

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



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2017 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 4.3 million pounds for 2017 based on the model's results from spring of 2017 that included the latest data from the 2016 summer fishery and the 2014 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 540,000 pounds for 2017, 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 11.5% for the commercial red king crab fishery yielding a total GHL of 496,800 pounds. By regulation 8% of the GHL is allocated to the winter commercial fishery resulting in a potential 39,744 pound allocation. The Community Development Quota (CDQ) fishery is allocated 7.5% by regulation resulting in a potential 37,260 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 local 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

Open Access Fishery

The winter commercial season opened February 7, 2017, and 57 fishermen registered (43 actually fished). One land-based processor (NSSP in Nome) registered to buy crab, and 6 fishermen applied for a catcher-seller permit to sell crab dockside (3 made sales). Based on fish tickets submitted, the first landing was made February 8 and last landing was made on March 22. From beginning to end of the season, the harvest rate was consistently high, with landings every day until March 5 when the CDQ fishery commenced (Figure 3). A total of 223 landings were made, with an overall CPUE of 8 crab/pot, and average weight of 3.0 lbs/crab (Table 1). Including CDQ, the price of crab averaged \$6.73/lb, tied for the fourth highest in the Norton Sound winter king crab fishery, and total exvessel value was \$483,797, the third highest for the winter fishery (Table 2). A total of 77,843 lbs (26,008 crab), including CDQ, were harvested in the winter, with roughly a third harvested in February and two-thirds in March. Total amount of crab harvested was similar to last year, as were the number of landings. The season started a week earlier this year than last year. Ice was stable until the third week of February, when 160 out of 679 pots reported fishing (24%) were lost. Nome crabbers reported fishing from 21 miles west to 12 miles east of Nome, excluding the area closed to commercial fishing. Similar to last year, the majority of fishermen (42) and harvest (90%) came from the Nome area, with the remaining fishermen and harvest coming from Elim, Golovin, Shaktoolik, Stebbins, Unalakleet, and White Mountain areas. Similar to the last two years, the ice was unstable in most of eastern & southern Norton Sound and, except for Elim and White Mountain (accounting for 4% each of total harvest), harvest from these areas accounted for 1% or less of the total harvest in 2017.

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 are allowed to 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 2017, as in the previous 10 years, YDFDA transferred their quota to NSEDC.

Similar to the past 12 years except for 2013, NSEDC fishermen harvested all, or nearly all, of the entire allocation. In 2017, for the second time, the CDQ fishery was prosecuted during the winter season, opening on February 28, two days before the open-access fishery originally closed, to allow registered CDQ permit-holders to continue fishing. From then until the last landing was made on March 22, the 45 crabbers that fished (out of 49 that registered) harvested 37,232 pounds, or 99.9% of the CDQ quota (Table 3) and none was harvested during the summer fishery.

In 2017, there were a total of 212 CDQ landings and 1,617 pots lifts. Average price paid to CDQ fishermen was \$5.90/lb, for an exvessel value of \$206,620 (43% of the total winter value) for the

CDQ fishery. This was the 17th year a CDQ harvest occurred since the CDQ fishery was implemented in 1998.

SUMMER FISHERY

HARVEST SUMMARY

Open Access Fishery

The 2017 summer open access commercial crab fishery was opened by emergency order at 12:00 noon, June 26 in the Norton Sound Section, with a GHQ of 419,000 pounds of crab. NSSP was registered to buy crab, and two fishermen registered to sell crab dockside as catcher-seller (both made sales). NSSP operated a seafood processing plant in Nome and three tenders in eastern Norton Sound. Crab were sold to NSSP and to local residents.

The first open access deliveries were made on June 28 and final deliveries were made July 25, the day the fishery was closed by emergency order at 6:00 AM, for a season length of 30 days, the third 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 2017 season, as in the past two years, the harvest rate was excellent from the start and, with only one major storm at the end, continued to be superb throughout the four week season (Figure 4). The daily CPUE averaged 14 crab per pot and went as high as 31 crab per pot (Table 4). By the third week of July, the projected trend line showed that the open access quota could be reached in a few days; therefore a closure was announced for July 23. However, with worsening change in weather, and out of safety concerns as well as the quota not being reached, the closure was extended for 48 hours, to July 25 at 6:00 AM. Crabbers were allowed 12 hours beyond the closure time to deliver, or at least be waiting to deliver, at the Nome plant or at a tender. For safety reasons, the usual requirement to have all pot doors open and bait containers removed by the closure date and time was waived. Fishermen could get to their pots once they felt safe to do so, but all crab retrieved after the closure date and time had to be returned to the water.

The open access harvest from fish ticket reports was 135,323 red king crab or 411,739 pounds (98% of the open-access quota; Table 4). Of this total, 2,109 pounds were reported as personal use. Out of the 41 vessels and 42 permit holders that registered to fish, 36 vessels and 36 permit holders made 270 landings (Table 5). The average weight for commercially caught crab was 3.0 pounds, same as last year. Number of pots registered was 1,640, and there were 9,440 pot pulls. CPUE was 14 crab per pot, lower than the last 2 years. In 2017, the total harvest rate tracked similarly to 2016 but fell off slightly mid-season (Figure 4). The average price paid was \$6.25/lb, the second highest amount ever paid for the summer fishery (Table 6). The exvessel value of the fishery was \$2.560 million, the second highest fishery value ever for Norton Sound without adjusting for inflation (Figure 5).

Harvest Areas and Sampling

Fish ticket reports document 12 statistical areas were fished in the summer open access fishery (Table 7). Like last year, the top harvest (45%) and most effort (38%) came from statistical area 636401, which is southwest of Golovnin Bay in eastern Norton Sound, followed by statistical area 646401, south of Nome, which yielded 25% of the total harvest. Third highest harvest (13%) and effort (18%) came from 626401, southeast of Golovnin Bay. These three statistical areas are all directly south of the

closed boundary line (Figure 6), and, similar to last year, effort was concentrated in this main area. Except for statistical area 656401, directly south of Nome, the remaining 8 statistical areas all had 3% or less of the total harvest (Appendix 2). The catch from statistical areas east of 164°W longitude made up 60% of the harvest (Figure 7).

Carapace length (CL) measurements and shell age were collected from 3,432 commercially-caught crab during the summer open access fishery. Since the summer of 2002, NSEDC has operated a seafood processing plant in Nome. In 2017, 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 80% of the total legal crab sampled, and old-shell crab made up 20%, more than twice as much as last year. Recruit crab are new-shell legal crab < 116-mm CL. Postrecruit crab are legal new-shell male crab \geq 116-mm CL and all legal old-shell males. Recruit crab made up 25% of the legal crab sampled and postrecruit crab made up 75%, the highest in the last 11 years (Table 5). Overall mean carapace length of legal male crab was 120-mm.

Table 1.—Daily catch based on fish ticket data for the winter commercial king crab harvest, Norton Sound, February 7–March 22, 2017.

Date	Landings	Number of crab	Lbs of crab harvested	Number of pots pulled	Average weight (lbs)	Daily CPUE
02/08	3	32	89	24	2.8	1
02/09	6	275	821	57	3.0	5
02/10	4	180	535	29	3.0	6
02/11	12	739	2,208	113	3.0	7
02/12	12	796	2,417	137	3.0	6
02/13	6	246	732	40	3.0	6
02/14	4	228	678	48	3.0	5
02/15	9	839	2,540	58	3.0	14
02/16	19	1,097	3,442	148	3.1	7
02/17	9	456	1,377	61	3.0	7
02/18	9	454	1,347	37	3.0	12
02/19	6	316	938	31	3.0	10
02/20	13	762	2,273	100	3.0	8
02/21	12	890	2,598	78	2.9	11
02/22	2	355	1,051	14	3.0	25
02/23	2	80	233	12	2.9	7
02/24	5	187	559	31	3.0	6
02/25	4	290	869	23	3.0	13
02/26	12	925	2,776	86	3.0	11
02/27	7	292	870	35	3.0	8
02/28	7	729	2,161	53	3.0	14
03/01	13	658	1,939	72	2.9	9
03/02	16	986	2,972	91	3.0	11
03/03	7	438	1,322	55	3.0	8
03/04	15	690	2,084	99	3.0	7
03/22	9	581	1,780	76	3.1	8
Total	223	13,521	40,611	1,608	3.0	8

Note: The fishery closed by emergency order on 3/22/17 and the last delivery was made on 3/22/17.

Table 2.—Historical winter commercial red king crab fishery catch statistics and economic performance, Norton Sound Section, Eastern Bering Sea, 1978–2017.

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

^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 3.—Daily catch based on fish ticket data for the CDQ commercial king crab harvest, Norton Sound Section, Eastern Bering Sea, March 5–22, 2017.

Date	Landings	Number crab	Crab harvested (lbs)	Cumulative total (lbs)	Number pots pulled	Average weight (lbs)	CPUE
03/05	9	375	1,141	1,141	72	3.0	5
03/06	6	365	1,071	2,212	44	2.9	8
03/07	9	441	1,310	3,522	58	3.0	8
03/08	11	650	1,937	5,459	72	3.0	9
03/09	18	931	2,782	8,241	109	3.0	9
03/10	9	457	1,360	9,601	63	3.0	7
03/11	7	412	1,249	10,850	59	3.0	7
03/12	11	532	1,521	12,371	94	2.9	6
03/13	15	864	2,616	14,987	115	3.0	8
03/14	9	478	1,402	16,389	64	2.9	7
03/15	10	739	2,194	18,583	102	3.0	7
03/16	7	324	986	19,569	37	3.0	9
03/17	10	444	1,362	20,931	59	3.1	8
03/18	11	677	1,997	22,928	72	2.9	9
03/19	19	1,162	3,496	26,424	134	3.0	9
03/20	14	793	2,392	28,816	98	3.0	8
03/21	13	1,076	3,141	31,957	120	2.9	9
03/22	24	1,767	5,275	37,232	245	3.0	7
Total	212	12,487	37,232	37,232	1,617	3.0	8

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Note: The CDQ fishery closed on 3/22/17, and the last delivery was made 3/22/17.

Table 4.—Daily catch based on fish ticket data for the open-access summer commercial king crab harvest, Norton Sound Section, Eastern Bering Sea, June 26–July 25, 2017.

Date	Landings	Number of crab	Lbs of Crab harvested	Cumulative lbs	No. of Pots pulled	Average weight (lbs)	Daily CPUE
6/28	4	1,413	4,395	4,395	86	3.1	16
6/29	8	3,858	11,484	15,879	282	3.0	14
6/30	20	11,212	34,256	50,135	573	3.1	20
7/01	4	2,299	7,293	57,428	121	3.2	19
7/02	8	6,636	20,010	77,438	275	3.0	24
7/03	12	8,262	24,178	101,616	469	2.9	18
7/04	8	5,597	16,571	118,187	292	3.0	19
7/05	3	3,661	9,548	127,735	120	2.6	31
7/06	16	7,682	23,818	151,553	492	3.1	16
7/07	1	720	2,324	153,877	78	3.2	9
7/08	26	14,201	43,162	197,039	883	3.0	16
7/09	8	5,831	17,452	214,491	316	3.0	18
7/10	8	3,033	9,277	223,768	317	3.1	10
7/11	13	5,845	17,990	241,758	457	3.1	13
7/12	5	3,968	11,413	253,171	194	2.9	20
7/13	12	4,178	13,158	266,329	386	3.1	11
7/14	14	5,477	16,545	282,874	552	3.0	10
7/15	12	5,639	17,382	300,256	397	3.1	14
7/16	6	2,384	7,252	307,508	205	3.0	12
7/17	2	846	2,640	310,148	80	3.1	11
7/18	2	1,217	3,997	314,145	56	3.3	22
7/19	21	9,483	29,066	343,211	765	3.1	12
7/20	9	5,417	16,499	359,710	337	3.0	16
7/21	14	4,210	13,434	373,144	460	3.2	9
7/22	8	2,208	6,912	380,056	283	3.1	8
7/23	0	0	0	380,056	0		
7/24	2	367	1,110	381,166	44	3.0	8
7/25	24	9,679	30,573	411,739	920	3.2	11
Totals	270	135,323	411,739		9,440	3.0	14

Note: The fishery closed by emergency order on 7/25 at 6:00 AM, and last delivery was made on 7/25.

Table 5.—Historical summer commercial red king crab annual harvest, Norton Sound Section, Eastern Bering Sea, 1977–2017.

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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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

^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 6.—Historical summer commercial red king crab fishery economic performance, Norton Sound Section, Eastern Bering Sea, 1977–2017.

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	16.4	0.52	^d	0.75	0.229	60	^c	^d
1978	3.00	15.5	2.09	^d	0.95	1.897	60	6/07–8/15	^d
1979	3.00	11.5	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	4.4	1.38	^d	0.85	1.172	38	7/15–8/22	^d
1982	0.50	3.3	0.23	^d	2.00	0.405	23	8/09–9/01	^d
1983	0.30	4.0	0.37	^d	1.50	0.537	4	8/01–8/05	^d
1984	0.40	4.4	0.39	^d	1.02	0.395	14	8/01–8/15	^d
1985	0.45	5.0	0.43	^d	1.00	0.427	22	8/01–8/23	^d
1986	0.42	5.5	0.48	^d	1.25	0.600	13	8/01–8/25 ^c	^d
1987	0.40	5.6	0.33	^d	1.50	0.491	11	8/01–8/12	^d
1988	0.20	5.6	0.24	^d	^c	^c	10	8/01–8/11	^d
1989	0.20	5.6	0.25	^d	3.00	0.739	3	8/01–8/04	^d
1990	0.20	5.2	0.19	^d	^c	^c	4	8/01–8/05	^d
1991	0.34	5.0				No Summer Commercial Fishery			
1992	0.34	4.6	0.07	^d	1.75	0.130	2	8/01–8/03	^d
1993	0.34	4.1	0.33	^d	1.28	0.430	52	7/01–8/28 ^f	^d
1994	0.34	3.4	0.32	^d	2.02	0.646	31	7/01–7/31	^d
1995	0.34	2.7	0.32	^d	2.87	0.926	67	7/01–9/05	^d
1996	0.34	2.3	0.22	^d	2.29	0.519	57	7/01–9/03 ^g	^d
1997	0.08	2.3	0.09	^d	1.98	0.184	44	7/01–8/13 ^h	^d
1998	0.08	2.7	0.03	^d	1.47	0.041	65	7/01–9/03 ⁱ	^d
1999	0.08	3.4	0.02	^d	3.08	0.073	66	7/01–9/04 ^j	^d
2000	0.33	4.0	0.29	0.01	2.29	0.715	91	7/01–8/29	9/01–9/29
2001	0.30	3.7	0.28	0.00	2.34	0.674	97	7/01–9/01	9/01–9/09
2002	0.24	3.5	0.24	0.01	2.81	0.729	77	7/01–8/06	6/15–28; 8/9–9/3
2003	0.25	3.6	0.25	0.01	3.09	0.823	68	7/01–8/13	6/15–28; 8/15–24
2004	0.35	4.0	0.34	0.03	3.13	1.038	53	7/01–8/08	6/15–6/28
2005	0.37	4.2	0.37	0.03	3.18	1.264	72	7/01–8/15	6/15–28; 8/17–27
2006	0.45	4.0	0.42	0.03	2.26	1.021	67	7/01–8/22	6/15–6/28

-continued-

Table 6.–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 \$)	Season length days	Season length dates	
			open access	CDQ				open access	CDQ
2007	0.32	4.0	0.29	0.02	2.84	0.750	52	7/01–8/17	6/15–6/28
2008	0.41	4.4	0.36	0.03	3.20	1.231	73	6/23–8/18	8/17–9/03
2009	0.38	4.6	0.37	0.03	3.17	1.225	98	6/15–9/20 ^k	6/15–7/28 ^k
2010	0.40	5.1	0.39	0.03	3.73	1.528	58	7/01–8/24	6/28–7/16
2011	0.36	5.2	0.37	0.03	5.23	2.016	33	6/28–7/30	6/28–7/08
2012	0.47	4.8	0.44	0.03	5.41	2.556	72	6/29–8/11	6/29–9/08
2013	0.50	4.3	0.37	0.02	5.63	2.165	74	7/03–9/14	7/03–9/14 ⁱ
2014	0.38	4.1	0.36	0.03	5.12	1.960	52	6/25–8/02	6/25–8/15
2015	0.39	4.4	0.37	0.03	5.40	2.130	26	6/29–7/24	6/29–7/24 ^l
2016 ^m	0.52	4.3	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

^a Deadloss included in total.

^b Millions of pounds.

^c Information not available.

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

^e Fishing actually began 8/12.

^f Fishing actually 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 meatfill.

^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 7.—Red king crab CDQ and open-access summer commercial harvest based on fish ticket reports by statistical area for Norton Sound Section, Eastern Bering Sea, June 26–July 25, 2017.

Statistical area	Number of crab	Crab harvested (lbs.)	Number pots pulled	CPUE	Average weight (lbs.)	Percent of pots pulled in stat area ^a	Percent of harvest in stat area ^a
616401	766	2,368	117	7	3.09	1.2	0.6
626331	1,111	3,366	136	8	3.03	1.4	0.8
626401	17,637	53,398	1,748	10	3.03	18.5	13.0
636330	1,126	3,429	146	8	3.04	1.5	0.8
636401	61,784	185,444	3,574	17	3.00	37.9	45.0
646330	126	388	10	13	3.08	0.1	0.1
646401	33,245	101,796	2,160	15	3.06	22.9	24.7
656330	708	2,317	65	11	3.27	0.7	0.6
656401	14,111	44,007	1,089	13	3.12	11.5	10.7
666330	453	1,469	40	11	3.24	0.4	0.4
666401	3,826	12,412	266	14	3.24	2.8	3.0
666402	430	1,347	89	5	3.13	0.9	0.3
Total	135,323	411,739	9,440	14	3.04	100	100

^a Percentage rounded to nearest tenth except total.

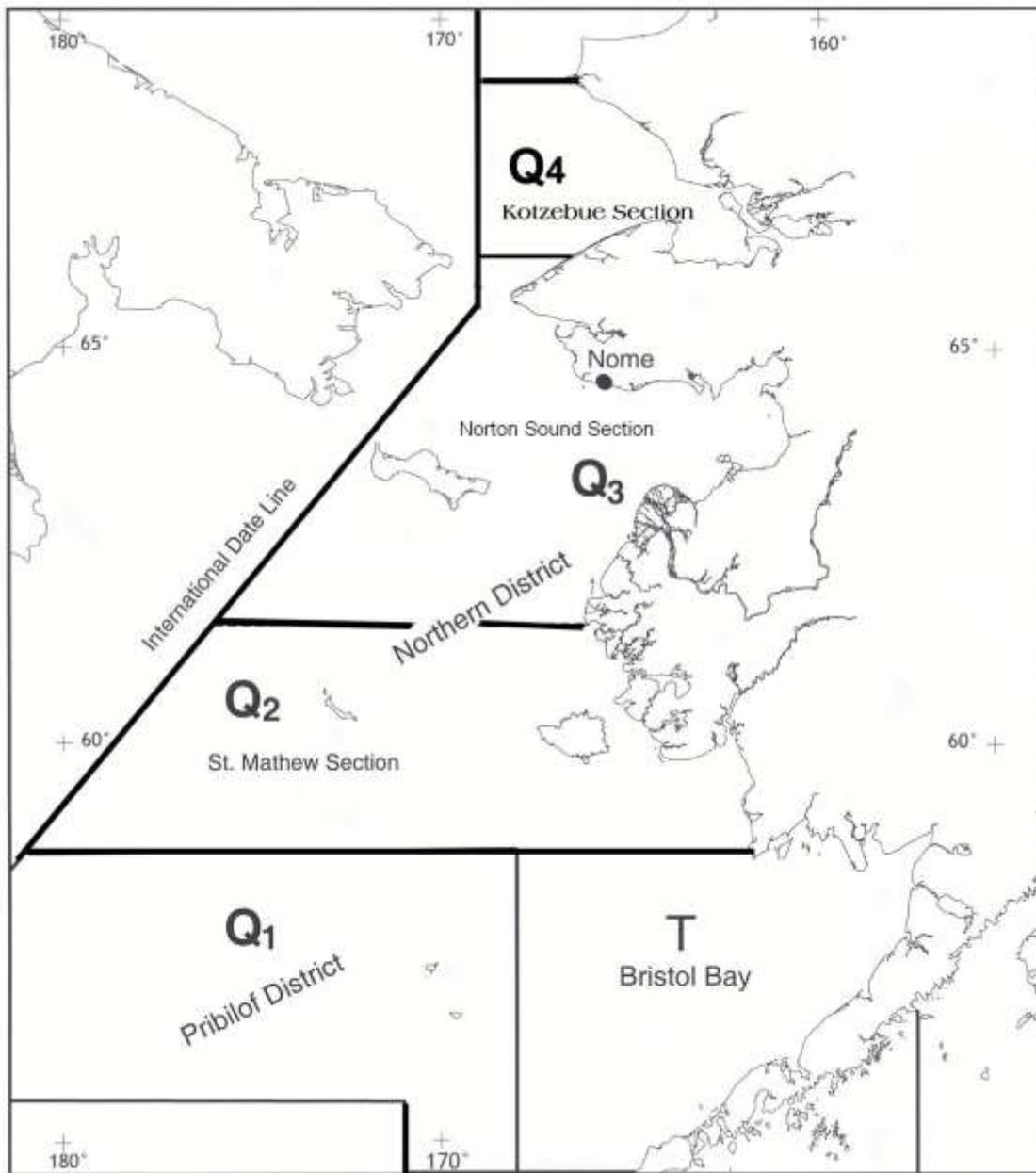


Figure 1.—King crab fishing districts and sections of Statistical Area Q.

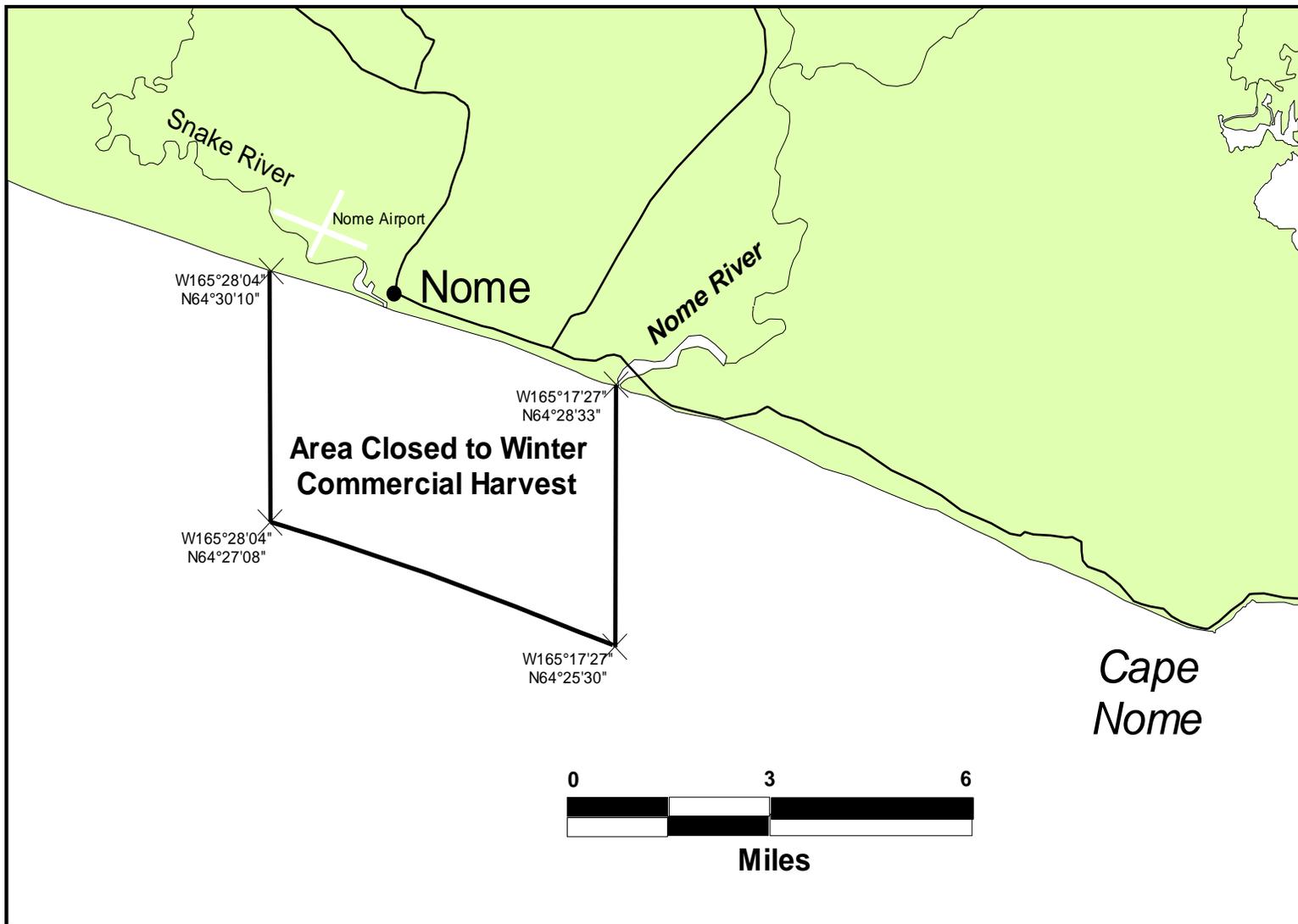
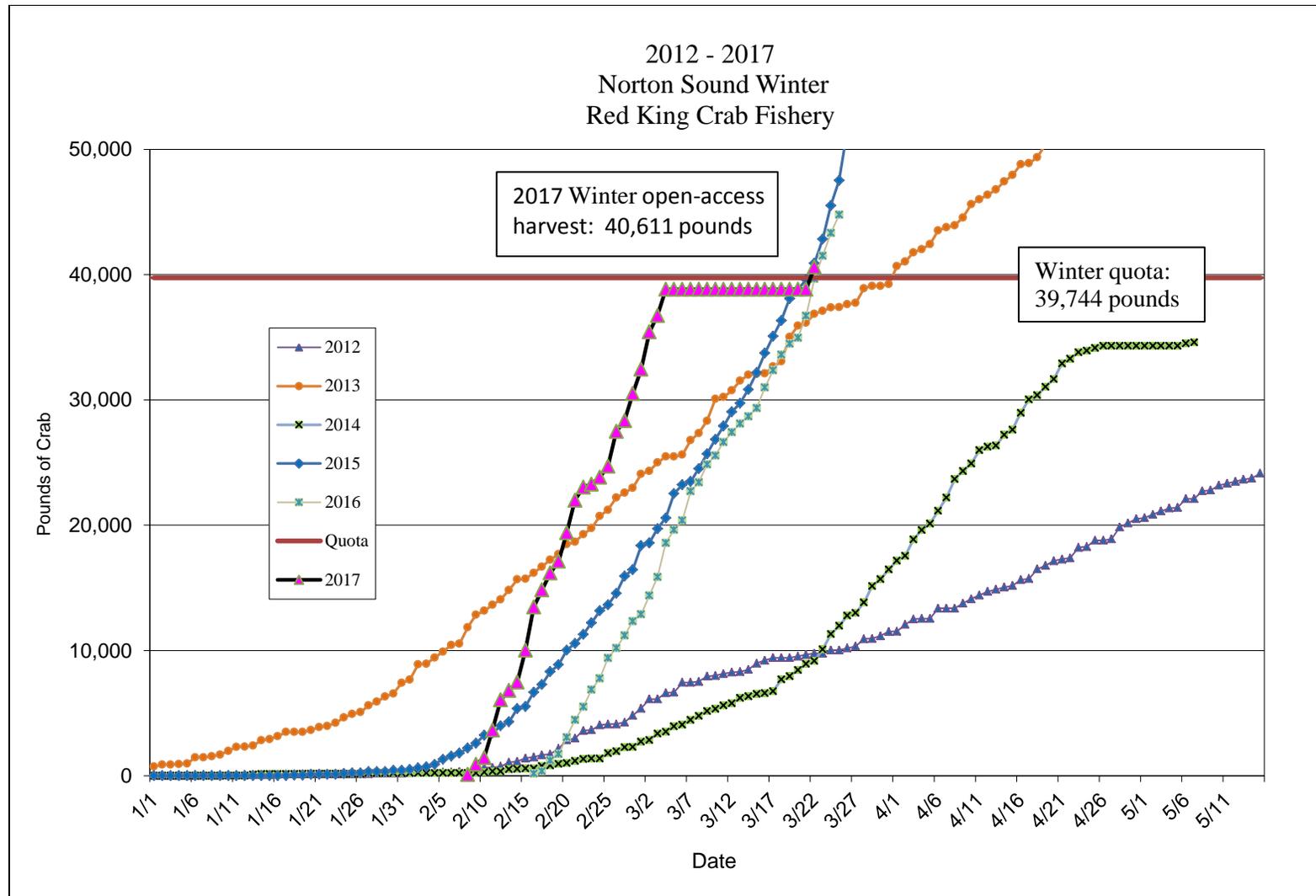


Figure 2.—Closed waters area in effect for the Norton Sound winter commercial crab fishery.

2012 - 2017
Norton Sound Winter
Red King Crab Fishery



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Figure 3.—Current and historical catch performance for the Norton Sound winter commercial crab fishery, 2012–2017.

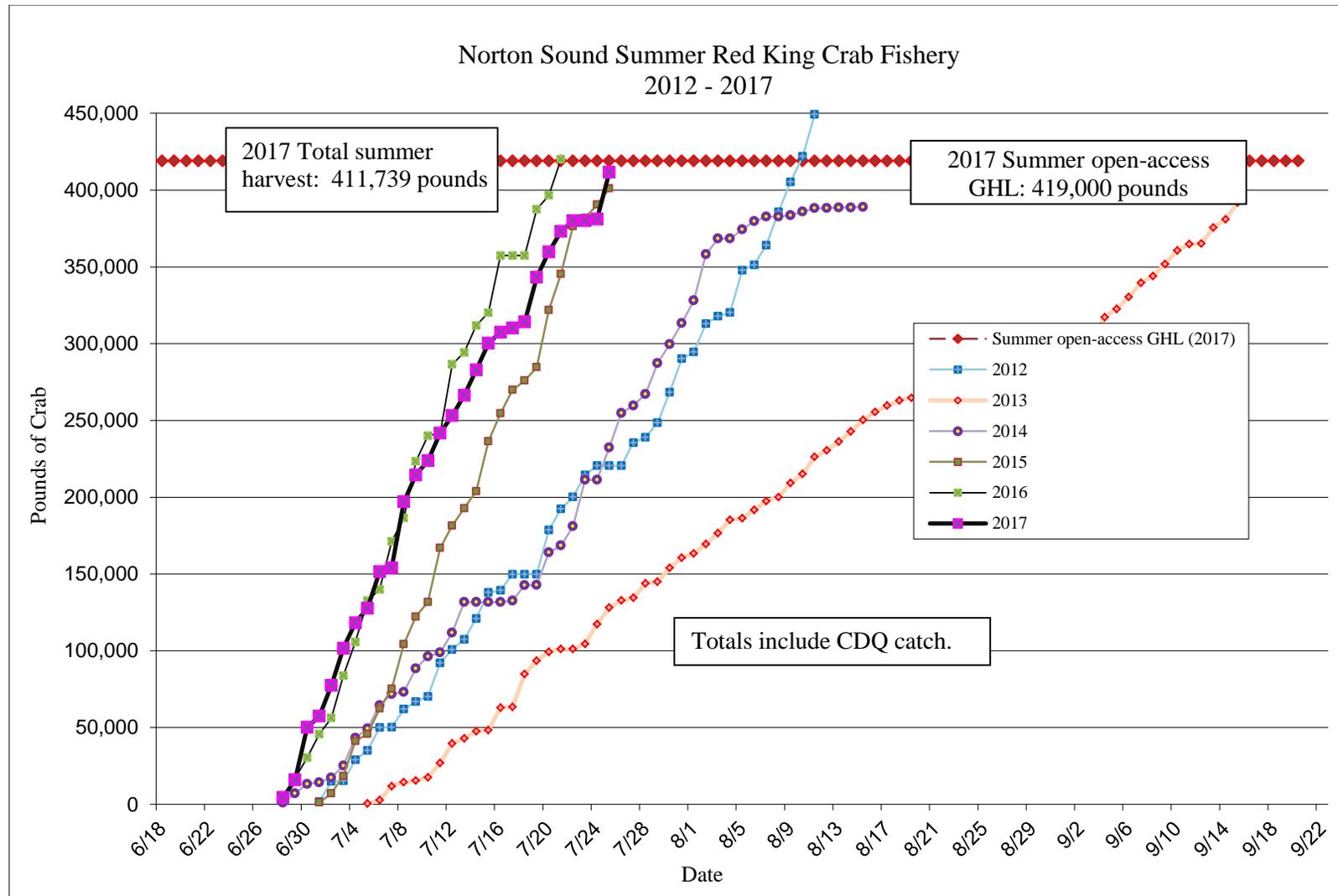
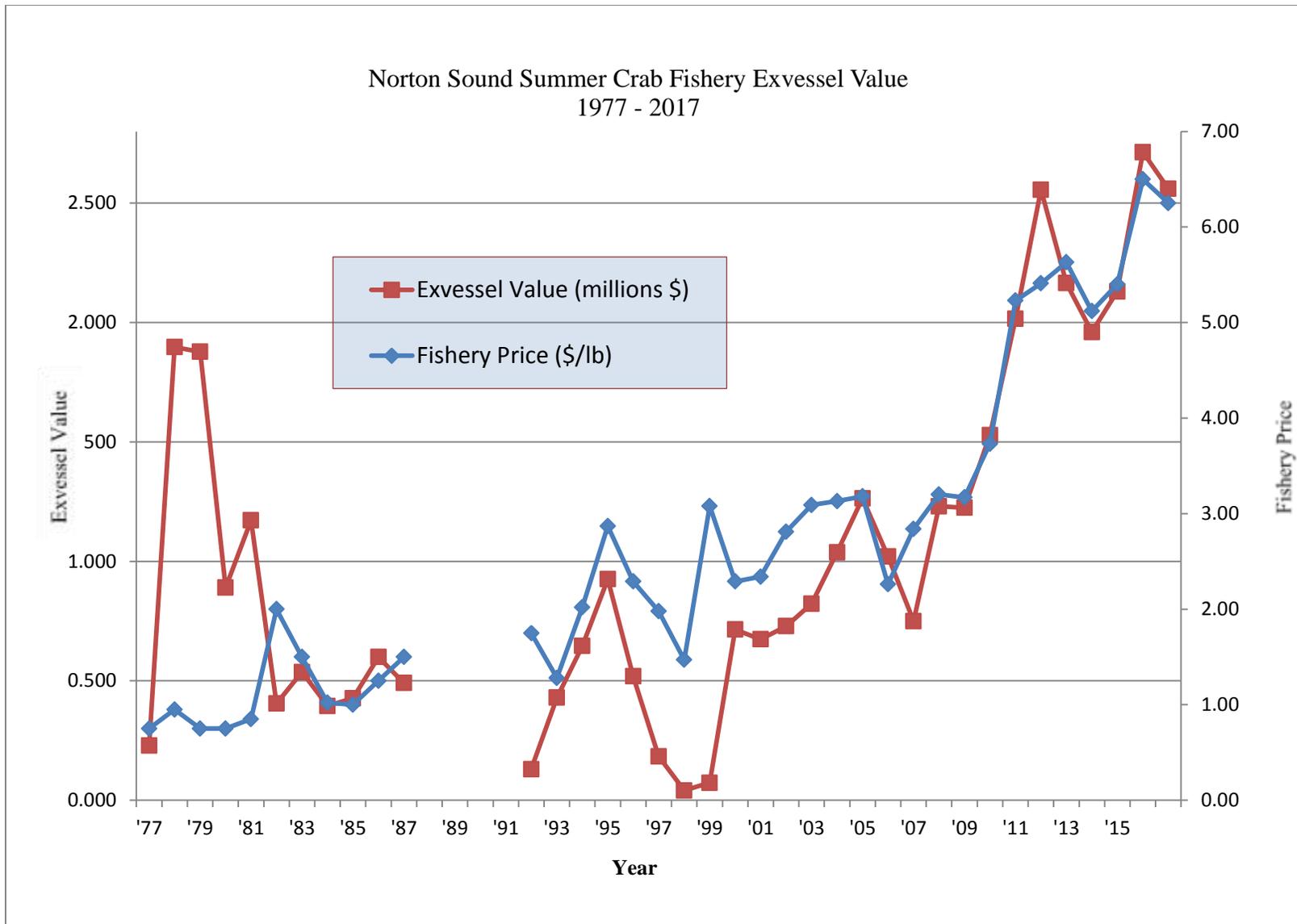
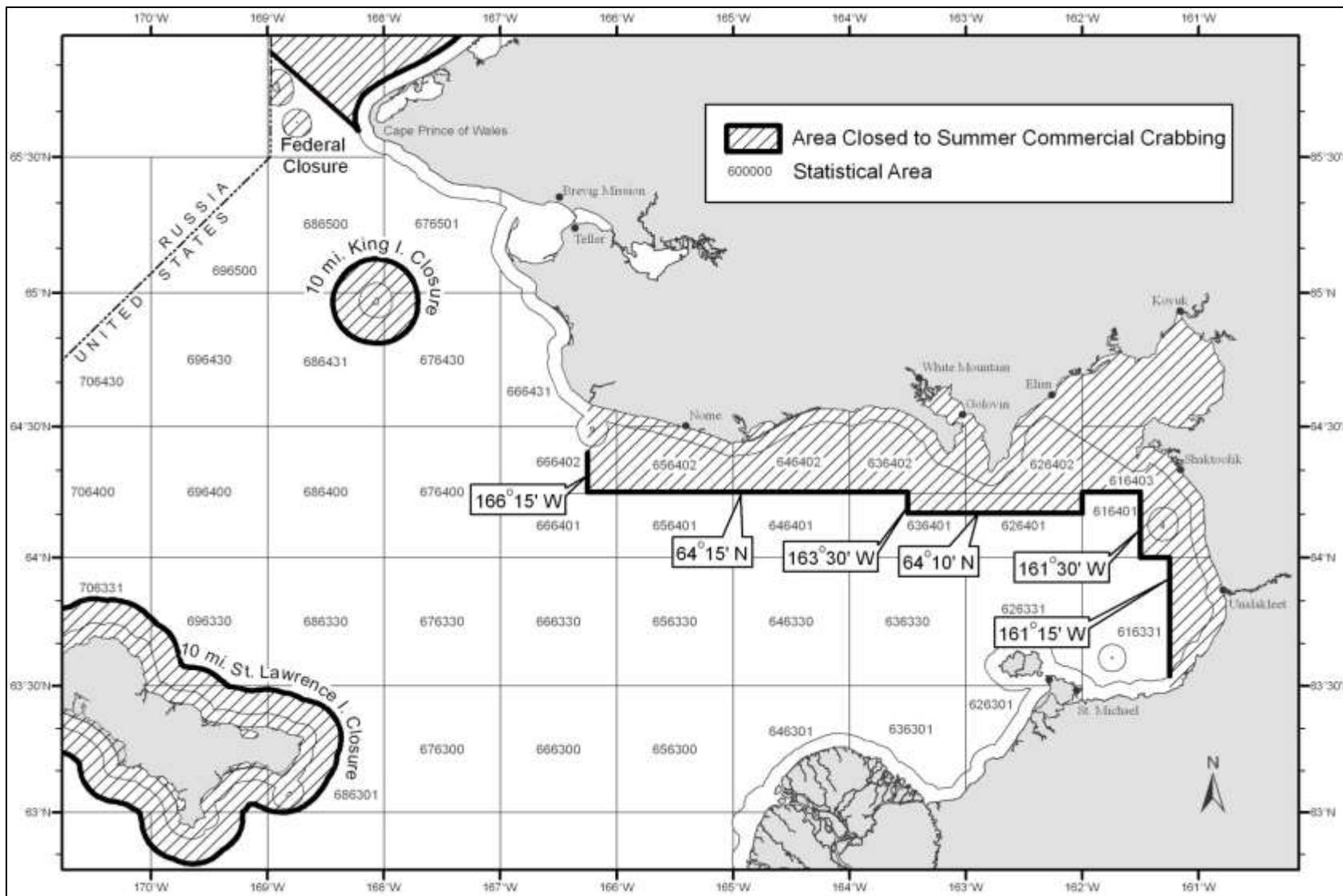


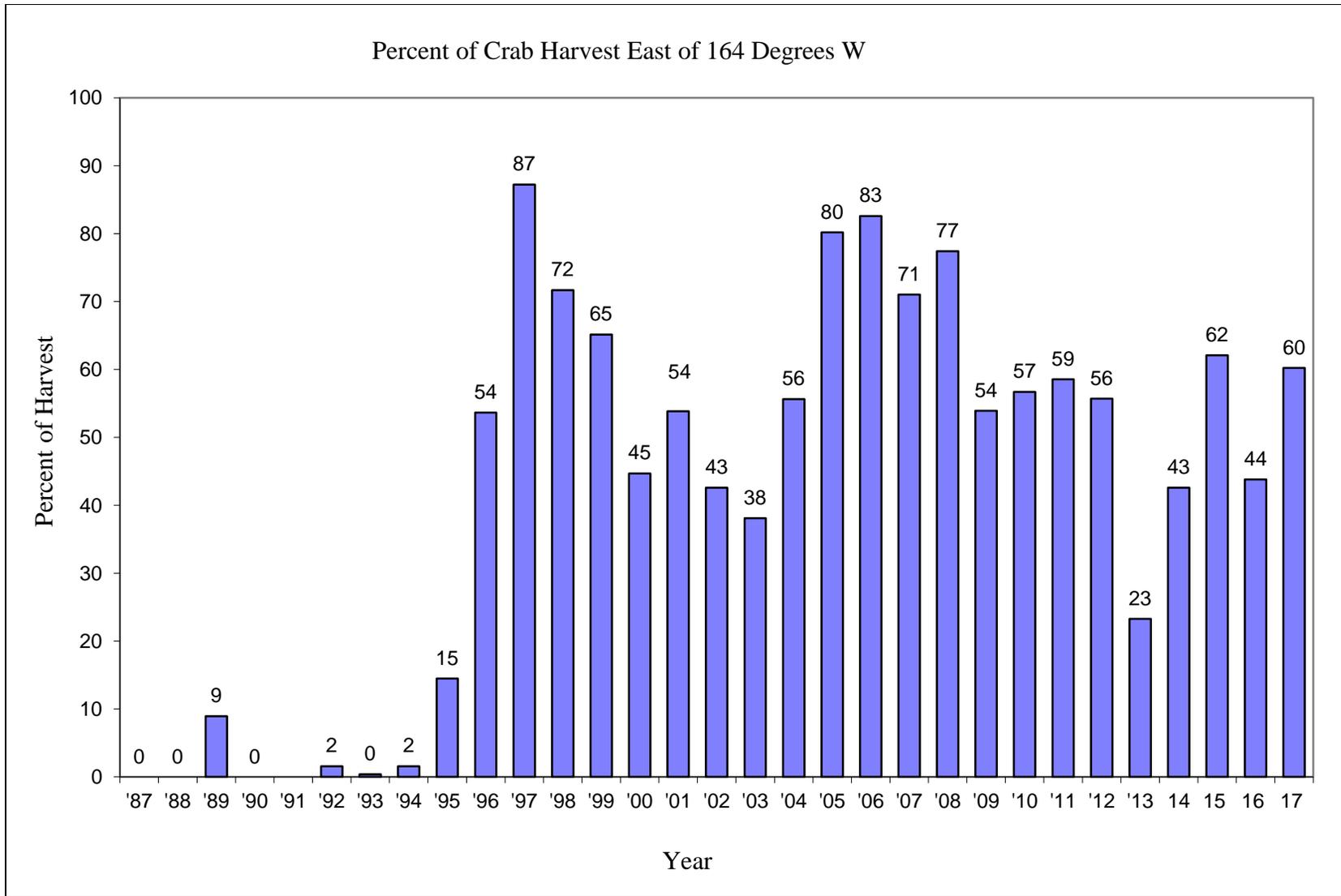
Figure 4.—Current and historical catch performance for the Norton Sound summer commercial crab fishery, 2012–2017.



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, 1977–2017.



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, 1987–2017.

Appendix 1.–Standardized results from population assessment surveys for red king crab in Norton Sound, 1976–2014.

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

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 of 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.

Appendix 2.—Historical commercial harvest by statistical areas of red king crab from Norton Sound Section, Eastern Bering Sea, 1977–2017 (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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Appendix 2.–Page 2 of 4.

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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Appendix 2.–Page 3 of 4.

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	1977-2017		
	2016	2017	Totals
616331			34,518
616401		2,368	23,570
626331		3,366	83,814
626401	19,488	53,398	1,296,259
626402			40,347
636330	10,122	3,429	97,404
636401	154,502	185,444	2,779,595
636402			5,220
646301			18,516
646330		388	52,346
646401	126,906	101,796	1,066,770
646402			294,200
656300			180,012
656330	307	2,317	1,305,184
656401	97,414	44,007	3,005,804
656402			1,214,562
666230			57,288
666300			366,045
666330		1,469	1,569,022
666401	6,030	12,412	2,959,905
666402	5,391	1,347	1,429,886
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	19,167,313

Note: No summer commercial fishery occurred in 1991.

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