

FISHERY MANAGEMENT PLAN
FOR THE
SNOW CRAB COMMERCIAL FISHERY
IN THE BERING SEA, 2001

by

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ABSTRACT

This fishery management plan provides a brief overview of the snow crab *Chionoecetes opilio* fishery which occurs in the Bering Sea District of Tanner Crab Registration Area J. An area description, brief historic fishery review, and summary of current management practices and policies are included and should provide fishers and members of industry a better understanding of how the Alaska Department of Fish and Game (ADF&G) intends to manage the snow crab fishery in this area. Supplemental information is provided on gear requirements, registration, stand down provisions, inseason reporting, the onboard observer program and the harvest strategy.

INTRODUCTION

Snow crab landings were first documented as bycatch in the Tanner crab *Chionoecetes bairdi* fishery in 1977/78 season, when a total of 1.7 million pounds were harvested. Since that time the fishery has developed into the largest crab fishery in the nation, with annual harvests which have exceeded 300 million pounds (Table 1). Currently the population is low in abundance and in the year 2000 a harvest strategy and stock rebuilding plan were implemented to promote stock recovery.

Description of Registration Area and Statistical Areas

The snow crab fishery occurs in the Bering Sea District of Tanner Crab Registration Area J and includes all waters of the Bering Sea north of the latitude of Cape Sarichef at 54°36' N lat., and east of the U.S.-Russian Convention Line of 1867, as described in 5 AAC 35.500 DESCRIPTION OF REGISTRATION AREA J on page 186 of the 2000-2002 Commercial Shellfish Fishing Regulations booklet (CSRB). The Bering Sea District is divided into the Eastern and Western Subdistricts at 173° W long. (Figure 1).

The district is divided into statistical areas for catch reporting purposes. Each statistical area encompasses one degree of longitude by one half degree of latitude (Figure 2). All commercial removals of snow crabs (including deadloss) are reported to ADF&G, at the time of landing, on fishtickets, in reference to these statistical areas.

Historic Fishery Perspective

Snow crab landings were first documented in the 1977/78 season. ADF&G initiated guideline harvest levels (GHL) for snow crabs in 1981 using data collected during the summer 1980 National Marine Fisheries Service (NMFS) Eastern Bering Sea trawl survey. In 1981, the GHL range was 39.5 - 91.0 million pounds and the commercial harvest was 52.7 million pounds. For the next three years the commercial harvest was below 30 million pounds. The harvest increased annually to a peak of 328.6 million pounds in 1991. Subsequent to the record harvest in 1991, stocks declined and by 1996 the harvest was 65.7 million pounds (Figure 3). During 1997 and 1998, the GHL increased. In 1998, the commercial harvest reached 243.3 million pounds, and for the first time a portion of the GHL was set aside for harvest by Community Development Quota (CDQ) groups.

In 1999, the estimate of large male crabs declined by 17% from the prior year's survey, resulting in an open access GHL of 186.0 million pounds. The stock continued to decline, with the estimate for large male crabs falling an additional 63% in 2000. With the surveyed stock at 60% of the minimum stock size threshold, defined as ½ the long term average mature biomass, ADF&G reduced the standard 58% exploitation rate on 4 inch and larger male snow crabs to 22%, consistent with the NMFS guidelines for stock rebuilding (Restrepo 1998). This reduction in the exploitation rate resulted in a GHL of 28.5 million pounds for the 2000 season. Of this total, 2.1 million pounds (7.5%) was set aside for the CDQ fishery, resulting in a 26.4 million

pound GHL for the 2000 open access fishery. The actual harvest in the 2000 open access fishery was 30.8 million pounds, which was 17 % over the GHL.

REGULATIONS

Regulations which apply to the Bering Sea snow crab fishery begin in Title 5, Chapter 35 of the Alaska Administrative Code (ACC) on page 164 of the CSR (ADF&G 2000). Some of the more pertinent regulations are summarized below. This section does not include all regulations pertaining to the Bering Sea District. Fishers may obtain a copy of the CSR (light blue in color for the 2000-2002 cycle) from any ADF&G office. For additional information on the Bering Sea snow crab fishery, contact the ADF&G office in Dutch Harbor or Kodiak.

Onboard Observer Program and Vessel Preseason Registration

In addition to the pay-as-you-go mandatory observer coverage on at-sea processors, new regulations allow for placement of observers on catcher vessels. These regulations are listed in 5 AAC 39.645 SHELLFISH ONBOARD OBSERVER PROGRAM, starting on page 53 of the CSR. ADF&G plans to place observers on approximately 10 percent of the catcher vessels in the 2001 Bering Sea snow crab fishery, which will be paid for with funds generated by cost recovery fishing. However, observers will not be placed on vessels less than 75 feet overall length. Observers will have their own rain gear, boots, gloves, survival suit and personal floatation device for working on deck, along with their own bedding and personal items. Some of the regulatory requirements for vessels that carry observers include:

- Provide adequate food and accommodations for the observer equal to those provided for the vessel's crew;
- Provide to the observer daily catch information, including areas fished, number of crabs retained, number of pots pulled, and other information specified by the department;
- Provide a safe work area, and necessary gear, example: 2 to 3 totes the observer can use at all times to hold the contents of sampled crab pots;
- Assure observer access to single side band (SSB) radio, fax, telex, or telephone and that catch reports from observers are transmitted to the Dutch Harbor ADF&G office;
- Provide proof of compliance with USCG vessel safety requirements.

In order to determine the number of observers needed and to determine which catcher vessels will carry an observer, vessels intending to participate in the Bering Sea snow crab fishery must file a preseason registration form with ADF&G in Dutch Harbor or Kodiak as specified in 5 AAC 35.506 AREA J REGISTRATION (e)(1) on page 188 of the CSR. The preseason registration form must be imprinted with a 2000 or 2001 Commercial Fisheries Entry Commission interim use card for Bering Sea Tanner crab, prior to submission to ADF&G. Preseason vessel registrations may be submitted to ADF&G in Dutch Harbor or Kodiak, by fax, mail, or in person. **The preseason registration deadline for the 2001 Bering Sea snow crab fishery is 5:00 PM December 26, 2000.**

Vessels will be selected at random to carry an observer from those vessels which file a preseason registration form with ADF&G. Vessels selected to carry an observer will be announced by news release several days following the preseason registration deadline.

A web site has been established for vessel operators and agents to verify receipt of preseason vessel registrations by ADF&G. The web site is available for the 2001 Bering Sea snow crab fishery. ADF&G will post names of vessels which file preseason registrations on the web site, usually within two days of receipt. All vessel operators or agents are urged to verify the vessel preseason registration. If a vessel name fails to appear on the web site list within several days after submission of a preseason registration, the vessel operator or agent should contact ADF&G in Dutch Harbor immediately.

The ADF&G web site for verification of vessel preseason registration for the 2001 Bering Sea snow crab fishery is http://www.cf.adfg.state.ak.us/region4/shellfish/crabs/01opilio_reg.pdf

Fishing Seasons

The annual regulatory opening for the Bering Sea snow crab fishery is noon on January 15 as specified in 5 AAC 35.510 FISHING SEASONS FOR REGISTRATION AREA J (6)(C) beginning on page 191 of the CSRB. The fishery is closed by emergency order when the GHL is achieved or when stock status indicators, such as poor fishery performance or excessive catch of undersized male or female crabs, indicate a closure is warranted to protect the long term health of the stock.

Pot Limits and Legal Gear

In the Bering Sea District, vessels participating in the snow crab fishery which are in excess of 125 feet overall length are limited to 250 pots while vessels 125 feet and under are limited to 200 pots as required by 5 AAC 35.525 LAWFUL GEAR FOR REGISTRATION AREA J (c)(4) on page 195 of the CSRB. Unlike the Bristol Bay red king crab *Paralithodes camtschatica* fishery, these pot limits, which were implemented by the Board of Fisheries (BOF) in 1993 to reduce pot loss, are not adjusted based on the GHL or altered by the number of vessels registered for the fishery.

Each pot in a vessel's legal complement of gear must have an identification tag on the main or trailer buoy as specified in 5 AAC 35.526 TANNER CRAB POT MARKING REQUIREMENTS FOR REGISTRATION AREA J on page 196 of the CSRB. Buoy tags are available at the Dutch Harbor and Kodiak ADF&G offices for \$2.00 each. As part of the total allowable number of pots, vessels are allowed to fish a maximum of 20 pots for Pacific cod *Gadus macrocephalus*, for use as bait. Pots used for Pacific cod fishing must conform to the regulations in 5 AAC 35.525 LAWFUL GEAR FOR REGISTRATION AREA J (d) on page 195 and 196 of the CSRB. These pots must also be tagged with ADF&G issued buoy tags. Legal crabs captured in cod bait pots may be retained. All pots must be tagged at the time of tank inspection and remain tagged throughout the fishery. The vessel operator is responsible for all tagged gear and insuring that tags are affixed to gear in a way to minimize tag loss.

Pots which lose tags should be placed on deck or set back into the water with all bait and bait containers removed and all doors secured open. Fishers should IMMEDIATELY report to Fish and Wildlife Protection (FWP), the exact location of any pot which has lost the ADF&G issued buoy tag. Pots which are no longer tagged cannot be legally fished. Lost tags should be replaced as soon as possible. Buoy tags lost during the season may be replaced according to provisions of 5 AAC 35.526 TANNER CRAB POT MARKING REQUIREMENTS FOR REGISTRATION AREA J (b) on page 196 of the CSRB. Replacement tags are only issued if the vessel operator and three crewmembers submit sworn affidavits in person at the ADF&G office in Dutch Harbor, describing how tags were lost and listing the number of each lost tag. To facilitate tag replacement for the Bering Sea snow crab fishery, ADF&G staff in the Pribilof Islands will, when available, accept and forward the required tag affidavits to the ADF&G office in Dutch Harbor for processing. It remains the responsibility of the vessel operator to make arrangements for payment, purchase and shipment of tags from Dutch Harbor.

Legal snow crab pots can be no more than 10 ft long by 10 ft wide by 42 inches high, with rigid tunnel eye openings that individually are no more than 3 inches in one dimension with tunnel eye perimeters that individually are more than 36 inches, or pots that are no more than 10 ft long by 10 ft wide by 42 inches high and that taper inward from the base to a top that consists of one horizontal opening of any size. A more complete description of legal gear for the fishery is provided in 5 AAC 35.525 LAWFUL GEAR FOR REGISTRATION AREA J on page 196 of the CSRB, including new regulations implemented by the BOF at their spring 2000 meeting. These recently implemented regulations require all pots used to take snow crabs in Tanner crab Registration Area J to have **at least eight escape rings with an inside diameter measure of no less than four inches placed within one mesh measurement from the bottom of the pot, with four escape rings on each of two sides of a four-sided pot, and if the pot has no escape rings as specified in this paragraph, then one-half of one side of a four-sided pot must have a side panel composed of not less than five and one-quarter inch stretched mesh webbing.** All Tanner crab pots must also be equipped with a biodegradable escape mechanism which is at least 18 inches in length, laced, sewn, or secured together by a single length of untreated, 100 percent cotton twine, no larger than 30 thread and located within six inches of the bottom of the pot as described in 5 AAC 39.145 ESCAPE MECHANISM FOR SHELLFISH AND BOTTOM FISH POTS on page 44 of the CSRB.

Vessel Registration, Tank, Pre-Tank and Gear Inspections

Area J is a nonexclusive registration area. A Tanner crab vessel validly registered for a nonexclusive registration area may not be used to take Tanner crabs in a superexclusive registration area but may register to fish in other nonexclusive registration areas during the same registration year as provided in 5 AAC 35.005 REGISTRATION AREAS ESTABLISHED (c) on page 164 of the CSRB.

In addition to vessel registration requirements with the Commercial Fisheries Entry Commission (CFEC) listed under 5 AAC 39.120 REGISTRATION OF COMMERCIAL FISHING VESSELS on page 30 of the CSRB, a vessel used to take snow crabs in the Bering Sea District must first obtain a registration certificate from ADF&G as specified in 5 AAC 35.020 TANNER CRAB AREA REGISTRATION on page 165 of the CSRB. The registration year for snow crab vessels is August 1- July 31. In order for a registration to be valid, a vessel must first have all holds

and/or live tanks inspected by an ADF&G representative as specified in 5 AAC 35.030 INSPECTION REQUIREMENTS on page 166 of the CSR. Hold inspections are required to insure that vessels are not in possession of crabs prior to the start of a fishery. Vessels intending to participate in the Bering Sea snow crab fishery are required to register and have their holds inspected, beginning 48 hours prior to the start of the season, in Dutch Harbor, Akutan, or King Cove according to provisions of 5 AAC 35.555 INSPECTION REQUIREMENTS FOR REGISTRATION AREA J (b) on page 199 of the CSR. ADF&G also provides staff for tank inspections in the Pribilof Islands at St. Paul harbor 24 hours prior to the start of the season.

In addition to the normal 48 hour tank inspection window, pre-tank and gear inspections are available to facilitate gear loading and expedite the registration validation process. ADF&G staff in all tank inspection ports, except St. Paul, inspect holding tanks and gear on vessels up to seven days prior to the normal tank inspection period. If all gear on the vessel at the time of the pre-tank inspection is in compliance with registration area gear requirements, and all tanks are confirmed to contain no crabs, a pre-tank inspection certificate is issued to the operator of the vessel. Leaving port or placing gear on the vessel, that is not in compliance with area registration gear requirements, invalidates the pre-inspection certificate. If the pre-tank inspection certificate is invalidated for any reason the vessel is then required to undergo a regular tank inspection during the 48 hour tank inspection window. Vessels may change dock locations within the same port by first checking out with the local ADF&G representative and providing their departure time, arrival time and route of travel. Contact with a local ADF&G representative must be made prior to location change.

Operators or interim-use card holders from vessels which have received a pre-tank and gear inspection certificate may proceed to a pre-designated "Quick Registration" signing location. By providing the ADF&G representative at that location the completed pre-tank certificate, vessel registration, and a 2001 interim-use permit card for Bering Sea Tanner crab (T09Q or T91Q) the vessels registration, issued when buoy tags were purchased, can be validated. Quick Registration signing locations are announced by new release and during pre-tank inspections. Once a vessel's registration has been validated, the vessel is free to leave port and proceed to the fishing grounds. The pre-tank inspection and Quick Registration validation process greatly expedites tank inspections and normally enables the majority of the fleet to complete the registration validation process and depart port within one hour of the start of regular tank inspection period.

During the tank inspection period, United States Coast Guard (USCG) representatives may review vessel stability requirements and certified letters of stability to ensure that the number of pots carried by a vessel does not exceed the vessel's stability requirements. Questions regarding USCG stability checks should be addressed to: Lieutenant Bob D. Beck Jr., Supervisor, Marine Safety Detachment, USCG, Dutch Harbor, (907) 581-3468.

Operation of Other Gear and Stand Down Provisions

A person or vessel that operates commercial, subsistence, sport, or personal use pots, during the 14 days immediately before the opening of the commercial snow crab fishery in the Bering Sea, may not participate in the commercial snow crab fishery. A person or vessel that participates in the commercial snow crab fishery in the Bering Sea may not operate commercial, subsistence, sport, or personal use pots in the Bering Sea District during the 14 days after the close of the snow crab

fishery. Regulations which address the operation of other pot gear in the Bering Sea District before and after the snow crab fishery are contained in 5 AAC 35.053. OPERATION OF OTHER POT GEAR on page 170 of the CSRB.

A vessel or person may operate other commercial pots in a the Bering Sea District after putting Tanner crab pots in storage, as specified in 5 AAC 35.052 TANNER CRAB GEAR STORAGE REQUIREMENTS (CSRB page 169) and 5 AAC 35.527 TANNER CRAB POT STORAGE REQUIREMENTS FOR REGISTRATION AREA J (4) (CSRB page 197) and, unless the registration is already invalidated under 5 AAC 35.020 (k) (CSRB page 165), after invalidating the vessel's Tanner crab registration by contacting, in person, a local representative of ADF&G.

Landing Requirements

For a fishing vessel in the Eastern Subdistrict of the Bering Sea District, the landing deadline is 24 hours following the fishery closure, except that an owner, or the owner's agent, of a vessel delivering to King Cove, or ports east of that location, may request additional time to deliver Tanner crabs by contacting a representative of the ADF&G office in Dutch Harbor within 24 hours of the closure. A reasonable amount of additional time will be provided to allow the vessel to proceed directly to the processing location. From the Western Subdistrict of the Bering Sea the landing deadline is 72 hours if delivery is made to a floating or shore based processor in Dutch Harbor or Akutan. If delivering to King Cove, or ports east of that location, the same procedure must be followed as required for the Eastern Subdistrict of the Bering Sea. The landing deadline for vessels delivering to a floating or shore based processor in the Pribilof Islands is 24 hours following the fishery closure from both the Eastern and Western Subdistricts. Additional information concerning landing requirements for vessels fishing for Tanner crabs in the Bering Sea can be found in 5 AAC 35.556 LANDING REQUIREMENTS FOR AREA J on page 199 of the CSRB.

Vessels desiring to place pot gear at a dry storage facility en route to a landing destination east of King Cove may make special arrangements with ADF&G at the time the vessel requests additional transit time and checks out of the Bering Sea District. In addition to vessel location, number of crabs on board, processing destination and estimated time of arrival, the vessel operator will also be required to provide the estimated time of arrival and departure from the dry storage facility.

Pot Storage Requirements

To legally store pots in the water, all doors must be secured open with all bait and bait containers removed from the pot. In the Bering Sea District, pots may be stored in waters of the Eastern Subdistrict north of 57° N. lat., south of 58° N. lat., east of 166° W. long., and west of 164° W. long., from January 1 through December 31. Pots may also be stored in waters deeper than 25 fathoms for ten days following the closure of the commercial snow crab fishery. In waters around the Pribilof Islands shoreward of the 25-fathom isobath, pots may be stored only from September 1 through May 31. Pots may also be stored in the waters around the Pribilof Islands at any depth within five nautical miles from the shoreline of St. Paul or St. George Islands, or in waters that are not more than 35 fathoms deep for 14 days before the scheduled opening date,

and for 14 days after the closure of the snow crab season. Additional provisions of these regulations can be found in 5 AAC 35.527 TANNER CRAB POT STORAGE REQUIREMENTS FOR REGISTRATION J starting on page 197 of the CSRB .

Legal Size Limit

Male snow crabs and male hybrid Tanner crabs conforming to the identification criteria described in 5 AAC 35.521 IDENTIFICATION OF BERING SEA TANNER CRAB (b) (CSRB page 195) must be 3.1 inches or greater in shell width to be retained. This is measured at the widest point of the carapace. All female and undersize male crabs must be immediately returned unharmed to the sea, as outlined in 5 AAC 35.065 FEMALE AND UNDERSIZE TANNER CRAB on page 172 of the CSRB.

HARVEST STRATEGY

The current harvest strategy for Bering Sea snow crabs requires a minimum spawning biomass of 230.4 million pounds and a guideline harvest level of at least 25 million pounds in order for a commercial fishery to occur. The harvest strategy also contains a stepped exploitation rate ranging from 8.4 to 22.5 percent of the mature male biomass, based on the total estimated spawning biomass as determined from the annual NMFS Eastern Bering Sea trawl survey. Specifics of the Bering Sea snow crab harvest strategy are described in 5 AAC 35.517 BERING SEA C. *OPILIO* TANNER CRAB HARVEST STRATEGY on page 194 of the CSRB.

FISHERIES MANAGEMENT AND VOLUNTEER CATCH REPORTING

Prior to the 2000 season, the Bering Sea snow crab fishery was managed using weekly processor production reports. These reports were augmented by fishery performance data provided by observers onboard catcher processors and floating processors. Due to smaller GHs brought on by current stock conditions, management of the fishery is currently based on voluntary catch reports from fishers. These reports, sent each 24 hours by means of marine satellite telex or over SSB radio, are processed daily by ADF&G in Dutch Harbor. Vessel operators report number of pots hauled and number of legal crabs harvested for a pre-established 24 hour period. Inseason management allows the fishery manager to base management decisions on actual, real-time fishery performance and weather conditions.

The 2001 snow crab fishery will be managed inseason, based on daily reports from fishers. Operators of all validly registered vessels are encouraged to participate in voluntary catch reporting and may sign up and receive reporting instructions and materials at the time of tag purchase, registration and/or tank inspection. Inseason information will be used to monitor the daily harvest and to calculate daily catch rates used to project the date and time of the fishery closure. Advance notice for the fishery closure will be based upon actual and anticipated harvest rates. ADF&G will provide as much advance notice of a closure as possible, however, the fishery

could close on as little as 24 hours advanced notice. The closure will be announced on SSB radio frequency 4125 mHz and faxed or emailed to all major processors and industry groups.

In some years, sea ice moves south and covers major portions of productive fishing areas in the Bering Sea. To achieve vessel, gear, and biological conservation objectives, as provided in the Bering Sea/Aleutian Islands King and Tanner Crab Fishery Management Plan and to promote the safety of human life at sea as specified in National Standard 10 of the Magnuson-Stevens Fishery Conservation and Management Act, ADF&G could close areas where sea ice is a concern until conditions improve. In response to closure of an area due to sea ice, ADF&G has developed criteria to open or reopen the affected areas as follows:

1. The opening or reopening will occur based on consultation with fishers and industry on a specified date after the leading ice edge has retreated to a specified latitude;
2. ADF&G will review, on a weekly basis, the position of the ice edge and provide adequate notice of a reopening;
3. Other criteria for opening or reopening is met as deemed necessary.

ADF&G may also temporarily delay the opening of the Bering Sea snow crab fishery if weather and sea conditions exist which could hamper the ability of the U.S. Coast Guard (USCG) to initiate and conduct search and rescue (SAR) operations for vessels which have become disabled or need emergency assistance while attempting to reach the fishing grounds. In the three to five days leading up to the scheduled fishery opening, staff from ADF&G, the National Weather Service and the USCG will confer and review daily wind and sea conditions, and the USCG flight operations commander will determine if conditions allow for SAR operations. Weather delays will only be considered for fishery openings and will be implemented prior to tank inspections and reevaluated each 24 hours. Updates on fishery opening delays, due to weather, will be issued by ADF&G news release and announced on SSB radio frequency 4125 mHz and faxed or emailed to all major processors and industry groups.

GUIDELINE HARVEST LEVEL AND OUTLOOK FOR THE 2001 FISHERY

Results from the NMFS summer 2000 trawl survey of the Eastern Bering Sea, used to set the 2001 GHL, indicate a 100% increase in the number of small (< 4.0 inch) male and female crabs observed, most of these small crabs in the 2 inch size range. Large female abundance increased by 213% while large (>4.0 inches) male crabs continued to decline, falling an additional 20% from levels observed during the 1999 survey (Stevens, B.G. and Robert, R.S, NMFS, Kodiak, personal communication, August 31, 2000). Under the current harvest strategy, the spawning biomass estimate was above the minimum value established for a fishery opening. The 2001 snow crab GHL will be 27.3 million pounds. Of this total, 2,047,500 pounds will be available to the CDQ fishery and the remaining 25,252,5000 pounds will be available to the open access fishery.

DEPARTMENT CONTACTS

Contacts for ADF&G in Dutch Harbor are Rance Morrison (rance_morrison@fishgame.state.ak.us), Area Management Biologist; Forrest Bowers (forrest_bowers@fishgame.state.ak.us), Assistant Area Management Biologist, Robert Gish (robert_gish@fishgame.state.ak.us), Crab CDQ and Groundfish Management Biologist, Amy Gilson (amy_gilson@fishgame.state.ak.us), buoy tag sales agent and Larry Boyle (larry_boyle@fishgame.state.ak.us), Shellfish Observer Program Coordinator. The ADF&G phone number in Dutch Harbor is (907) 581-1239; the fax number is (907) 581-1572.

Department contacts in Kodiak are Wayne Donaldson (wayne_donaldson@fishgame.state.ak.us), Regional Shellfish Biologist; Dave Jackson (dave_jackson@fishgame.state.ak.us), Kodiak Island/Alaska Peninsula Area Shellfish Management Biologist and Mike Ruccio (mike_ruccio@fishgame.state.ak.us), Assistant Area Shellfish Biologist. The ADF&G phone number in Kodiak is (907) 486-1840; the fax number is (907) 486-1824.

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Table 1. Bering Sea snow crab commercial harvest, 1978/79-2000.

Year	GHL ^a	Number of			Harvest ^{b,c}	Pots Pulled	CPUE ^d	Deadloss ^c
		Vessels	Landings	Crab ^b				
1978/79		102	490	22,118,498	32,187,039	190,746	116	759,137
1979/80		134	597	25,286,777	39,572,668	255,102	99	228,345
1981	39.5-91.0	153	867	34,415,322	52,750,034	435,742	79	2,269,979
1982	16.0-22.0	122	803	24,089,562	29,355,374	469,091	51	1,092,655
1983 ^e	15.8	109	461	23,853,647	26,128,410	287,127	83	1,324,466
1984 ^e	49.0	52	367	24,009,935	26,813,074	173,591	138	798,795
1985 ^e	98.0	75	718	52,903,246	65,998,875	372,045	142	1,064,184
1986 ^e	57.0	88	992	76,499,123	97,984,539	543,744	141	1,378,533
1987 ^e	56.4	103	1,038	81,307,659	101,903,388	616,113	132	978,449
1988 ^e	110.7	171	1,285	105,716,337	135,354,637	776,907	136	3,260,020
1989 ^e	132.0	168	1,341	112,618,881	149,455,848	663,442	170	1,844,682
1990 ^e	139.8	189	1,565	128,977,638	161,821,350	911,613	141	1,796,664
1991 ^e	315.0	220	2,788	265,123,960	328,647,269	1,391,583	191	3,464,036
1992	333.0	250	2,763	227,376,582	315,302,034	1,281,796	177	2,325,852
1993	207.2	254	1,836	169,558,842	230,787,000	971,046	175	1,573,952
1994	105.8	273	1,293	114,779,014	149,775,765	716,524	160	1,799,323
1995	55.7	253	869	60,611,411	75,252,677	506,802	117	1,287,169
1996	50.7	234	766	52,912,823	65,712,797	520,651	102	1,333,014
1997	117.0	226	1,127	99,975,539	119,543,024	754,140	133	2,351,555
1998 ^f	225.9	229	1,767	186,543,734	243,341,381	891,268	207	2,893,945
1999 ^f	186.2	241	1,630	143,296,568	184,529,821	899,043	158	1,828,313
2000 ^f	26.4	229	287	23,265,802	30,774,838	170,064	137	338,057

^aGuideline harvest level in millions of pounds.

^bDeadloss included.

^cIn Pounds.

^dDefined as catch of legal crabs per pot pull.

^ePartial district and subdistrict closures.

^fOpen access fishery only.

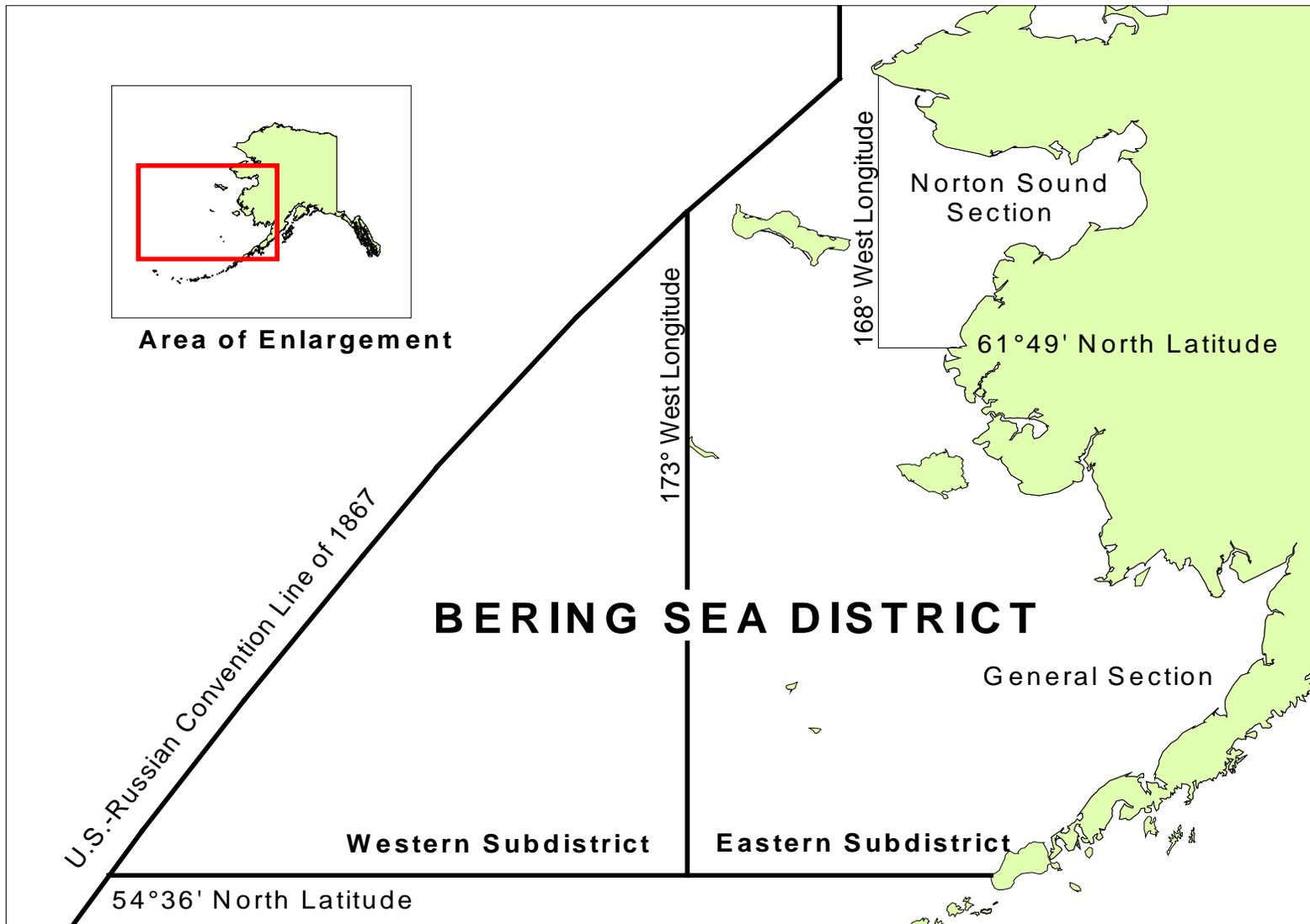


Figure 1. Subdistricts and sections of the Bering Sea District of Tanner crab Registration Area J.

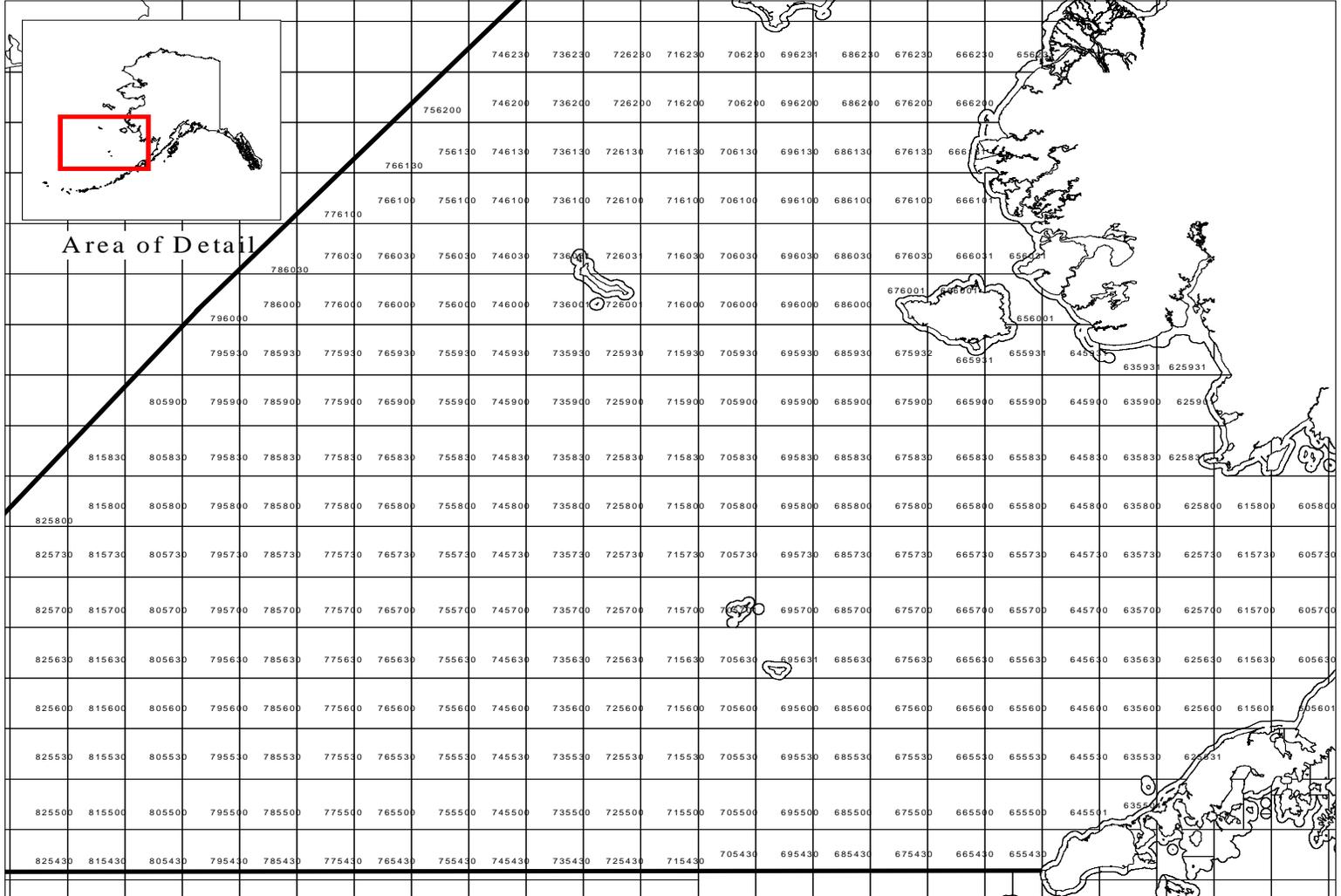


Figure 2. Statistical areas of the Bering Sea District of Tanner crab Registration Area J.

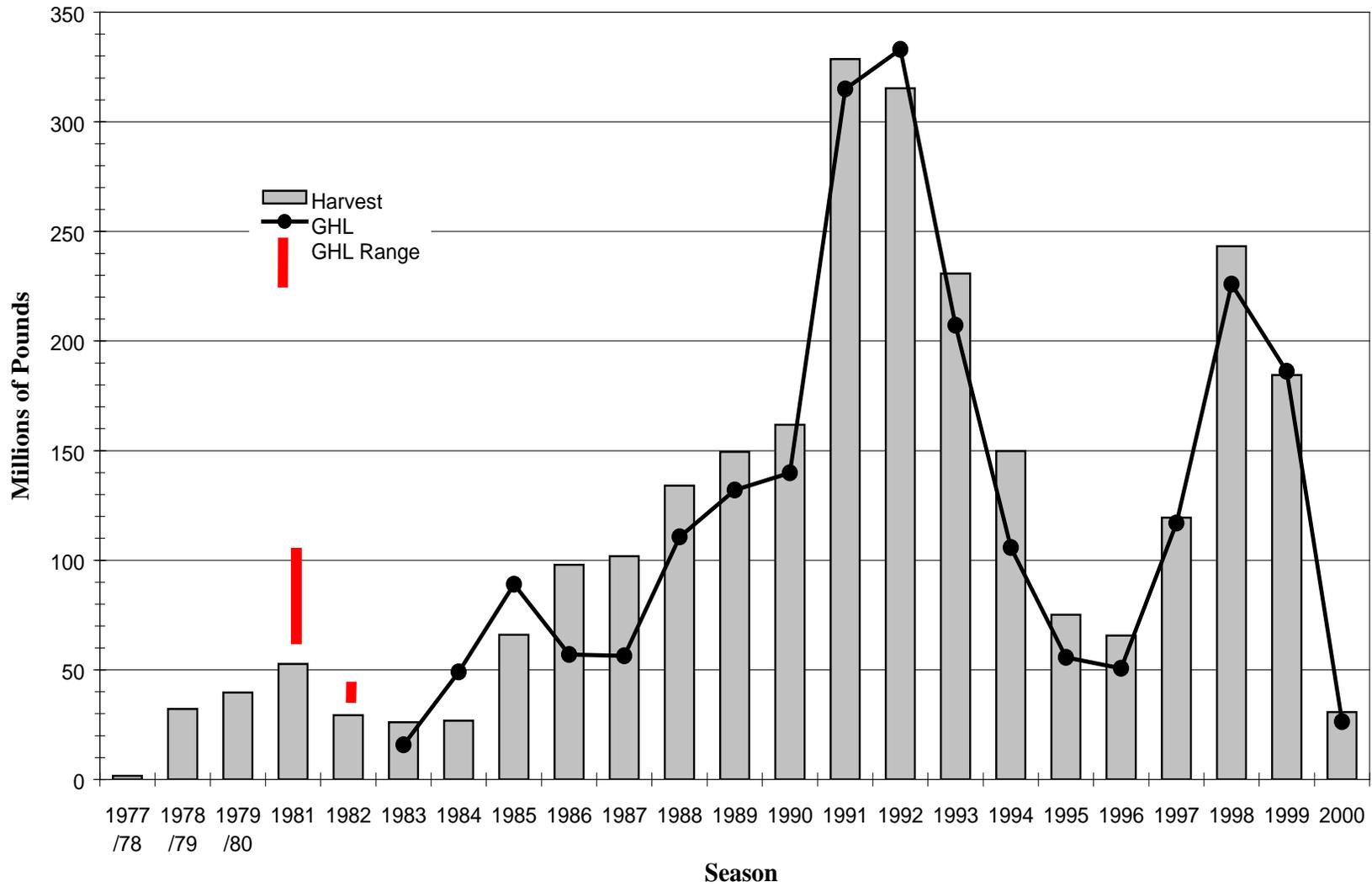


Figure 3. Harvest and GHLs, for the Bering Sea snow crab fishery, 1977-2000.

APPENDIX

Appendix A. List of contact persons, by agency and location.

Alaska Department of Fish and Game

Web site: <http://www.cf.adfg.state.ak.us/region4/shellfish/shellhom4.htm>

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-Continued-

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