into its own registration area separate from the rest of Southeast Alaska in 1986, but the emergency order opening requirement for the golden king crab fishery remained. In 2015, the golden king crab fishery opening requirement was changed from an emergency order to a commissioner's permit.

PERSONAL USE AND SUBSISTENCE FISHERIES

The personal use golden king crab fishery occurs in both Southeast and in Yakutat, whereas the subsistence golden king crab fishery occurs only in Yakutat. The Southeast personal use golden king crab fishery is a male-only fishery occurring from July 1–June 15 with a legal size of 7 inches or greater CW. The bag and possession limit is 3 male king crab per person, which applies to all species of king crab (red, blue, and golden) in combination. Thus, bag and possession limits of golden king crab are dependent on current red and blue king crab bag and possession limits which, unlike golden king crab, can be adjusted based on stock health. Overall, the maximum personal use bag and possession limits for king crab is 3.

The Yakutat personal use and subsistence golden king crab fisheries are male-only fisheries with a legal size of 7 inches or greater CW. There is no closed season, and the bag and possession limit for all species of king crab combined is 2 crab per person. Operators of a commercially licensed and registered king crab fishing vessel are required to obtain a permit from the Alaska Department of Fish and Game (ADF&G) before harvesting golden king crab for personal use, subsistence, or both purposes in the waters of Yakutat Bay.

SEX AND SIZE LIMITS

The minimum legal size for golden king crab was established to protect sexually mature male king crab from harvest during the early years of sexual maturity. The minimum legal size was increased from 6½ in to 7 in, or 178 mm, CW in 1969. This corresponds to a carapace length (CL) of 151 mm (Koeneman and Buchanan 1985). This size limit was determined from growth and size at maturity information collected from Gulf of Alaska red king crab stocks. The larger minimum size limit increases reproductive potential by providing additional protection to mature male crab. However,

provisions in the Lower Chatham and Southern management areas still allow male golden king crab of 6½ in or greater to be retained during specified periods by emergency order.

A general standard of size at maturity plus 2 molts of growth has been used to establish size limits for king crab throughout Alaska (Otto 1984). Golden king crab males mature at a minimum size of 114 mm CL in British Columbia (Jewett et al. 1985), 110 mm CL in Prince William Sound (Paul and Paul 2001b), and 130 mm CL in the Southern Bering Sea (Somerton and Otto 1986). Size at maturity decreases with latitude in the Bering Sea; this is believed to be a function of slower growth with colder water temperature. In Southeast Alaska, maturity estimates are greater than 118 mm CL in 6 of the 7 fishery areas, and preliminary research casts doubt on whether the current legal size of 7 inches allows crab to reproduce at least once before being harvested in 2 of the 7 management areas (Olson et al. 2018).

In 1990, the BOF adopted a regulation allowing the harvest of any king crab infected with parasitic barnacle, *Briarosaccus spp.*, regardless of sex or size. Crab infected with this parasite are incapable of reproduction and may experience reduced growth (Hawkes et al. 1986, 1987). Hence, removal of infected crab may improve stock reproduction and growth. There are different species of rhizocephalan barnacle, with *B. regalis* infecting red and blue king crab, and *B. auratum* infecting golden king crab (Noever et al. 2016).

STOCK ASSESSMENT

There has never been an independent stock assessment program for Region 1 golden king crab. Assessment of the stock's health and area-specific GHs are dependent on data collected inseason: fish ticket harvests, logbook CPUE (number of crab per pot), and dockside biological information. GHs are set and adjusted based on temporal trends in these data. To maximize utility of the limited available data, ADF&G is developing a collaborative harvest strategy with industry to lay the framework for a consistent and transparent inseason and postseason approach to management of the fishery with particular focus on GH determination and area closures. The harvest strategy will remain consistent with the Board of Fisheries' *Policy on King and Tanner Crab Resource Management* (90-04-FB). The primary goal is to implement an inseason and postseason harvest strategy for Southeast Alaska to improve and stabilize golden king crab fishery performance using transparent and repeatable metrics that evaluate stock health and measure performance. Objectives include minimizing and mitigating ecological risks from fishing related activities; maintaining desirable size and age compositions that allow long-term reproductive viability; minimizing handling and unnecessary mortality of non-legal golden king crab and nontarget species; and reducing dependency on future recruitments.

LOGBOOK

Logbook information is used for monitoring fishery performance inseason. Therefore, since the 1999/00 season, ADF&G has required vessels participating in the golden king crab fishery to maintain a daily logbook of their catch throughout the season. Information in the logbooks includes date, area description, statistical area, number of pot lifts, number of legal golden and blue king crab, gear type, and beginning in 2020, soak time.

DOCKSIDE SAMPLING

Since 1970, ADF&G personnel have sampled dockside deliveries of golden king crab to document carapace length and shell condition at various ports throughout the region. Length frequency data

are used to monitor recruitment trends and the relative contribution of various recruit classes of crab (Table 9). ADF&G personnel began collecting average weight data dockside in 1974; this data provides additional insight into stock dynamics.

RECENT COMMERCIAL SEASONS

2017/18 SEASON SUMMARY

For the 2017/18 season, ADF&G announced a preseason closure for the East Central area. The first inseason closure occurred for the North Stephens Passage area shortly after the season opened in February, achieving the GHL in just 9 days of fishing. The Icy Strait and Northern areas closed next in late March. The GHL was reached in the Icy Strait area, but the Northern area closed short of the GHL for stock health concerns. The GHL was also achieved in the Southern area and it was closed in late May. The Mid-Chatham Strait area closed in August, short of the GHL for poor fishery performance and stock health concerns. The last management area to close, due to the GHL being reached, was the Lower Chatham Strait area in November. During the season, 13 permit holders, the lowest amount of effort in the fishery since the 1995/96 season, fished for a total of 60,371 lb of golden king crab harvested (Table 1) with an average size of 167.4 mm CL from dockside sampling (Table 9). The Southern, Lower Chatham Strait, and North Stephens Passage areas produced the majority of the harvest (Tables 2–8).

2018/19 SEASON SUMMARY

For the 2018/19 season, ADF&G announced a preseason closure for the Northern area. The first inseason closure occurred for the North Stephens Passage area on shortly after the season opening in February, achieving the GHL in just 5 days of fishing. The Icy Strait and Southern management areas closed next in March after reaching their respective GHLs. The East Central area closed in April short of its GHL for conservation concerns. The Mid-Chatham Strait and Lower Chatham Strait areas were last to close in June, closing short of their respective GHLs due to poor fishery performance. During the season, 15 permit holders harvested a total of 57,491 lb of golden king crab from all fishing areas (Table 1) with an average size of 166.7 mm CL (Table 9). The Southern and North Stephens Passage areas produced most of the harvest (Tables 2–8).

2019/20 SEASON SUMMARY

For the 2019/20 season, ADF&G announced preseason closures for 4 areas: East Central, Northern, Mid-Chatham Strait, and Lower Chatham Strait. The first closure of an open area occurred for the North Stephens Passage area shortly after the season opened in February, reaching the GHL in just over 2 days. The Icy Strait and Southern management areas closed next in March after reaching their respective GHLs. During the season, 14 permit holders harvested a total of just 47,165 lb of golden king crab from all fishing areas (Table 1), the lowest harvest since the 1995/96 season with an average size of 172.1 mm CL (Table 9). The North Stephens Passage and Southern areas produced most of the harvest (Tables 2–8).

2020/21 OUTLOOK

Fishery performance has continued to decline in many of the management areas despite continued reductions in area GHLs, indicating golden king crab stock health remains at poor levels. Preseason area closures have been implemented the prior 3 seasons to enhance stock recovery. ADF&G is developing a more robust and consistent harvest management strategy to continue

improving overall stock health. Average prices of golden king crab per pound remain high, making the fishery economically feasible even at low abundance levels and catch rates much lower than other king crab fisheries in Alaska. There is fishery performance evidence of improved recruitment of crab in some of the smaller areas like Southern, North Stephens Passage, and Icy Strait. Current management strategies consist of reducing GHLs and closing areas inseason short of their GHL when catch rates and recruit percentages are low. This approach promotes recovery and sustainability of the fishery, and damage to the long-term reproductive potential of the stock. Per usual, ADF&G will evaluate each management area prior to the start of the 2020/21 season, assessing whether each area will open and setting appropriate GHLs based on fish ticket/logbook and port sampling data from prior years. Management concerns and strategies are routinely discussed with stakeholders.

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TABLES AND FIGURES

Table 1.—Golden king crab commercial harvest, number of landings, number of permits, and pounds per landing in Registration Area A by season (1972/73–1984/85 seasons defined October–September; 1985/86–1987/88 seasons defined January–December; and 1988/89–2019/20 seasons defined February–December), 1972/73 to present.

Season	Total harvest (lb)	Number of landings	Number of permits	Pound (lb) per landing
1972/73	177,544	85	12	2,089
1973/74	71,783	38	11	1,889
1974/75	32,332	28	9	1,155
1975/76	68,842	33	7	2,086
1976/77	75,046	30	6	2,502
1977/78	83,407	54	14	1,545
1978/79	52,476	66	10	795
1979/80	167,823	82	20	2,047
1980/81	704,622	158	30	4,460
1981/82	655,562	255	54	2,571
1982/83	801,917	283	70	2,833
1983/84	973,100	307	89	3,170
1984/85	848,818	277	124	3,064
1985/86	698,249	211	61	3,309
1986/87	1,016,011	222	51	4,577
1987/88	949,205	235	56	4,039
1988/89	968,296	228	59	4,247
1989/90	632,872	260	63	2,434
1990/91	426,882	221	40	1,932
1991/92	229,242	154	33	1,489
1992/93	103,781	80	18	1,297
1993/94	30,318	51	13	594
1994/95	39,344	65	19	605
1995/96	15,845	40	11	396
1996/97	67,164	62	16	1,083
1997/98	244,484	87	18	2,810
1998/99	367,782	105	30	3,503
1999/00	560,427	143	46	3,919
2000/01	530,765	189	45	2,808
2001/02	609,510	211	45	2,889
2002/03	562,395	190	48	2,960
2003/04	557,251	144	45	3,843
2004/05	557,725	130	42	4,290
2005/06	563,615	165	37	3,416
2006/07	581,101	131	34	4,436
2007/08	638,582	104	33	6,140
2008/09	698,637	134	36	5,214
2009/10	732,127	147	38	4,980
2010/11	687,505	172	40	3,997
2011/12	599,723	205	36	2,925
2012/13	511,229	219	33	2,334
2013/14	234,891	175	30	1,342
2014/15	129,822	141	33	921
2015/16	76,829	94	21	817
2016/17	61,586	78	18	790
2017/18	60,371	52	13	1,161
2018/19	57,491	47	15	1,223
2019/20	47,165	35	14	1,348

Table 2.—Golden king crab commercial harvest, number of landings, number of permits, and pounds per landing in the East Central management area by season (1971/72–1984/85 seasons defined October–September; 1985/86–1987/88 seasons defined January–December; and 1988/89–2019/20 seasons defined February–December), 1971/72 to present.

Season	Total harvest (lb)	Number of landings	Number of permits	Pound (lb) per landing
1971/72	148,391	49	5	3,028
1972/73	130,544	61	7	2,140
1973/74	50,393	21	6	2,400
1974/75	28,296	22	8	1,286
1975/76	*	*	*	*
1976/77	*	*	*	*
1977/78	74,465	40	6	1,862
1978/79	41,042	39	6	1,052
1979/80	64,257	32	7	2,008
1980/81	213,212	48	10	4,442
1981/82	251,930	85	10	2,964
1982/83	211,995	61	21	3,475
1983/84	254,407	78	23	3,262
1984/85	397,881	92	42	4,325
1985/86	392,323	71	23	5,526
1986/87	449,202	61	22	7,364
1987/88	393,464	48	25	8,197
1988/89	491,786	83	35	5,925
1989/90	184,111	90	37	2,046
1990/91	143,597	97	19	1,480
1991/92	38,487	35	12	1,100
1992/93	16,248	19	7	855
1993/94	10,277	13	4	791
1994/95	9,656	12	4	805
1995/96	*	*	*	*
1996/97	12,994	23	9	565
1997/98	76,803	27	11	2,845
1998/99	160,072	29	17	5,520
1999/00	299,585	47	21	6,374
2000/01	196,810	61	25	3,226
2001/02	267,637	99	29	2,703
2002/03	226,905	72	23	3,151
2003/04	233,655	53	24	4,409
2004/05	261,035	52	25	5,020
2005/06	249,330	65	16	3,835
2006/07	243,675	57	18	4,275
2007/08	251,004	29	14	8,655
2008/09	303,811	43	19	7,065
2009/10	308,013	51	24	6,039
2010/11	305,659	54	20	5,660
2011/12	223,616	28	19	7,986
2012/13	265,049	100	23	2,650
2013/14	81,375	72	17	1,130
2014/15	25,259	40	17	631
2015/16	9,052	25	12	362
2016/17	972	6	4	162
2017/18			CLOSED	
2018/19	6,749	14	5	482
2019/20			CLOSED	

Note: Asterisks (*) mean fewer than 3 permits were fished; information is confidential.

Table 3.—Golden king crab commercial harvest, number of landings, number of permits, and pounds per landing in the North Stephens Passage management area by season (1971/72–1984/85 seasons defined October–September; 1985/86–1987/88 seasons defined January–December; and 1988/89–2019/20 seasons defined February–December), 1971/72 to present.

Season	Total harvest (lb)	Number of landings	Number of permits	Pound (lb) per landing
1971/72	*	*	*	*
1972/73	*	*	*	*
1973/74	16,961	10	4	1,696
1974/75	*	*	*	*
1975/76	0	0	0	0
1976/77	*	*	*	*
1977/78	7,349	10	6	735
1978/79	*	*	*	*
1979/80	17,748	21	6	845
1980/81	*	*	*	*
1981/82	41,994	28	7	1,500
1982/83	28,324	15	7	1,888
1983/84	16,674	14	10	1,191
1984/85	29,573	21	16	1,408
1985/86	26,432	28	11	944
1986/87	37,608	20	12	1,880
1987/88	16,280	19	11	857
1988/89	7,965	17	7	469
1989/90	5,450	18	6	303
1990/91	16,359	32	10	511
1991/92	20,377	32	11	637
1992/93	10,750	25	9	430
1993/94	5,548	30	8	185
1994/95	8,932	35	12	255
1995/96	2,960	23	10	129
1996/97	15,556	27	10	576
1997/98	19,888	16	6	1,243
1998/99	*	*	*	*
1999/00	11,678	18	11	649
2000/01	11,563	27	11	428
2001/02	23,335	22	10	1,061
2002/03	26,085	16	7	1,630
2003/04	19,608	25	10	784
2004/05	18,580	29	8	640
2005/06	16,366	12	3	1,364
2006/07	19,450	12	5	1,621
2007/08	27,441	9	7	3,049
2008/09	22,770	20	10	1,139
2009/10	20,568	18	7	1,143
2010/11	20,714	25	8	829
2011/12	15,657	27	6	580
2012/13	*	*	*	*
2013/14	7,644	15	4	510
2014/15	6,280	23	11	273
2015/16	5,321	19	8	280
2016/17	16,558	16	8	1,035
2017/18	10,345	9	6	1,149
2018/19	17,581	11	8	1,598
2019/20	19,769	10	8	1,977

Note: Asterisks (*) mean fewer than 3 permits were fished; information is confidential.

Table 4.—Golden king crab commercial harvest, number of landings, number of permits, and pounds per landing in the Mid-Chatham Strait management area by season (1974/75–1984/85 seasons defined October–September; 1985/86–1987/88 seasons defined January–December; and 1988/89–2019/20 seasons defined February–December), 1974/75 to present.

Season	Total harvest (lb)	Number of landings	Number of permits	Pound (lb) per landing
1974/75	*	*	*	*
1975/76	0	0	0	0
1976/77	0	0	0	0
1977/78	0	0	0	0
1978/79	0	0	0	0
1979/80	0	0	0	0
1980/81	0	0	0	0
1981/82	*	*	*	*
1982/83	89,870	22	9	4,085
1983/84	78,271	12	4	6,523
1984/85	112,704	24	11	4,696
1985/86	163,694	37	13	4,424
1986/87	412,789	86	16	4,800
1987/88	181,679	39	8	4,658
1988/89	224,211	42	7	5,338
1989/90	184,327	44	6	4,189
1990/91	111,348	42	5	2,651
1991/92	52,419	29	5	1,808
1992/93	*	*	*	*
1993/94	*	*	*	*
1994/95	*	*	*	*
1995/96	*	*	*	*
1996/97	*	*	*	*
1997/98	70,709	19	4	3,722
1998/99	73,934	17	5	4,349
1999/00	79,208	28	6	2,829
2000/01	126,579	34	10	3,723
2001/02	113,426	43	10	2,638
2002/03	78,284	47	15	1,666
2003/04	55,107	33	7	1,670
2004/05	61,841	20	4	3,092
2005/06	81,463	31	5	2,628
2006/07	78,416	26	5	3,016
2007/08	89,873	26	6	3,388
2008/09	123,626	27	8	4,579
2009/10	141,558	26	10	5,445
2010/11	114,966	32	10	3,593
2011/12	106,620	31	9	3,439
2012/13	99,101	51	9	1,943
2013/14	43,475	22	4	1,976
2014/15	30,910	32	7	966
2015/16	9,228	15	5	615
2016/17	*	*	*	*
2017/18	*	*	*	*
2018/19	4,481	10	3	448
2019/20		CLOSED		

Note: Asterisks (*) mean fewer than 3 permits were fished; information is confidential.

Table 5.—Golden king crab commercial harvest, number of landings, number of permits, and pounds per landing in the Northern management area by season (1971/72–1984/85 seasons defined October–September; 1985/86–1987/88 seasons defined January–December; and 1988/89–2019/20 seasons defined February–December), 1971/72 season to present.

Season	Total harvest (lb)	Number of landings	Number of permits	Pound (lb) per landing
1971/72	*	*	*	*
1972/73	*	*	*	*
1973/74	*	*	*	*
1974/75	*	*	*	*
1975/76	*	*	*	*
1976/77	*	*	*	*
1977/78	*	*	*	*
1978/79	6,835	17	5	402
1979/80	85,568	28	11	3,056
1980/81	247,940	73	18	3,396
1981/82	154,018	78	27	1,975
1982/83	271,729	92	33	2,954
1983/84	537,907	139	43	3,870
1984/85	170,458	70	49	2,435
1985/86	57,730	30	16	1,924
1986/87	43,773	27	12	1,621
1987/88	271,422	101	30	2,687
1988/89	153,588	65	21	2,363
1989/90	213,443	88	21	2,425
1990/91	91,963	52	18	1,769
1991/92	42,542	33	10	1,289
1992/93	2,960	9	4	329
1993/94	*	*	*	*
1994/95	3,669	10	6	367
1995/96	*	*	*	*
1996/97	0	0	0	0
1997/98	14,619	10	5	1,462
1998/99	40,208	18	6	2,234
1999/00	34,706	10	6	3,471
2000/01	108,058	53	18	2,039
2001/02	131,277	56	19	2,344
2002/03	178,938	60	22	2,982
2003/04	181,154	47	23	3,854
2004/05	142,449	36	20	3,957
2005/06	142,455	58	19	2,456
2006/07	152,145	38	15	4,004
2007/08	184,227	36	17	5,117
2008/09	156,261	44	17	3,551
2009/10	176,782	48	22	3,683
2010/11	161,522	52	21	3,106
2011/12	150,453	92	19	1,635
2012/13	102,351	85	12	1,204
2013/14	39,802	52	9	765
2014/15	7,226	27	11	268
2015/16	6,939	16	7	434
2016/17	5,610	25	8	224
2017/18	1,852	9	4	206
2018/19		CLOSED		
2019/20		CLOSED		

Note: Asterisks (*) mean fewer than 3 permits were fished; information is confidential.

Table 6.—Golden king crab commercial harvest, number of landings, number of permits, and pounds per landing in the Icy Strait management area by season (1971/72–1984/85 seasons defined October–September; 1985/86–1987/88 seasons defined January–December; and 1988/89–2019/20 seasons defined February–December), 1971/72 season to present.

Season	Total harvest (lb)	Number of landings	Number of permits	Pound (lb) per landing
1971/72	*	*	*	*
1972/73	*	*	*	*
1973/74	*	*	*	*
1974/75	0	0	0	0
1975/76	*	*	*	*
1976/77	0	0	0	0
1977/78	0	0	0	0
1978/79	*	*	*	*
1979/80	*	*	*	*
1980/81	236,890	26	10	9,111
1981/82	152,441	50	23	3,049
1982/83	151,715	72	32	2,107
1983/84	46,514	48	28	969
1984/85	52,811	34	24	1,553
1985/86	24,827	19	9	1,307
1986/87	1,455	10	7	146
1987/88	16,356	16	12	1,022
1988/89	37,496	21	7	1,786
1989/90	30,168	21	11	1,437
1990/91	19,350	18	9	1,075
1991/92	*	*	*	*
1992/93	*	*	*	*
1993/94	*	*	*	*
1994/95	*	*	*	*
1995/96	*	*	*	*
1996/97	0	0	0	0
1997/98	*	*	*	*
1998/99	52,127	22	4	2,369
1999/00	101,111	21	14	4,815
2000/01	41,221	25	10	1,649
2001/02	50,080	25	8	2,003
2002/03	45,106	39	16	1,157
2003/04	53,034	22	12	2,411
2004/05	62,843	24	13	2,619
2005/06	61,290	35	13	1,751
2006/07	71,058	26	13	2,733
2007/08	58,453	26	14	2,243
2008/09	51,026	19	10	2,686
2009/10	42,136	21	9	2,006
2010/11	44,882	22	10	2,040
2011/12	45,244	51	11	887
2012/13	8,185	20	6	409
2013/14	19,583	30	6	653
2014/15	12,359	28	8	441
2015/16	10,255	17	3	603
2016/17	7,007	21	6	334
2017/18	6,458	10	3	646
2018/19	*	*	*	*
2019/20	6,833	9	6	759

Note: Asterisks (*) mean fewer than 3 permits were fished; information is confidential.

Table 7.—Golden king crab commercial harvest, number of landings, number of permits, and pounds per landing in the Lower Chatham management area by season (1974/75–1984/85 seasons defined October–September; 1985/86–1987/88 seasons defined January–December; and 1988/89–2019/20 seasons defined February–December), 1971/72 season to present.

Season	Total harvest (lb)	Number of landings	Number of permits	Pound (lb) per landing
1974/75	*	*	*	*
1975/76	0	0	0	0
1976/77	0	0	0	0
1977/78	0	0	0	0
1978/79	0	0	0	0
1979/80	0	0	0	0
1980/81	0	0	0	0
1981/82	*	*	*	*
1982/83	19,124	4	7	4,781
1983/84	30,756	4	9	7,689
1984/85	61,644	10	13	6,164
1985/86	*	*	*	*
1986/87	47,136	7	17	6,734
1987/88	54,264	7	21	7,752
1988/89	46,076	4	14	11,519
1989/90	8,208	2	4	4,104
1990/91	44,260	4	24	11,065
1991/92	61,007	5	31	12,201
1992/93	20,193	2	8	10,097
1993/94	*	*	*	*
1994/95	0	0	0	0
1995/96	0	0	0	0
1996/97	0	0	0	0
1997/98	23,013	2	7	11,507
1998/99	14,694	2	7	7,347
1999/00	25,407	5	19	5,081
2000/01	37,560	4	14	9,390
2001/02	11,848	6	14	1,975
2002/03	5,630	2	9	2,815
2003/04	*	*	*	*
2004/05	*	*	*	*
2005/06	*	*	*	*
2006/07	7,736	7	3	1,105
2007/08	*	*	*	*
2008/09	20,004	8	3	2,501
2009/10	22,328	11	5	2,030
2010/11	17,786	14	5	1,270
2011/12	*	*	*	*
2012/13	*	*	*	*
2013/14	23,376	12	3	1,948
2014/15	26,424	16	4	1,652
2015/16	*	*	*	*
2016/17	*	*	*	*
2017/18	*	*	*	*
2018/19	*	*	*	*
2019/20			CLOSED	

Note: Asterisks (*) mean fewer than 3 permits were fished; information is confidential.

Table 8.—Golden king crab commercial harvest, number of landings, number of permits, and pounds per landing in the Southern management area by season (1982/83–1984/85 seasons defined October–September; 1985/86–1987/88 seasons defined January–December; and 1988/89–2019/20 seasons defined February–December), 1982/83 season to present.

Season	Total harvest (lb)	Number of landings	Number of permits	Pound (lb) per landing
1982/83	15,960	12	4	1,330
1983/84	*	*	*	*
1984/85	21,594	22	5	982
1985/86	25,232	24	4	1,051
1986/87	*	*	*	*
1987/88	*	*	*	*
1988/89	*	*	*	*
1989/90	*	*	*	*
1990/91	0	0	0	0
1991/92	*	*	*	*
1992/93	*	*	*	*
1993/94	0	0	0	0
1994/95	*	*	*	*
1995/96	*	*	*	*
1996/97	*	*	*	*
1997/98	*	*	*	*
1998/99	*	*	*	*
1999/00	*	*	*	*
2000/01	*	*	*	*
2001/02	*	*	*	*
2002/03	*	*	*	*
2003/04	*	*	*	*
2004/05	*	*	*	*
2005/06	*	*	*	*
2006/07	*	*	*	*
2007/08	*	*	*	*
2008/09	*	*	*	*
2009/10	20,724	20	3	1,036
2010/11	21,976	20	4	1,099
2011/12	*	*	*	*
2012/13	*	*	*	*
2013/14	19,636	16	3	1,227
2014/15	21,364	22	5	971
2015/16	19,167	25	5	767
2016/17	16,722	21	4	796
2017/18	19,908	15	3	1,327
2018/19	20,105	12	4	1,675
2019/20	20,557	14	5	1,468

Note: Asterisks (*) mean fewer than 3 permits were fished; information is confidential.

Table 9.—Commercial golden king crab size frequency and shell condition data collected during dockside sampling in Southeast Alaska by season, 1969/1970 to present.

Season	Number sampled		Carapace length (mm)	
	Boats	Crab	Mean	Range
1969/70	4	72	173.5	154–202
1970/71	18	1,138	174.6	142–214
1971/72	21	1,705	175.1	150–211
1972/73	11	1,040	174.7	149–208
1973/74	8	604	173.0	146–210
1974/75	*	*	*	*
1975/76	9	837	172.2	145–208
1976/77	2	153	168.8	152–205
1977/78	7	678	169.9	149–201
1978/79	6	498	171.0	145–201
1979/80	6	478	169.8	145–203
1980/81	20	1,354	171.6	149–206
1981/82	6	533	176.4	148–214
1982/83	18	1,567	169.8	146–204
1983/84	10	703	169.6	150–196
1984/85	12	1,368	165.3	148–196
1985/86	17	1,765	166.6	148–198
1986/87	43	4,609	168.0	143–210
1987/88	63	5,408	173.4	148–214
1988/89	76	7,120	172.7	142–210
1989/90	86	7,880	176.7	146–211
1990/91	80	7,108	175.4	147–214
1991/92	61	5,157	172.8	146–213
1992/93	18	1,454	171.8	148–211
1993/94	13	1,080	171.1	133–206
1994/95	13	1,037	171.1	137–208
1995/96	15	351	172.2	146–208
1996/97	19	1,585	165.9	143–206
1997/98	31	2,390	166.1	147–212
1998/99	35	2,401	166.7	145–210
1999/00	59	4,154	166.9	138–203
2000/01	85	5,717	168.9	143–206
2001/02	71	4,858	171.2	148–210
2002/03	76	5,494	169.7	137–204
2003/04	60	2,854	170.5	145–206
2004/05	63	3,097	168.9	147–210
2005/06	65	3,211	169.6	138–214
2006/07	66	3,358	170.0	148–205
2007/08	40	2,022	169.1	148–210
2008/09	33	1,692	170.2	147–205
2009/10	57	2,917	171.6	142–215
2010/11	74	3,850	175.0	143–221

-continued-

Table 9.–Page 2 of 2.

Season	Number sampled		Carapace length (mm)	
	Boats	Crab	Mean	Range
2011/12	71	3,517	176.4	147–217
2012/13	65	3,310	176.1	148–220
2013/14	58	2,937	175.8	146–215
2014/15	71	3,294	172.9	140–214
2015/16	48	2,129	171.1	143–207
2016/17	27	1,021	170.1	149–203
2017/18	18	856	167.4	147–203
2018/19	16	704	166.7	105–197
2019/20	11	668	172.1	141–206

Note: Asterisks (*) mean data are confidential because fewer than 3 boats were sampled.

^a Sublegal and female crab may be harvested if they are infected with *Briarosaccus auratum*.

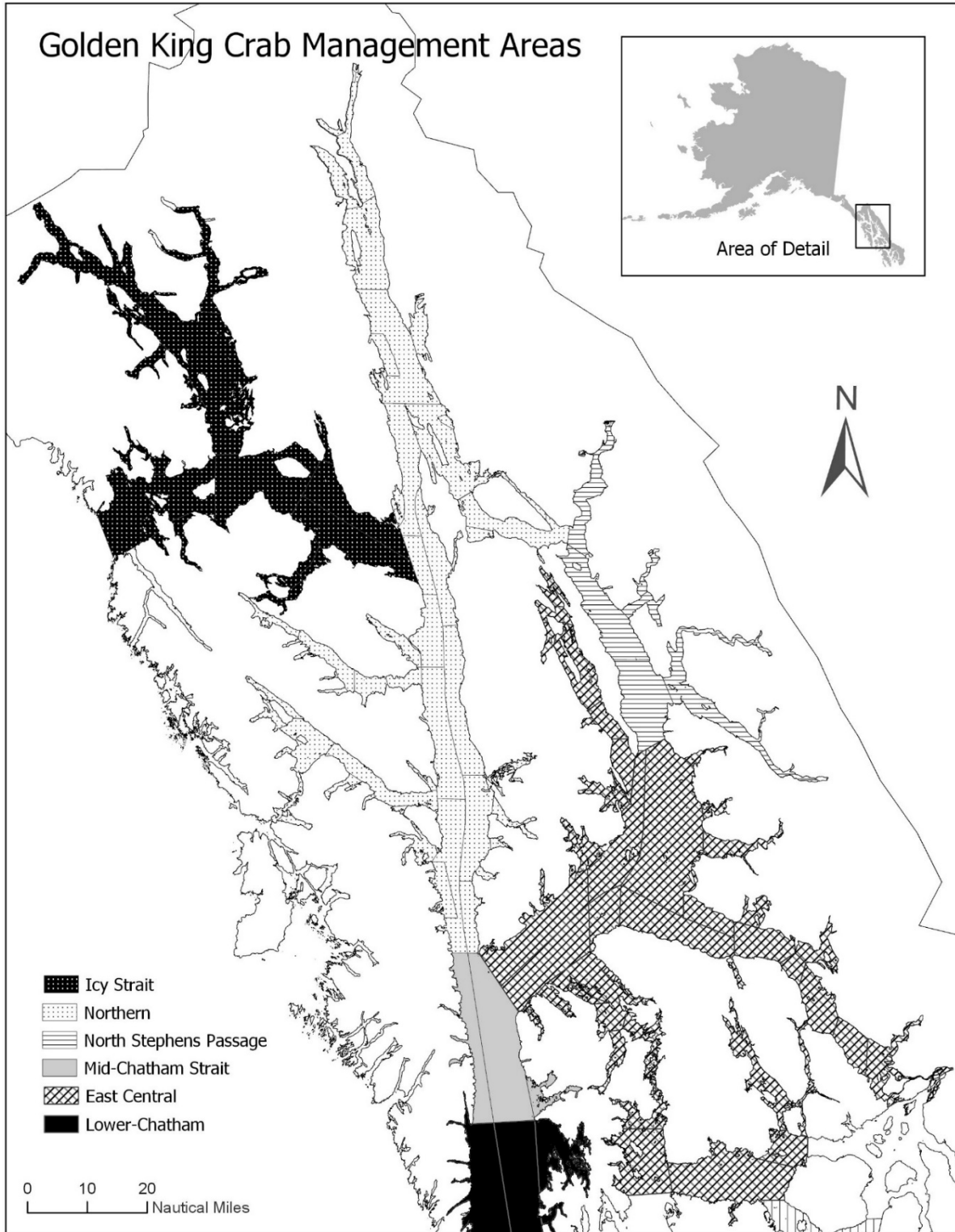


Figure 1.—Map showing northern golden king crab management area boundaries in Southeast Alaska, Registration Area A.

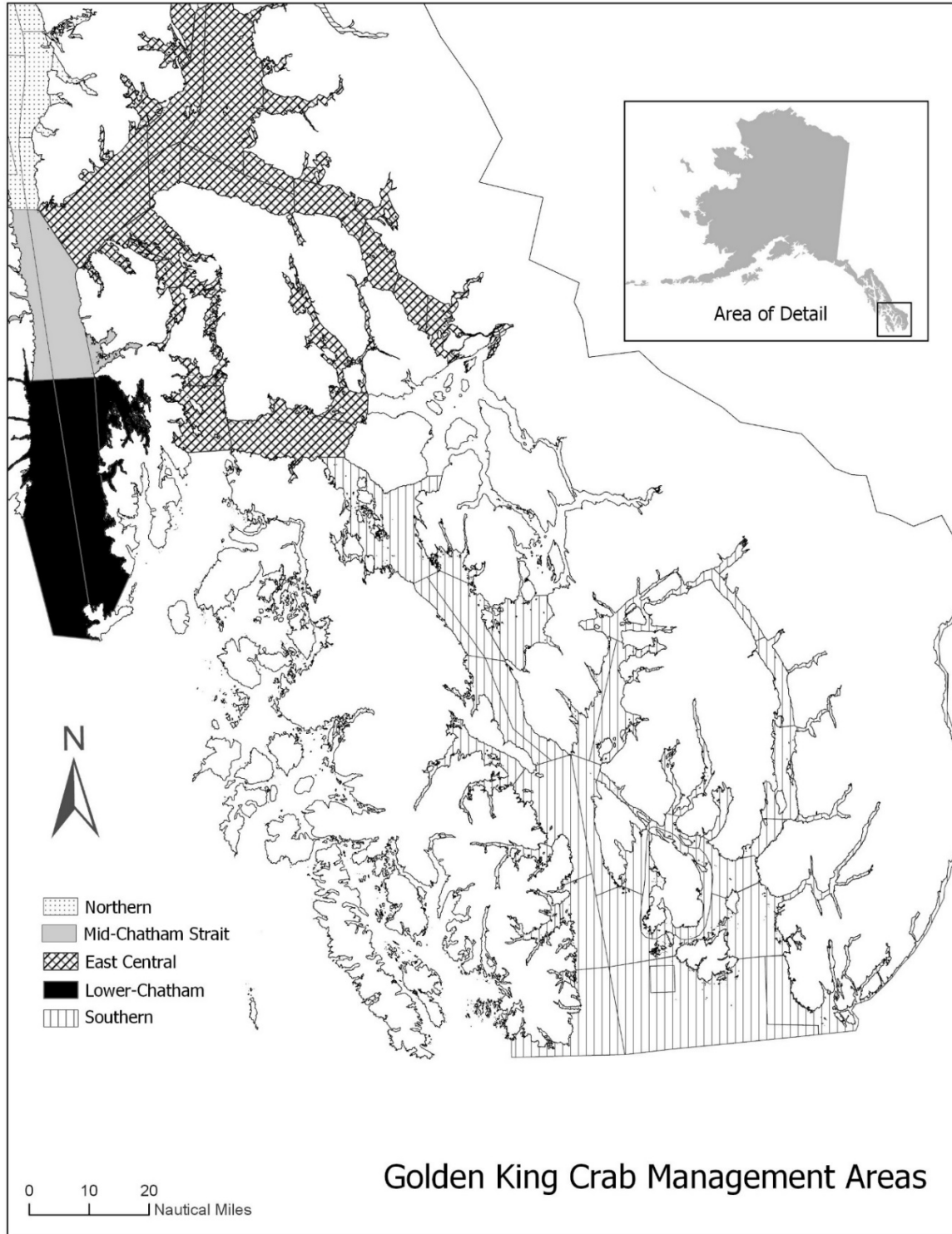


Figure 2.—Map showing southern golden king crab management area boundaries in Southeast Alaska, Registration Area A.