

**ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
NEWS RELEASE**



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2018 Norton Sound Winter & Summer Commercial Crab Season Summaries

Norton Sound Section (Q3) consists of all waters in Statistical Area Q north of the latitude of Cape Romanzof (61° 49' N latitude), east of the International Dateline, and south of latitude 66° N (Figure 1).

Starting in 2016, under the new king crab management plan, both winter and summer commercial fisheries are now combined under one red king crab harvest strategy. The department estimated the legal male biomass (LMB) to be 3.5 million pounds for 2018 based on the model's results from spring of 2018 that included the latest data from the 2017 summer fishery and the 2017 trawl survey (Appendix 1). By Board of Fisheries (BOF) regulation, a harvest rate of up to 15% is allowed when the LMB exceeds 3.0 million pounds. Additionally, the North Pacific Fishery Management Council had set an allowable biological catch (ABC) of 350,000 pounds for 2018, which is to include the summer and winter commercial harvests, estimated winter and summer subsistence harvests, and estimated incidental mortality of non-target crab discards. Based on the recommended ABC, the department applied a harvest rate of 9.0% for the commercial red king crab fishery yielding a total GHL of 319,410 pounds. By regulation 8% of the GHL is allocated to the winter commercial fishery resulting in a potential 25,553-pound allocation. The Community Development Quota (CDQ) fishery is allocated 7.5% by regulation resulting in a potential 23,956-pound allocation. Any commercial harvest allocation not taken during the winter commercial fishery will be added to the summer commercial fishery allocation.

WINTER FISHERY

The winter commercial harvest traditionally occurred within 15 miles of Nome, with an area closed to commercial fishing that is roughly 1 mile west to 3 miles east of town and extending 3 miles offshore (Figure 2). But in recent years, with the increase in exvessel crab price, harvest has occurred in eastern and southern Norton Sound. The harvest is generally divided between residents who buy crab directly from the fishermen, the Norton Sound Seafood Plant (NSSP) in Nome, and other non-local markets such as Anchorage.

Some regulations adopted by the BOF in 2015 affecting the winter red king crab commercial fishery went into effect starting with the 2016 season. The fishery is now opened by emergency order on or after January 15 and closes on April 30 or earlier if necessary. Another adopted regulation setting pot limits and requiring pot tags was implemented during the 2017 season. Commercial permit holders were limited to 20 pots each and each pot must have a current-year pot tag attached.

HARVEST SUMMARY

The 2018 winter season, which opened March 3 for both CDQ and open access, started almost a month later this year than last year, primarily due to the main buyer's concerns with high deadloss seen last year attributed to cold temperatures. Ice was relatively stable from the end of February until the third week of April, when over 160 out of 336 pots reported fishing were lost (49%). Nome crabbers reported fishing from 25 miles west to 50 miles east of Nome, excluding the area closed to commercial fishing. Like last year, most fishermen (39, or 90%) and harvest (91%) came from the Nome area, with the remaining fishermen (2 each) and harvest (1% & 8%, respectively) coming from Elim and White Mountain areas. Like the last couple of years, ice was unstable in most of eastern & southern Norton Sound and, except for Elim and White Mountain, no harvest or effort came from these areas. Of note is that this was the second snowiest winter on record for the Nome area, and winter crabbers reported difficulties getting to and from their pots, as well as much more effort required to dig out their crab holes, so they were not able to check as many pots in a day as in past years, which potentially impacted the harvest rate.

CDQ Fishery

The Norton Sound Economic Development Corporation (NSEDC) and Yukon Delta Fisheries Development Association (YDFDA) divide the CDQ allocation. Only fishermen designated by these two CDQ groups can participate in this portion of the king crab fishery. Fishermen are required to have a CDQ king crab permit from the Commercial Fisheries Entry Commission and register with ADF&G before they make their first delivery. Fishermen operate under authority of the CDQ group and each CDQ group decides how their crab quota is harvested. In 2018, as in the previous 11 years, YDFDA transferred their quota to NSEDC.

Like the past 13 years except for 2013, NSEDC fishermen harvested all, or nearly all, of the entire allocation. Starting in 2016, the CDQ fishery has been prosecuted during the winter season, but 2018 was the first time that NSSP, the only land-based processor in Nome, purchased only CDQ crab at first, even though both the CDQ and open-access fisheries were opened on March 3. From then until the last landing was made on April 14, the 27 crabbers that fished (out of 34 that registered) harvested 23,957 pounds, or 100% of the CDQ quota (Table 1), and none was harvested during the summer fishery.

In 2018, there were a total of 262 CDQ landings and 2,242 pots lifts. Average weight was 3.2 lbs/crab and average price paid to CDQ fishermen was \$7.00/lb, for an exvessel value of \$159,919 (86% of the total winter value) for the CDQ fishery. This was the 18th year a CDQ harvest occurred since the CDQ fishery was implemented in 1998.

Open Access Fishery

For the open-access fishery, 16 crabbers fished, out of the 37 that registered. Besides NSSP registering to buy crab, 13 fishermen applied for a catcher-seller permit to sell crab dockside (8 made sales). Since NSSP did not purchase open-access crab until the CDQ fishery closed on April 14, catcher-sellers were the only crabbers that made open-access sales for the first 6 weeks of the

fishery. Based on fish tickets submitted, the first landing was made March 5 and last landing was made on April 24 (Table 2). A total of 60 landings were made, with an overall CPUE of 5 crab/pot, and average weight of 3.1 lbs/crab. Crabbers harvested 5,161 pounds, or 20% of the open access quota. Even though the fishery remained open until the regulatory closure date of April 30, the ice around Nome was too unstable and crabbers either lost or pulled all their pots a week before the closure.

Including CDQ, the price of crab averaged \$6.95/lb, the second highest in the Norton Sound winter king crab fishery, but total exvessel value was \$186,044, less than 40% of last year's value (Table 3). From beginning to the end of both seasons, the harvest rate was consistent, but lower than the last 3 years, with landings every day except 2 (Table 4; Figure 3). A total of 29,118 lbs (9,180 crab), including CDQ, were harvested in the winter, with roughly half harvested in March and half in April. Total amount of crab harvested was less than 40% compared to last year.

SUMMER FISHERY

HARVEST SUMMARY

Open Access Fishery

The 2018 summer open access commercial crab fishery was opened by emergency order at 12:00 noon, June 24 in the Norton Sound Section, with a GHQ of 290,292 pounds of crab, which included the unharvested portion of the winter open-access quota. NSSP was registered to buy crab, and 3 fishermen registered to sell crab dockside as catcher-seller (2 made sales). NSSP operated a seafood processing plant in Nome and 3 tenders in eastern Norton Sound. Crab were sold to NSSP and to residents.

The first open access deliveries were made on June 26 and final deliveries were made July 29, the day after the fishery was closed by emergency order at 12:00 noon, for a season length of 34 days, the sixth shortest since 1993 when the Norton Sound king crab fishery effectively became a small-boat fishery. This year as in past years, the season start was based on when the crab processor was ready to purchase crab. Once the season was under way, NSSP purchased crab continuously with no reports of poor crab meat fill.

For the 2018 season, as in the past 3 years, the harvest rate was excellent at the start but, unlike the last 3 seasons, slowed noticeably halfway into the five-week fishery (Figure 4). For the first half, the daily CPUE averaged 13 crab and went as high as 18 crab per pot, but for the second half, the daily CPUE averaged 6 crab and went as low as 1 crab per pot (Table 5). Until the harvest rate slowed down, the projected trend line in the second week of July showed that the quota could be reached in less than a week. At the time, most of the fleet was fishing east of the 164° west longitude line. However, CPUE for most of the fleet declined soon after and feedback from some highlining crabbers indicated the crab were likely moving west. The fleet took over 2 weeks to locate the crab again and harvest the remaining quota, but due to concerns that the harvest rate could have picked up as fast as it had slowed down, the fleet was put on 24-hour minimum closure notice starting in mid-July.

The open access harvest from fish ticket reports was 89,613 red king crab or 298,396 pounds (103% of the open-access quota; Table 5). Of this total, 2,035 pounds were reported as personal use. Out of the 35 vessels and 36 permit holders that registered to fish, 33 vessels and permit holders made 256 landings. Average weight was 3.3 lbs/crab, the heaviest since the early 1980s (Table 6). Number of pots registered was 1,400, and there were 8,797 pot pulls. CPUE was 10 crab per pot, the lowest since 2013. In 2018, the harvest rate tracked similarly to the last 3 years for the first half, but after mid-

season tracked more closely to 2013 (Figure 4). The average price paid was \$6.25/lb, same as last year, tied for the second highest amount ever paid for the summer fishery (Table 7). The exvessel value of the fishery was \$1.846 million, 72% of last year's value.

Harvest Areas and Sampling

Fish ticket reports document 10 statistical areas were fished in the summer open access fishery (Table 8). Like last year, the top harvest (59%) and most effort (49%) came from statistical area 636401, which is southwest of Golovnin Bay in eastern Norton Sound, followed by statistical area 646401, southeast of Nome, which yielded 20% of the total harvest. Third highest harvest (7.5%) came from 2 statistical areas: 626401, southeast of Golovnin Bay, and 666402, west of the closed area. Except for 666402, the top 3 statistical areas are directly south of the closed boundary line (Figure 6), and, like last year, effort was concentrated in this main area. But unlike last year, once most of the remaining fleet moved west, effort (and harvest) was concentrated in 666402, as opposed to the usual 656401 statistical area, directly south of Nome. Preliminary results from the 2018 trawl survey indicate that bottom temperatures in 666402 (and farther south) were cooler than most of the rest of Norton Sound. The remaining 6 statistical areas all had less than 4% of the total harvest (Appendix 2). The catch from statistical areas east of 164°W longitude made up 67% of the harvest, the highest in the last 10 years (Figure 7).

Carapace length (CL) measurements and shell age were collected from 3,008 commercially-caught crab during the summer open access fishery. Since the summer of 2002, NSEDC has operated a seafood processing plant in Nome. In 2018, 100% of sampling data was collected from this plant, either as crabbers offloaded their catch or from holding tanks. Carapace age was classified as new (2–12 months old) or old (over 13 months old). Male new-shell crab made up 84% of the total legal crab sampled. Recruit crab are new-shell legal crab less than 116 mm CL. Postrecruit crab are legal new-shell male crab greater than or equal to 116 mm CL and all legal old-shell males. Recruit crab made up 16% of the legal crab sampled and postrecruit crab made up 84%, the highest since 1994 (Table 6). Overall mean carapace length of legal male crab was 123 mm, the highest since the early 1980s, and corresponding with the heaviest crab.

Table 1.—Daily catch based on fish ticket data for the winter CDQ king crab harvest, Norton Sound Section, Eastern Bering Sea, March 3–April 14, 2018.

Date	Landings	Number of crab	Pounds of crab	Cumulative pounds	Number of pots pulled	Average weight (lbs)	CPUE
03/04	2	37	110	110	17	3.0	2
03/05	4	94	287	397	27	3.1	3
03/06	5	122	377	774	35	3.1	3
03/07	1	45	137	911	16	3.0	3
03/08	6	250	797	1,708	70	3.2	4
03/09	6	125	408	2,116	46	3.3	3
03/10	5	125	400	2,516	36	3.2	3
03/11	11	375	1,196	3,712	103	3.2	4
03/12	5	191	609	4,321	39	3.2	5
03/13	7	157	480	4,801	53	3.1	3
03/14	6	193	564	5,365	59	2.9	3
03/15	10	328	1,008	6,373	79	3.1	4
03/16	3	80	323	6,696	29	4.0	3
03/17	1	76	250	6,946	20	3.3	4
03/18	10	341	1,085	8,031	73	3.2	5
03/19	3	27	89	8,120	25	3.3	1
03/20	9	255	811	8,931	82	3.2	3
03/21	4	137	423	9,354	30	3.1	5
03/22	1	37	129	9,483	8	3.5	5
03/23	10	304	942	10,425	103	3.1	3
03/24	3	131	426	10,851	35	3.3	4
03/25	12	334	1,063	11,914	94	3.2	4
03/26	4	118	386	12,300	26	3.3	5
03/27	6	89	276	12,576	67	3.1	1
03/28	9	198	620	13,196	61	3.1	3
03/29	4	111	339	13,535	37	3.1	3
03/30	7	96	283	13,818	57	2.9	2
03/31	5	192	631	14,449	51	3.3	4
04/01	14	505	1,619	16,068	102	3.2	5
04/02	5	135	428	16,496	46	3.2	3
04/03	6	164	556	17,052	49	3.4	3
04/04	8	116	368	17,420	66	3.2	2
04/05	8	198	635	18,055	62	3.2	3
04/06	4	154	497	18,552	46	3.2	3
04/07	11	342	1,087	19,639	132	3.2	3
04/08	6	126	409	20,048	51	3.2	2
04/09	4	72	239	20,287	28	3.3	3
04/10	5	163	542	20,829	34	3.3	5
04/11	9	260	824	21,653	72	3.2	4
04/12	7	127	421	22,074	33	3.3	4
04/13	9	345	1,106	23,180	82	3.2	4
04/14	7	243	777	23,957	61	3.2	4
Total	262	7,518	23,957	23,957	2,242	3.2	3

Note: The fishery closed by emergency order on 4/14 and the last delivery was made same day.

Table 2.– Daily catch based on fish ticket data for the winter commercial king crab harvest, Norton Sound Section, Eastern Bering Sea, March 3–April 30, 2018.

Date	Landings	Number of crab	Pounds of crab	Number of pots pulled	Average weight (lbs)	Daily CPUE
03/05	1	8	24	4	3.0	2
03/10	1	7	21	2	3.0	4
03/11	2	39	117	10	3.0	4
03/12	1	18	54	4	3.0	5
03/13	2	15	45	7	3.0	2
03/14	2	14	42	8	3.0	2
03/18	1	26	78	3	3.0	9
03/20	1	12	35	1	2.9	12
03/22	1	19	60	3	3.2	6
03/24	2	27	81	13	3.0	2
03/30	1	38	114	5	3.0	8
04/01	4	123	335	14	2.7	9
04/05	2	34	102	11	3.0	3
04/06	1	32	96	9	3.0	4
04/12	2	53	159	13	3.0	4
04/13	3	57	171	7	3.0	8
04/14	3	166	535	24	3.2	7
04/16	1	38	124	10	3.3	4
04/17	5	145	464	44	3.2	3
04/18	9	289	938	63	3.2	5
04/19	5	117	362	20	3.1	6
04/21	3	130	408	15	3.1	9
04/22	1	59	183	6	3.1	10
04/23	4	152	474	16	3.1	10
04/24	2	44	139	12	3.2	4
Total	60	1,662	5,161	324	3.1	5

Note: The fishery closed by regulation on 4/30, but the last delivery was made on 4/24.

Table 3.—Historical winter commercial red king crab fishery catch statistics and economic performance, Norton Sound Section, Eastern Bering Sea, 1978–2018.

Year	Commercial harvest (lbs) ^a	Permits fished	Landings	Pot pulls	CPUE	Average weight (lb)	Exvessel price/lb	Fishery value (\$)	Season dates ^b
1978	25,025	37	c	c	c	c	0.90	28,800	1/01–4/30
1979	575	1	c	c	c	c	c	c	1/01–4/30
1980	57	1	c	c	c	c	c	c	1/01–4/30
1981	0	0	c	c	c	c	c	c	1/01–4/30
1982	44	1	c	c	c	c	c	c	1/01–4/30
1983	1,427	5	c	c	c	c	c	c	1/01–4/30
1984	2,226	8	c	c	c	c	c	c	1/01–4/30
1985 ^c	3,042	10	106	103	11	2.6	5.56 ^d	6,494 ^d	1/01–4/30
1986 ^c	5,015	6	64	c	c	2.3	5.40 ^d	11,707 ^d	11/15–5/15
1987	2,590	7	51	55	19	2.5	2.60	6,734	11/15–5/15
1988	980	10	56	148	3	2.3	2.33	2,283	11/15–5/15
1989 ^c	1,045	5	59	c	c	c	5.40 ^d	2,210 ^d	11/15–5/15
1990 ^c	9,792	12	199	257	14	2.8	5.33 ^d	19,327 ^d	11/15–5/15
1991 ^c	10,064	11	187	609	6	2.7	5.00 ^d	19,000 ^d	11/15–5/15
1992	21,177	13	287	1,823	4	2.8	3.60	76,283	11/15–5/15
1993 ^c	4,926	8	66	c	c	2.8	2.84 ^c	14,000 ^d	11/15–5/15
1994	17,214	25	183	1,018	6	3.0	3.01	51,709	11/15–5/15
1995	21,813	42	345	3,302	2	2.9	3.09	66,190	11/15–5/15
1996	5,064	9	68	292	7	2.5	3.16	14,838	11/15–5/15
1997	^e	2	^e	^e	^e	^e	2.81	^e	11/15–5/15
1998	2,349	5	31	749	1	2.4	3.57	8,168	11/15–5/15
1999	7,041	5	61	425	6	2.6	3.69	24,777	11/15–5/15
2000	7,894	10	90	1,230	2	2.6	3.72	29,300	11/15–5/15
2001	2,943	3	21	534	2	2.7	3.60	10,582	11/15–5/15
2002	6,860	11	68	1,247	2	2.7	3.53	22,682	11/15–5/15
2003	16,827	13	128	1,960	3	2.5	3.52	57,577	11/15–5/15
2004 ^f	1,293	2	16	397	1	2.5	3.95	5,110	11/15–5/15
2005	5,619	4	51	1,076	2	2.7	4.52	25,054	11/15–5/15
2006	^e	1	^e	^e	^e	^e	3.98	^e	11/15–5/15
2007	8,023	8	106	926	4	2.4	3.06	24,464	11/15–5/15

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Year	Commercial harvest (lbs) ^a	Permits fished	Landings	Pot pulls	CPUE	Average weight (lb)	Exvessel price/lb	Fishery value (\$)	Season dates ^b
2008	14,676	9	129	1,008	6	2.5	3.03	43,664	11/15–5/15
2009	12,348	7	130	1,282	4	2.5	3.01	32,649	11/15–5/15
2010	12,028	10	184	1,848	3	2.5	3.54	41,265	11/15–5/15
2011	8,669	5	129	1,747	2	2.6	3.59	30,776	11/15–5/15
2012	24,142	35	319	1,668	5	2.6	6.47	150,569	11/15–5/15
2013	62,179	26	495	6,093	4	2.8	6.73	402,256	11/15–5/15
2014	34,587	21	323	4,037	4	2.3	6.94	234,291	11/15–5/15
2015	98,750	44	664	7,314	6	2.4	6.57	617,434	11/15–4/30
2016 ^g	79,986	48	471	5,459	5	2.7	7.22	559,803	2/15–4/21
2017 ^g	77,843	88	435	3,225	8	3.0	6.73	483,797	2/07–3/22
2018 ^g	29,118	43	322	2,566	4	3.2	6.95	186,044	3/03–4/30

^a Deadloss included in total.

^b From 1986 to 2014, season dates were from November 15 of the previous year to May 15 of the current year. In 2015, season dates were from November 15 of 2014 to April 30.

^c Prior to the 1985 season, no crab fish ticket data were entered into the fish ticket database. Some data for years 1985-86, 1989-91, and 1993 were missing from the fish ticket database, and some information were found in the text of the annual management report for the respective year.

^d Value given is price per crab. Fishery value was derived by multiplying price per crab by number of crab harvested.

^e Information is confidential because less than 3 permit holders delivered.

^f Confidentiality was waived by the fishermen.

^g Includes CDQ catch information and values.

Table 4.—Daily catch based on fish ticket data for the winter commercial CDQ & open access king crab harvest, Norton Sound Section, Eastern Bering Sea, March 3–April 30, 2018.

Date	Landings	Number of crab	Pounds of crab	Cumulative pounds	Number of pots pulled	Average Weight (lbs)	Daily CPUE
03/04	2	37	110	110	17	3.0	2
03/05	5	102	311	421	31	3.0	3
03/06	5	122	377	798	35	3.1	3
03/07	1	45	137	935	16	3.0	3
03/08	6	250	797	1,732	70	3.2	4
03/09	6	125	408	2,140	46	3.3	3
03/10	6	132	421	2,561	38	3.2	3
03/11	13	414	1,313	3,874	109	3.2	4
03/12	6	209	663	4,537	43	3.2	5
03/13	9	172	525	5,062	60	3.1	3
03/14	8	207	606	5,668	67	2.9	3
03/15	10	328	1,008	6,676	79	3.1	4
03/16	3	80	323	6,999	29	4.0	3
03/17	1	76	250	7,249	20	3.3	4
03/18	11	367	1,163	8,412	73	3.2	5
03/19	3	27	89	8,501	25	3.3	1
03/20	10	267	846	9,347	83	3.2	3
03/21	4	137	423	9,770	30	3.1	5
03/22	2	56	189	9,959	11	3.4	5
03/23	10	304	942	10,901	103	3.1	3
03/24	5	158	507	11,408	48	3.2	3
03/25	12	334	1,063	12,471	94	3.2	4
03/26	4	118	386	12,857	26	3.3	5
03/27	6	89	276	13,133	67	3.1	1
03/28	9	198	620	13,753	61	3.1	3
03/29	4	111	339	14,092	37	3.1	3
03/30	8	134	397	14,489	62	3.0	2
03/31	5	192	631	15,120	51	3.3	4
04/01	18	628	1,954	17,074	109	3.1	6
04/02	5	135	428	17,502	46	3.2	3
04/03	6	164	556	18,058	49	3.4	3
04/04	8	116	368	18,426	66	3.2	2
04/05	10	232	737	19,163	62	3.2	4
04/06	5	186	593	19,756	55	3.2	3
04/07	11	342	1,087	20,843	132	3.2	3
04/08	6	126	409	21,252	51	3.2	2
04/09	4	72	239	21,491	28	3.3	3
04/10	5	163	542	22,033	34	3.3	5
04/11	9	260	824	22,857	72	3.2	4
04/12	9	180	580	23,437	45	3.2	4
04/13	12	402	1,277	24,714	88	3.2	5
04/14	10	409	1,312	26,026	84	3.2	5
04/16	1	38	124	26,150	10	3.3	4
04/17	5	145	464	26,614	44	3.2	3
04/18	9	289	938	27,552	62	3.2	5
04/19	5	117	362	27,914	20	3.1	6
04/21	3	130	408	28,322	15	3.1	9
04/22	1	59	183	28,505	6	3.1	10
04/23	4	152	474	28,979	15	3.1	10
04/24	2	44	139	29,118	12	3.2	4
Totals	322	9,180	29,118		2,536	3.2	4

Note: The last CDQ delivery was made on 4/14, and the last open access delivery was made on 4/24.

Table 5.—Daily catch based on fish ticket data for the open-access summer commercial king crab harvest, Norton Sound Section, Eastern Bering Sea, June 24–July 28, 2018.

Date	Landings	Number of crab	Pounds of crab	Cumulative pounds	Number of pots pulled	Average weight (lbs)	Daily CPUE
06/26	6	1,881	6,328	6,328	197	3.4	10
06/27	10	3,220	10,356	16,684	335	3.2	10
06/28	16	6,965	23,053	39,737	544	3.3	13
06/29	5	1,962	6,472	46,209	155	3.3	13
06/30	9	4,221	13,768	59,977	313	3.3	13
07/01	4	1,067	3,557	63,534	110	3.3	10
07/02	1	13	36	63,570	1	2.8	13
07/03	13	5,927	19,252	82,822	446	3.2	13
07/04	16	8,221	26,688	109,510	584	3.2	14
07/05	2	1,067	3,706	113,216	80	3.5	13
07/06	7	3,069	10,069	123,285	273	3.3	11
07/07	23	12,983	44,265	167,550	804	3.4	16
07/08	3	1,897	6,347	173,897	104	3.3	18
07/10	20	9,997	33,288	207,185	751	3.3	13
07/11	6	3,630	12,469	219,654	229	3.4	16
07/12	5	973	3,174	222,828	166	3.3	6
07/13	14	2,876	9,473	232,301	460	3.3	6
07/14	4	575	1,955	234,256	100	3.4	6
07/15	10	2,437	7,964	242,220	381	3.3	6
07/17	16	3,124	10,271	252,491	615	3.3	5
07/18	1	57	185	252,676	40	3.2	1
07/19	2	43	126	252,802	40	2.9	1
07/20	10	1,602	5,311	258,113	295	3.3	5
07/21	6	797	2,672	260,785	225	3.4	4
07/22	7	1,198	4,066	264,851	222	3.4	5
07/23	5	1,602	5,156	270,007	169	3.2	9
07/24	6	894	2,996	273,003	212	3.4	4
07/25	6	1,944	6,598	279,601	205	3.4	9
07/26	2	74	224	279,825	34	3.0	2
07/27	6	1,793	6,417	286,242	205	3.6	9
07/28	10	1,908	6,519	292,761	325	3.4	6
07/29	5	1,596	5,635	298,396	177	3.5	9
Totals	256	89,613	298,396		8,797	3.3	10

Note: The fishery closed by emergency order on 7/28 at midnight, and last deliveries were made on 7/29.

Table 6.—Historical summer commercial red king crab annual harvest, Norton Sound Section, Eastern Bering Sea, 1977–2018.

Year	Number vessels (open access only)	Number permits	Number landings	Number crab	Harvest (lbs) ^a		Number pots		CPUE	Percent old shell	Percent postrecruits	Average weight (lbs)	Avg legal mean length (mm)	
					open access	CDQ ^b	registered	pulls						
1977	7	7	13	195,877	517,787		^c	5,457	36	^c	^c	2.7	113	
1978	8	8	54	660,829	2,091,961		^c	10,817	64	^c	^c	3.0	119	
1979	34	34	76	970,962	2,931,672		^c	34,773	28	^c	^c	3.0	120	
1980	9	9	50	329,778	1,186,596		^c	11,199	29	^c	^c	3.6	126	
1981	36	36	108	376,313	1,379,014		^c	33,745	11	^c	^c	3.7	129	
1982	11	11	33	63,949	228,921		^c	11,230	6	^c	^c	3.6	125	
1983	23	23	26	132,205	368,032			3,583	11,195	12	^c	45	2.8	115
1984	8	8	21	139,759	387,427			1,245	9,706	14	^c	41	2.8	113
1985	6	6	72	146,669	427,011			1,116	13,209	11	^c	55	2.9	116
1986	3	3	^c	162,438	479,463			578	4,284	38	^c	52	2.9	116
1987	9	9	^c	103,338	327,121			1,430	10,258	10	13	78	3.2	122
1988	2	2	^c	76,148	236,688			360	2,350	32	26	75	3.1	119
1989	10	10	^c	79,116	246,487			2,555	5,149	15	29	77	3.1	120
1990	4	4	^c	59,132	192,831			1,388	3,172	19	17	79	3.1	121
1991 ^d						No Summer	Commercial Fishery							
1992	27	27	^c	24,902	74,029			2,635	5,746	4	29	72	3.0	120
1993	14	20	208	115,913	335,790			560	7,063	16	10	69	2.9	119
1994	34	52	407	108,824	327,858			1,360	11,729	9	71	86	3.0	119
1995	48	81	665	105,967	322,676			1,900	18,782	6	21	64	3.0	118
1996	41	50	264	74,752	224,231			1,640	10,453	7	36	70	3.0	117
1997	13	15	100	32,606	92,988			520	2,982	11	14	51	2.8	116
1998	8	11	50	10,661	29,684			360	1,639	7	39	68	2.8	117
1999	10	9	53	8,734	23,553			360	1,630	5	12	58	2.7	118
2000	14	17	202	108,249	297,654	14,870		560	6,345	18	16	60	2.7	116
2001	30	37	320	98,321	288,199	0		1,200	11,928	8	11	67	2.9	119
2002	28	32	164	86,666	244,376	15,225		1,120	6,491	14	11	67	3.0	120
2003	24	30	219	88,518	253,284	13,923		960	8,494	11	14	52	2.8	117
2004	26	29	208	120,289	314,472	26,274		1,120	8,066	15	8	51	2.8	117
2005	30	32	227	128,405	370,744	30,060		1,320	8,867	16	9	64	2.9	118

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Table 6.–Page 2 of 2.

Year	Number vessels (open access only)	Number permits	Number landings	Number crab	Harvest (lbs) ^a		Number pots		CPUE	Percent old shell	Percent postrecruits	Average weight (lbs)	Avg legal mean length (mm)
					open access	CDQ ^b	registered	pulls					
2006	28	29	224	139,131	419,191	32,557	1,120	8,695	17	27	75	3.0	119
2007	30	30	234	101,672	289,264	23,611	1,200	9,118	12	12	55	2.8	117
2008	23	23	230	132,295	364,235	30,900	920	8,721	16	23	55	2.8	115
2009	22	23	333	133,498	369,462	28,125	920	11,934	12	18	57	2.8	116
2010	23	25	256	139,014	387,304	30,000	1,040	9,698	16	14	51	2.8	116
2011	24	25	173	132,030	373,990	26,850	1,040	6,808	21	14	57	2.8	116
2012	29	29	289	149,604	441,080	34,910	1,200	10,041	16	9	67	2.9	118
2013	33	33	435	124,485	373,278	18,585	1,420	15,058	9	8	68	3.0	120
2014	33	35	281	120,385	360,860	28,148	1,560	10,127	13	22	65	3.0	120
2015	36	36	231	133,531	371,520	29,595	1,480	8,356	17	22	42	2.8	115
2016	36	37	227	137,774	416,576	38,790 ^e	1,520	8,009	17	8	64	3.0	118
2017	36	36	270	135,323	411,739	37,232 ^f	1,640	9,440	14	20	75	3.0	120
2018	33	33	256	89,613	298,396	23,957 ^f	1,400	8,797	10	16	84	3.3	123

^a Deadloss included in total.

^b No CDQ fishery harvest prior to the 2000 season.

^c Data not available.

^d No summer commercial fishery.

^e 35,207 pounds were harvested during the winter CDQ fishery.

^f All CDQ harvest occurred during the winter.

Table 7.—Historical summer commercial red king crab fishery economic performance, Norton Sound Section, Eastern Bering Sea, 1977–2018.

Year	Guideline harvest level (lbs) ^b	Legal male pop est (lbs) ^b	Commercial harvest (lbs) ^{a,b}		Exvessel price/lb	Fishery value (millions \$)	Season length dates		
			open access	CDQ			days	open access	CDQ
1977	^c	16.7	0.52	^d	0.75	0.229	60	^c	^d
1978	3.00	16.0	2.09	^d	0.95	1.897	60	6/07–8/15	^d
1979	3.00	11.8	2.93	^d	0.75	1.878	16	7/15–7/31	^d
1980	1.00	6.6	1.19	^d	0.75	0.890	16	7/15–7/31	^d
1981	2.50	4.3	1.38	^d	0.85	1.172	38	7/15–8/22	^d
1982	0.50	2.8	0.23	^d	2.00	0.405	23	8/09–9/01	^d
1983	0.30	3.3	0.37	^d	1.50	0.537	4	8/01–8/05	^d
1984	0.40	3.6	0.39	^d	1.02	0.395	14	8/01–8/15	^d
1985	0.45	4.0	0.43	^d	1.00	0.427	22	8/01–8/23	^d
1986	0.42	4.5	0.48	^d	1.25	0.600	13	8/01–8/25 ^c	^d
1987	0.40	4.5	0.33	^d	1.50	0.491	11	8/01–8/12	^d
1988	0.20	4.7	0.24	^d	^c	^c	10	8/01–8/11	^d
1989	0.20	4.6	0.25	^d	3.00	0.739	3	8/01–8/04	^d
1990	0.20	4.4	0.19	^d	^c	^c	4	8/01–8/05	^d
1991	0.34	4.2				No Summer Commercial Fishery			
1992	0.34	4.1	0.07	^d	1.75	0.130	2	8/01–8/03	^d
1993	0.34	3.7	0.33	^d	1.28	0.430	52	7/01–8/28 ^f	^d
1994	0.34	3.1	0.32	^d	2.02	0.646	31	7/01–7/31	^d
1995	0.34	2.6	0.32	^d	2.87	0.926	67	7/01–9/05	^d
1996	0.34	2.1	0.22	^d	2.29	0.519	57	7/01–9/03 ^g	^d
1997	0.08	2.0	0.09	^d	1.98	0.184	44	7/01–8/13 ^h	^d
1998	0.08	2.4	0.03	^d	1.47	0.041	65	7/01–9/03 ⁱ	^d
1999	0.08	3.2	0.02	^d	3.08	0.073	66	7/01–9/04 ^j	^d
2000	0.33	3.7	0.29	0.01	2.29	0.715	91	7/01–8/29	9/01–9/29
2001	0.30	3.4	0.28	0.00	2.34	0.674	97	7/01–9/01	9/01–9/09
2002	0.24	3.2	0.24	0.01	2.81	0.729	77	7/01–8/06	6/15–28; 8/9–9/3
2003	0.25	3.2	0.25	0.01	3.09	0.823	68	7/01–8/13	6/15–28; 8/15–24
2004	0.35	3.4	0.34	0.03	3.13	1.038	53	7/01–8/08	6/15–6/28
2005	0.37	3.4	0.37	0.03	3.18	1.264	72	7/01–8/15	6/15–28; 8/17–27
2006	0.45	3.2	0.42	0.03	2.26	1.021	67	7/01–8/22	6/15–6/28

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Table 7.–Page 2 of 2.

Year	Guideline harvest level (lbs) ^b	Legal male pop est (lbs) ^b	Commercial harvest (lbs) ^{a,b}		Exvessel price/lb	Fishery value (millions \$)	days	Season length dates	
			open access	CDQ				open access	CDQ
2007	0.32	3.2	0.29	0.02	2.84	0.750	52	7/01–8/17	6/15–6/28
2008	0.41	3.6	0.36	0.03	3.20	1.231	73	6/23–8/18	8/17–9/03
2009	0.38	4.0	0.37	0.03	3.17	1.225	98	6/15–9/20 ^k	6/15–7/28 ^k
2010	0.40	4.5	0.39	0.03	3.73	1.528	58	7/01–8/24	6/28–7/16
2011	0.36	4.5	0.37	0.03	5.23	2.016	33	6/28–7/30	6/28–7/08
2012	0.47	4.1	0.44	0.03	5.41	2.556	72	6/29–8/11	6/29–9/08
2013	0.50	3.6	0.37	0.02	5.63	2.165	74	7/03–9/14	7/03–9/14 ⁱ
2014	0.38	3.6	0.36	0.03	5.12	1.960	52	6/25–8/02	6/25–8/15
2015	0.39	4.5	0.37	0.03	5.40	2.130	26	6/29–7/24	6/29–7/24 ^l
2016 ^m	0.52	4.7	0.42	0.04	6.50	2.713	25	6/27–7/21	3/23–4/21; 6/27–7/9
2017 ^m	0.50	4.3	0.41	0.04	6.25	2.560	30	6/26–7/25	2/28–3/22
2018 ^m	0.32	3.5	0.30	0.02	6.25	1.846	34	6/24–7/28	3/03–4/14

^a Deadloss included in total.

^b Millions of pounds; updated from 2017 SAFE report.

^c Information not available.

^d No CDQ was allocated until 1998, and no harvest occurred until 2000.

^e Fishing began 8/12.

^f Fishing began 7/8.

^g Fishing began 7/9 due to fishermen’s strike.

^h First delivery was made 7/10.

ⁱ First delivery was made 7/16.

^j The season was extended 24 hours due to bad weather.

^k NSSP stopped buying crab from 6/29 to 7/6 due to poor meat fill.

^l Final delivery was made 7/17.

^m GHF includes 8% that was allocated to the winter commercial fishery; the fishery value does not include amount from the winter CDQ fishery; and number of season days does not include the winter CDQ fishery.

Table 8.—Red king crab open-access summer commercial harvest based on fish ticket reports by statistical area for Norton Sound Section, Eastern Bering Sea, June 24–July 28, 2018.

Statistical area	Number of crab	Pounds of crab	Number of pots pulled	CPUE	Average weight (lbs.)	Percent of pots pulled in stat area ^a	Percent of harvest in stat area ^a
616331	338	1,110	114	3	3.28	1.3	0.4
626331	284	956	39	7	3.37	0.4	0.3
626401	6,991	22,520	660	11	3.22	7.5	7.5
636330	284	949	39	7	3.34	0.4	0.3
636401	52,746	174,811	4,288	12	3.31	48.7	58.6
646401	17,795	60,162	1,693	11	3.38	19.2	20.2
656401	1,478	4,885	625	2	3.30	7.1	1.6
666330	188	595	30	6	3.16	0.3	0.2
666401	3,048	9,963	490	6	3.27	5.6	3.3
666402	6,461	22,445	819	8	3.47	9.3	7.5
Total	89,613	298,396	8,797	10	3.33	100	100

^a Percentage rounded to nearest tenth except total.

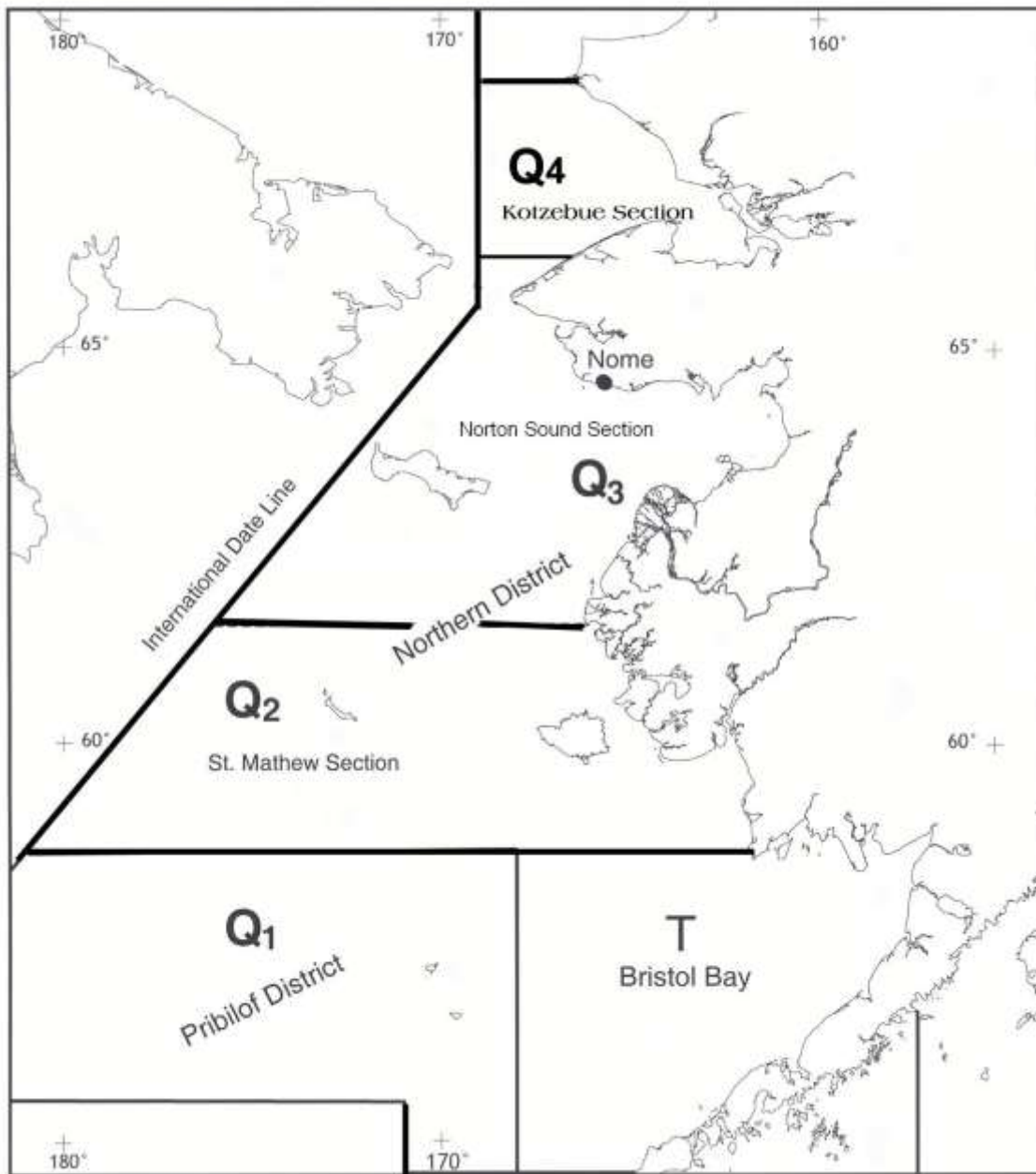


Figure 1.—King crab fishing districts and sections of Statistical Area Q.

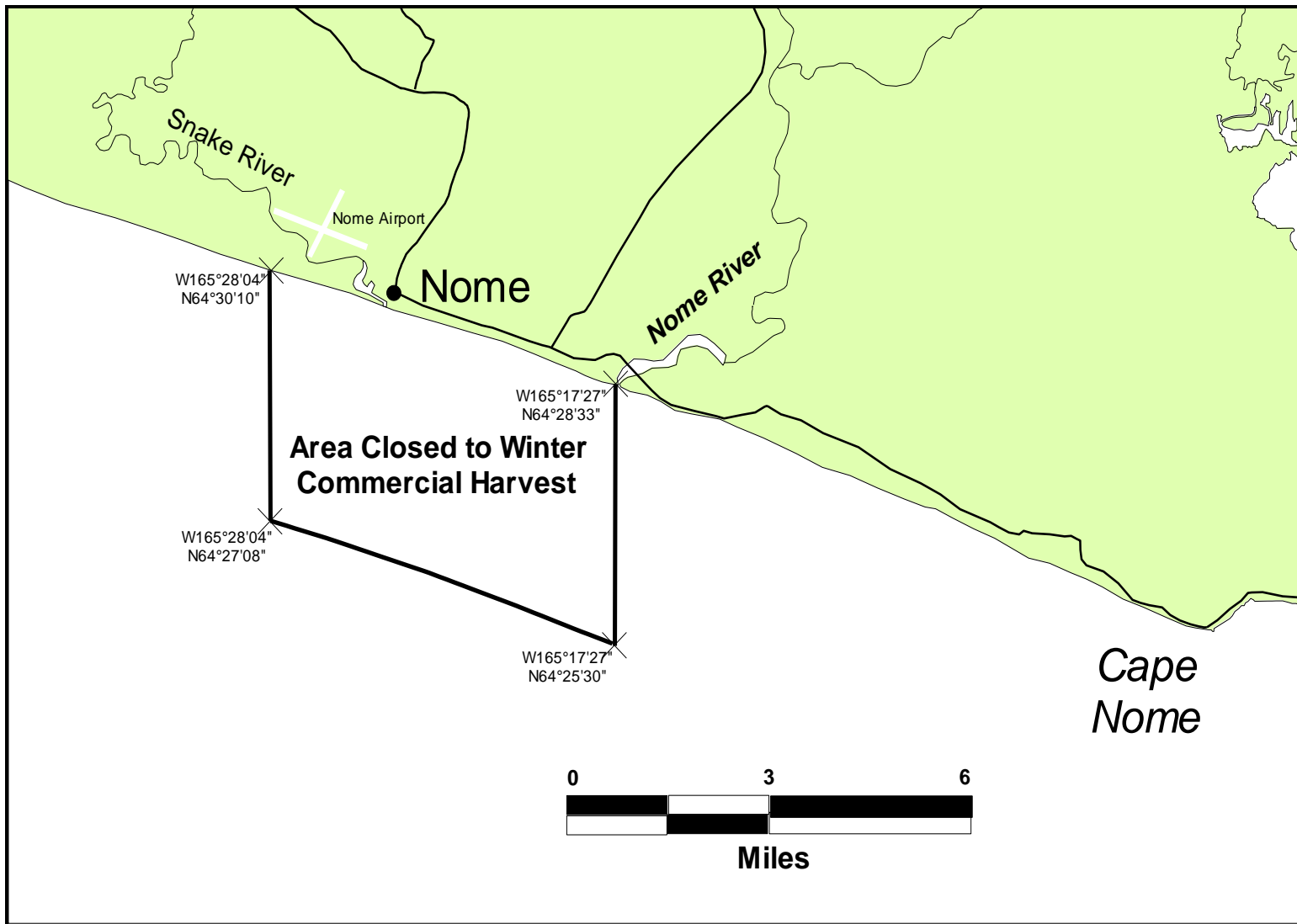


Figure 2.—Closed waters area in effect for the Norton Sound winter commercial crab fishery.

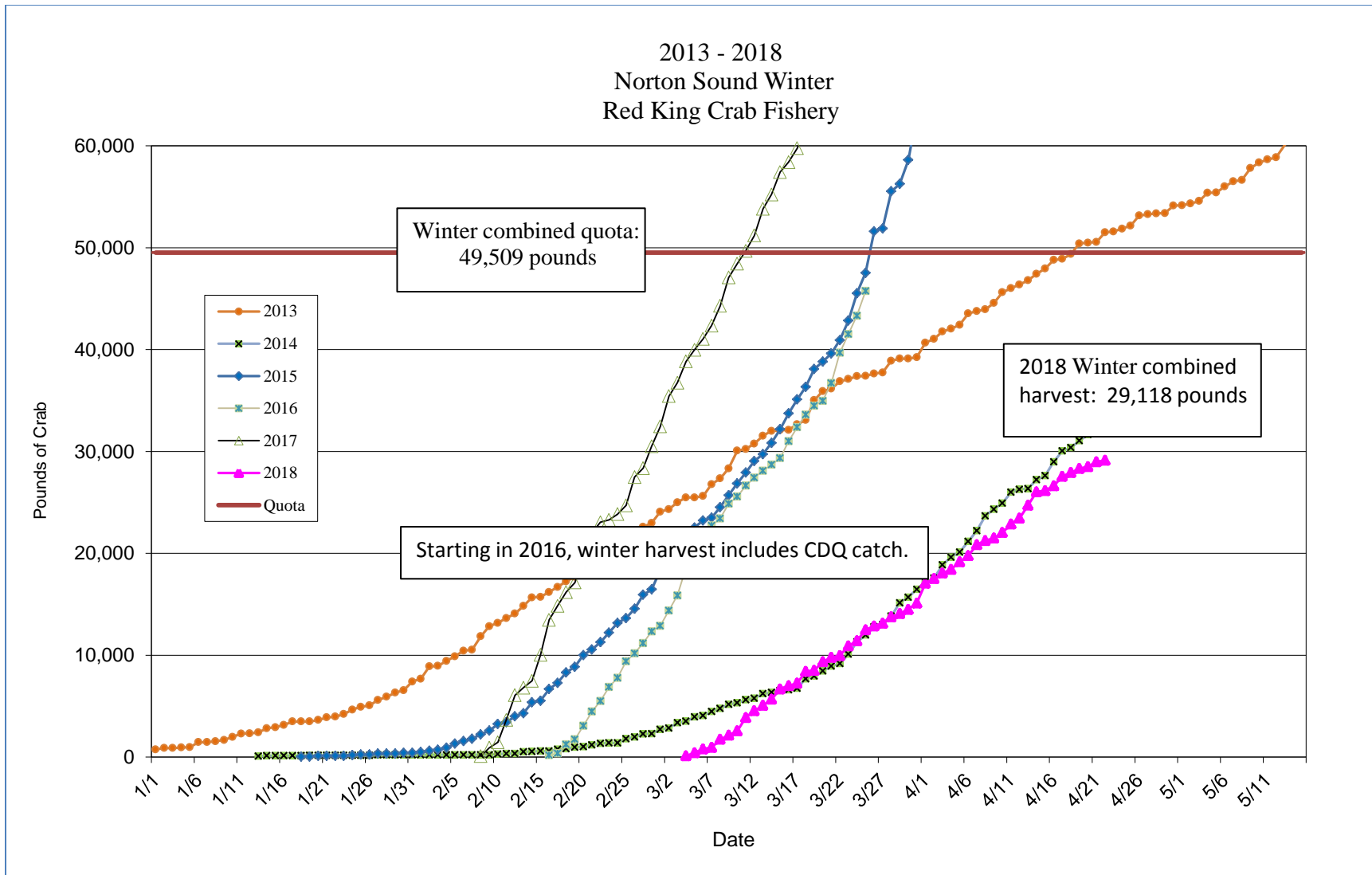


Figure 3.—Current and historical catch performance for the Norton Sound winter commercial crab fishery, 2013–2018.

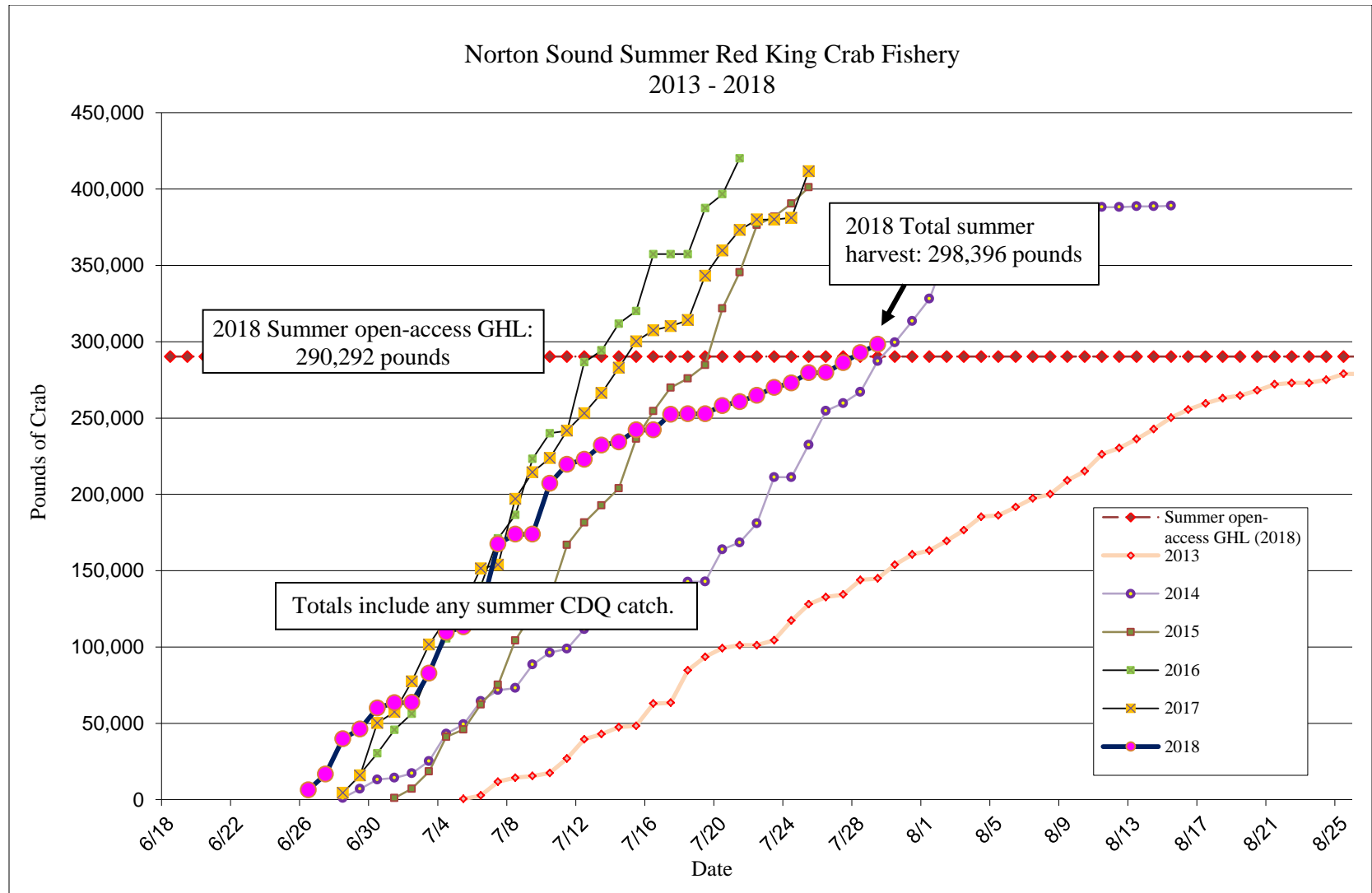
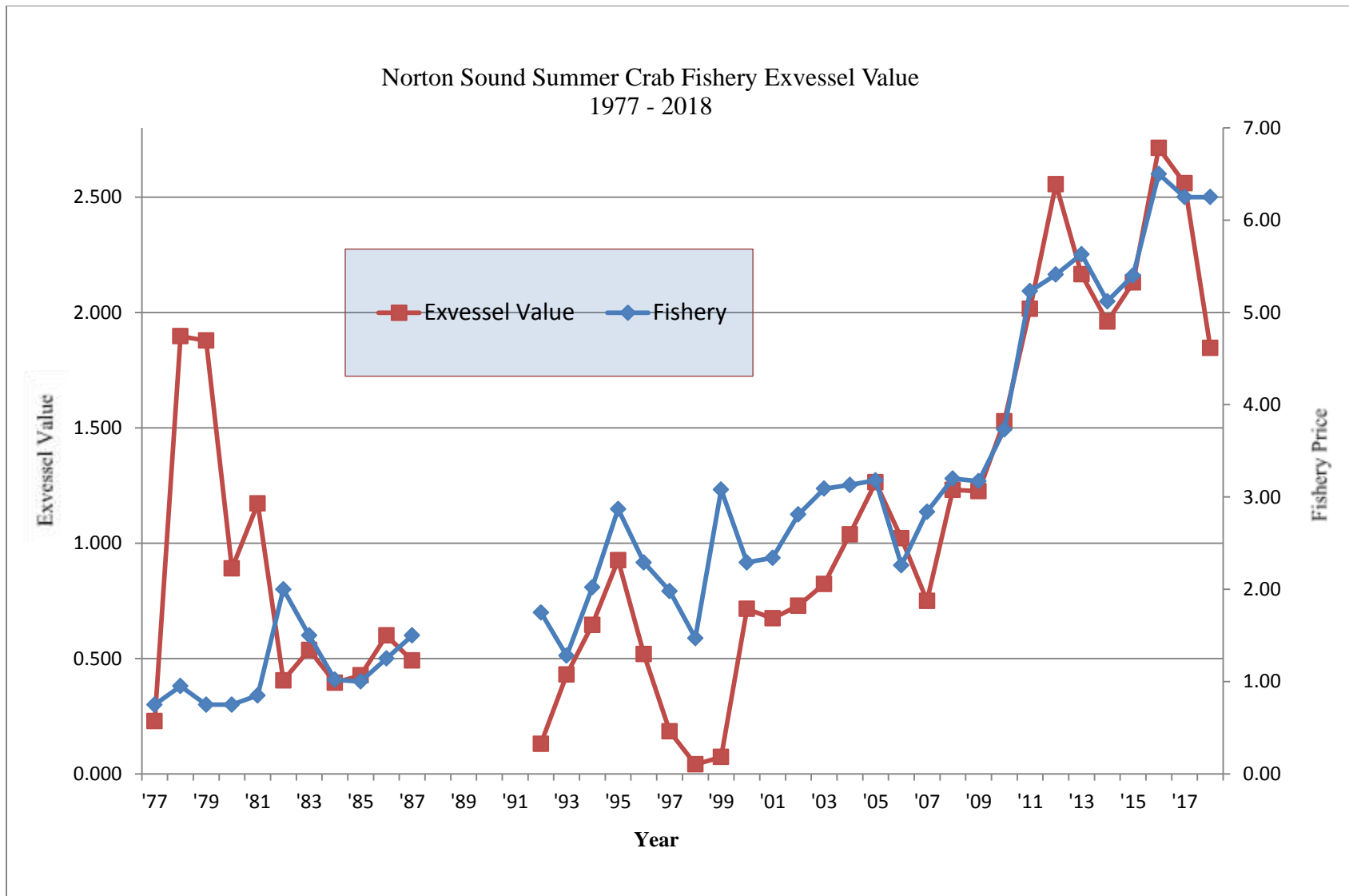
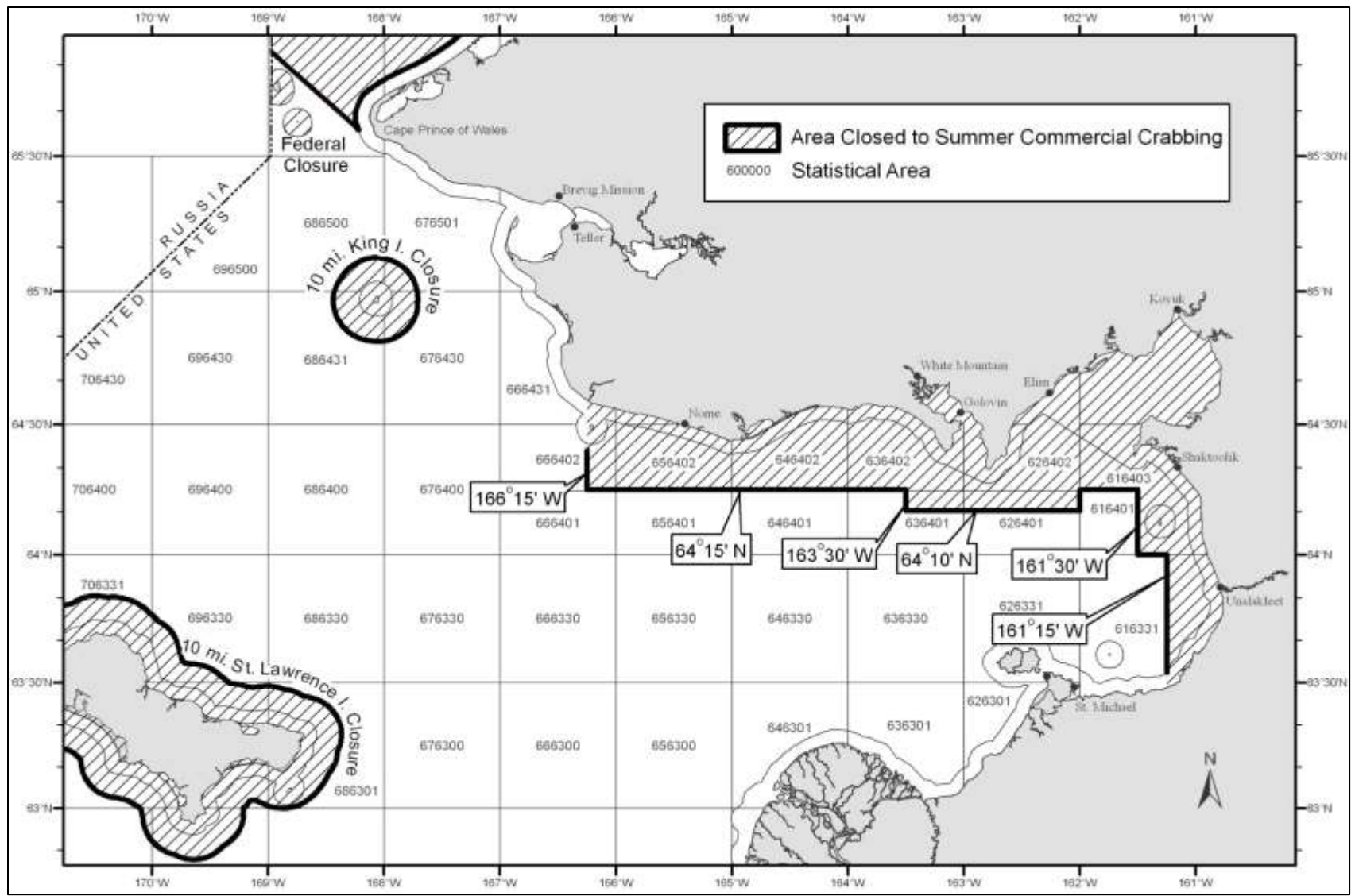


Figure 4.—Current and historical catch performance for the Norton Sound summer commercial crab fishery, 2013–2018.

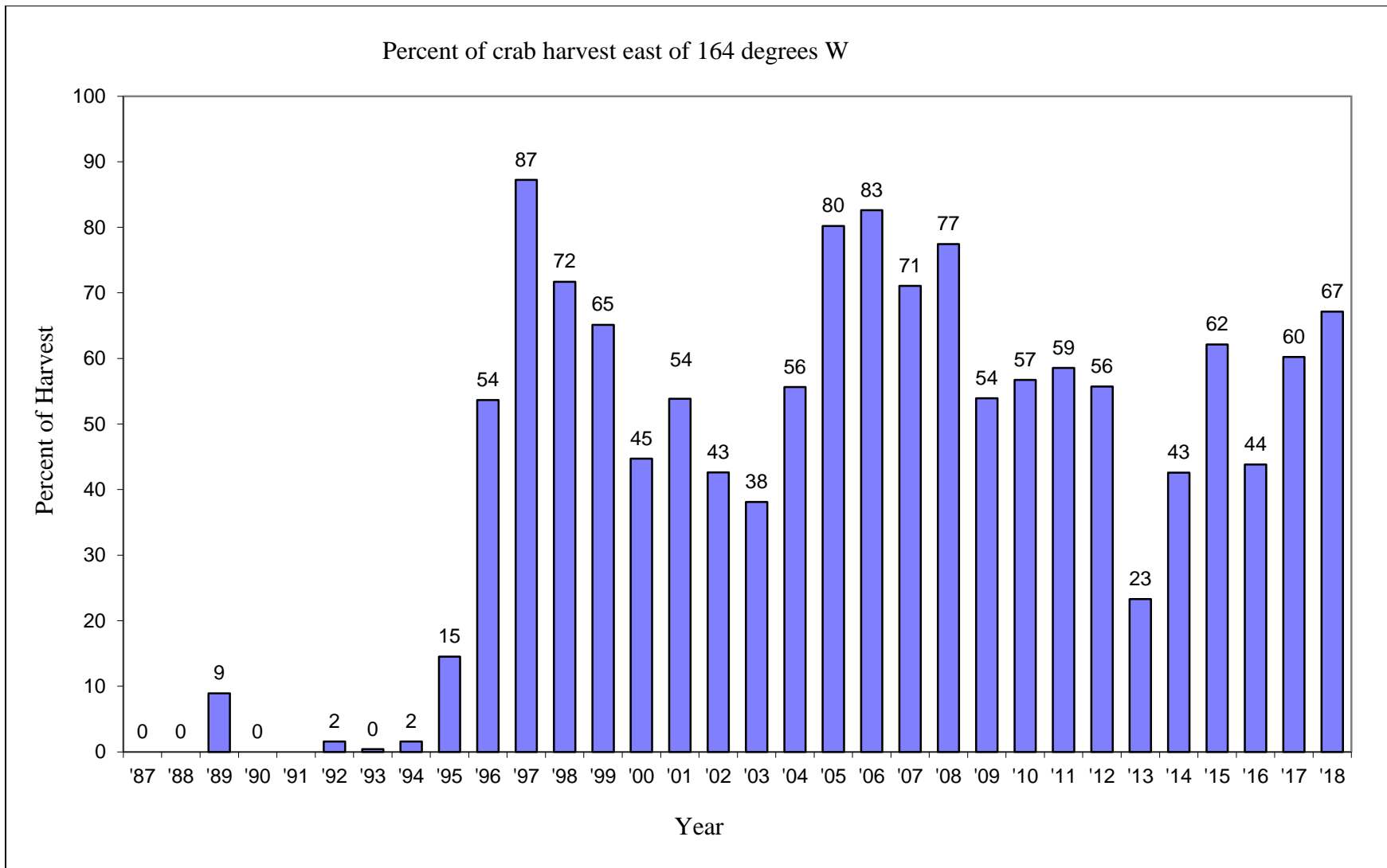
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Notes: Pricing information was not available for 1988–1990. No summer commercial fishery occurred in 1991.
Figure 5.—Norton Sound crab exvessel value and fishery price per pound, 1977–2018.



Note: Line drawn around the coastline delineates the 3-mile state waters zone.
 Figure 6.—Statistical areas and closed-waters area in effect for the Norton Sound summer commercial crab fishery.



Note: No summer commercial fishery occurred in 1991.

Figure 7.—The percent of crab harvested during the Norton Sound summer commercial red king crab fishery east of 164 degrees west longitude, 1987–2018.

Appendix 1.–Standardized results from population assessment surveys for red king crab in Norton Sound since 1976.

Year	Date	Research agency	Gear	Population abundance estimates (number of crab) ^a			Legal male biomass (millions of pounds) ^d	Standard error		
				pre-2 males ^b	pre-1 males ^b	legal males ^c		prerecruit-2 males	prerecruit-1 males	legal males
1976	9/02–09/05 9/16–10/07	NMFS	Trawl	653,106	1,414,353	2,491,086	7,473,258	285,637	642,876	801,298
1979	7/26–08/05	NMFS	Trawl	19,038	47,313	813,274	2,439,822	16,488	22,711	204,197
1980 ^e	7/04–07/14	ADF&G	Pots			1,900,000	5,700,000			
1981	6/28–07/14	ADF&G	Pots			1,285,195	3,855,585			
1982	7/06–07/20	ADF&G	Pots			353,273	1,059,819			
1982	9/05–09/11	NMFS	Trawl	379,347	1,012,272	918,686	2,756,058	120,610	295,984	243,467
1985	7/01–07/14	ADF&G	Pots			907,579	2,722,737			
1985	9/16–10/01	NMFS	Trawl	402,922	664,594	1,132,662	3,397,986	157,046	281,598	249,394
1988	8/16–08/30	NMFS	Trawl	583,924	486,570	972,757	2,918,271	146,733	249,394	354,901
1991	8/22–08/30	NMFS	Trawl	386,338	408,241	1,545,558	4,636,674	297,059	157,018	450,814
1996	9/07–09/18	ADF&G	Trawl	395,888	277,595	528,431	1,585,293	243,594	78,712	157,909
1999	7/28–08/07	ADF&G	Trawl	96,295	582,799	1,542,589	4,627,767	56,017	165,689	318,731
2002	7/27–08/06	ADF&G	Trawl	393,689	482,815	740,450	2,221,350	85,797	81,271	81,271
2006	7/25–08/08	ADF&G	Trawl	937,083	571,890	718,379	2,155,137	551,144	153,272	105,487
2008	7/24–08/11	ADF&G	Trawl	795,777	689,843	811,727	2,435,181	187,516	120,153	152,145
2011	7/18–08/15	ADF&G	Trawl	431,153	311,550	1,310,634	3,931,902	151,713	87,866	123,310
2014	7/18–07/30	ADF&G	Trawl	1,547,538	2,110,274	1,747,720	5,243,160	643,563	1,474,574	912,399
2017 ^f	7/28–08/08	ADF&G	Trawl	258,235	288,615	941,797	2,825,391	78,381	100,434	270,551

Note: Blank cells are because the numbers were not calculated.

^a Population estimates are valid for the date of the survey (i.e., either before or after the summer commercial fishery). All historical abundances were updated based on newly recovered data.

^b Pre-2 males were defined as 76–89 mm in carapace length (CL) and pre-1 males were defined as sublegal crab ≥ 90 mm CL.

^c Legal male red king crab were defined as ≥ 121 mm (4.75 inches) in carapace width (CW) for the pot surveys and all ADF&G trawl surveys, and ≥ 104 mm CL for all the NMFS trawl surveys except the 1979 survey which defined legal males as ≥ 100 mm CL.

^d Legal male biomass is estimated by multiplying the population abundance estimate of legal males by an average weight of 3.0 pounds.

^e The 1980 pot survey estimate has been revised from the original estimate of 13.4 million pounds which was thought inaccurate due to an under-reporting of recovered tagged crab.

^f Abundance estimates for 2017 are preliminary.

Appendix 2.—Historical commercial harvest by statistical areas of red king crab from Norton Sound Section, Eastern Bering Sea, 1977–2018 (catch in pounds).

Statistical area	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
616331	7,893	0	0	0	0	0	0	0	0	0	0	0	0
616401	0	0	0	0	0	0	0	0	0	0	0	0	0
626331	40,020	0	0	0	0	22	0	0	0	0	0	0	0
626401	31,572	0	0	4,830	399	0	0	0	0	0	0	0	0
626402	38,995	0	0	0	0	0	0	0	0	0	0	0	0
636330	0	0	0	0	0	0	0	0	0	0	0	0	0
636401	0	0	0	12,398	61,823	32,246	5,880	41	891	0	0	0	22,030
636402	0	0	0	0	0	0	0	0	0	0	0	0	0
646301	0	0	0	0	0	0	0	0	0	0	0	0	0
646330	0	0	0	0	4,716	0	0	0	0	0	0	0	5,212
646401	0	0	155,972	0	1,319	17,532	0	0	0	0	0	0	0
646402	80,969	0	0	0	0	748	0	0	0	0	0	0	0
656300	0	0	161,699	0	15,174	0	0	0	0	0	0	0	0
656330	0	0	323,518	72,735	395,662	3,983	24,246	83,479	7,632	0	79,006	36,129	1,757
656401	0	0	138,011	121,147	253,387	60,480	11,422	183,119	246,200	0	194,408	165,644	100,956
656402	306,302	90,187	288,869	918	3,098	2,832	0	0	132,363	0	0	0	0
666230	0	55,490	0	0	77	0	0	0	0	0	0	0	0
666300	0	162,795	60,816	84,874	9,167	95	0	4,534	0	0	0	0	0
666330	0	353,016	505,050	367,446	141,513	8,990	1,192	0	389	70,615	2,963	13,020	1,275
666401	0	179,212	486,947	205,400	381,510	79,580	325,045	116,254	5,341	408,848	50,744	21,895	115,257
666402	12,036	515,778	534,938	183,581	0	17,585	0	0	32,992	0	0	0	0
666431	0	0	146,029	0	0	0	0	0	0	0	0	0	0
676300	0	13,238	0	126,231	0	0	0	0	0	0	0	0	0
676330	0	51,304	81,798	6,762	18,734	0	0	0	0	0	0	0	0
676400	0	667,130	33,856	274	92,026	1,315	247	0	32	0	0	0	0
676430	0	3,811	12,309	0	373	3,513	0	0	1,171	0	0	0	0
676501	0	0	0	0	36	0	0	0	0	0	0	0	0
686330	0	0	1,860	0	0	0	0	0	0	0	0	0	0
686431	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	517,787	2,091,961	2,931,672	1,186,596	1,379,014	228,921	368,032	387,427	427,011	479,463	327,121	236,688	246,487

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Statistical area	1990	1992	1993	1994	1995	1996 ^a	1997	1998	1999	2000	2001	2002	2003
616331	0	0	0	48	0	0	0	0	633	4,557	0	3,506	646
616401	0	0	0	0	35	0	0	0	0	0	0	0	0
626331	0	0	0	0	0	61	0	0	0	0	0	2,455	0
626401	0	0	0	0	18,971	45,045	18,066	8,065	508	4,689	61,620	53,722	15,899
626402	0	0	0	0	0	0	0	0	0	0	0	0	1,352
636330	0	0	0	0	0	4,560	3,838	2,449	0	0	2,253	0	0
636401	0	1,159	1,373	8,087	24,329	70,677	59,206	10,771	14,201	126,994	91,343	50,906	83,949
636402	0	0	0	1,754	3,466	0	0	0	0	0	0	0	0
646301	0	0	0	0	4,628	13,888	0	0	0	0	0	0	0
646330	0	0	0	0	1,493	2,894	314	0	3,021	0	1,868	1,955	0
646401	0	0	1,963	37,222	105,045	22,834	1,052	3,194	221	0	4,287	0	3,952
646402	0	0	730	143,511	66,821	0	0	0	0	0	0	0	0
656300	0	0	0	0	0	0	0	0	0	0	0	0	14
656330	0	4,814	265	0	19,745	15,446	4,661	4,078	1,300	0	20,869	12,374	21,176
656401	171	53,119	105,341	29,566	32,289	9,985	4,035	1,127	2,739	94,813	55,158	63,038	40,566
656402	0	0	193,079	106,053	44,000	0	0	0	0	0	0	0	1,441
666230	0	0	0	0	0	0	0	0	0	0	0	0	0
666300	0	0	0	0	0	25,519	0	0	0	0	0	0	0
666330	27,185	4,305	31,758	0	730	0	0	0	0	5,839	7,030	1,332	1,296
666401	162,263	10,632	746	396	0	3,001	1,816	0	930	60,762	43,771	35,970	83,998
666402	0	0	535	1,221	0	0	0	0	0	0	0	30,070	12,873
666431	0	0	0	0	1,124	0	0	0	0	0	0	4,274	45
676300	0	0	0	0	0	546	0	0	0	0	0	0	0
676330	0	0	0	0	0	0	0	0	0	0	0	0	0
676400	3,212	0	0	0	0	9,775	0	0	0	0	0	0	0
676430	0	0	0	0	0	0	0	0	0	0	0	0	0
676501	0	0	0	0	0	0	0	0	0	0	0	0	0
686330	0	0	0	0	0	0	0	0	0	0	0	0	0
686431	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	192,831	74,029	335,790	327,858	322,676	224,231	92,988	29,684	23,553	297,654	288,199	259,602	267,207

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Statistical area	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
616331			2,357		5,658	888					4,923	3,410
616401				231	416	6,170				7,729	4,692	1,929
626331			1,415	27,018	3,235	3,047		2,489		686		
626401	23,113	94,130	118,202	61,704	96,327	103,043	52,054	85,271	115,524	36,802	69,936	103,881
626402												
636330		126	26,680	10,253	2,350	5,026	2,584		1,454	12,035	7,565	2,680
636401	166,489	227,204	224,531	123,092	197,948	96,279	182,040	146,973	148,183	34,027	78,572	137,285
636402												
646301												
646330	2,226	4,097	2,629	5,290	1,505	933	1,205		1,204	4,195	5,390	1,812
646401	1,964	149	1,660		18,728	46,264	77,437	83,099	98,811	59,737	36,409	58,929
646402										5,271		
656300	932		284	1,909								
656330	46,288	47,411	17,752	4,911		10,617	17,660	1,546	8,168	8,515		4,828
656401	21,579	9,405	28,434	70,065	68,968	107,557	82,747	77,149	85,920	147,569	122,631	69,355
656402		380	807	2,254						37,743		
666230			1,721									
666300			18,245									
666330	12,359	142	5,041	511		1,514		2,042	1,000			
666401	42,452	727	600	2,498		10,021			15,726	33,469	38,099	9,308
666402	23,344	16,025	1,050	2,959		6,228	1,577	2,271		1,419	18,968	7,699
666431										2,669	1,825	
676300												
676330												
676400				180								
676430												
676501		1,008										
686330												
686431			340									
Totals	340,746	400,804	451,748	312,875	395,135	397,587	417,304	400,840	475,990	391,863	389,008	401,115

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Statistical area	2016	2017	2018	1977-2018 Totals
616331			1,110	35,628
616401		2,368		23,570
626331		3,366	956	84,770
626401	19,488	53,398	22,520	1,318,779
626402				40,347
636330	10,122	3,429	949	98,353
636401	154,502	185,444	174,811	2,954,406
636402				5,220
646301				18,516
646330		388		52,346
646401	126,906	101,796	60,162	1,126,932
646402				294,200
656300				180,012
656330	307	2,317		1,305,184
656401	97,414	44,007	4,885	3,010,689
656402				1,214,562
666230				57,288
666300				366,045
666330		1,469	595	1,569,617
666401	6,030	12,412	9,963	2,969,868
666402	5,391	1,347	22,445	1,452,331
666431				155,966
676300				140,015
676330				158,598
676400				808,047
676430				21,177
676501				1,044
686330				1,860
686431				340
Totals	420,159	411,739	298,396	19,465,709

Note: No summer commercial fishery occurred in 1991.

^a Does not include approximately 2,490 lbs not reported on fish tickets (1996).