



ALASKA DEPARTMENT OF FISH AND GAME

REPORT TO THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

SEPTEMBER 23, 1997

The State of Alaska is delegated the authority to manage fisheries in federal waters for salmon, demersal shelf rockfish, scallops and crab. Fisheries for lingcod and state waters Pacific Cod are managed by the state. This report summarizes fishery management of these species for the period June 15 to September 15, 1997. The section addressing Bering Sea king and Tanner crabs has been expanded to provide a summary of the status of these stocks.

SALMON TROLL FISHERY

The spring Chinook Salmon troll fishery caught 40,300 fish. There were 3 fishing periods during the summer Chinook Treaty fishery; July 1 to 7, August 18 to 24, and August 30 to September 5. Harvest in the first summer opening was 122,500 fish, in the second opening, 38,000 fish were taken and the third opening had a harvest of 20,000 fish for a total harvest of 241,700 Chinook. The areas of frequent high abundance were closed during the last 2 summer openings. Approximately 27,000 fish were from Alaskan hatcheries.

The 1997/1998 winter fishery will open on October 11.

SE ALASKA DEMERSAL SHELF ROCKFISH AND LINGCOD FISHERIES

The directed demersal shelf rockfish fishery is closed until the IFQ fishery closes November 1.

The Lingcod fishery was slow until the Chinook troll fishery closure on 9/5/97 when landings began to increase in Central and Northern Southeast Outside. In Central Southeast Outside 64,435 pounds remain from the 152,800 pounds allocated to the summer fishery (includes leftover quota from the winter fishery). In the Northern Southeast Outside area, 54,770 pounds remain out of 80,800 pounds allocated to the summer fishery (includes leftover quota from the winter fishery). The Northern Southeast Inside, Southern Southeast Inside and Outside areas continue to have very little effort.

STATE WATERS PACIFIC COD FISHERY

The Pacific cod fishery in Prince William Sound, Cook Inlet and Westward region state waters opened April 4. Delay of regulation implementation for state waters Pacific cod fisheries significantly limited the first fishing period for Prince William Sound prior to regulatory closure.

Prince William Sound Pacific Cod

The Prince William Sound fishery has experienced low effort. A total of 6 vessels have harvested 83,000 pounds using primarily pot gear. Catch to date is well below the GHL of 880,000 pounds. Given the fishery has limited experience with fishing during fall and early winter the department is hesitant to project fishery performance. Managers conservatively estimate 360,000 pounds of the GHL will not be taken by the end of the season.

Cook Inlet Pacific Cod

Harvest of Pacific Cod in the Cook Inlet fishery to date is 545,000 pounds taken with jig gear and 93,000 pounds taken with pot gear. A total of 61 vessels have participated in the fishery. Once again, the limited experience with state waters Pacific cod fishing has led the department to conservatively estimate approximately 540,000 pounds of the GHL will not be taken by the end of the season.

Westward Pacific Cod

The Westward Region GHLs by district for Pacific cod are 8.5 million pounds for Kodiak, 9.4 million pounds for Alaska Peninsula, and 5.9 million pounds for Chignik. The Kodiak pot gear GHL of 4.25 million pounds was reached with a harvest of 4.6 million pounds. Harvest by jig gear in the Kodiak district is 2.0 million pounds. The remainder of the jig gear GHL has been rolled over to either gear type. Catch to date of Pacific Cod for pot and jig gear in the Alaska Peninsula District is 6.9 million pounds and the fishery remains open. Attainment of the Kodiak and Alaska Peninsula GHLs depends on fish availability. The Pacific Cod fishery in Chignik has harvested 1.1 million pounds leaving 4.8 million pounds for either gear type. The department anticipates 4.5 million pounds of Chignik Pacific Cod GHL will remain unharvested due to closure of the processing plant in Chignik.

STATEWIDE SCALLOP FISHERY

Cook Inlet Scallops

The Cook Inlet scallop fishery opened August 15 with a GHL of 20,000 pounds. Three vessels harvested over 19,000 pounds. The CPUE was comparable to last year and the size of animals was above average.

The Westward Region scallop fisheries opened simultaneously in both Federal and State waters at 12:00 noon, July 1 with the following GHLs and bycatch limits.

Westward Region Scallop Fisheries			
Registration Area	GHL Pounds	Bycatch Limits	
		Tanner Crab	King Crab
Kodiak	400,000		
Shelikof		51,000	35
Northeast		91,600	50
Alaska Peninsula	200,000	45,300	79
Dutch Harbor	170,000	10,700	10
Bering Sea	600,000	238,000 <i>C. bairdi</i>	500
		172,000 <i>C. opilio</i>	
Adak	75,000	10,000	10

Kodiak Scallops

Four vessels fished the Shelikof District and harvested 260,763 pounds of shucked scallop meats. Tanner crab bycatch was 36,228 crab and no king crab were caught. The season was closed on August 10 due to concerns for localized depletion of the scallop stocks in the Shelikof. The Northeast District remains open and three vessels had harvested approximately 50,000 pounds of shucked meats by mid-September. Tanner crab bycatch to date is 1,746 crab and no king crab have been caught. The remainder of the Kodiak area remains open to fishing but no fishing activity has occurred.

Alaska Peninsula Scallops

Four vessels have fished the Alaska Peninsula Registration Area with a harvest to date of 37,366 pounds of shucked scallop meats. Approximately 20,000 Tanner crabs and no king crabs have been caught. The fishery remains open.

Bering Sea and Dutch Harbor Scallops

In the Bering Sea and Dutch Harbor scallop fisheries, harvest and crab bycatch remains confidential because fewer than 3 vessels registered and participated in the fishery. The Bering Sea scallop fishery closed on August 11 due to achievement of the *C. opilio* bycatch limit of 172,000 crabs. The Dutch Harbor scallop fishery closed on August 25 due to achievement of the *C. bairdi* bycatch limit of 10,700 crabs.

Adak Scallops

No vessels have registered to participate in the Adak scallop fishery and the fishery remains open.

BERING SEA/ALEUTIAN ISLANDS KING AND TANNER CRAB FISHERIES

Guideline harvest levels have been set for the following Bering Sea and Aleutian Islands king and Tanner crab fisheries.

Bering Sea King and Tanner Crab FMP Fisheries		
Fishery	Opening Date	GHL ¹
Norton Sound red king crab	July 1	0.08
Aleutians brown king crab	Sept. 1	
E. of 174° W. long.		3.2
W. of 174° W. long.		2.7
St. Matthew blue king crab	Sept. 15	5.0
Pribilof Islands blue & red king crab	Sept. 15	1.5
Bristol Bay red king crab	Nov. 1	7.0
Bering Sea <i>C. bairdi</i> crab	NO FISHERY	
Bering Sea <i>C. opilio</i> crab	Jan. 15	225.9

¹Millions of pounds

Norton Sound Red King Crab

An ADF&G trawl survey of Norton Sound red king crab in 1996 estimated the abundance of legal male crabs was 1.6 million pounds. This was a dramatic drop from 3.4 million pounds estimated in 1991 and warranted reduction of the exploitation rate from 10% to 5%. A total of 15 permits harvested 93,000 pounds of red king crab by the fishery closure August 13.

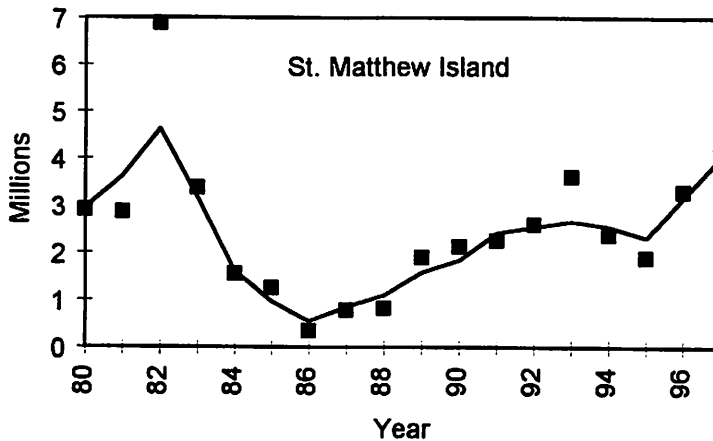
Aleutian Islands Brown King Crab

The Aleutian Islands brown king crab fishery opened on September 1 with 14 vessels registering and a GHL of 5.9 million pounds split 3.2 million pounds east of 174° west longitude and 2.7 million pounds west of 174° west longitude corresponding to areas of stock distribution. The GHL is the same as last years and is set equal to average harvest for the most recent five years. The Department began a triennial pot survey of the main fishing grounds this summer.

Saint Matthew Blue King Crab

The Saint Matthew blue king crab fishery opened September 15 with 117 vessels registering. The 5.0 million pound GHL is based on a 20% exploitation of the catch- survey analysis (CSA) estimate of 6.4 million mature males and a mean weight of 3.96 pounds, well above the state's threshold of 0.6 million mature male crabs. This is the first year the CSA has been applied to this stock.

The annual trawl survey is an essential data-gathering tool on the status of king and Tanner crab stocks in the eastern Bering Sea. However, year-to-year variation in oceanographic conditions can alter species distributions and availability to survey gear. These changes can lead to unexpected shifts in area-swept abundance estimates unrelated to true changes in population size. The CSA model was developed for stocks with commercial catch, catch samples and survey data but lacking detailed size composition data. It is particularly well suited for crab stocks that occupy untrawlable areas such as blue king crab where survey catchability is uncertain. The Auxiliary information used in the CSA helps decipher real changes in the abundance of legal sized male crabs from survey measurement errors. The CSA and NMFS area-swept estimates of legal male abundance compare favorable for St. Matthew blue king crab.

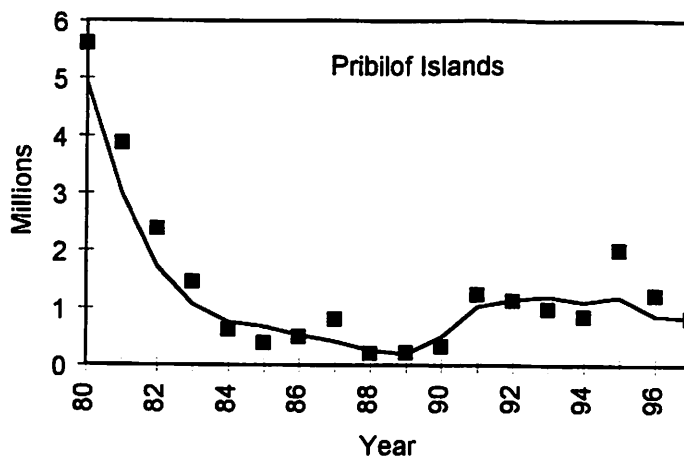


Legal male abundance estimated by CSA increased from 3.1 last year to 4.1 million this year. Pre-recruit abundance estimated by area swept estimates increased slightly from 2.0 to 2.3 million. Legal and pre-recruit estimates are combined to for a mature male crab abundance of 6.4 million up from 5.1 million in This apparent increase in abundance is tempered by low confidence in the population estimates and relatively poor fishery performance in 1996.

Pribilof Islands Blue and Red King Crab

The Pribilof Islands blue and red king crab fishery opened concurrently with the Saint Matthew blue king crab fishery on September 15 with 48 vessels registering. A combined species GHL of 1.5 million pounds was set, a decrease from 1.8 million pounds in 1996. Blue king crab stock abundance has declined from 1996 but remains above the state's threshold of 770,000 mature male crabs. No threshold has been established for red king crab but the abundance has increased. The combined species harvest is based on 20% exploitation of the CSA estimate of mature blue king crab and the expectation of some incidental catch of red king crab. Additionally, an aggregate GHL for the combination fishery avoids bycatch problems that would occur if each fishery was managed separately. This year's conservative approach was adopted because of the decline in blue king crab abundance, imprecision in survey indices of abundance and poor fishery performance for red king crabs in 1996 when harvest fell short of the GHL by 700,000 pounds.

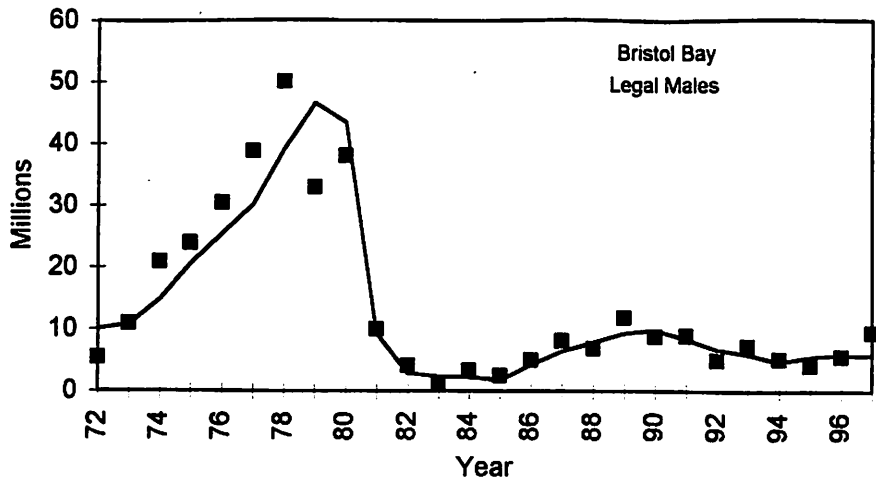
This is the first year the CSA has been applied to Pribilof Islands blue king crab stock. Comparison of the CSA and NMFS area-swept estimates of abundance demonstrates the CSA smoothing of variant area-swept estimates. Legal male abundance from CSA indicated a slight decrease from 900,000 to 800,000 crabs. Pre-recruit abundance estimated by area-swept estimates dropped from 900,000 to 300,000 crabs. Taken together the mature male abundance of Pribilof blue king crab declined by 41% from 1.8 to 1.1 million crabs.



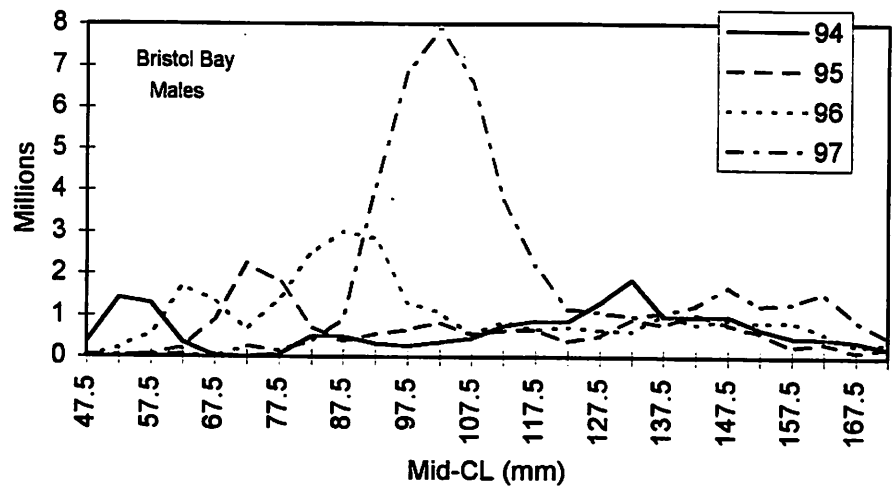
Bristol Bay Red King Crab

The Bristol Bay red king crab fishery opens November 1 with a GHL of 7.0 million pounds up from the 1996 GHL of 5.0 million pounds. The harvest strategy for Bristol Bay red king crab stock sets the GHL using a harvest rate coupled to a fishery threshold of 8.4 million mature females or 14.5 million pounds effective spawning biomass (ESB). The 1997 length based analysis (LBA) estimates of mature female abundance and ESB were 23.7 million and 31.4 million pounds. Mature male abundance increased from 8.5 million crabs to 10.5 million and legal males were unchanged at 5.9 million. The prescribed 10% exploitation of the mature male stock results in a harvest of 1.05 million crabs equating to a GHL of 7.0 million pounds.

The LBA is an analytical procedure developed for Bristol Bay red king crab to estimate annual abundance using extensive high-quality data. The annual abundance estimates of male and female crabs are a combined estimate of recruitment, growth, natural mortality and harvest. The LBA provides more precise abundance estimates and compares favorably with area-swept estimates over the history of the survey.



There are some notable differences between the two estimates of abundance in 1997. An above average year class, likely from spawning in 1989-1991 was nearly fully recruited to the surveyed stock of red king crab in 1997 leading to substantial increases in most segments of the stock, except for legal crabs. LBA estimates of legal and mature males were 5.9 and 10.5 million compared to preliminary area-swept estimates of 9.4 and 12.7, respectively. This difference in the two estimates is the largest since the middle to late 1970s. The reason for the difference is evident by comparing the size frequency distributions. Size frequencies from area-swept estimates show a slight decline in abundance of males >120 mm CL from 1994 to 1996. Yet, in 1997, the abundance of males > 140 mm CL nearly doubled over the 1994-1996 levels. This increase is not consistent with the previous year's data. Note that the 1989-1991 year classes are primarily 85-125 mm CL in 1997 – too small in size to have contributed to a real increase in males >140 mm CL. These are the types of inconsistencies that the LBA is intended to address.



The apparent increase in abundance of sublegal males and females is explained by increased catchability by survey gear as the crabs get larger. This is good news for rebuilding the Bristol Bay red king crab stock though the 31.4 million pounds of ESB is well short of our target rebuilding level of 55 million pounds.

Alaska Board of Fisheries Meeting, August 1997

The directed fishery for red king crab in 1996 exceeded the GHL by 3.4 million pounds motivating a special Alaska Board of Fisheries meeting in August, 1997 to address the Bristol Bay red king crab harvest strategy. The Board adopted a suite of regulations to facilitate inseason management. These regulatory provisions will be in place for the 1997 and 1998 fishing season and will expire on December 31, 1998. The Board also considered a petition to increase the harvest rate of mature male red king crab in Bristol Bay to 20%, but made no change in the regulation. The Board has been appealed on this issue and a meeting will be scheduled to determine whether to deny or consider the petition.

The Board also instructed the department to establish a maximum of 12 hour inseason reporting schedule with the fleet. A tiered pot limit was created based on the number of vessels participating and the GHL. To enable this structure a vessel registration deadline was established as the first Friday of October (October 3 for 1997).

Tiered Pot Limits for Bristol Bay Red King Crab				
GHL Range	Number of Vessels	Number of Pots		Management
		Vessels>125'	Vessels≤125'	
<4.0	Any	0	0	Season Closed
4.0-5.9	<200	80	100	Inseason
	200-250	60	75	Inseason
	>250	60	75	Pre-announce Closure
6.0-8.9	<200	120	150	Inseason
	200-250	100	125	Inseason
	>250	100	125	Pre-announce Closure
9.0-12	<200	200	250	Inseason
	200-250	160	200	Inseason
	>250	160	200	Pre-announce Closure
>12	Any	200	250	Inseason

Additional regulations adopted by the Board include:

- 30 hour time period for tank inspections prior to the fishery;
- 30 hour delivery time following the fishery;
- fishing season was set to open at 4:00 PM, November 1;
- baited gear will be allowed to remain on the fishing grounds for up to 10 days following a season closure if less than 24 hour notice was given prior to the closure time.

Bering Sea *C. bairdi*

The survey estimate of legal male *C. bairdi* crab is the second lowest on record at 3.45 million crabs equating to a biomass of 8.0 million pounds. Large female abundance declined from 28.8 million to 10.4 million, and is the lowest on record. There will be no commercial harvest of *C. bairdi* for the 1997/98 season.

The 1996 GHL for Bering Sea *C. bairdi* was 6.2 million pounds. A total of 1.8 million pounds of *C. bairdi* were harvested: 995,000 pounds concurrent with the Bristol Bay red king crab fishery and 811,000 pounds after closure of Bristol Bay. This poor fishery performance coupled to depressed stock abundance was instrumental in the department's decision to forego the 1997 fishery at a 3.4 million pound GHL based on 40% exploitation of the legal males.

Overfishing Concerns

Overfishing for *C. bairdi* in the Bering Sea is defined as a fishing mortality rate in excess of F_{MSY} estimated as $F_{0.1} = 0.34$ based on the size of first maturity for male crabs. The foregone GHL for the directed fishery would not have risked overfishing. However, the department in its' decision to close the fishery did consider the impact of *C. bairdi* PSC on the stock.

The following table details fishing mortality rates based on the mid-point and lower 95% confidence limit of the survey estimates of mature *C. bairdi* abundance. Bycatch fishing mortality rates are considered conservative because natural mortality of crabs was not accounted for during fishing and females crabs were excluded from bycatch.

Evaluating fishing mortality within the range indicates that neither the forgone GHL or the anticipated *C. bairdi* PSC for 1998 (average of 1996 and 1997) alone would approach $F_{0.1}$. Cumulatively, the opposite may have been true. Note that attainment of the Zone 2 *C. bairdi* PSC could result in overfishing. This is due to the 25/75% split of PSC between Zone 1 and Zone 2 based on distribution of *C. bairdi* at higher abundance. The *C. bairdi* distribution is contracting as the population declines and mature males are currently distributed closer to 52% in Zone 1 and 45% in Zone 2.

Fishing Mortality Rates for Bering Sea <i>C. bairdi</i>			
Harvest Type	Harvest	Survey Est. of Mature Males ¹	
		Mid-Pt.	Lower 95% CL
GHL	= 1.68 million crabs:	F = .134	F = .192
Avg. PSC ² 96/97	= 1.25 million crabs:	F = .103	F = .147
GHL+Avg. PSC	= 2.93 million crabs:	F = .260	F = .386
PSC Zone 1	= 0.56 million crabs:	F = .088	F = .125
PSC Zone 2	= 1.58 million crabs:	F = .316	F = .476
Total PSC	= 2.14 million crabs:	F = .183	F = .266

¹Mature male abundance was reduced for 3 mo. M (Aug.-Oct.) in the directed F and for 5 mo. M (Aug.-Dec) in the bycatch F.

²All PSC values were reduced 25% to subtract bycatch of female crabs necessary to equate the currency for bycatch F to that used in the definition of *C. bairdi* overfishing.

Bering Sea *C. opilio*

The Bering Sea survey for *C. opilio* indicated abundance of 4.0 inch and greater crabs increased 78% over last year to 306 million crabs with a biomass of 406 million pounds. Approximately 17% of the population is above 4.0 inches CL. Exploitation of the stock at 58% yields a GHY of 225.8 million pounds.

The department is concerned about the lack of recruitment to the Bering Sea *C. opilio* stock. Last year and again this year few smaller crabs, <50 mm CW, were caught in the survey.

**RESULTS OF THE 1997 NMFS BERING SEA CRAB SURVEY
EXECUTIVE SUMMARY**

This document summarizes data presented in the Report to Industry on the 1996 Eastern Bering Sea Trawl Survey. Numbers presented are trawl survey indices of population level and do not necessarily represent absolute abundance. For further information, contact Dr. Robert Otto, NMFS, P.O. Box 1638, Kodiak, AK 99615. Phone (907) 487-5961. (GHL = Guideline Harvest Level.)

Red king crab (*Paralithodes camtschaticus*) Bristol Bay.

Legal males: 9.3 million crabs; 66% increase.
 Pre-recruits: 8.9 million crabs; 154% increase.
 Large Females: 24.9 million crabs; 109% increase.
 Outlook: Increased abundance of legal males is within the error of the survey and probably not due to recruitment. The Alaska Department of Fish and Game estimated abundance at 5.9 million legal males; for this reason the GHL was set at an intermediate level, with an exploitation rate of 10 %. However, abundance of prerecruits has increased due to growth of a strong year class probably hatched between 1989 and 1991. This cohort should start to reach legal size by 1998 and result in a significantly increased fishery.
 GHL: 7.0 million lbs (3180 metric tons, mt). Fishery opens November 1.

Red king crab (*Paralithodes camtschaticus*) Pribilof District

Legal males: 1.1 million crabs; 120% increase.
 Pre-recruits: 0.6 million crabs
 Large Females: 1.0 million crabs; 11 % increase
 Outlook: Legal and pre-recruit male crab are concentrated at few stations, and index has very low precision. Females and small males are poorly estimated. Both survey and fishery data indicate a long term population decline. Red king crab are relatively rare in the Pribilof Islands and usually harvested as incidental catch in the blue king crab fishery.
 GHL: Fishery combined with blue king crab in 1997.

Pribilof Islands blue king crab (*P. platypus*) Pribilof District.

Legal males: 0.8 million crabs; 32% decrease
 Pre-recruits: 0.4 million crabs; 52% decrease.
 Large Females: 2.5 million crabs; 46% decrease.
 Outlook: Population is low and trends are not easily detectable.
 GHL: 1.5 million lbs (681 mt) of **red and blue king crabs (see above)**.

St. Matthew blue king crab (*P. platypus*) Northern District.

Legal males: 3.9 million crabs; 16% increase.
 Pre-recruits: 2.3 million crabs; 15% increase.
 Large Females: Not well estimated.
 Outlook: Population is above average levels. Rocky grounds preclude surveying important portions of the habitat, and abundance estimates may be affected by annual changes in the portion of the stock available to the survey.
 GHL: 5.0 million lbs (2270 mt).

Tanner crab (*Chionoecetes bairdi*) Eastern District.

Legal males: 3.4 million crabs; 66% decrease.

Pre-recruits: 9.1 million crabs; 61% decrease.

Large Females: 10.0 million crab ; 64% decrease.

Outlook: Population still declining, and little sign of recruitment is apparent. This years estimate of legal males is second lowest, and females is lowest, in history of the survey.

GHL: Fishery will not open in 1997.

Snow crab (*C. opilio*) All districts combined.

Large males: 306 million crabs; 78% increase.

Small males: 1491 million crab; 45% decrease.

Large Females: 1383 million crab; no change.

Outlook: Abundance of large males is increasing due to growth of a large cohort of small crabs, as expected. This population should remain stable or increase next year. Decline of small crab may indicate poor long term recruitment.

GHL: 225.9 million lbs (102,680 mt). Fishery to open January 15, 1998.

Hair crab (*Erimacrus isenbeckii*)

Total males: 5.9 million crabs; 30% decrease.

Large Females: Not well estimated.

Outlook: Population is declining from a recently high level. Recruitment trends are not apparent.

GHL: 0.8 million lbs (364 mt) Pribilof District only. Fishery opens November 1.

**DRAFT Minutes of the
Bering Sea/Aleutian Islands Crab Plan Team
Meeting, August 28, 1997**

Members Present:

Josh Greenberg (UAF)

Rance Morrison (ADF&G)

Peggy Murphy (ADF&G, chair)

Bob Otto (NMFS)

Doug Pengilly (ADF&G)

Jerry Reeves (NMFS)

Kim Rivera (NMFS)

Tom Shirley (UAF)

Dave Witherell (NPFMC)

The Bering Sea/Aleutian Islands (BSAI) Crab Plan Team met August 28, 1997 at the West Coast International Inn in Anchorage. The team meeting was conducted based on the following agenda:

Introductions

Status of Stocks and available GHL's

Review Crab FMP Proposals

Review Council and Board of Fisheries meetings

Review preliminary EFH report

Discuss overfishing definitions

Other discussion

Election of officers

Adjourn

The meeting began with introductions and general business. Minutes from the previous meeting (Nov 1996) were approved without changes. The draft agenda was approved and some subjects were suggested for other discussion. The team discussed harvest of crab in Russian waters, accounting of marketed crab, and noted interest in reading the Russian Report on the agenda for the September Council meeting.

Status of Crab Stocks and GHLS

The team briefly reviewed status of the Bristol Bay red king crab stock. The LBA model estimated the current biomass of legal males to be about the same as last year, whereas large increases were observed in all other size groups. An above average year-class from spawning in 1989-1991 was nearly fully recruited to the survey, and will begin to recruit to commercial fisheries beginning next year. This is the largest year-class observed since 1975. Increased harvests over the next few years are likely. The GHL for 1997 was established at 7.0 million pounds. A paper by Zheng et al. (1997) summarizing the status of the Bristol bay red king crab stock was distributed to the team and public.

Bob Otto reviewed the status of eastern Bering Sea opilio stock as indicated by preliminary survey analysis. The survey encountered numbers of large opilio, but very few opilio less than 50 mm were observed. Bob also observed an increasing incidence of bitter crab disease in opilio west of 123 degrees along the date line. Overall, prevalence remains low relative to the total population abundance. Survey data for C. opilio and C. bairdi have not been reviewed by ADF&G, so GHLS have yet to be announced. Bob noted that there were still plenty of large hair crab in the Bering Sea. Many were large animals, but carapaces were encrusted with a unique barnacle that reduces marketability.

Bob discussed other aspects of the Bering Sea trawl survey including significant changes in species co-occurrence this year compared to past years. A catchability experiment was conducted at the end of the trawl survey this year. NMFS towed a trawl underneath and slightly behind their normal survey net to get a handle on the survey net

selectivity. Both nets had identical footropes. For crab, the experiment indicated that medium sized *C. opilio* and bairdi crab were not fully sampled by the survey gear. Bob had long suspected that this was the case based on historic length frequency data obtained by the trawl survey. Of interest, Bob observed that hardshelled crab, that pass under the first trawl, appeared to be unharmed by this encounter. The team noted that the NMFS trawl net is not configured the same as most commercial nets targeting groundfish. Next year, the Center intends to examine if tow times could be shortened from 30 minutes to 15 minutes. Bob noted his concern for this proposed change and informed the team that an experiment will be done to estimate mean density of crabs for shorter tow lengths.

Review of Board of Fisheries Meeting

The Board met in Anchorage on August 25-27 to discuss management options for the Bristol Bay red king crab fishery. The BOF made several changes to enhance inseason management: a vessel registration deadline was set as the first Friday in October, the fishing season was set to open at 4 pm on November 1, a 30 hour tank inspection and delivery time was adopted; and baited gear will be allowed to remain on the grounds for up to 10 days following season closure if less than a 24 hour notice was given prior to closure time. Most significantly, the Board adopted tiered pot limits linked to GHLs and the number of registered vessels. These pot limits are shown in the adjacent table. Note that in all cases when pre-registration exceeds 250 vessels, the fishery will be managed by a pre-announced season closure instead of inseason. The Board also instructed the Department to establish a maximum of a 12 hour inseason reporting schedule with the fleet to facilitate management. These regulatory provisions will expire on December 31, 1998.

GHL	# of vessels	Pot Limit
< 4 million	no fishery	no fishery
4-5.9 million	< 200	80/100
	200-250	60/75
	>250	60/75
6-8.9 million	< 200	120/150
	200-250	100/125
	>250	100/125
9-12 million	< 200	200/250
	200-250	160/200
	>250	160/200
>12 million	any no.	200/250

Review of Crab Plan Amendments

A total of four amendment proposals were received by the public, and subsequently reviewed by the plan team. The following are the team's comments on these proposals.

Buyback Program for crab vessels/licenses (proposed by Crab Group Inc.): The proposal is to sever crab from groundfish licenses under the license limitation program, and then to allow a industry funded buyback program to reduce capacity of this fleet. Gordon Blue and Arni Thomson were on hand to discuss the proposal. A buyback program is authorized under the Magnuson-Stevens Act with a 66% approval of the fleet. The goal is to reduce fleet size to 200 vessels. As envisioned, the program would use a voluntary bidding process to set the value of these permits. Concerns were raised about how to deal with latent permits (those not currently fished). The plan team endorses this proposal as a means to address the overcapitalization problem and associated management problems, and recommends that Council proceed with analysis.

Accounting System for Crab Mortality (proposed by United Catcher Boats): The proposal is to initiate a reporting and accounting system for mortality of crab discarded in Bering Sea crab fisheries. The team noted that reporting of crab bycatch already occurs, but estimating mortality has not been an emphasis of the observer program. It was further noted that this was not a plan amendment, per se, but a suggestion for research priorities. This proposal dovetails with the proposed guidelines for National Standards (research on bycatch mortality). The team endorses this proposal and recommends forwarding it to the Research Planning Group.

Add Seven Non-Alaskan Members to the BOF (proposed by Alaska Fisheries Conservation Group): The proposal is to add four voting members from Washington and three from Oregon to the BOF in order to increase

equitability to fishermen from those states that fish for crab off Alaska. Tom Casey was on hand to discuss this proposal. The team noted that, as written, this was not a plan amendment. The BOF is regulated by state law (Title 16, Chapter 5, Section 16.05.221) to be composed of Alaska residents only. An alternative, which would require a plan amendment, would be to assemble a new Board of non-Alaskans, with management authority similar to the BOF. However, the team noted that the overall responsibility for crab management falls within the purview of the Council, which has non-Alaska votes. Further, the BOF is required to follow guidelines laid out in the FMP, as well as National Standards, when making management decisions.

Reduce Exploitation Rates of Tanner and Snow Crab (proposed by David Hillstrand): The purpose of the proposal is to cut back on exploitation rates for C. bairdi and C. opilio to prevent overharvest and rebuild these stocks. David Hillstrand was on hand to discuss this proposal. ADF&G staff noted that they were in the process of developing a comprehensive management approach for these species, similar to the harvest strategy for red king crab. The proposed exploitation rates could be considered as a rebuilding alternative as these plans are developed. Changing exploitation rates have both biological and socioeconomic implications that need to be analyzed in concert with other management tools. The team recommends that no action be taken on this proposal at this time, but that further study was endorsed.

Other Business

The team briefly reviewed groundfish plan amendment proposals. It was noted that many of these proposals deal with crab bycatch and development of sanctuary areas. The team would be interested in providing further review for the Council should any of these proposals get tasked for analysis.

Dave briefed the team on the essential fish habitat initiative. A preliminary EFH report was distributed to team members for their review. Peggy requested comments, changes in the distribution maps, and suggestions for scaling the distribution data classified as presence/absence (level 1) be forwarded to her, Dave, or Jerry for inclusion in the next draft. Rance noted that he may have some GIS maps of crab distribution already. The team requested that it have a chance to review the final draft when available.

Peggy provided copies of a paper reviewing current overfishing definitions for BSAI crab stocks. A review of overfishing definitions is being conducted by the NMFS central office, and we may be required to amend our overfishing definitions. On a related note, copies of the proposed rule for National Standards were distributed to team members. Comments are due September 19.

Upcoming meetings include the Council meeting (September 22-28 in Seattle), a PNCIAC meeting (October 1 in Seattle), and a Lowell Wakefield symposium on Stock Assessment Models (October 8-11 in Anchorage).

The meeting closed with election of officers. Peggy Murphy was re-elected as chair for another 2-year term. After discussion of workloads and staff schedules, the team agreed that a vice-chair position should be created to assist the chair and Council staff with team presentations. Kim Rivera was elected as vice-chair for a 1-year term.

Others in attendance were:

Arni Thomson
Steve Ganey
Joe Sullivan

Henry Mitchell
Gordon Blue
Al Spalinger

David Hillstrand
Tom Casey