

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



*Cora Campbell, Commissioner
Jeff Regnart, Director*



Contact:

Jim Menard, Area Management Biologist
Joyce Soong, Fishery Biologist
Phone: (907) 443-5167
Fax: (907) 443-5893

Pouch 1148
Nome, Alaska 99762
Date Issued: 5/3/2012

2011 Norton Sound Summer Crab Season Summary

INTRODUCTION

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). A large vessel summer commercial crab fishery existed in the Norton Sound Section from 1977 through 1992. No summer commercial fishery occurred in 1991 due to a cut in staff needed to manage the fishery the previous winter. In 1992 the summer commercial fishery resumed. Regulation changes adopted during the March 1993 Board of Fisheries (BOF) meeting changed participation in the fishery to that of small boats. A super-exclusive designation went into effect for the Norton Sound commercial crab fishery June 27, 1994. This designation stated that a vessel registered for the Norton Sound crab fishery may not be used to take king crab in any other registration area during that registration year. Later a vessel moratorium put into place before the 1996 season had the intention of creating a license limitation program. The Community Development Quota (CDQ) groups were allocated a portion of the summer harvest quota beginning in 1998. Although the CDQ allocation was in place, no harvest occurred until the 2000 season. The North Pacific License Limitation Program (LLP) went into effect for the Norton Sound crab fishery January 1, 2000. The program states that a vessel which exceeds 32 feet in length overall must hold a valid crab license issued under the LLP by the National Marine Fisheries Service.

During the March 1999 BOF meeting, a new management strategy was enacted for the Norton Sound summer red king crab fishery (5AAC 34.915). A threshold level of abundance of legal male red king crab biomass was set at 1.5 million pounds. The summer commercial season may only open if the population of legal crab exceeds 1.5 million pounds. If the legal biomass is 1.5 to 2.5 million pounds the harvest rate will not exceed five percent, so that the stock may rebuild. If the legal biomass is 2.5 million pounds or more, the harvest rate will be no more than 10 percent. Improved abundance estimates and the current management strategy will greatly reduce the risks of overfishing the stock.

During the March 2002 BOF meeting, new regulations were adopted changing closed water boundaries and start dates for the crab CDQ fishery. Figure 2 shows the new closed waters boundaries. Closed waters were extended further offshore near Golovin, moved closer to shore near Unalakleet and eastward near Sledge Island. The Norton Sound CDQ crab fishery may begin at 12:00 noon, June 15, or no less than 72 hours after the commercial sac roe herring fishery is closed, whichever is later, through 12:00 noon, June 28. After July 1, the commissioner may, by emergency order, open a CDQ fishery for any remaining allocation after closure of the open access fishery.

Prior to 2006, Norton Sound Section (Q 3) included all waters north of the latitude of Cape Romanzof ($61^{\circ} 49'$ N lat), south of the latitude of Cape Prince of Wales ($65^{\circ} 49'$ N lat), and east of 168° W longitude. At a special BOF meeting on May 3, 2006, Norton Sound Section was expanded so that the new northern boundary was latitude 66° N, and the International Dateline became the new western boundary (Figure 1). In 2010, due to conservation concerns, NMFS closed the area above the latitude of Cape Prince of Wales, and that area is now open to fishing only in state waters (Figure 2).

At its March 2008 meeting, BOF changed the start date of the open access fishery. Previously, the open access fishery started on July 1, but BOF passed a regulation allowing ADF&G to open the fishery by emergency order anytime beginning on or after June 15. The CDQ fishery may open at any time, also by emergency order. Previous restrictions requiring the herring fishery to be over before the start of the crab fishery have been eliminated. For escapement of sublegal crabs, a new regulation is in effect: a minimum of 4 escape rings are required per pot with each ring having a minimum inside diameter of $4\frac{1}{2}$ inches located within one mesh size from the bottom of the pot, or at least $\frac{1}{2}$ of the vertical surface of a square pot or sloping side-wall surface of a conical or pyramid pot must be composed of no less than $6\frac{1}{2}$ inch stretched mesh. Another regulation change was that the size limit for male blue king crab in the Norton Sound commercial fishery was reduced from $5\frac{1}{2}$ inches to 5 inches in shell width.

The ADF&G length-based population model estimated legal male crab abundance for the 2011 summer commercial crab fishery at 3.98 million pounds (1.47 million crabs), compared to the revised 2010 model abundance estimate of 3.88 million pounds (1.48 million crabs) for legal male crabs. The model revised the 2010 estimate from 4.45 million pounds (1.69 million crabs) to 3.88 million pounds. Every time new data is incorporated into the population model, it estimates current abundance as well as revises prior years' abundances. Current and revised abundance estimates are based on the 2008 trawl survey (Appendix 1), the latest summer and winter fisheries data, and historical data going back to 1976 that include pot and trawl surveys and summer and winter fisheries results.

A 9% exploitation rate on the legal population ≥ 4.75 -inch (121-mm) carapace width equates to a guideline harvest level (GHL) of 358,000 pounds of crab. This follows the harvest strategy set by the BOF. By regulation, the CDQ fishery is allocated 7.5% of the GHL; therefore, the CDQ harvest quota was set at 26,850 pounds pre-season, with the open access fishery allocation set at 331,150 pounds.

HARVEST SUMMARY

Open Access Fishery

The 2011 summer open access commercial crab fishery was opened by emergency order at 12:00 noon, June 28 in the Norton Sound Section, with a GHF of 331,150 pounds of crab. Two companies, Norton Sound Seafood Products (NSSP) and Aquatech, were registered to buy crab, and five fishermen registered to sell crab dockside as catcher-sellers. NSSP operated a seafood processing plant in Nome and two tenders in eastern Norton Sound. A fisherman based in Unalakleet flew live crabs to Aquatech in Anchorage. The majority of crabs were delivered to NSSP, while four catcher-sellers sold crabs directly to local residents.

The first open access delivery was made on June 30 and final delivery was made July 31, the day after the open access portion of the fishery was closed by emergency order at 6:00pm, for a total season length of 33 days, compared to 58 days in 2010. In 2011, both buyers purchased crab continuously once the open access season was under way, with no reports of poor crab meat fill.

The open access harvest from fish ticket reports was 132,030 red king crabs or 373,990 pounds (113% of the open-access quota; Table 1). Of this total, 236 pounds were reported as deadloss, and 5,050 pounds reported as personal use. A total of 24 vessels and 25 permit holders made 173 landings (Table 2). The average weight for commercially caught crab was 2.8 pounds, same as the last four years. Including CDQ, number of pots registered was 1,040, the same as last year, but there were 6,808 pot pulls, which was 70% of last year's 9,698 pot pulls. CPUE was 21 crabs, compared to 16 last year. In 2011, the catch rate was significantly higher than in the previous five years (Figure 3). The average price paid (including CDQ catch) was \$5.23 per pound, the highest paid ever (Table 3). The exvessel value of the fishery (including CDQ) was \$2.016 million, the highest ever for this fishery (Figure 4).

CDQ Fishery

The Norton Sound and Yukon Delta CDQ groups 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 fishing permit from the Commercial Fisheries Entry Commission (CFEC) and register their vessel 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 2011, as in the previous five years, Yukon Delta transferred their quota to Norton Sound; therefore, all fishermen operated under authority of the Norton Sound CDQ group.

For the second time, the CDQ fishery opened concurrently with the open-access fishery in 2011, because the Anchorage buyer was ready to purchase crab by the end of June. The initial CDQ delivery was made on June 30 and the last delivery was made July 8, when 100% of the CDQ allocation (26,850 pounds) had been harvested, for a total length of 11 days (Table 4). Sixteen permit-holders were registered to fish CDQ but only eleven actually fished, making a total of 17 landings and 519 pots lifts. Average price paid to fishermen was \$5.28 per pound, for an exvessel value of \$139,291 for the CDQ fishery. This was the eleventh year a CDQ harvest occurred since the CDQ fishery was implemented in 1998, and the eighth year the fishery harvested or nearly harvested the entire allocation.

Fish ticket reports document that 8 statistical areas were fished in the 2011 open access and CDQ fisheries (Table 5), same number as last year. Similar to last year, the top harvest came from

statistical area 636401 (37%). Significant harvests also came from 3 other areas: 626401 (21%), 646401 (21%), and 656401 (19%), all of which are directly south of the closed boundary line (Figure 2, Appendix 2). The catch from statistical areas east of 164°W longitude made up 59% of the harvest, similar to 57% last year (Figure 5).

Harvest Sampling

Carapace length measurements and shell age were collected from 2,552 commercially-caught crabs during the open access and CDQ fisheries. Carapace age was classified as new (2-12 months old) or old (over 13 months old). Male new-shell crabs made up 86% of the total legal crabs sampled, and old-shell crabs made up 14%. Recruit crabs are new-shell legal crabs < 116-mm carapace length (CL). Postrecruit crabs are legal new-shell male crabs \geq 116-mm CL and all legal old-shell males. Recruit crabs made up 43% of the legal crabs sampled and postrecruit crabs made up 57%, similar to the three years prior to 2010 (Table 2). Overall mean carapace length of legal male crabs was 116 mm, same as the last two years.

Since the summer of 2002, Norton Sound Economic Development Corporation has operated a seafood processing plant in Nome. In 2011, all sampling data were collected from this plant as crabbers offloaded their catch. The department will continue to make a concerted effort to coordinate catch sampling and data collection with fishermen and buyers to ensure optimal commercial harvest data collection.

Table 1.-Daily catch based on fish ticket data for the open-access summer commercial king crab harvest, Norton Sound Section, Eastern Bering Sea, June 28–July 30, 2011.

Date	Landings	Number of Crabs	Lbs of Crabs Harvested	Cumulative Lbs	Number of Pots Pulled	Average Weight (lbs)	Daily CPUE
6/30	1	17	49	49	30	2.9	1
7/02	1	427	1,152	1,201	40	2.7	11
7/04	2	1,461	4,158	5,359	62	2.8	24
7/05	2	432	1,184	6,543	41	2.7	11
7/07	3	1,425	3,990	10,533	99	2.8	14
7/08	6	1,254	3,575	14,108	213	2.9	6
7/09	4	948	2,526	16,634	118	2.7	8
7/10	7	3,657	10,253	26,887	275	2.8	13
7/11	10	7,604	21,532	48,419	359	2.8	21
7/14	1	404	1,160	49,579	40	2.9	10
7/15	15	10,619	30,343	79,922	559	2.9	19
7/16	3	2,166	5,961	85,883	120	2.8	18
7/17	6	3,082	8,799	94,682	233	2.9	13
7/18	12	10,168	28,911	123,593	449	2.8	23
7/19	2	2,616	7,210	130,803	80	2.8	33
7/20	7	5,880	16,712	147,515	274	2.8	21
7/21	15	13,726	38,976	186,491	622	2.8	22
7/22	4	2,110	6,029	192,520	159	2.9	13
7/23	9	10,421	29,119	221,639	333	2.8	31
7/24	12	9,043	25,848	247,487	437	2.9	21
7/25	3	1,739	4,958	252,445	120	2.9	14
7/26	13	10,528	30,558	283,003	426	2.9	25
7/27	9	9,700	27,709	310,712	360	2.9	27
7/28	9	6,031	16,404	327,116	248	2.7	24
7/29	4	2,805	8,151	335,267	140	2.9	20
7/30	8	8,120	22,740	358,007	299	2.8	27
7/31	5	5,647	15,983	373,990	153	2.8	37
Totals	173	132,030	373,990	373,990	6,289	2.8	21

Note: The fishery closed by EO on 7/30/11 at 6:00pm and the last delivery was made on 7/31/11.

Table 2.-Historical summer commercial red king crab annual harvest, Norton Sound Section, Eastern Bering Sea, 1977-2011.

Year	Number	Number	Number	Number	Harvest (lbs) ^a		Number		Percent		Average	Avg. Legal		
	Vessels	Permits	Landings	Crabs	Open	CDQ ^b	Pots	CPUE	Old	Percent	Weight	Mean		
	(open access only)				Access		Registered	Pulls	Shell	Postrecruits	(lbs)	Length (mm)		
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

-continued-

Table 2.-Page 2 of 2.

Year	Number	Number	Number	Number	Harvest (lbs) ^a		Number		CPUE	Percent		Average Weight (lbs)	Avg. Legal Mean Length (mm)
	Vessels	Permits	Landings	Crabs	Open Access	CDQ ^b	Registered	Pulls		Old Shell	Percent Postrecruits		
	(open access only)												
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

^a Deadloss included in total.

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

^c Data not available.

^d No summer commercial fishery.

7

Table 3.-Historical summer commercial red king crab fishery economic performance, Norton Sound Section, Eastern Bering Sea, 1977–2011.

Year	Guideline	Legal Male Pop. Est. (lbs) ^b	Commercial		Exvessel Price/lb	Fishery Value (millions \$)	Season Length	
	Harvest		Harvest (lbs) ^{a,b}				Days	Dates
	Level (lbs) ^b		Open Access	CDQ				
1977	^c	1.7	0.52		0.75	0.229	60	^c
1978	3.00	1.7	2.09		0.95	1.897	60	6/07-08/15
1979	3.00	0.8	2.93		0.75	1.878	16	7/15-07/31
1980	1.00	1.9	1.19		0.75	0.890	16	7/15-07/31
1981	2.50	1.3	1.38		0.85	1.172	38	7/15-08/22
1982	0.50	0.9	0.23		2.00	0.405	23	8/09-09/01
1983	0.30	0.9	0.37		1.50	0.537	4	8/01-08/05
1984	0.40	0.9	0.39		1.02	0.395	14	8/01-08/15
1985	0.45	1.1	0.43		1.00	0.427	22	8/01-08/23
1986	0.42	1.1	0.48		1.25	0.600	13	8/01-08/25 ^d
1987	0.40	1.1	0.33		1.50	0.491	11	8/01-08/12
1988	0.20	1.0	0.24		^c	^c	10	8/01-08/11
1989	0.20	1.0	0.25		3.00	0.739	3	8/01-08/04
1990	0.20	1.0	0.19		^c	^c	4	8/01-08/05
1991	0.34	1.3			No summer commercial fishery			
1992	0.34	1.3	0.07		1.75	0.130	2	8/01-08/03
1993	0.34	1.3	0.33		1.28	0.430	52	7/01-08/28 ^e
1994	0.34	1.3	0.32		2.02	0.646	31	7/01-07/31
1995	0.34	1.3	0.32		2.87	0.926	67	7/01-09/05
1996	0.34	0.5	0.22		2.29	0.519	57	7/01-09/03 ^f
1997	0.08	0.5	0.09		1.98	0.184	44	7/01-08/13 ^g
1998	0.08	0.5	0.03		1.47	0.041	65	7/01-09/03 ^h
1999	0.08	1.6	0.02		3.08	0.073	66	7/01-09/04 ⁱ

-continued-

Table 3.-Page 2 of 2.

Year	Guideline	Legal Male Pop. Est. (lbs) ^b	Commercial Harvest (lbs) ^{a,b}		Ex-vessel Price/lb	Fishery Value (millions \$)	Season Length		
	Harvest Level (lbs) ^b		Open Access	CDQ			Days	Dates	
2000	0.33	4.2	0.29	0.01	2.29	0.715	91	7/01-09/29	^j
2001	0.30	3.8	0.28	0.00	2.34	0.674	97	7/01-09/09	^k
2002	0.24	3.1	0.24	0.01	2.81	0.729	77	6/15-09/03	^l
2003	0.25	3.1	0.25	0.01	3.09	0.823	68	6/15-08/24	^m
2004	0.35	4.4	0.34	0.03	3.13	1.158	53	6/15-08/08	ⁿ
2005	0.37	4.8	0.37	0.03	3.18	1.264	72	6/15-08/27	^o
2006	0.45	4.5	0.42	0.03	2.26	1.021	67	6/15-08/22	ⁿ
2007	0.32	3.1	0.29	0.02	2.84	0.750	52	6/15-08/07	ⁿ
2008	0.41	4.1	0.36	0.03	3.20	1.231	73	6/23-09/03	^p
2009	0.38	3.8	0.37	0.03	3.17	1.225	98	6/15-09/20	^q
2010	0.40	4.5	0.39	0.03	3.73	1.528	58	6/28-08/24	^r
2011	0.36	4.0	0.37	0.03	5.23	2.016	33	6/28-07/30	^s

^a Deadloss included in total.

^b Millions of pounds.

^c Information not available.

^d Fishing actually began 8/12.

^e Fishing actually began 7/8.

^f Fishing began 7/9 due to fishermen's strike.

^g First delivery was made 7/10.

^h First delivery was made 7/16.

ⁱ The season was extended 24 hours due to bad weather.

^j Open access (OA) fishery closed 8/29; CDQ fishery opened 9/1-9/29.

^k OA closed 9/1. CDQ opened 9/1- 9/9.

^l OA opened 7/1-8/6. CDQ opened 6/15-6/28 and 8/9-9/3.

^m OA opened 7/1-8/13. CDQ opened 6/15-6/28 and 8/15-8/24.

ⁿ CDQ opened 6/15-6/28. OA opened 7/1 to the end date.

^o OA opened 7/1-8/15. CDQ opened 6/15-6/28 and 8/17-8/27.

^p OA opened 6/23-8/18. CDQ opened 8/17-9/3.

^q CDQ opened 6/15-7/28. OA opened 6/15 to the end date.

^r CDQ opened 6/28-7/16. OA opened 7/1 to the end date.

^s CDQ opened 6/28-7/8. OA opened 6/28 to the end date.

6

Table 4.-Daily catch based on fish ticket data for the CDQ summer commercial king crab harvest, Norton Sound Section, Eastern Bering Sea, June 28–July 8, 2011.

Date	Landings	Number Crab	Crab Harvested (lbs)	Cumulative Total (lbs)	Number Pots Pulled	Average Weight (lbs)	CPUE
6/30	1	571	1,605	1,605	30	2.8	19
7/01	1	377	1,014	2,619	40	2.7	9
7/02	3	2,091	5,820	8,439	101	2.8	21
7/03	2	589	1,674	10,113	19	2.8	31
7/04	2	1,164	3,208	13,320	79	2.8	15
7/05	3	1,862	5,296	18,616	107	2.8	17
7/07	1	1,175	3,216	21,832	40	2.7	29
7/08	4	1,767	5,018	26,850	103	2.8	17
Total	17	9,596	26,850	26,850	519	2.8	18

Note: The CDQ fishery closed by regulation 7/8/2011, and the last delivery was made on 7/8/2011.

Table 5.-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 28–July 30, 2011.

Statistical Area	Number Crab	Crab Harvested (lbs.)	Number Pots Pulled	CPUE	Average Weight (lbs.)	Percent of Pots Pulled in Stat. Area	Percent of Harvest in Stat. Area
626331	913	2,489	120	8	2.7	1.8%	0.6%
626401	30,117	85,271	1,225	25	2.8	18.0%	21.3%
636401	52,102	146,973	1,740	30	2.8	25.6%	36.7%
646401	29,478	83,099	1,270	23	2.8	18.7%	20.7%
656330	535	1,546	27	20	2.9	0.4%	0.4%
656401	26,919	77,149	2,210	12	2.9	32.5%	19.2%
666330	741	2,042	97	8	2.8	1.4%	0.5%
666402	821	2,271	119	7	2.8	1.7%	0.6%
Total	141,626	400,840	6,808	21	2.8	100.0%	100.0%

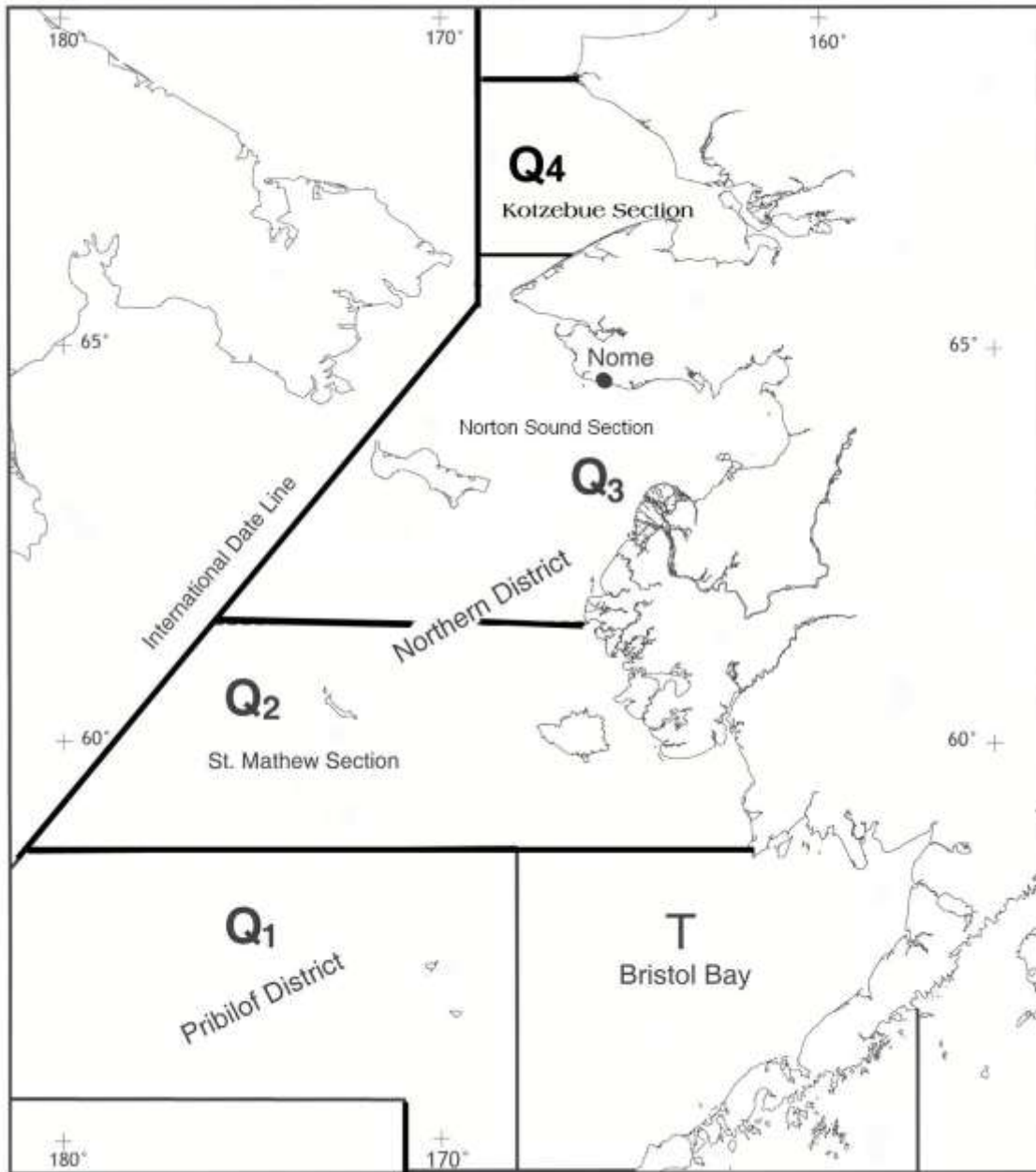


Figure 1.—King crab fishing districts and sections of Statistical Area Q.

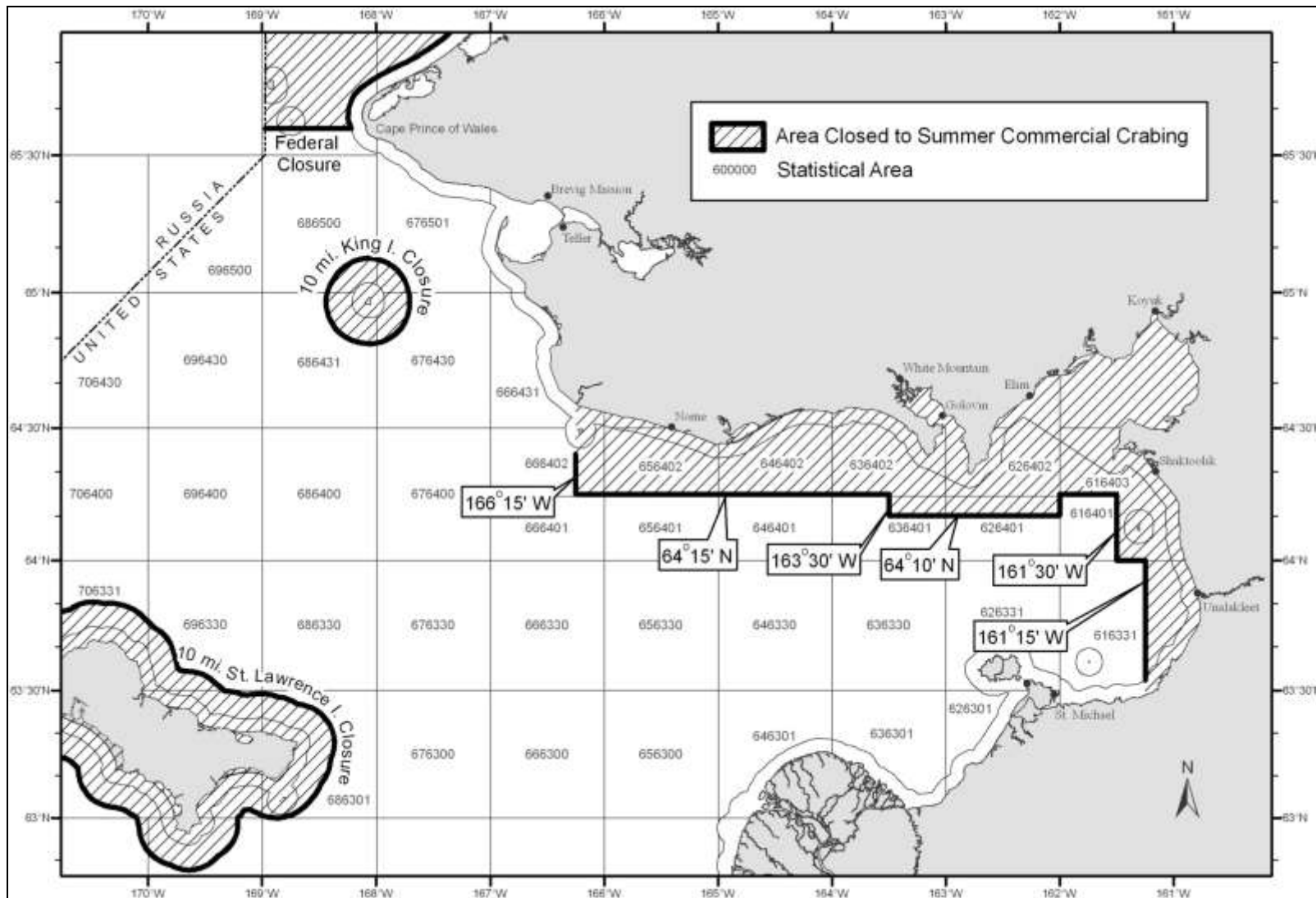
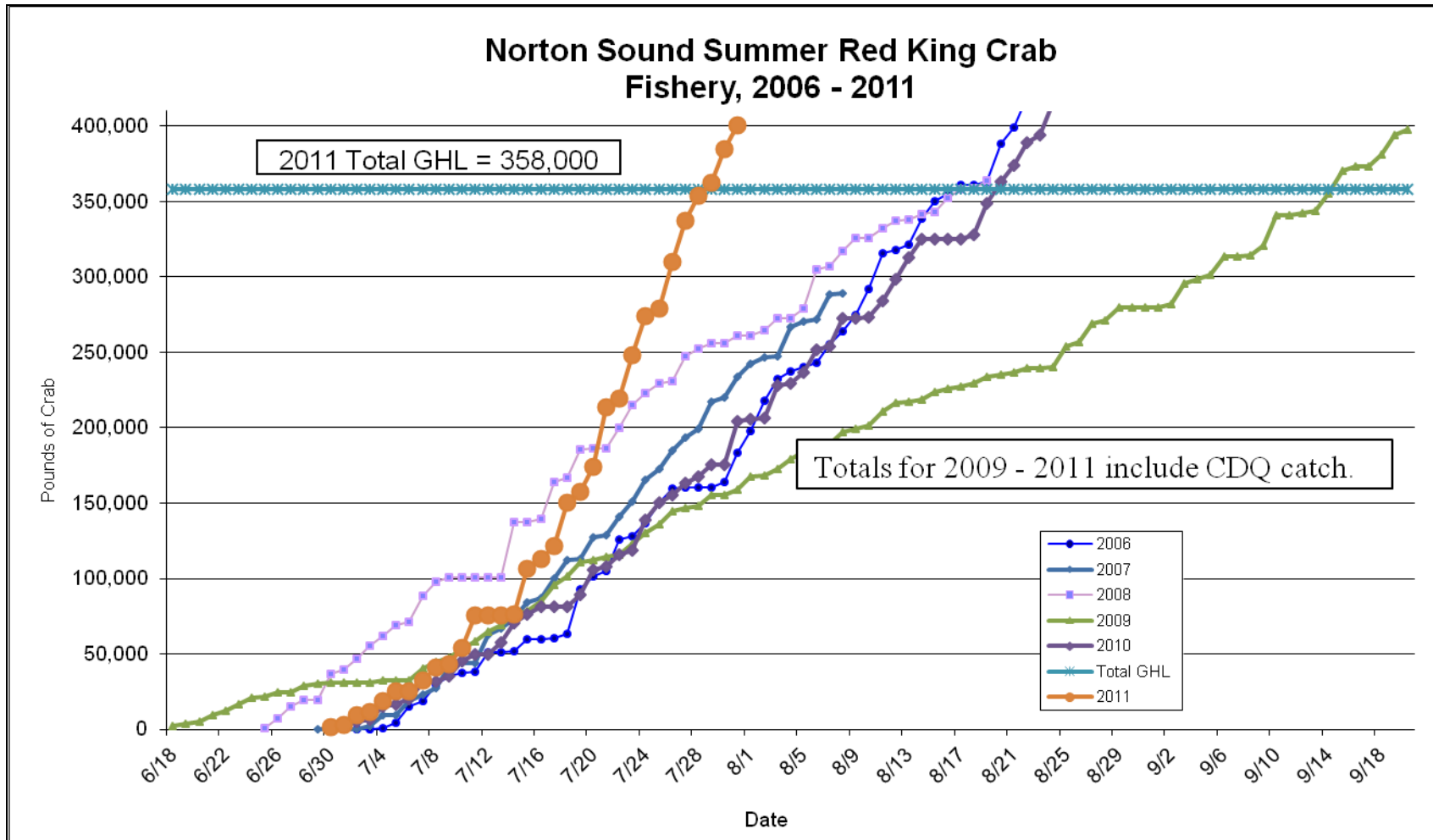


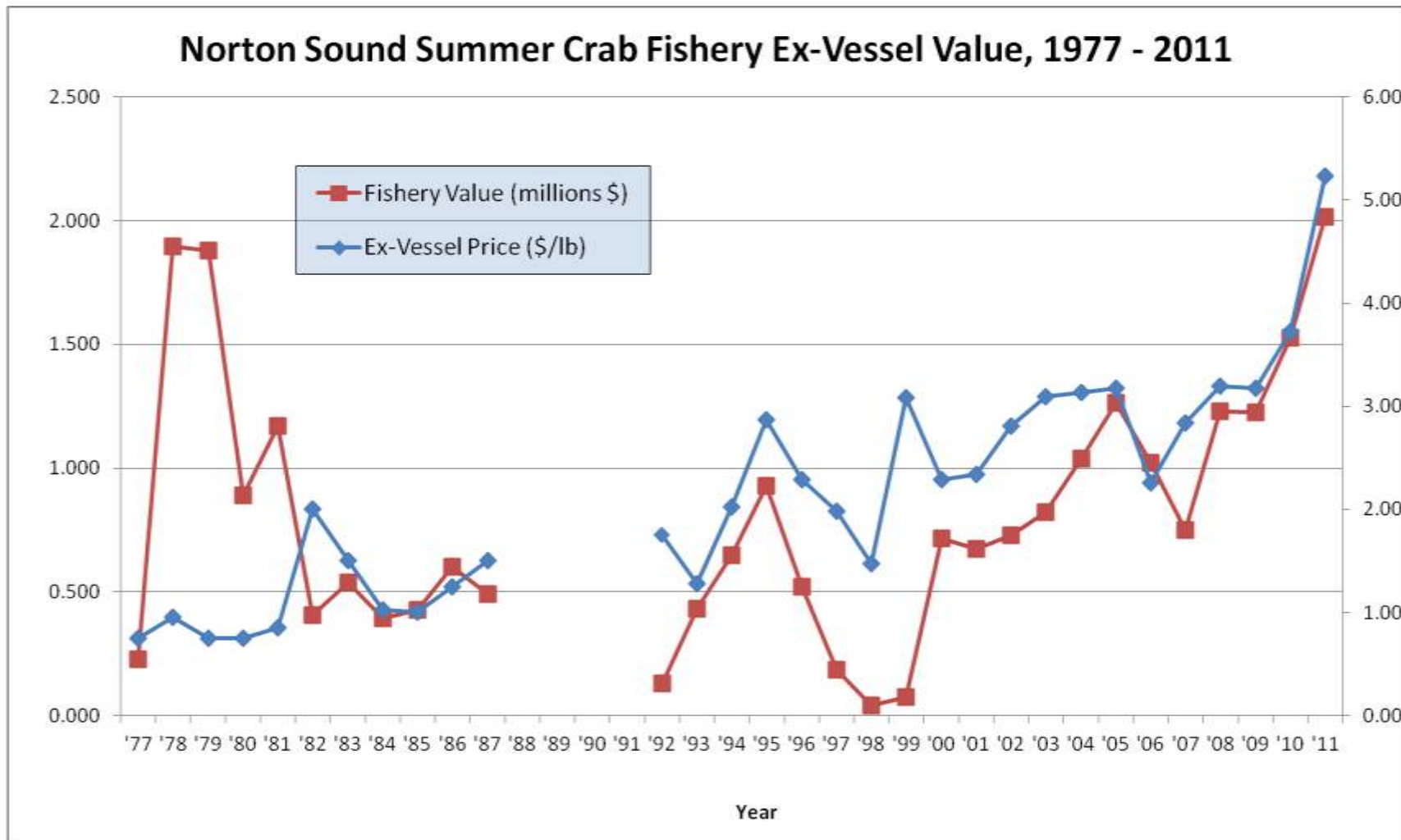
Figure 2.-Closed-waters area in effect for the Norton Sound summer commercial crab fishery.



Note: CDQ catch is not included in years prior to 2009 because the open-access and CDQ portions of the crab fishery did not occur concurrently in those years.

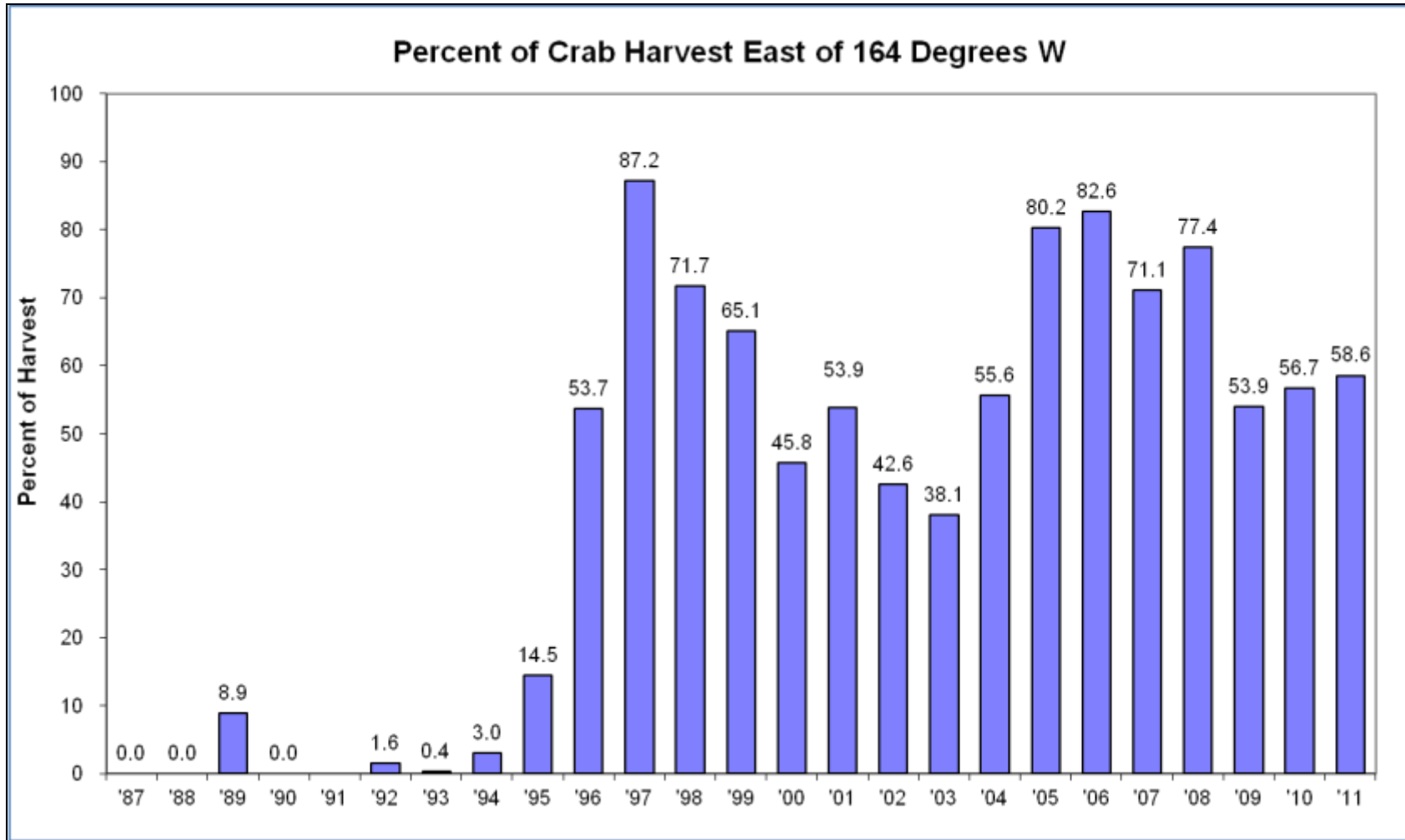
Figure 3.-Current and historical catch performance for the Norton Sound summer commercial crab fishery, 2006-2011.

15



Notes: Pricing information was not available for 1988-1990. No summer commercial fishery occurred in 1991.

Figure 4.-Norton Sound crab fishery ex-vessel value and price per pound, 1977-2011.



Note: No summer commercial fishery occurred in 1991.

Figure 5.-The percent of crab harvested during the Norton Sound summer commercial red king crab fishery east of 164 degrees west longitude, 1987-2011.

Appendix 1.-Standardized results from population assessment surveys for red king crabs in Norton Sound, 1976-2008.

Year	Dates	Research Agency	Gear	Number of Red King Crabs Captured ^{a, b}				Population Abundance Estimates ^c			Standard Error		
				Pre-2	Pre-1	Legal	Females	Pre-2	Pre-1	Legal	Pre-2	Pre-1	Legal
				Males	Males	Males ^d		Males	Males	Males	Males	Males	Males
1976	9/02 - 9/05, 9/16 - 10/7	NMFS	Trawl	58(38)	110(213)	180(614)	101(35)	331,555	808,091	1,742,755	44,653	70,094	104,941
1979	^e 7/26 - 8/05	NMFS	Trawl			90(86)	N/A			809,799			61,176
1980	^f 7/04 - 7/14	ADF&G	Pots			3,290	158			1,900,000			
1981	6/28 - 7/14	ADF&G	Pots			3,415	1,933			1,285,195			
1982	7/06 - 7/20	ADF&G	Pots			2,001	424			353,273			
1982	9/05 - 9/11	NMFS	Trawl	42	107	97	256	356,724	832,581	877,722	50,116	76,454	79,907
1985	7/01 - 7/14	ADF&G	Pots			4,645	181			907,579			
1985	9/16 - 10/01	NMFS	Trawl	63	94	139	139	466,858	707,140	1,051,857	58,598	71,999	87,931
1988	8/16 - 8/30	NMFS	Trawl	82(0)	69(1)	135(3)	212(2)	565,255	493,030	978,748	62,339	58,224	82,083
1991	8/22 - 8/30	NMFS	Trawl	39	42	166	105	294,801	303,682	1,287,486	46,648	46,960	98,101
1996	8/07 - 8/18	ADF&G	Trawl	39(36)	32(17)	53(14)	98(70)	452,580	325,699	536,235	52,324	47,338	69,647
1999	7/28 - 8/07	ADF&G	Trawl	9(3)	64(38)	103(63)	64(18)	103,832	940,198	1,594,341	40,841	120,449	129,864
2002	7/27 - 8/06	ADF&G	Trawl	34(18)	42(23)	61(29)	116(35)	427,703	518,638	771,569	73,494	80,741	85,303
2006	7/25 - 8/08	ADF&G	Trawl	77(3)	37(16)	51(18)	66(1)	775,076	569,833	726,251	91,812	82,883	92,590
2008	7/24 - 8/11	ADF&G	Trawl	51(18)	46(19)	53(15)	90(2)	795,777	697,442	811,727	100,778	91,542	103,155

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

^a Number of crabs captured on ADF&G pot surveys represent data standardized for a 24-hour soak.

^b The 1976, 1979, 1988, and all ADF&G trawl catches include resampled stations (in parentheses). The 1979, 1996, 2006, and 2008 population estimates incorporated resampled stations by combining catches and tow distances for each station resampled.

^c Population estimates are valid for the date of the survey (i.e., either before or after the summer commercial fishery).

^d Legal male red king crabs were defined as ≥ 121 -mm (4.75-in) 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.

^e Pre-1 and pre-2 male, and female data is not available for the 1979 NMFS trawl survey and the legal male abundance estimate is fully standardized.

^f 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 crabs.

Appendix 2.-Historical commercial harvest by statistical areas of red king crabs from Norton Sound Section, Eastern Bering Sea, 1977-2011 (catch in pounds).

Statistical Area	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
616331	7,893												
616401													
626331	40,020					22							
626401	31,572			4,830	399								
626402	38,995												
636330													
636401				12,398	61,823	32,246	5,880	41	891				22,030
636402													
646301													
646330					4,716								5,212
646401			155,972		1,319	17,532							
646402	80,969					748							
656300			161,699		15,174								
656330			323,518	72,735	395,662	3,983	24,246	83,479	7,632		79,006	36,129	1,757
656401			138,011	121,147	253,387	60,480	11,422	183,119	246,200		194,408	165,644	100,956
656402	306,302	90,187	288,869	918	3,098	2,832			132,363				
666230		55,490			77								
666300		162,795	60,816	84,874	9,167	95		4,534					
666330		353,016	505,050	367,446	141,513	8,990	1,192		389	70,615	2,963	13,020	1,275
666401		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		17,585			32,992				
666431			146,029										
676300		13,238		126,231									
676330		51,304	81,798	6,762	18,734								
676400		667,130	33,856	274	92,026	1,315	247		32				
676430		3,811	12,309		373	3,513			1,171				
676501					36								
686330			1,860										
686431													
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

-continued-

Appendix 2.-Page 2 of 3.

19

Statistical Area	1990	1992	1993	1994	1995	1996 ^a	1997	1998	1999	2000	2001	2002	2003
616331				48					633	4,557		3,506	646
616401					35								
626331						61						2,455	
626401					18,971	45,045	18,066	8,065	508	4,689	61,620	53,722	15,899
626402													1,352
636330						4,560	3,838	2,449			2,253		
636401		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				1,754	3,466								
646301					4,628	13,888							
646330					1,493	2,894	314		3,021		1,868	1,955	
646401			1,963	37,222	105,045	22,834	1,052	3,194	221		4,287		3,952
646402			730	143,511	66,821								
656300													14
656330		4,814	265		19,745	15,446	4,661	4,078	1,300		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			193,079	106,053	44,000								1,441
666230													
666300						25,519							
666330	27,185	4,305	31,758		730					5,839	7,030	1,332	1,296
666401	162,263	10,632	746	396		3,001	1,816		930	60,762	43,771	35,970	83,998
666402			535	1,221								30,070	12,873
666431					1,124							4,274	45
676300						546							
676330													
676400	3,212					9,775							
676430													
676501													
686330													
686431													
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

-continued-

Appendix 2.-Page 3 of 3.

Statistical Area	2004	2005	2006	2007	2008	2009	2010	2011	Totals
616331			2,357		5,658	888			26,186
616401				231	416	6,170			6,852
626331			1,415	27,018	3,235	3,047		2,489	79,762
626401	23,113	94,130	118,202	61,704	96,327	103,043	52,054	85,271	897,230
626402									40,347
636330		126	26,680	10,253	2,350	5,026	2,584		60,119
636401	166,489	227,204	224,531	123,092	197,948	96,279	182,040	146,973	2,042,860
636402									5,220
646301									18,516
646330	2,226	4,097	2,629	5,290	1,505	933	1,205		39,358
646401	1,964	149	1,660		18,728	46,264	77,437	83,099	583,894
646402									292,779
656300	932		284	1,909					180,012
656330	46,288	47,411	17,752	4,911		10,617	17,660	1,546	1,279,060
656401	21,579	9,405	28,434	70,065	68,968	107,557	82,747	77,149	2,432,624
656402		380	807	2,254					1,172,583
666230			1,721						57,288
666300			18,245						366,045
666330	12,359	142	5,041	511		1,514		2,042	1,566,553
666401	42,452	727	600	2,498		10,021			2,836,616
666402	23,344	16,025	1,050	2,959		6,228	1,577	2,271	1,395,063
666431									151,472
676300									140,015
676330									158,598
676400				180					808,047
676430									21,177
676501		1,008							1,044
686330									1,860
686431			340						340
Totals	340,746	400,804	451,748	312,875	395,135	397,587	417,304	400,840	16,661,521

Note: No summer commercial fishery occurred in 1991.

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