

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke
Executive Director

DATE: September 18, 1995

SUBJECT: Crab Management

ESTIMATED TIME
2 Hours

ACTION REQUIRED

- (a) Review plan team report on status of stocks.
- (b) Schedule joint Council and Board of Fisheries meeting.

BACKGROUND

Status of Crab Stocks

The BSAI king and Tanner crab plan team met by teleconference on August 30 and September 21 to assemble the 1995 Stock Assessment and Fishery Evaluation (SAFE) report and review changes in crab management. Minutes of their meeting are attached. The SAFE was distributed to the public and Council family last week. A summary of stock status, based on the 1995 NMFS trawl survey, is attached.

Overall, the crab stocks in the Bering Sea remain at low levels. For the second year in a row, female red king crab in Bristol Bay was below threshold; consequently, the fishery will remain closed. Eastern Bering Sea Tanner crab stocks have declined, but may be leveling out. Opilio stocks appear to have bottomed out, as survey data showed signs of improved recruitment for coming years. Dr. Bob Otto (NMFS) will be on hand to summarize current status of Bering Sea crab stocks.

Schedule joint Council and Board of Fisheries meeting

In October 1993, NMFS and ADF&G approved a "State/Federal Action Plan for Management of Commercial King and Tanner Crab Fisheries" to foster improved coordination and cooperation with respect to crab management. As a result of the plan, a consultation group consisting of Council and Board members was formed to meet publicly on an annual basis to discuss crab issues. Minutes from the last meeting in January 1995 are attached.

At this meeting, the Council may recommend preferred dates for the next meeting. As a reference, the Board of Fisheries has scheduled meetings in Anchorage for January 16-29. They have suggested Tuesday, January 9, 1996, 10:00 a.m. - 4:30 p.m. for the meeting. This would be one day before the Council meets on January 10.

**Minutes of the
Bering Sea/Aleutian Islands Crab Plan Team
Meeting, August 30, 1995**

Members Present:

Ron Berg (NMFS-AKRO, fill-in)
Ken Griffin (ADF&G-Juneau)
Rance Morrison (ADF&G-Dutch)
Peggy Murphy (ADF&G-Juneau)
Bob Otto (NMFS-Kodiak)

Doug Pengilly (ADF&G-Kodiak)
Jerry Reeves (NMFS-AFSC)
Tom Shirley (UAF)
Dave Witherell (NPFMC)

The Bering Sea/Aleutian Islands (BSAI) Crab Plan Team met by teleconference at 9:00 a.m. Wednesday August 30, 1995. Public listening stations were provided in Anchorage, Kodiak, Juneau, and Seattle. A packet of materials was distributed to team member prior to the meeting; papers included: Draft Annual Area Management Report (SAFE), Draft EA/RIR for trawl area closures to protect female red king crab, and an updated draft crab FMP. The team meeting was conducted based on the following agenda:

Introductions
Nomination and Election of Chairperson
SAFE review and approval

- Review Status of Stocks and available survey information
- Review available GHL's
- Review recent fisheries and management actions
- Other information

Review trawl area closure analysis
Review updated FMP
Other discussion
Adjourn

Following introductions, the team elected Peggy Murphy as chairperson. She ran the meeting from that point. Dave Witherell agreed to draft meeting minutes to be included in Council notebooks.

Bob Otto and Doug Pengilly briefed the team about stock assessment information and GHL's that had been finalized to date, and BSAI Tanner, snow, and Bristol Bay red king crab are expected to be completed in the next few weeks (the Pribilof and St. Matthew king crab assessments are complete). For the Pribilof Islands fishery, a pre-season guideline harvest level has been set at 2.5 million pounds of legal male red and blue king crab, combined. Doug explained that this GHL was set conservatively, because the point estimates of abundance from the survey had low precision (in the order of $\pm 126\%$ for legal male blue king crab and $\pm 79\%$ for legal male red king crab). The two species were combined to allow for better in-season management of small quotas and also result in less sorting and discarding. In the St. Matthew area, the survey point estimate had reasonable precision, and the GHL was based on a 20% harvest of mature males based on the point estimate. The resulting GHL for the St. Matthew fishery was 2.4 million pounds of mature male blue king crab.

Rance Morrison provided the team with a brief overview of the 94/95 season. Overall, the fisheries tended to be characterized by lower landings, lower CPUE, increased effort, shorter seasons, and increased price per pound. The Bristol Bay red king crab fishery was not opened due to female stock below threshold. A summary of other fisheries is provided in the following table.

Summary of selected 94/95 Bering Sea crab fisheries.

Fishery	Opening Date	Closing Date	# of Vessels	# of Pounds	Price per lb.
Dutch Harbor brown king crab	Sept. 1	Oct. 28	14	1.8 mil	4.00
Adak brown king crab	Nov. 1	Aug. 15	30	4.1 mil	4.00
red king crab	Nov. 1	Nov. 28	29	200,000	5.50
Bering Sea Tanner	Nov 1	Nov. 21	183	7.8 mil	3.75
snow	Jan. 15	March 1	273	75 mil	1.30

Rance and Ken Griffin updated the team with recent Board of Fisheries actions. In March, the Board lifted the pot limit restrictions on deepwater king and Tanner crab fisheries. They also instituted a requirement for 100% observer coverage in the Adak red and brown king crab fisheries and the Dutch Harbor brown king crab fishery. Increased observer coverage was needed for inseason management and to provide stock assessment data collected through pot sampling. The Board also approved a change in the petition policy for Category 2 management measures (5AAC39.998). This change allows the Board to review these measures out-of-cycle if they are not solely allocative in nature and they present new legal, biological, or management information that indicates the regulation may not be consistent with the FMP.

The Team discussed what should be included in the SAFE. It was felt that the final SAFE, which would be ready on or about September 13, should include the following: 1) Status of Stocks executive summary, 2) Annual Management Reports, 3) Summary of the Shellfish Observer Program Database, 4) Joint Crab and Groundfish Team minutes from March 21-22, and 5) recent Commercial Fisheries News Releases.

Dave Ackley provided a summary of his analysis of trawl closure area options to protect female red king crab in Bristol Bay. The analysis will be presented to the Council in September for final action. The Team decided that it should further review the analysis at a later teleconference and possibly provide recommendations to the Council.

The Team also received a working draft of an updated crab FMP. There was some discussion about updating Table 6.1 (MSY estimates) with more recent information. There was also some interest in examining the current MSY definition. It was decided that Peggy, Dave W, and Rance would update the Table 6.1 for the next FMP draft, and that further consideration of MSY would be a longer-term project of the Team or a subcommittee. Team members will revise the draft (not amendment type changes) and provide comments to Dave for incorporation in the next iteration. Dave will make the changes and distribute copies when available.

Dave Witherell volunteered to draft a guidance manual, or "Terms of Reference" to help the team define its organization and function. Team members agreed that guidelines would be helpful, but gave the project a lower priority given the other issues facing the team at this time.

A teleconference meeting was scheduled for **September 21 at 1:00 p.m.** to discuss upcoming reports and to revisit the proposed trawl closure area in Bristol Bay and revisions to the crab FMP. The agenda will include the following reports:

1. Status of Stocks and GHLL's for BSAI Tanner and snow crab, and Bristol Bay red king crab
2. Report on the proposed Zone 1 Tanner crab PSC cap revision
3. Further review and comments on the proposed trawl closure area in Bristol Bay
4. Report of the Observer Oversight Committee
5. Review of revisions to the crab FMP, if available

Public testimony was received from Jeff Stephan and Arni Thomson.

The meeting adjourned at about 11:15 p.m.

Others listening in were:

*Arni Thomson
Vince Curry
Lauri Jansen
Bill Nippes
Lisa Pelito*

*Jeff Stephan
Charlie Ess
Gretchen Harrington
Fran Bennis*

*Pete Probasco
Dave Ackley*

**Teressa Kandianis
William Bisbee
Don Braun
Ted Painter
Ellen Lockyear
Joe Sullivan
Bobbi Person**

**Paul Sandhofer
Edwin Glotfelty
June Anderson
Anthony Philemenoff
Pat McBride
Vince Curry**

NOTE: A list of those who gave public testimony during the meeting is found in Appendix I to these minutes.

JOINT MEETING - NPFMC/ALASKA BOARD OF FISHERIES

Rick Lauber, NPFMC Chairman, called the meeting to order at approximately 10:30 a.m. on Tuesday, January 10, 1995.

The focus for the annual joint meeting between the North Pacific Fishery Management Council and Alaska Board of Fisheries is to review recent actions and exchange information and ideas on fisheries issues of mutual interest.

Reports were provided on the current status of crab stocks in the Bering Sea/Aleutian Islands as well as crab bycatch in trawl, scallop, and directed crab fisheries. The Council and Board received a review of recent research and management actions taken to address the situation of low crab abundance. Other reports provided a review of the Council's Research (Observer) Plan, the draft Scallop FMP, bycatch and discard reduction proposals, the groundfish and crab moratorium, salmon bycatch, and a summary of the halibut charter issue. The Council and Board also took public comments on these subjects.

This was an informational meeting and no action was taken. Members of the Board and Council expressed the necessity for each body to be aware of management problems and anticipated changes being encountered by the other in fisheries of mutual interest.

RESULTS OF THE 1995 NMFS BERING SEA CRAB SURVEY EXECUTIVE SUMMARY

This document summarizes data presented in the NMFS Processed Report "Report to Industry on the 1995 Eastern Bering Sea Crab Survey". Numbers presented are indices of population level and do not represent absolute abundance. For further information, contact Dr. Bradley G. Stevens or 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: 7.4 million crabs; 34% increase.
 Pre-recruits: 6.2 million crabs; 40% decrease.
 Large Females: 9.3 million crabs; 28% increase.
 Outlook: Total population index continues at low levels. Fertilized female abundance is believed to be at or below threshold.
 GHL: No fishery in 1995.

Red king crab (*Paralithodes camtschaticus*) Pribilofs District.

Legal males: 2.6 million crabs; 37% increase.
 Pre-recruits: 0.7 million crabs; no change.
 Large Females: 2.4 million crabs; no change.
 Outlook: Legal crab are concentrated at few stations, and index has low precision. Females and small males are poorly estimated.
 GHL: 2.5 million lbs of **red and blue king crabs (see below)**.

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

Legal males: 2.0 million crabs; 163% increase.
 Pre-recruits: 1.2 million crabs; 127% increase.
 Large Females: 4.5 million crabs; no change.
 Outlook: Population low and stable. Trends not easily detectable.
 GHL: Fishery combined with red king crab in 1995.

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

Legal males: 1.9 million crabs; 24% decrease.
 Pre-recruits: 1.1 million crabs; 19% decrease.
 Large Females: Not well estimated.
 Outlook: Population average but declining slightly.
 GHL: 2.4 versus 3.0 million lbs last year.

Tanner crab (*Chionoecetes bairdi*) Eastern District.

Legal males: 11.0 million crabs; 29% decrease.
 Pre-recruits: 34.7 million crabs; 10% decrease.
 Large Females: 39.4 million crab ; 33% increase.

Outlook: Population still declining, but may be leveling out.
GHL: 5.5 million lbs, vs 7.5 last year, both West of 163W only.

Snow crab (C. opilio) All districts combined.

Large males: 68.7 million crabs; 4% decrease.

Pre-recruits: 479.1 million crab; 88% increase.

Large Females: 2,409.4 million crab; 44% increase.

Outlook: Large crab declined slightly, but have bottomed out. Strong recruitment of juveniles occurring at northern limit of survey.

GHL: 50.7 million lbs (4" width).

Hair crab (Erimacrus isenbeckii)

Total males: 11.1 million crabs; 35% increase.

Large Females: Not well estimated.

Outlook: Population at medium to high and stable.

GHL: Pribilofs: 1.8 million lbs vs 1.0 last year.

ADF&G ESTIMATION OF 1995 BRISTOL BAY RED KING CRAB ABUNDANCES

The Alaska Department of Fish and Game (ADF&G) estimates abundance of red king crabs in Bristol Bay using a length-based analysis (LBA). The LBA uses all historic and current survey and fishery data coupled with knowledge of crab growth and mortality. Annual survey data are provided by the National Marine Fisheries Service (NMFS) to ADF&G as area-swept estimates of abundance. The LBA estimates of abundance fit well with the NMFS area-swept estimates of abundance and have been very similar in recent years (Fig 1). The LBA adjusts the annual area-swept estimates of abundance to values that are more consistent with the historical survey data, past fishery harvests and what is known of red king crab growth-per-molt and natural mortality. Large discrepancies between the LBA and area-swept estimates can usually be attributed to the influence of atypically high catches in one or a few individual survey tows.

Typically, the NMFS survey performs one tow in each of the 20-by-20 nm survey stations that comprise the systematic survey grid. In 1995, the standard NMFS survey effort was increased by adding three random systematic tows to each of 20 stations in Bristol Bay that were specially chosen on the basis of high abundance of mature female red king crabs. The goal of replicating tows in each of the 20 stations was to improve estimation of mature female abundance relative to threshold value of 8.4 million mature female crabs. The standard statistical treatment of these data is to consider them as four replicate surveys that must be analyzed separately resulting in four estimates of abundance. Our analysis has indicated that the median, rather than the mean, of the individual abundance estimates for the four replicate surveys provides the most appropriate final estimator of abundance.

The four LBA estimates of mature female (>89 mm) abundance provided by the four replicates of the survey (7.9, 7.9, 8.9, and 11.6 million crabs) do not indicate that the abundance of mature female crabs is above the fishery threshold of 8.4 million crabs: half of the estimates are below the threshold value and one is only marginally above the threshold value. The final mature female abundance estimate, the median of those four estimates, is 8.4 million crabs (Table 1). LBA estimates for mature males (>119 mm) and legal males (>134 mm) are 8.4 and 5.3 million crabs, respectively. LBA estimates of abundance for pre-recruit males (95-134 mm) and for male and female recruits to the LBA model remain near historic low levels (Table 1). The LBA does not provide estimates of abundance for juvenile male < 95 mm or female < 90 mm crabs; area-swept estimates for these two classes are 7.5 and 6.6 million crabs, respectively.

Questions concerning estimation of Bristol Bay red king abundance can be directed to Doug Pongilly at 907-486-1865.

Table 1. LBA estimation of annual abundance (millions of crabs) for red King crab in Bristol Bay. Male recruits to the LBA model are >94 mm¹ and female recruits are >89 mm.

Year	Males					Females	
	Recruits to LBA Model	Small 95-119mm	Pre-rec 110-134mm	Mature >119mm	Legal >134mm	Recruits to LBA Model	Mature >89mm
1972	NA	13.755	15.315	18.831	10.176	NA	59.845
1973	33.704	21.445	28.900	24.020	10.661	32.500	69.545
1974	22.108	14.837	37.007	36.262	15.393	28.333	71.418
1975	34.166	21.692	38.033	43.461	21.423	21.753	66.030
1976	49.794	31.673	49.215	52.031	26.252	34.526	75.490
1977	57.467	36.987	65.383	66.623	31.508	72.017	118.791
1978	23.749	16.835	61.964	79.476	41.619	46.032	119.528
1979	12.816	8.810	38.689	76.172	48.865	18.889	93.001
1980	24.901	15.674	27.210	61.185	44.665	35.703	93.470
1981	17.582	11.703	17.836	18.874	9.505	13.330	71.286
1982	23.918	15.290	17.184	10.935	2.889	17.141	29.837
1983	13.003	8.896	13.936	9.316	2.460	4.850	10.144
1984	18.756	11.970	13.463	8.609	2.287	12.076	13.878
1985	11.127	7.540	11.273	7.252	1.766	5.004	7.459
1986	6.923	4.807	13.476	12.216	4.376	4.017	9.394
1987	7.320	4.821	12.058	14.371	6.734	9.017	15.805
1988	6.792	4.510	10.965	15.063	8.352	5.769	17.173
1989	5.620	3.772	9.971	16.012	9.832	5.556	17.975
1990	1.524	1.224	7.381	15.316	10.293	0.877	13.881
1991	3.997	2.518	5.235	12.141	8.617	3.652	13.718
1992	6.419	4.103	6.325	10.155	6.774	3.342	13.269
1993	2.446	2.087	7.150	10.078	5.892	1.957	11.561
1994	1.088	0.960	5.625	8.539	4.625	0.372	8.746
1995	3.048	1.988	4.660	8.484	5.337	2.108	8.452

95% Limits¹ in 1995:

Lower	2.416	NA	3.722	6.604	3.997	1.523	6.770
Upper	3.696	NA	5.249	9.287	5.955	3.270	11.354

¹All sizes are measures of carapace length in millimeters (mm).
²Estimated by bootstrapping.

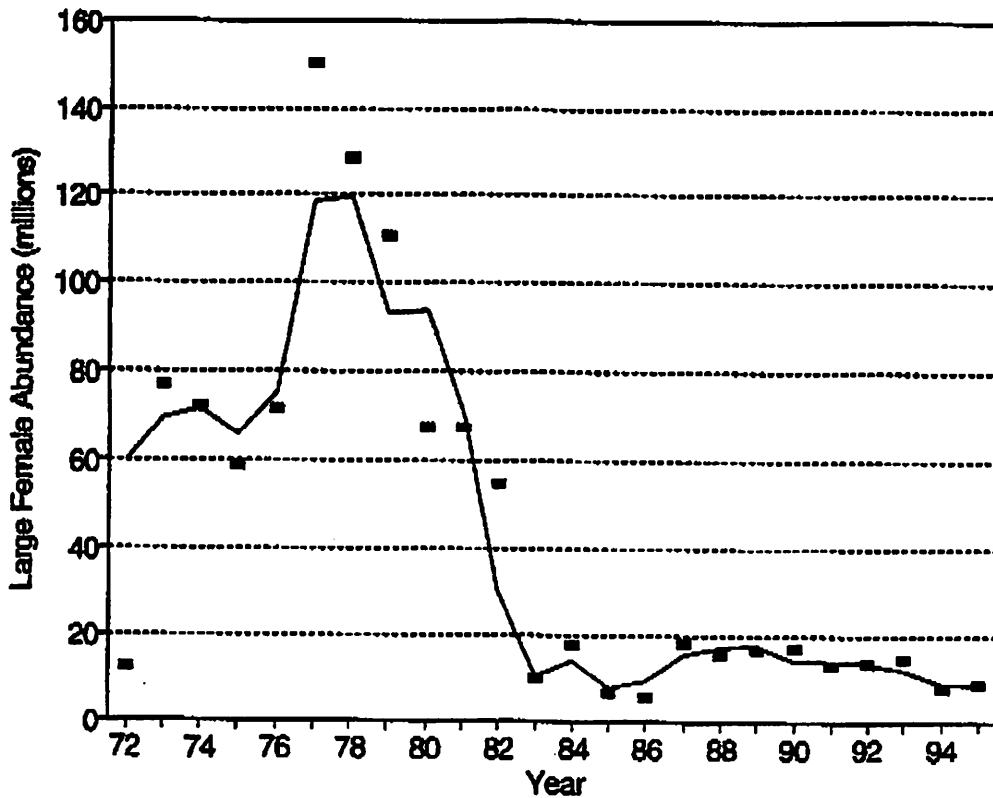
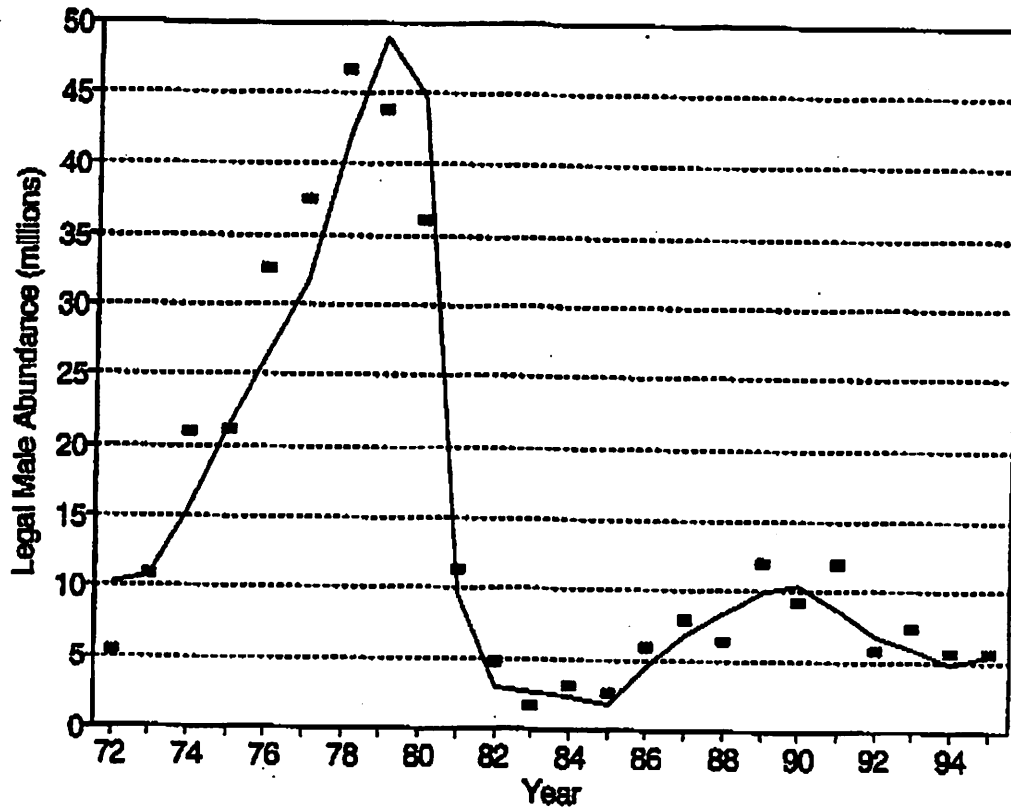


Figure 1. Comparison of NMFS survey (dots) and LBA (solid line) estimates of legal male (top panel) and large female (lower panel) red king crab abundances in Bristol Bay from 1972 to 1995.

**DRAFT Minutes of the
Bering Sea/Aleutian Islands Crab Plan Team
Meeting, September 21, 1995**

Members Present:

Ron Berg (NMFS)
Ken Griffin (ADF&G)
Rance Morrison (ADF&G)
Peggy Murphy (ADF&G, chair)
Bob Otto (NMFS)

Doug Pengilly (ADF&G)
Jerry Reeves (NMFS)
Tom Shirley (UAF)
Dave Witherell (NPFMC)

The Bering Sea/Aleutian Islands (BSAI) Crab Plan Team met by teleconference September 21, 1995. Public listening stations were provided in Anchorage, Kodiak, Juneau, and Seattle. The team meeting was conducted based on the following agenda:

Introductions

Status of Stocks and GHL's for BSAI Tanner and snow crab, and Bristol Bay red king crab
Report on the proposed Zone 1 Tanner crab PSC cap revision
Further review and comments on the proposed trawl closure area in Bristol Bay
Report of the Observer Oversight Committee

Other discussion

Adjourn

The meeting began with introductions and general business. Minutes from the previous meeting were approved without changes. The draft agenda was approved and some subjects were suggested for other discussion.

Status of Crab Stocks

Bob Otto reviewed the status of eastern Bering Sea *C. bairdi* and *opilio* stocks. For *bairdi*, the NMFS indicated a decreased abundance of all sizes, and no sign of improvement was observed. *Bairdi* GHLs were much reduced due to a declining stock and ADF&G's closure of the area east of 163° W to reduce red king crab bycatch. Consequently, the 1995 *bairdi* GHL was set at 5.5 million lbs, or 60% of the available legal sized males. *Opilio* stocks were more promising. In 1995, large male abundance and GHL (50.7 million lbs.) were at stable levels. Pre-recruits showed about a 90% increase in abundance, indicating that GHLs should increase in coming years.

Bob and Doug Pengilly also reviewed status of the Bristol Bay red king crab stock. To improve crab abundance estimates, the NMFS survey conducted in Bristol Bay was done somewhat differently than in previous years. In 1995, 20 survey stations that traditionally had high abundance of red king crab were re-sampled by adding an additional 3 random systematic tows at each station. Essentially, there were four replicate tows at each station, yielding four length-based analysis (LBA) estimates of abundance. The mature female abundance estimate (8.4 million crabs) was estimated from the median of the four LBA abundance estimates (7.9, 7.9, 8.9, and 11.6). The adaptive cluster sampling indicated that estimates from a single survey provide robust abundance estimates. The team discussed deletion of one survey station with an exceptionally large male crab catch from the calculation of abundances. Team members did not have model output to reference during the discussion. It was suggested that protocol for interagency review of abundance estimates and GHL discussions be reviewed at the ADF&G and NMFS interagency meeting, and that ADF&G and NMFS consider endorsement of an assessment working group under the auspices of the crab plan team.

Review of Groundfish Plan Amendments

Tanner Crab PSC Flexibility

Ron Berg briefed the team on a proposed BSAI groundfish FMP amendment to allow greater flexibility in management of Tanner crab PSC limits in Zones 1 and 2. Currently, the FMP establishes bairdi PSC limits for trawl fisheries at 1 million crab for Zone 1 and 3 million crab for Zone 2. Attainment of a trawl fishery allowance forces movement of fishing operations into Zone 2. Because Zone 2 typically has higher bycatch rates of halibut, there is increased potential for attainment of halibut allowance, resulting in closure of the entire BSAI to that fishery. This situation, which occurred in the yellowfin sole in 1994 and the Pacific cod fishery in 1995, may have been avoided with increased flexibility in the management of bairdi PSC limits between Zones. An analysis being drafted by NMFS examines the following alternatives:

- Alternative 1. Status quo.
- Alternative 2. Increase the Zone 1 bairdi PSC limit and reduce the Zone 2 limit by that amount.
- Alternative 3. Combine Zones 1 and 2 to create a single annual limit of 4 million bairdi crab.
- Alternative 4. Based on in-season data, allows Regional Director to increase the Zone 1 bairdi PSC limit and reduce the Zone 2 limit by that amount for specified fisheries.

The analysis is scheduled for Council review in September, at which time they may release the document for public review. Dave will distribute the draft EA/RIR to team members when it becomes available. Team members were concerned about possible impacts of allowing increased trawling on certain areas where crab occur.

A motion was made that the crab team should review the EA/RIR before it is released for public review. (Griffin/Pengilly motion passed 8-1)

Red King Crab Protection Area

The team reviewed an analysis of alternative trawl closure areas designed to protect red king crab by reducing bycatch. The team wished to convey the following points to the Council.

1. An area closure will reduce red king crab bycatch.
 - ✓ the emergency rule closure in place last year did reduce bycatch.
 - ✓ the EA/RIR projects bycatch reductions in all alternatives to the status quo.
2. The team has conservation concerns for red king crab.
 - ✓ trawl fisheries remove 0.75% to 1.5% of the mature crab stock each year, in addition to natural mortality that removes 25% of the stock annually.
 - ✓ the Bristol Bay red king crab stock is depressed and stable.
 - ✓ trawl fisheries occur during the molting and mating period.
 - ✓ trawling may impact crab habitat and may have unseen detrimental effects on non-retained crab.
 - ✓ the Board of Fisheries instituted conservation measures in 1993.
3. Trawl fisheries are impacted under all alternatives to the status quo.

Regarding a specific alternative, the team noted that:

1. net benefits (\$) to the nation were similar among all alternatives; and
2. alternative vary greatly in predicted red king crab bycatch.

A motion was made that any alternative closure area should be made year-round (Griffin/Pengilly motion passed 8-1).

A motion was made to recommend Alternative 3, and allow pelagic trawling within the area as long as pelagic trawling is defined and monitored (Griffin motion, no vote taken).

The team discussed if they should recommend a specific alternative to the Council. They did not, but instead, came to consensus on highlighting the following points:

The team notes that a closure area would protect red king crab. The team also recognizes that Alternative 4 and 7 provide the most protection for red king crab, however, the team understands there are economic tradeoffs to consider, thus making Alternative 3 more preferable. Under any of the alternatives, the team notes that pelagic trawling would be acceptable and not harm crab stocks if pelagic trawling were defined and monitored.

Ken Griffin briefed the team on the Observer Oversight Committee (OOC) meeting held mid-month. In general, the OOC thought the research plan was OK in terms of technical concerns, but that overall and distributional cost issues remained an impediment. The team agreed that, no matter what plan was implemented, an observer program was essential to fisheries management. Dave will distribute copies of the OOC report to team members when it was completed. If team members feel plan team comment is necessary once they have reviewed the document, they were to contact the chair concerning scheduling a crab plan team meeting.

Other Discussion

Ken discussed the need for the team to have alternate members, in case a member could not attend a meeting. It was noted that this is done at the groundfish plan team without assigned alternates, and this was deemed acceptable to the crab team. This issue will be further fleshed out when the crab team's Terms of Reference is drafted.

Dave suggested that the team be expanded to include an economist, as many of the issues discussed involve allocation and economic tradeoffs. Current team membership includes 4 people from ADF&G (2 managers, 2 biometricians), 3 people from NMFS (2 biologists, 1 manager), one person from the University (biologist), and one Council staffer (biologist). A majority of team members agreed that an economist would be a good addition to the team. Dave agreed to propose this to the SSC for their recommendation.

Public Comment

Because the meeting was conducted by teleconference, public comment was deferred until the end of the meeting. It was agreed that in the future, however, public comment should be taken before the team makes any recommendations on any issue.

Pete Probasco questioned why the ADF&G news release indicated that female red king crab abundance was below threshold (8.4 million), yet the NMFS status of stocks in the crab SAFE indicates that female abundance was 9.3 million. ADF&G explained that the 9.3 estimate was derived from the survey, rather than the length based analysis that was used to estimate abundance. ADF&G provided documentation for the plan team as to how these estimate were derived. Copies of this document will be available to the public at the Council meeting. Future reporting of population estimates will be suggested for discussion at the October interagency meeting.

Joe Terry commented that he was concerned about having public input until after the votes were taken. Team members concurred, and agreed that public testimony at future meetings would be taken prior to any team recommendations. The Chair contacted all public participants following the meeting to acknowledge oversight of public comment prior to team discussion and note that future meetings will be conducted as noted above.

Others listening in were:

Armi Thomson
Bill Nippes
Lisa Polito
Mike Ward
Pete Probasco

Dave Ackley
Gary Loncon
Brent Paine
Joe Terry

Gordon Blue
Dave Jackson
Mike Ward
Skip Gish