

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke
Executive Director



ESTIMATED TIME
4 HOURS

DATE: April 3, 2000

SUBJECT: Crab Management

ACTION REQUIRED

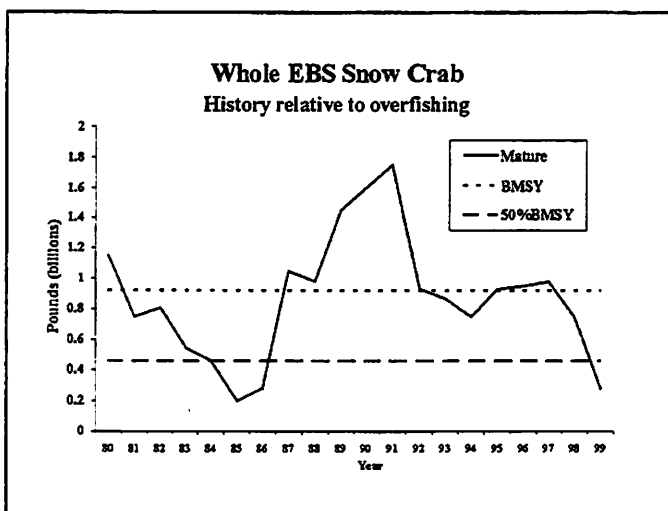
- (a) Initial review of rebuilding plans for opilio and St. Matthew blue king crab.
- (b) Receive status report on crab co-ops and permit buyback program.

BACKGROUND

- (a) Crab Rebuilding Plans

Opilio Rebuilding Plan - Proposed Amendment 14

Amendment 7 to the BSAI King and Tanner Crab FMP redefined overfishing, OY, and MSY, and updated the FMP with new information. The amendment established MSY point estimates, along with minimum stock size thresholds (MSST) for individual crab stocks based on prevailing environmental conditions (1983-1997 period). Overfishing is now defined as a fishing mortality rate in excess of natural mortality ($M=0.2$ for king crabs, $M=0.3$ for Tanner and snow crabs) and overfished is defined as a biomass that falls below MSST.

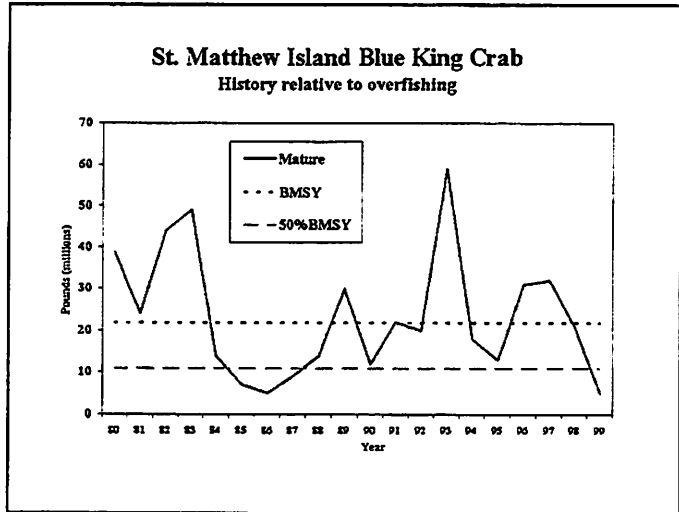


The 1999 NMFS Bering Sea survey indicated that the snow crab stock was below the minimum stock size threshold (MSST) established for this stock. Abundance of snow crab (*C. opilio*) declined sharply this year, resulting in a spawning biomass value (283.3 million pounds) that falls below the MSST (460.8 million pounds) and hence precipitated a severe curtailment of the fishery in the 2000 season. On September 24, 1999, NMFS informed the Council that this stocks was declared "overfished" pursuant to the Magnuson Act guidelines, which require a rebuilding plan to be developed within one year.

A draft rebuilding plan for this stock was mailed out on March 14, 2000. The Board of Fisheries has since adopted a revised harvest strategy for this stock, as detailed in the proposed rebuilding plan. An executive summary of the plan is attached as Agenda Item D-2(a)(1). Staff will provide additional details of their analysis. At this meeting, the Council is scheduled to approve the plan for public review, so that final action can be taken in June.

St. Matthew Blue King Crab - Proposed Amendment 15

The 1999 NMFS Bering Sea survey indicated that the Saint Matthew blue king crab stock was below the minimum stock size threshold (MSST) established for this stock. Abundance declined sharply this year, resulting in a spawning biomass value (4.8 million pounds) that falls below the MSST (11.0 million pounds). On September 24, 1999, NMFS informed the Council that this stock was declared "overfished" pursuant to the Magnuson Act guidelines, which require a rebuilding plan to be developed within one year.



A draft rebuilding plan for this stock was mailed out on March 14, 2000. The Board of Fisheries has since adopted a revised harvest strategy for this stock, as detailed in the proposed rebuilding plan. An executive summary of the plan is attached as Agenda Item D-2(a)(2). Staff will provide additional details of their analysis. At this meeting, the Council is scheduled to approve the plan for public review, so that final action can be taken in June.

(b) Crab Co-ops and Permit Buyback Program

The crab industry has continued to work on developing alternatives for a potential cooperative style management program, possibly in conjunction with some type of permit buyback program. At the same time there has been a request by St. Paul for emergency disaster relief related to the situation in the opilio crab fishery. A meeting was held on March 3 in Seattle (attended by over 100 fishermen and processors) to further discuss these issues, and was presided over by Council members Dave Fluharty and Kevin O'Leary. A brief meeting summary is included as Item D-2(b). Among the primary outcomes of that meeting was the establishment of two committees, one to work on a near-term solution related to a buyback program, and the other to work on a longer-term horizon towards a co-op solution. Council members Fluharty and O'Leary, or members of industry, may have additional information for the Council at this time. A meeting of the industry committees is tentatively scheduled for April 26 in Seattle.

Executive Summary

The 1999 NMFS Bering Sea survey indicated that the snow crab stock was below the minimum stock size threshold (MSST) established for this stock. Abundance of snow crab (*C. opilio*) declined sharply this year, resulting in a spawning biomass value (283.3 million pounds) that falls below the MSST (460.8 million pounds) and hence precipitated a severe curtailment of the fishery in the 2000 season. On September 24, 1999, NMFS informed the Council that this stocks was declared "overfished" pursuant to the Magnuson-Stevens Act guidelines, which require a rebuilding plan to be developed within one year. This Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (EA/RIR/IRFA) addresses alternatives for rebuilding the overfished stock of snow crab in the Eastern Bering Sea. Alternatives and options were developed by the Council at their October, 1999 meeting. The alternatives examined were the following:

Alternative 1: Status Quo. No rebuilding plan would be adopted for Bering Sea snow crab.

Alternative 2: Establish a rebuilding plan for Bering Sea snow crab. The rebuilding plan may have three components: a harvest strategy, bycatch control measures, and habitat protection. Note that more than one option can be adopted for each component.

A. Harvest Strategy: In previous years when there was a directed fishery, harvest rates for Bering Sea snow crab were established at 58% of the mature male abundance. This harvest strategy could be modified to reduce mortality on legal males, females, and juvenile crabs.

Option 1: Status quo. Continue to establish harvest rates for Bering Sea snow crab at 58% of the mature male abundance.

Option 2: Adopt a new harvest strategy for Bering Sea snow crab. The strategy, as detailed in Section 1.6.1 includes lower harvest rates at low biomass levels, and incorporates a threshold biomass.

B. Bycatch Controls: Bycatch control measures have previously been implemented in the crab, scallop, and groundfish fisheries. These measures could be adjusted to reduce mortality on unharvested crabs.

Option 1: Status quo. Maintain existing snow crab bycatch control measures.

Option 2: Reduce the snow crab PSC limit. The snow crab PSC limit would be set at 0.1133% of total survey abundance with a maximum of 13 million crabs.

Option 3: Request the Board of Fisheries and the Alaska Department of Fish and Game to consider additional measures (such as gear modifications and area closures) to reduce bycatch of snow crab in crab fisheries.

C. Habitat protection: Adequate habitat is essential for maintaining the productivity of fishery resources. Measures previously implemented that protect snow crab habitat from fishing impacts include several areas where trawling and dredging is prohibited. Essential fish

habitat (EFH) has been defined and potential threats have been identified. Additional measures could be implemented to further protect habitat.

Option 1: Status quo. Maintain existing habitat protection measures.

Option 2: For agency consultation purposes, highlight the importance of snow crab EFH in maintaining stock productivity. To the extent feasible and practicable, this area should be protected from adverse impacts due to non-fishing activities.

The proposed actions contained in this amendment are intended to rebuild the Bering Sea snow crab stock. Adoption of Alternative 2 (particularly Part A, Option 2) is expected to allow the Bering Sea snow crab stock to rebuild, with a 50% probability, to the Bmsy level in 8 years. Adoption of the revised harvest strategy should result in more spawning biomass as more larger male crab would be conserved and fewer juveniles and females would die due to discarding. This higher spawning biomass would be expected to produce good year-classes when environmental conditions are favorable. Protection of habitat and/or reduction of bycatch may reduce mortality on juvenile crabs, thus allowing a higher percentage of each year-class to contribute to spawning (and future landings). Any or all of these actions proposed under Alternative 2 would be expected to improve the status of this stock. No rebuilding benefits are provided by Alternative 1.

Alternative 2B, Option 2, could impact the groundfish trawl fisheries (the flatfish trawl fisheries in particular). The crab bycatch limits are apportioned among fisheries pre-season, and reaching one of these limits shuts down a fishery for the remainder of the season. Additional costs to the groundfish trawl fisheries would be incurred if additional areas were closed to trawling to protect crab habitat.

None of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866. None of the alternatives are likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations, fisheries, regulations, gear used, revenues generated, etc.

Executive Summary

The 1999 NMFS Bering Sea survey indicated that the Saint Matthew blue king crab (*Paralithodes platypus*) stock was below the minimum stock size threshold (MSST) established for this stock. The stock declined sharply from 1998 to 1999 and the current estimate of spawning biomass (4.8 million pounds) is considerably below the MSST (11.0 million pounds). Consequently no fishery was allowed in 1999. On September 24, 1999, NMFS informed the Council that this stocks was declared "overfished" pursuant to the Magnuson Act guidelines, which require a rebuilding plan to be developed within one year. This Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (EA/RIR/IRFA) addresses alternatives for rebuilding the overfished Saint Matthew blue king crab stock. The alternatives examined were the following:

Alternative 1: Status Quo. No rebuilding plan would be adopted for Saint Matthew blue king crab.

Alternative 2: Establish a rebuilding plan for Saint Matthew blue king crab. The rebuilding plan may have three components: a harvest strategy, bycatch control measures, and habitat protection. Note that more than one option can be adopted for each component.

A. Harvest Strategy: In previous years when there was a directed fishery, harvest rates for Saint Matthew blue king crab were established at 20% of the mature male abundance. This harvest strategy could be modified to reduce mortality on legal males, females, and juvenile crabs.

Option 1: Status quo. Continue to establish harvest rates for Saint Matthew blue king crab at 20% of the mature male abundance.

Option 2: Adopt a new harvest strategy for Saint Matthew blue king crab. The strategy, as detailed in Section 1.6.1 includes lower harvest rates at low biomass levels, and incorporates a threshold biomass.

B. Bycatch Controls: Bycatch control measures have not previously been implemented in other fisheries, such as other crab, scallop, and groundfish fisheries. These measures could be implemented to reduce mortality on unharvested crabs.

Option 1: Status quo. Maintain existing management regime.

Option 2: Establish a PSC limit for trawl fisheries to reduce bycatch of St. Matthew blue king crabs.

Option 3: Request the Board of Fisheries and the Alaska Department of Fish and Game to consider additional measures (such as gear modifications and area closures) to reduce bycatch of blue king crabs in crab fisheries.

C. Habitat protection: Adequate habitat is essential for maintaining the productivity of fishery resources. Essential fish habitat (EFH) has been defined and potential threats have been identified. Additional measures could be implemented to further protect habitat.

Option 1: Status quo. No species habitat protection measures would be established for this stock.

Option 2: For agency consultation purposes, highlight the importance of blue king crab EFH in maintaining stock productivity. To the extent feasible and practicable, this area should be protected from adverse impacts due to non-fishing activities.

Option 3: Establish habitat protection areas for egg bearing female blue king crab around Saint Matthew Island.

The proposed actions contained in this amendment are intended to rebuild the Saint Matthew blue king crab stock.

Adoption of Alternative 2 (particularly Part A, Option 2) is expected to allow the Saint Matthew blue king crab stock to rebuild, with a 50% probability, to the Bmsy level in less than 10 years. Adoption of the revised harvest strategy should result in more spawning biomass as more larger male crab would be conserved and fewer juveniles and females would die due to discarding. This higher spawning biomass would be expected to produce good year-classes when environmental conditions are favorable. Protection of habitat and/or reduction of bycatch may reduce mortality on juvenile crabs, thus allowing a higher percentage of each year-class to contribute to spawning (and future landings). Any or all of these actions proposed under Alternative 2 would be expected to improve the status of this stock. No rebuilding benefits are provided by Alternative 1.

Alternative 2B, Option 2, could impact the groundfish trawl fisheries (the flatfish trawl fisheries in particular). The crab bycatch limits are apportioned among fisheries pre-season, and reaching one of these limits shuts down a fishery for the remainder of the season. Additional costs to the groundfish trawl fisheries would be incurred if additional areas were closed to trawling to protect crab habitat.

None of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866. None of the alternatives are likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations, fisheries, regulations, gear used, revenues generated, etc.

DRAFT MEETING SUMMARY Crab Co-op Meeting – Seattle 3/2/00

Meeting Facilitators: Dave Fluharty
 Kevin O’Leary

A meeting summary was drafted by Linda Kozak.

Reports:

1. Dave Fluharty presented a summary of the crab co-op meeting held in Anchorage in conjunction with the February North Pacific Council meeting.
2. John Iani provided an status report on the Magnuson-Stevens Act.
3. Garry Loncon reported on the PNCIAC meeting held the previous day.
4. Tom Casey presented the draft primer on co-ops which he had prepared.
5. Arni Thomson provided a review of cooperatives currently in place in Washington and Alaska.
6. Jeff Steele presented a white paper on development of IFQs for the crab fisheries.
7. Simeon Swetzof and Tony Smith presented an update on their attempts to get a declaration of disaster for St. Paul in relation to the situation in the opilio fishery.
8. Gordon Blue provided an overview of the buyback primer and provided information on the Rule, which will implement buyback loans.

Presentations were made by several processor representatives, and the following are general concerns expressed by Don Giles (Icicle), John Black (Ocean Beauty), Garry Loncon (Royal Aleutian), and Bart Eaton (Trident):

- ◆ The processor investment needs to be considered.
- ◆ Any buyout for harvesters must take processors into consideration.
- ◆ Processors are sensitive to community concerns and don’t want to see anything that will disadvantage them.
- ◆ Opposed to anything that looks like an ITQ program and if it looks like that is developing, there will be a fight.
- ◆ Processors prefer an AFA-style co-op.
- ◆ Processors will work with industry, but it has to be an industry agreement.

Co-op Options Paper

The cooperative options paper was reviewed and the following changes made:

1. For the qualifying years of catch history, add:
 - 1990–1999
 - 1995–1999
 - 1988-1999
2. For the fishery-by fishery options, add:
 - Status Quo
 - Opilio – 1996 – 1999
 - Bristol Bay red king crab – 1996 - 1999
 - Bristol Bay red king crab – 1991-1997
 - Bairdi – 1990 – 1997
 - Exclude 1999 for all options
3. Catch History Options, add: A format for percentage of income/dependence.
4. Number of vessels allowed to form cooperatives, add: 5 vessels.
5. Processor issues, add: AFA style with Dooley-Hall concept.

There was general discussion regarding effort reduction and the need to begin working quickly on a program to take to Washington D.C. in this session. A comment was made by John Iani that Senator Stevens and Gorton want vessels retired, not just licenses.

Tom Suryan pointed out that the skippers should not be forgotten in this process and they want to be involved in whatever plan is generated.

It was suggested by several speakers that smaller working groups be appointed to begin working on the logistical details of buyback and co-op development. This was supported by most of the industry and processor participants. Kevin O'Leary suggested that there should be two committees formed. The buyback committee would attempt to move quickly to a proposal for review by the larger group and submission to Washington D.C. and that the co-op committee would move forward at a slower paced effort. After a lot of discussion regarding make-up of the committees, the following was determined:

Buyback Committee:

Composition: 8 harvesters
 3 processors
 2 communities

The buyback committee would also include John Iani as an advisor, due to his continued work in Washington D.C. on behalf of the industry.

A list was sent around the room and since few people signed up for this group, the formation was accomplished at the meeting. Following is the membership of the buyback committee:

John Boggs – harvester
John Boggs – harvester
Linda Kozak - harvester
Paula Brogdon – harvester
Steve Toomey - harvester
Garry Loncon - processor
Tony Smith - St. Paul
Frank Kelty – Dutch Harbor

Ron Briggs – harvester
Gordon Blue - harvester
Pat Dwyer – harvester
Gary Painter - harvester
Joe Plesha - processor
Jim Yonker – processor
Steve Minor – St. Paul

NOTE: Following the meeting, Jim Yonker requested his name be removed and a replacement name will be determined by Dave Fluharty and Kevin O’Leary.

Co-op Committee:

Composition: 6 crab catcher vessels – 3 Alaskan and 3 non-Alaskan
1 crab catcher/processor
1 skipper
5 processors
2 communities
6 group representatives

The six group representatives are: Tom Casey, Arni Thomson, Jeff Stephan, Linda Kozak, Paula Brogdon, and Brent Paine.

The processors indicated the companies to be represented would be: Trident, PSPA, Royal Aleutian Seafoods, Norquest Seafoods, and Icicle Seafoods.

The communities of St. Paul and Dutch Harbor will also be represented on the committee by designees from those areas.

A total of 29 individuals submitted their names for consideration for the crab harvester, catcher/processor and skipper seats. Dave Fluharty and Kevin O’Leary met the following week and appointed the following:

Appointment

Non-Alaskan harvester
Non-Alaskan harvester
Non-Alaskan harvester
Alaskan harvester
Alaskan harvester
Alaskan harvester
Catcher/processor
Skipper

Committee Member

Rick Shelford
Kevin Kaldestad
Gary Painter
Lenny Herzog
Phil Fogle
Louie Lowenberg
Dick Powell
Tom Suryan

Alternate

Kim Hansen
Kris Fanning
David Lethin
Gordon Blue
Jeff Steele
Paul Duffy

D-2

Comment on the draft EA/RIR/IRFA for Proposed Amendment 14 To The Fishery Management Plan for the King and Tanner Crab Fisheries in the Bering Sea/Aleutian Islands and a Regulatory Amendment to the Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Island Areas.
"A rebuilding plan for the Bering Sea C. opilio stock."

Prepared by

Ray Hilborn
Professor, School of Fisheries
University of Washington, Seattle

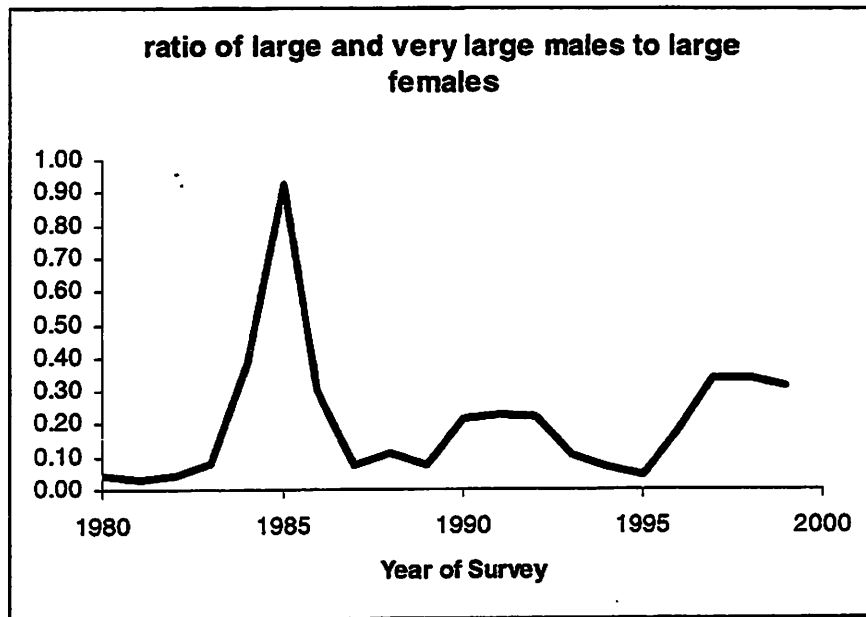
2 April, 2000

Opportunities from the biology of opilio

The biology of crabs, and many invertebrates, is very different from finfish, and it provides opportunities for creative fisheries management. The biology of C. opilio in particular means that one should look at the concept of overfishing quite differently from finfish.

Because of the size difference between males and females, and the nature of pot fishing, the fishery for opilio can be very sex and size specific. There is no effective fishing mortality on females. Even the bycatch of females in other fisheries is trivial. The estimated bycatch removals of female opilio in 1997, 1998 and 1999 was 1.1 million, 0.68 million and 0.80 million respectively (from table page 25 of rebuilding plan). This was at a time that the survey indicated there were 1.4 billion, 1.2 billion and 0.47 billion large females (table 1 of rebuilding plan). The bycatch is thus about 1 in 1,000 per year.

Thus we can safely say that the fishery has no impact on female abundance, except as it might reduce future recruitments due to lack of fertilization by fishing on males. Reduced fertilization has been a problem in king crab fisheries (Orensanz et al. 1998), but opilio consistently show normal levels of egg fertilization (J. Orensanz and D. Armstrong, School of Fisheries, University of Washington, personal communication). Furthermore, using the survey data from table 1 in the rebuilding plan, the graph below shows the ratio between large and very large males, and females over time.



Here we can see that at present there is about 0.35 large or very large males per large female. This ratio is as high as it has ever been except in 1984 and 1985. There is no reason to expect that directed fishing mortality on the males is distorting the sex ratio enough that females are not going to be fertilized.

Yield implications

Given that there is no effective fishing mortality on females, and fertilization has not been affected by directed fishing on males, then quite **simply there is no impact from the fishery on the long term yield of opilio**. To maximize the biological yield from this stock you would simply maximize the yield-per-recruit of males, which is done by the size limit combined with a 58% exploitation rate (see page 15 of rebuilding plan lines 4 and 5).

The **reductions in harvest rate** proposed in Option 2 of the harvest strategy, and the bycatch controls under options 2 and 3 **will not increase the production of the stock in any way**. The only reason the stock rebuilds a slight bit faster under these options is that the rebuilding plan reduces the removals of males, and thus the male component of the stock increases faster -- but this does not provide any increase in yield.

The problem seems to be that the overfishing definitions that have been derived generically for finfish, have been applied to a crab with a very different biology, and a very different fishery.

I would suggest that an appropriate overfishing definition for opilio would be measured in terms of fertilization of females, not stock biomass. If there was evidence that a certain low male/female ratio was correlated with reduced fertilization, then you could define overfishing in terms of the sex ratio.

Analysis

The operating definition of overfishing (rebuilding plan page 11) is "a rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce MSY on a continuing basis." Nothing in the current status of this fishery suggests that the fishery has affected the capacity of the fishery to produce MSY. The yield from this fishery is being driven by environmental factors affecting recruitment. So long as the females are fertilized and not impacted by fishing mortality, there will be no impact of fishing on the production.

If we examine the six scenarios on page 38 of the rebuilding plan, we find the results presented in table 10 of the rebuilding plan are summarized in the table below.

Table 1. Results of rebuilding plan calculations for not autocorrelated recruitment.

Scenario	Regulations	years to 50% probability of rebuild	Mean annual yield (million lbs)			mean time to rebuild
			5 yr	10 yr	20 yr	
1	Zero catch	7	1.6	29.3	57.0	7.8
2	Trawl bycatch only	7	1.3	28.5	56.9	7.9
3	New strategy	8	22.4	44.1	64.1	9.2
4	new strategy no trawl	8	22.6	44.6	64.6	9.1
5	new strategy 100% bycatch mortality	8	20.3	39.5	53.8	10.0
6	status quo	8	27.1	56.7	81.0	10.0

Table 2. Results of rebuilding plan calculations with autocorrelated recruitment.

Scenario	Regulations	years to 50% probability of rebuild	Mean annual yield (million lbs)			mean time to rebuild
			5 yr	10 yr	20 yr	
1	zero catch	11	0.0	13.1	39.0	13.2
2	trawl bycatch only	11	0.0	13.5	39.2	13.2
3	new strategy	12	16.6	30.0	50.3	15.1
4	new strategy no trawl	12	16.8	30.5	50.9	14.8
5	new strategy 100% bycatch mortality	13	14.4	26.8	43.0	15.7
6	status quo	13	19.2	38.2	65.8	15.7

Here we see that the long term yield (in this case 20 years) is maximized by scenario 6; the status quo harvest policy with or without autocorrelated recruitment. MSY is long term yield – the calculations in the rebuilding plan show that MSY is maximized by the status quo.

Legal Implications

A few definitions from the Magnuson-Stevens Fisheries Conservation and Management Act

Section 104-297 (28) The term "optimum", with respect to the yield from a fishery, means the amount of fish which –

- (A) will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems;
- (B) is prescribed as such on the basis of the maximum sustainable yield from the fishery, as reduced by any relevant economic, social, or ecological factors; and
- (C) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such a fishery.

Section 104-297 (29) The terms "overfishing" and "overfished" mean a rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce maximum sustained yield on a continuing basis.

Section 303 (a) Required Provisions – Any fishery management plan which is prepared by any Council, or by the Secretary, with respect to any fishery, shall --

(10) specify objective and measurable criteria for identifying when the fishery to which the plan applies is overfished (with an analysis of how the criteria were determined and the relationship of the criteria to the reproductive potential of stocks of fish in that fishery) and, in the case of a fishery which the Council or the Secretary has determined is approaching an overfished condition or is overfished, contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery;

An alternative overfishing definition

Clearly the fishery has not met criteria 104-297(29) for overfished, the fishery has not "jeopardized the capacity of a fishery to produce maximum sustained yield on a continuing basis."

The problem seems to be that the NMFS guidelines which have been established for the biology and management of finfish, have been inappropriately applied to crab biology and management. These guidelines are not legally binding, and it is within the power of the council to establish its own definition of overfishing.

I suggest that overfishing for opilio be defined based on sex ratio or egg fertilization success, rather than a specific stock size. As it has been shown in other species that these two quantities are related, and since sex ratio is easily measured from the survey, an overfishing definition based on sex ratio would be the simplest to define and implement. An overfishing definition based on sex ratio would assure that the long term ability of the stock to produced MSY would not be hindered. This definition would be well within the law as outlined above.

The word of the law and the intent is to manage fisheries to produce MSY. In the case of opilio this does not involve a specific stock size, but rather protection of females and assurance that females are mated.

References

Orensanz, J.M., J. Armstrong, D. Armstrong and R. Hilborn. 1998. Crustacean resources are vulnerable to serial depletion – the multifaceted declines of crab and shrimp fisheries in the Greater Gulf of Alaska. *Reviews in Fish Biology and Fisheries* 8: 117-176

D-2

NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

Crab Management – Agenda D-2

Testimony of Mayor Simeon Swetzof

April 14, 2000

MR. CHAIRMAN, MEMBERS OF THE COUNCIL, THANK YOU FOR THIS OPPORTUNITY TO TESTIFY BEFORE YOU TODAY.

AS YOU CONSIDER AGENDA ITEM D-2 AND THE OPILIO CRAB REBUILDING PLAN I WANT TO SHARE WITH YOU A FEW THOUGHTS AND UPDATE YOU ON RECENT MEASURES THAT ST. PAUL HAS TAKEN.

I. REBUILDING PLAN:

FIRST, CONCERNING THE SCOPE OF THE OPILIO REBUILDING PLAN, ST. PAUL SUPPORTS ALTERNATIVE 2 AND ITS THREE COMPONENTS WHICH ANALYZE HARVEST STRATEGIES, BYCATCH CONTROLS, AND HABITAT PROTECTION.

HOWEVER, WE BELIEVE THAT AN IMPORTANT COMPONENT IS MISSING IN THIS STUDY. FOR SEVERAL YEARS NOW, ST. PAUL HAS BEEN PROMOTING THE IDEA AT THIS BODY AND ELSEWHERE THAT MANAGEMENT OF A COMMERCIAL FISHERY MUST TAKE INTO ACCOUNT ITS IMPACTS ON THE ECOSYSTEM AS A WHOLE. WE HAVE SEEN ON REPEATED OCCASIONS THAT MANAGEMENT OF EACH OF OUR FISHERIES MAY HAVE UNINTENDED CONSEQUENCES ON OTHER SPECIES, INCLUDING OTHER COMMERCIAL FISHERIES.

FOR THIS REASON, I PROPOSE THAT YOU INCLUDE IN THE SCOPE OF THE PROPOSED REBUILDING PLAN A FOURTH COMPONENT UNDER ALTERNATIVE 2 THAT ANALYZES THE ABOVE INTERACTIONS. I SUGGEST THAT YOU ADD THE FOLLOWING:

“D. Ecosystem-Based Management: Understanding the interactions between crab and other species in the Bering Sea and Gulf of Alaska ecosystems is important to rebuilding the opilio stocks. In addition, management practices may need to reflect these interactions in order to ensure a sustainable opilio crab fishery.

Option 1: Status Quo. Maintain existing management practices.

Option 2: Recommend that an opilio crab rebuilding plan include a study of the interspecies relationships including the food web and predator/prey interactions necessary to maintain sustainable opilio stocks.

II. BUDGETARY IMPACTS:

THE 2000 SEASON CLOSED LAST WEEKEND AND ST. PAUL HAS BEGUN TO DOCUMENT THE ECONOMIC IMPACTS OF A DRAMATICALLY REDUCED OPIILIO GHL. SINCE LAST SEPTEMBER'S ANNOUNCEMENT BY NMFS, THERE HAS BEEN AN IMMEDIATE DECLINE IN LOCAL REVENUES AND JOB OPPORTUNITIES. WE HAVE BEEN WORKING TO BRING OUR BUDGET INTO BALANCE, BUT THERE IS SIMPLY NO WAY TO ABSORB THIS TYPE OF REVENUE LOSS THROUGH PROGRAM CUTS.

IN ADDITION, THE AFA SIDEBOARD CAPS ON CRAB HAVE HAD THE UNINTENDED CONSEQUENCE OF COMPOUNDING THE IMPACTS OF A REDUCED CRAB QUOTA. WHILE THE UNISEA PROCESSOR CHOSE NOT TO OPEN, THE TRIDENT AND ICICLE PLANTS HAD TO LIMIT THE DELIVERIES THEY COULD ACCEPT TO COMPLY WITH THE CAPS, FURTHER REDUCING THE REVENUES OF CRABBERS, IN-SHORE PROCESSORS, AND THE COMMUNITY.

III. DECLARATION OF A COMMERCIAL FISHERY FAILURE;

ON JANUARY 31 THE CITY OF ST. PAUL REQUESTED THAT THE SECRETARY OF COMMERCE DECLARE A COMMERCIAL FISHERY FAILURE IN THE CRAB FISHERY UNDER SECTION 312 OF THE MAGNUSON-STEVENSONS ACT. SINCE THEN, MOMENTUM FOR A DISASTER DECLARATION BY THE SECRETARY HAS

INCREASED. ON MARCH 10, THE GOVERNOR OF ALASKA FILED A LETTER WITH SECRETARY DALEY REQUESTING A DISASTER DECLARATION. WITH THE 2000 OPILIO FISHERY NOW OVER, THE MAGNITUDE OF THE FISHERY FAILURE CAN BE DOCUMENTED TO SUPPORT SUCH A DECLARATION. THE CITY OF ST. PAUL HAS BEEN WORKING CLOSELY WITH NMFS, THE ALASKA CONGRESSIONAL DELEGATION, AND THE STATE OF ALASKA TO EXPEDITE THIS PROCESS AND DEVELOP AN INDUSTRY-WIDE RELIEF PROGRAM.

IV. RELIEF FOR ST. PAUL AND THE CRAB INDUSTRY:

IN ORDER TO RESPOND TO THE CRISIS RESULTING FROM THE COLLAPSE OF THE BERING SEA CRAB STOCKS, ST. PAUL VIEWS THE FOLLOWING COMPONENTS AS CRITICAL:

1) ASSISTANCE TO AFFECTED COMMUNITIES: ST. PAUL MUST DIVERSIFY ITS ECONOMY INTO MULTISPECIES PROCESSING IN ORDER TO OVERCOME THE CURRENT DOWNTURN AND PREVENT SIMILAR EVENTS IN THE FUTURE. TO ACHIEVE THIS THERE ARE SPECIFIC INFRASTRUCTURE PROJECTS THAT MUST BE COMPLETED, INCLUDING THE HARBOR IMPROVEMENTS, AND REGULATORY ISSUES THAT MUST BE ADDRESSED. THESE OBJECTIVES ARE CONSISTENT WITH THE GOALS OF SECTION 312 OF THE MAGNUSON-STEVENSON ACT WHICH SEEK TO RESTORE THE AFFECTED FISHERY AND ASSIST THE AFFECTED FISHING COMMUNITY. THEY ALSO MAKE SENSE FROM FISHERIES MANAGEMENT PERSPECTIVE GIVEN ST. PAUL'S IDEAL LOCATION.

2) EFFORT REDUCTION: ST. PAUL SUPPORTS THE DEVELOPMENT OF A BUYBACK PROGRAM OR OTHER CAPITAL REDUCTION PROGRAMS TO BE PURSUED THROUGH AN ACT OF CONGRESS. IN THIS REGARD, ST. PAUL SUPPORTS THE AP'S RECOMMENDATION TO THE COUNCIL THAT IT REQUEST CONGRESS FOR ASSISTANCE IN DEVELOPING AN EFFORT REDUCTION PROGRAM IN THE CRAB FISHERY.

3) CRAB MANAGEMENT/HABITAT PROTECTION: ST. PAUL SUPPORTS CHANGES IN HOW THE CRAB STOCKS ARE MANAGED IN ORDER TO ENSURE SUSTAINABILITY. WE BELIEVE THAT THE SCOPE OF ANALYSIS FOR THE REBUILDING PLAN, INCLUDING ST. PAUL'S SUGGESTED MODIFICATION ABOVE, WOULD BE A MOVE IN THE RIGHT DIRECTION.

4) RATIONALIZATION: ST. PAUL WANTS TO ENSURE THAT ANY MOVES TOWARDS RATIONALIZATION IN THE CRAB FISHERY DO NOT HARM OUR POSITION AS A PROCESSING CENTER. FOR THE LAST SEVERAL YEARS, THE CRAB INDUSTRY HAS UTILIZED ST. PAUL'S HARBOR BECAUSE IT MADE ECONOMIC SENSE. IF RATIONALIZATION OCCURS WE WANT THE HISTORIC RATE OF CRAB DELIVERIES TO ST. PAUL PROTECTED.

THANK YOU.

Comments on Ray Hilborn's Snow Crab Analysis

*"From a managerial perspective, the pattern and magnitude of the collective rise and fall of the crustacean fisheries of Alaska are such that **overfishing has to be considered as the default working scenario**, even before being tested as a scientific hypothesis. The challenge now faced by Alaskan managers and scientists is to develop effective strategies to rebuild the depleted stocks, and to provide for sustainable use afterwards." Orensanz, Armstrong, Armstrong, and Hilborn (1998)*

"Quite simply, there is no impact from the fishery on the long-term yield of opilio. To maximize the biological yield from this stock you would simply maximize the yield-per-recruit of males, which is done by the size limit combined with a 58% exploitation rate." Hilborn (2000)

Harvest Strategy

- The paper states that "The word of the law and the intent is to manage fisheries to produce MSY." This is incorrect.
- The National Standard Guidelines state: "First, **target reference points, such as OY, should be set safely below limit reference points**, such as the catch level associated with the maximum fishing mortality threshold. Second, **a stock that is below its MSY level should be harvested at a lower rate or level of fishing mortality than if it were above its MSY level**. Third, **the criteria used to set target catch levels should be explicitly risk averse**, so that greater uncertainty regarding a stock's status or productive capacity corresponds to greater caution in setting target catch levels."
- The establishment of Guideline Harvest Levels (GHLs) is a Category 2 management measure determined by the State of Alaska and is frameworked in the federal FMP. The Alaska Board of Fisheries policy on king and Tanner crab fishery management explicitly states that the harvest policy "may not result in maximization of physical or economic yield." This policy is consistent with the MSFCMA and other applicable federal law.
- Even if the current harvest rate of 58% corresponded to MSY, lower harvest rates must be applied to depleted stocks and those with high levels of uncertainty about their productive capacity. Not only is this required by the National Standard Guidelines, but also it is prudent for stocks with periodic recruitment.
- The current 58% harvest rate was based on yield-per-recruit analysis that ignores stock effects and uses growth and mortality parameters that are unknown or, at best, highly uncertain.

- The premise of Hilborn's paper is that the fishery has no effect on the stock. This conjecture is inconsistent with Orensanz et al. (1998) and not prudent in the face of uncertainty.
- The paper suggests to develop overfishing definitions based on sex ratio or egg fertilization success rather than a specific stock size. There are problems with this approach as described below.

Sex Ratio

- The sex ratio on page 2 was incorrectly calculated. Large (≥ 102 mm CW) and very large (≥ 110 mm CW) were added together thus double counting all males ≥ 110 mm CW. Large females are ≥ 50 mm CW. The double counting of very large males inflated the male:female sex ratio presented in Hilborn's figure.
- The correct sex ratios of large males (includes "very large") to large females averaged 0.14 (i.e., 14 males per 100 females), not 0.35, during 1980-1999. Values were as small as 0.02-0.03 in 1980-1982 and 0.03-0.04 in 1994-1995, and as high as 0.61 in 1985. See sex ratio calculations (attached)
- What is "sex ratio" measuring? It is not clear what "large males" and "large females" means with respect to reproduction capacity of the stock. Males smaller than "large" may be mature, and very large males and females may not be reproductively active. Perhaps you seek the ratio of reproductively active males to mature females. For Tanner crabs, newshell mature males do not mate within 3 months after molting, and oldshell mature males out-compete newshell mature males. Owing to smaller spermatophores, small mature males are capable to mate with fewer females and fertilize a smaller portion of egg clutches, than larger mature males. Disparate spatial distributions of mature males and females imply that all mature males do not participate in mating in any one year. So, what is a biologically meaningful sex ratio?
- Use of sex ratio as a measure of overfishing is questionable. Historically, male:female sex ratio is highest (e.g., >0.2) on declining and depleted stocks probably due to the fact that females mature at younger ages than males and recruitment is periodic. Does use of sex ratio suggest we should remove even *more* males under depressed stock conditions?

Egg Fertilization Success

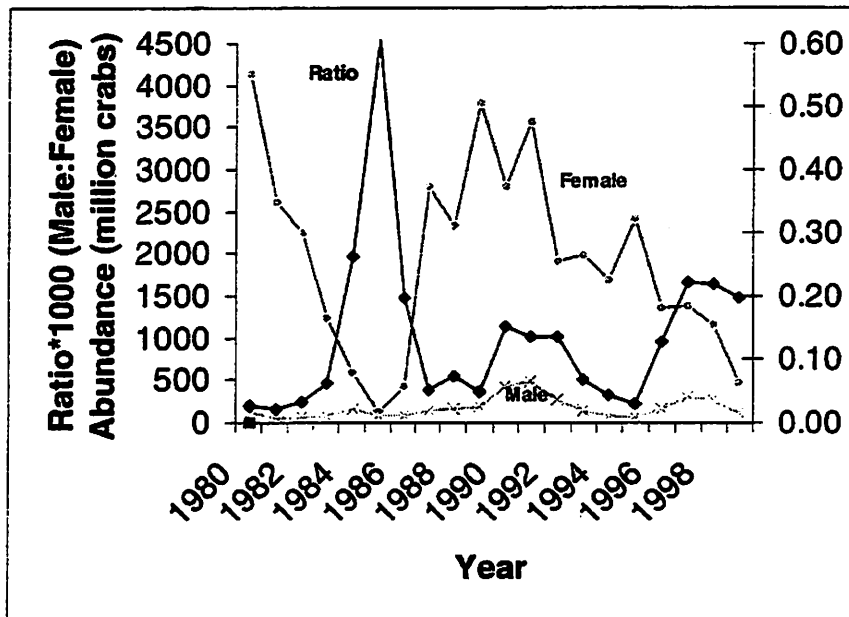
- Egg fertilization success is *subjective* and *imprecise* with high variability among readers. It is set relative to a maximum of "100%" where the absolute maximum clutch size in any one year may vary depending on the historical

experience and expertise of the individual reader. One study on red king crab found very low precision of clutch size determinations among readers.

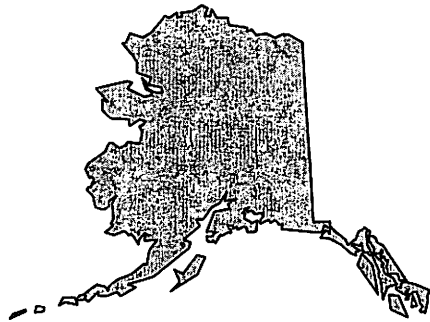
- Egg masses are not necessarily routinely enumerated to determine the fraction of fertilized versus unfertilized eggs.
- National Standard Guidelines specify that “specific, objective, and measurable definitions of overfishing be established for each fishery managed under the Magnuson-Stevens Act.” It is questionable whether overfishing definitions based on egg fertilization success can be termed “objective” and “measurable.” Imprecise measures of clutch size are unlikely to detect small to moderate reproductive failures; they may be capable to detect severe reproductive failures.
- By the time that a severe reproductive failure is detected, it means that overfishing already occurred and it’s too late to take meaningful remedial actions.
- Use of egg fertilization success as a measure of overfishing assumes that the overfishing will be manifested only as a decline in reproduction. It is *possible* that a lack of males promotes higher mortality rate of females. It is possible that males provide protection to molting females against predators. Also, there is evidence that unmated females may go through “ovarian shock” and that the metabolic cost of egg resorption is death. If high harvest rates of males cause increases in female mortality of unmated females, then use of egg fertilization rate will fail to detect overfishing.
- The report quotes Section 104-297 (29) of the MSFCMA that defines “overfishing” and “overfished” as a rate or level of fishing that jeopardizes capacity of a fishery to produce MSY on a continuing basis. But the report ignores the National Standard Guidelines that define “overfished” as a stock below a minimum stock size threshold.

	Large Males (millions)	Large Females (millions)	Sex Ratio
1980	115.2	4144.5	0.03
1981	54.5	2607.6	0.02
1982	70.2	2255.8	0.03
1983	75.3	1228.4	0.06
1984	153.2	581.7	0.26
1985	74.9	123.5	0.61
1986	83.1	422.0	0.20
1987	144.3	2795.0	0.05
1988	171.0	2322.7	0.07
1989	187.1	3790.7	0.05
1990	420.3	2798.1	0.15
1991	484.1	3575.0	0.14
1992	256.4	1914.3	0.13
1993	135.0	1982.6	0.07
1994	71.6	1674.3	0.04
1995	68.8	2409.4	0.03
1996	171.6	1364.2	0.13
1997	305.7	1383.1	0.22
1998	254.6	1160.8	0.22
1999	94.2	474.3	0.20

Mean = 0.14



**OVERVIEW OF STOCK ASSESSMENT
AND RECOMMENDED HARVEST
STRATEGY FOR ST. MATTHEW
ISLAND BLUE KING CRABS**



By
Jie Zheng and Gordon H. Kruse
Alaska Department of Fish and Game

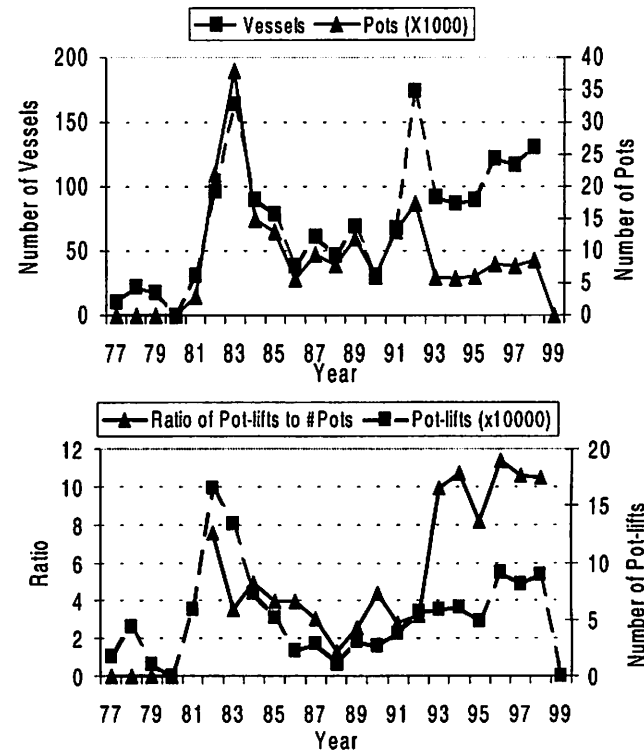
PROBLEMS

1. The stock is "overfished"
 - In 1999 mature biomass (4.8 M lbs) fell below the Minimum Stock Size Threshold (11.0 M lbs)
 - NPFMC must develop a rebuilding plan within 1 year of September 24, 1999
2. Current harvest strategy is not conservative when stocks are low: fixed 20% mature male harvest rate, low threshold of 0.6 million mature males
3. Difficult to manage small GHs with the current large fleet
4. High bycatch of females and sublegal males

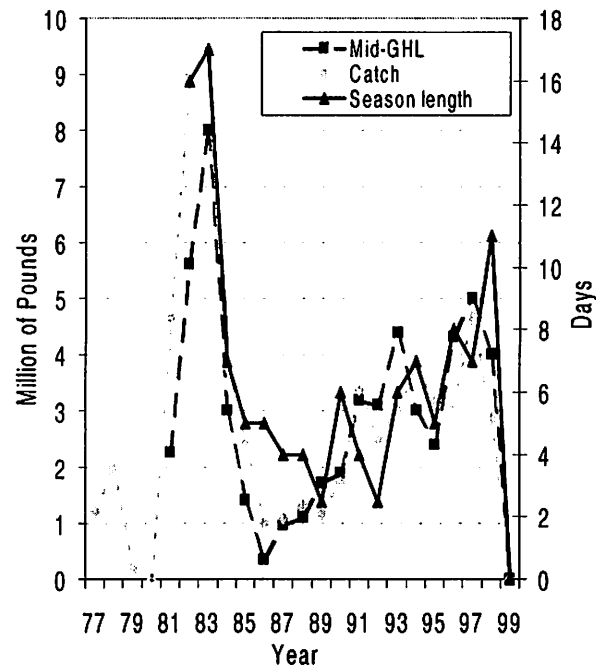
OUTLINE OF PRESENTATION

1. Review of fishery
2. Review of stock reconstruction
3. Current and proposed new harvest strategies
4. Analysis of alternative harvest strategies
5. Management recommendations

REVIEW OF FISHERY



REVIEW OF FISHERY



CATCH-SURVEY ANALYSIS (CSA)

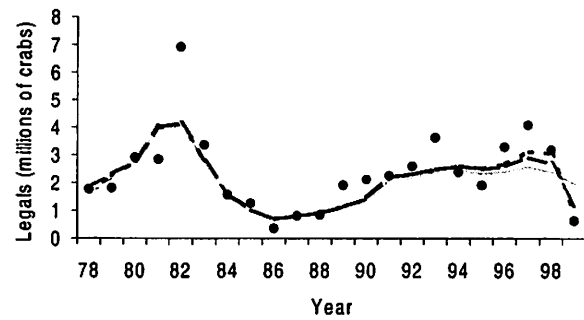
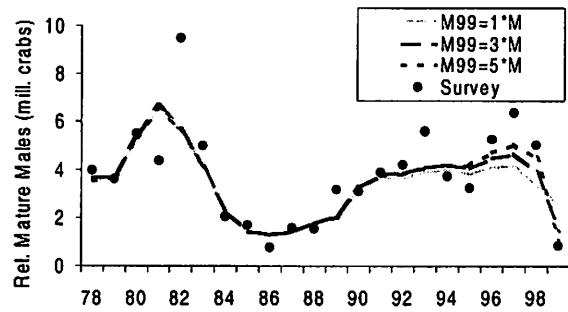
What is CSA?

- CSA is an analytical procedure to estimate annual abundance of St. Matthew Island male blue king crabs >89 mm (3.5 in) CL
- Data sources:
 - Historical data on pre-recruit 2 (90-104 mm CL), pre-recruit 1 (105-119 mm CL), recruits (120-133 mm CL, newshell), and post-recruits (>133 mm CL and 120-133 mm CL oldshell) from trawl and pot surveys
 - Annual commercial harvest
 - Growth information from tagging data

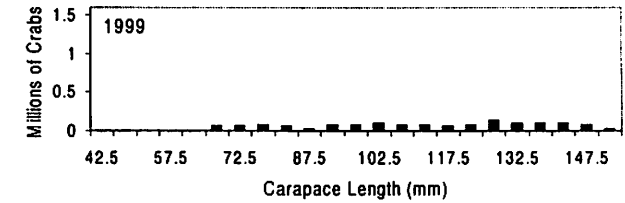
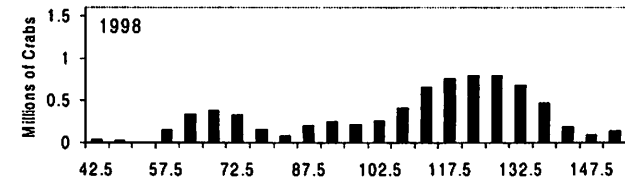
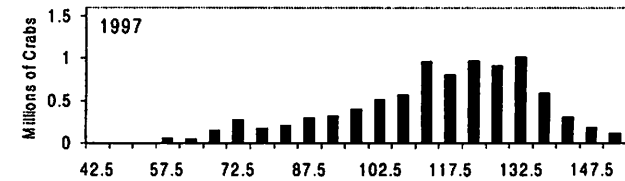
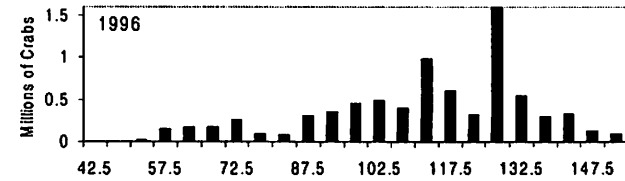
Why do we use CSA?

- Provides more precise estimates of stock abundance than area-swept estimates
- Provides framework for analysis of population dynamics and alternative harvest strategies

CATCH-SURVEY ANALYSIS



AREA-SWEPT ESTIMATES OF MALES

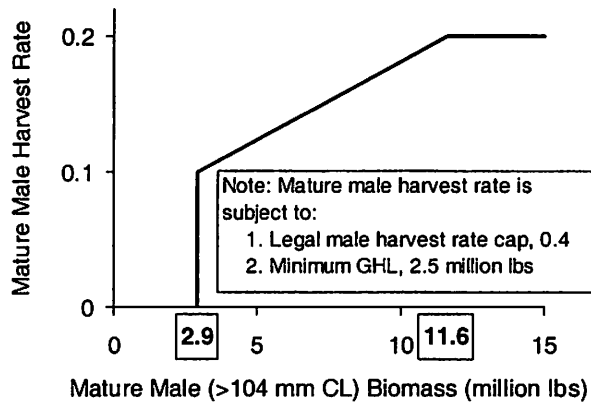


CURRENT AND PROPOSED HARVEST STRATEGIES

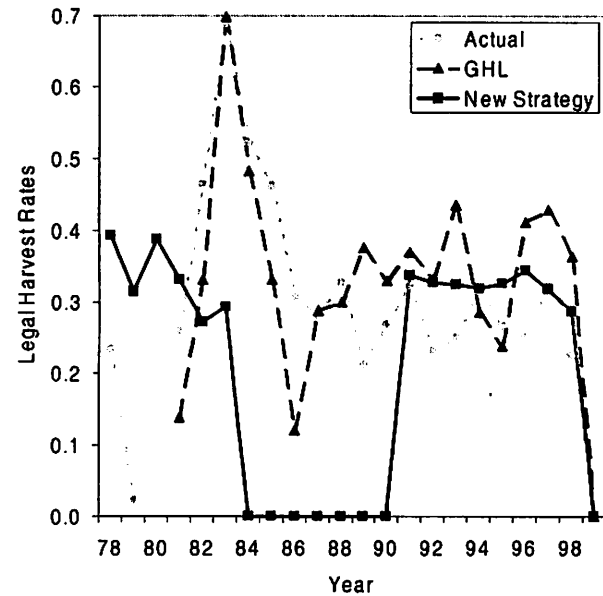
Current strategy:

- Stock threshold: 0.6 millions of mature male crabs (>104 mm CL), ≈2 million lbs
- Fixed 20% harvest rate of mature male crabs

Proposed strategy:



LEGAL HARVEST RATES UNDER CURRENT & PROPOSED STRATEGIES



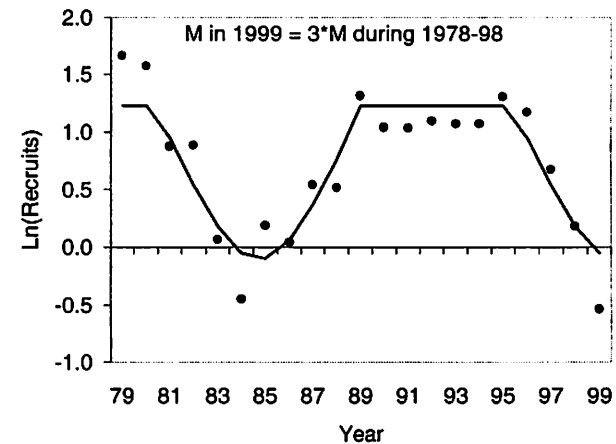
- Generally lower legal harvest rates for the proposed strategy than for the current one
- No fishery during 1984-1990 for the proposed strategy
- Conservation benefits not shown in this figure

ANALYSIS OF ALTERNATIVE HARVEST STRATEGIES

Simulation Model

- Initialize CSA with population status in 1999
- Model only males, B_{msy} (males) = 11.6 million lbs $\approx B_{msy}$ (males + females) = 22 million lbs
- 35 year simulations, 1000 replicates each
- Three approaches for male recruitment:
 - Random sampling from recruitment estimates during 1979-1999
 - Periodically semi-cyclic low recruitment (8-12 years) and high recruitment (6-10 years)
 - Autocorrelated recruitment: set as mean plus autocorrelated noise
- Handling mortality rate is 20% for crab fishery
- No bycatch from trawl or scallop fisheries

SEMI-CYCLIC RECRUITMENT TRENDS



- Recruits to the model are crabs entering pre-recruit-2 size group
- A semi-cyclic pattern with a low cycle for about 8 years (1981-88) and a period of high values for about 8 years (1989-96)
- This pattern is independent of assumptions on M in 1999
- Recruitment going down during recent years

ANALYSIS OF ALTERNATIVE HARVEST STRATEGIES

***GHL = harvest rate X mature male abundance
X mean weight of legal crabs***

Alternative harvest rate strategies:

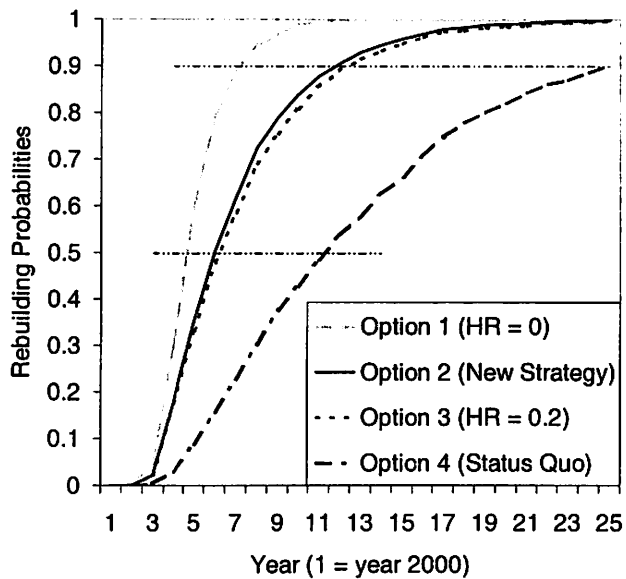
1. No fishery (harvest rate = 0)
2. Proposed harvest strategy
3. Fixed mature harvest rate of 20% with a threshold of 2.9 million lbs of mature male biomass, a minimum GHL of 2.5 million lbs, and a legal harvest rate cap of 40%
4. Status quo strategy

RESULTS OF HARVEST STRATEGY ANALYSIS

H.S. Option	Years at RP			Fishery Closure			Mean Annual Yield		
	10%	50%	90%	5-yr	10-yr	20-yr	5-yr	10-yr	20-yr
				(proportion of yr.)			(million lbs)		
1	4	5	8	1	1	1	0	0	0
2	4	6	12	0.66	0.50	0.42	1.148	1.711	2.009
3	4	7	13	0.64	0.48	0.40	1.195	1.755	2.051
4	6	12	25	<0.01	<0.01	<0.01	1.953	2.275	2.478

- Base model: random recruitment & $M_{1999} = 3 * M$
- Under base model, $T_{min} = 5$ years, $T_{target} = 6$ years, and $T_{max} = 10$ years
- Minimum GHL causes frequent closures
- Status quo creates highest fishing opportunity, produces highest mean yield, but requires longest rebuilding time
- Higher minimum GHLs shorten rebuilding time
- Autocorrelated recruitment causes long rebuilding time

REBUILDING TIMES (base model)



CONCLUSIONS

- Status of St. Matthew Is. blue king crabs:
 - Depends on natural mortality in 1999, which is uncertain
 - Near-term outlook is not very promising based on recent poor recruitment, extremely low survey abundance in 1999, and poor in-season fishery performance in 1998
 - Future trawl & pot surveys will help resolve uncertainties about this stock
- Benefits of the proposed harvest strategy:
 - Relatively short rebuilding times and high mean yield
 - Applies precautionary approach (reduced harvest rates) when stock abundance is low
 - Addresses problem of fishery manageability at low GHGs
 - Satisfies federal requirements for stock rebuilding
- The Alaska Board of Fisheries adopted the proposed harvest strategy in March 2000.

D-2

EBS *opilio* Rebuilding Plan:
Alaska Board of Fisheries Actions, March 2000

Douglas Pengilly
ADF&G
Kodiak

For:
North Pacific Fishery Management Council Meeting
10-17 April 2000
Anchorage, AK

EBS *Opilio* Rebuilding Plan: Harvest Strategy

Background:

- Timeframe for harvest strategy development:
 - late September 1999 "overfished" declaration ⇒ Sec'y approve plan by Sept 2000
 - March 2000 BOF meeting to adopt harvest strategy
 - April 2000 NPFMC initial review of rebuilding plan
 - June 2000 NPFMC final action on rebuilding plan

⇒ Insufficient time for thorough harvest strategy analysis

- Population assessment model
 - "reconstruct" stock size ← include estimates of catchability at size,
 - estimate natural mortality ← consider geographic include
 - estimate growth per molt, molting probabilities
 - Assess population, biological, environmental factors affecting recruitment
 - Model alternative harvest strategies
-
- Goal of harvest strategy adopted by BOF, March 2000:
 - Serve as an "**interim harvest strategy**" that:
 - Protects against overfishing as defined by FMP
 - Includes a rebuilding component
 - Is consistent with National Standard Guidelines and NMFS' recommendations for their implementation
 - BOF will revisit adopted strategy at March 2002 meeting
 - Receive thorough harvest strategy analysis
 - NMFS-ADF&G joint analysis
 - Adopt changes indicated as needed/warranted

EBS *Opilio* Rebuilding Plans: Harvest Strategy

Old (pre-March 2000) harvest strategy:

- Harvest 58% of males ≥ 4 " CW, as estimated from the summer NMFS EBS trawl survey
 - 4" CW is "industry standard"
 - minimum legal size is 3.1" CW
- Based on yield-per-recruit analysis
 - [REDACTED] 1970's work

New (post-March 2000) harvest strategy is based on:

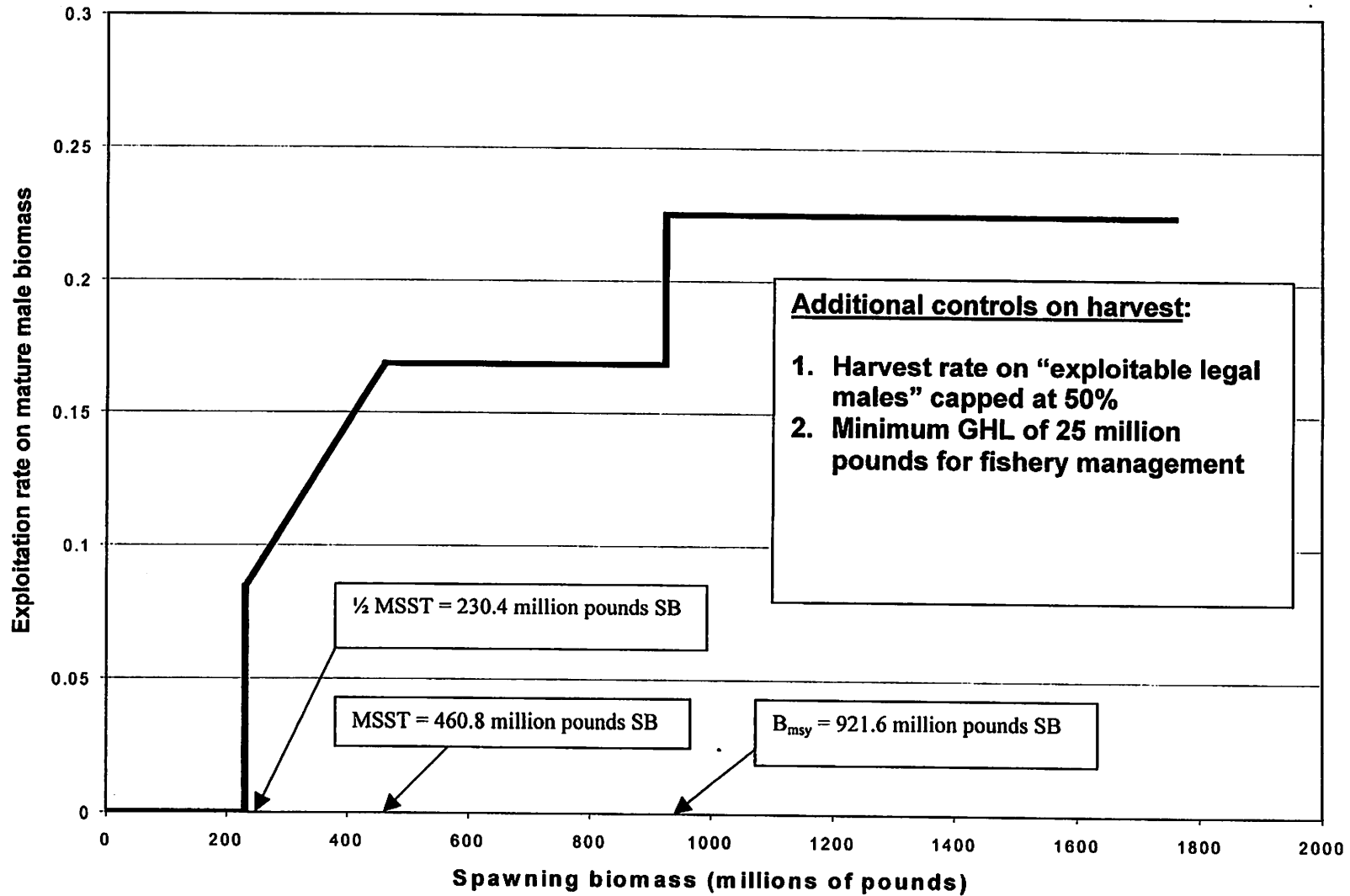
- NMFS' recommended defaults when analyses are insufficient
 - "Technical Guidance on the Use of Precautionary Approaches to Implementing National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act" (Restrepo et al. 1998)
- Constraints from FMP definitions for EBS snow crab
 - "**Overfishing**" – Fishing at a rate in excess of $F_{MSY} = 0.3$
 - Assumes natural mortality rate, m , is 0.3
 - In application, overfishing is:
 - Harvest $> 0.3 \times$ estimated spawning biomass
 - "**Overfished**" -- Estimated spawning biomass $< MSST$
 - MSST = 460.8 million pound spawning biomass
- "Borrowed" concepts from the EBS *bairdi* harvest strategy.

EBS *Opilio* Rebuilding Plans: Harvest Strategy

EBS snow crab harvest strategy adopted by BOF, March 2000:

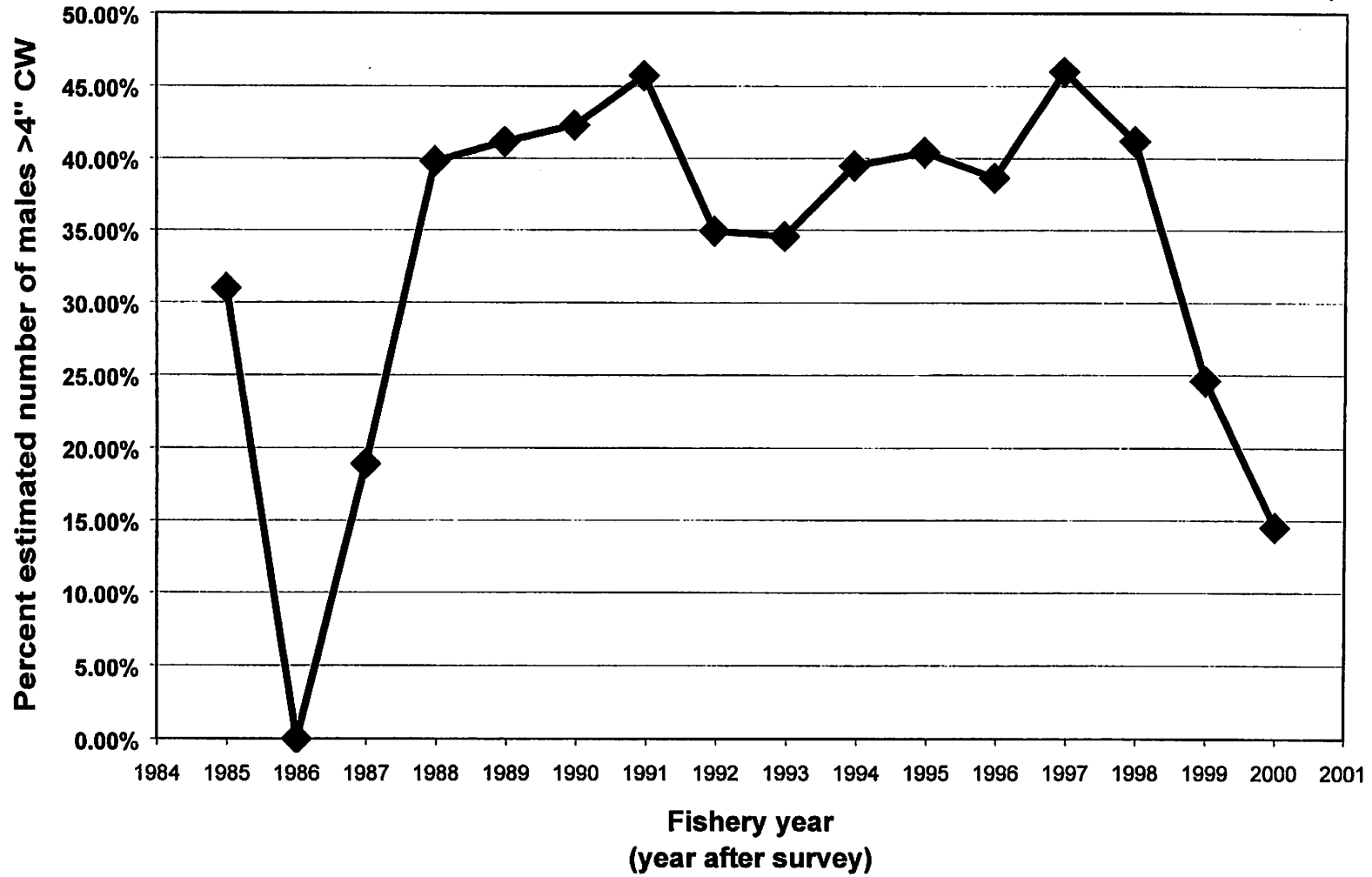
1. Exploitation rate applied to estimated mature male biomass
 - **NOT** applied to:
 - Estimated spawning biomass
 - Estimated biomass of males ≥ 3.1 " CW
 - Estimated biomass of males ≥ 4 " CW
2. Exploitation rate on mature male biomass is dependent on estimated spawning biomass (SB)
 - $0.75 \times 0.3 = 22.5\%$
 - when SB ≥ 921.6 million pounds
 - $0.75 \times 22.5\% = 16.875\%$
 - when SB ≥ 460.8 million pounds and SB < 921.6 million pounds
 - $(SB/460.8) \times 16.875\%$
 - when SB ≥ 230.4 million pounds and SB < 460.8 million pounds
 - 0% (fishery closed)
 - when SB < 230.4 million pounds.
3. Harvest rate on "exploitable legal males" capped at 50%
 - "Exploitable legal males" defined by shellage and size:
 - 100% of estimated number of newshell males ≥ 4 " CW
 - 25% of estimated number of oldshell males ≥ 4 " CW
 - Definition based on:
 - "Industry standard" minimum size = 4" CW
 - Disproportionate harvest of newshells compared to survey estimates
4. Minimum GHL threshold of 25 million pounds
 - GHLS < 25 million pounds may not be manageable

**EBS snow crab harvest strategy adopted by BOF March 2000:
Determination of exploitation rate on mature male biomass**



**Harvest rate on males >4" CW under new harvest strategy
for historic population conditions**

*Doesn't
include
my
harvest
B Smillim*



Results of rebuilding simulation for three scenarios. Each scenario was run with random recruitment and with autocorrelated recruitment. RP is rebuilding probability.

	Years of RP>=			Probability of Fishery Closure ¹			Mean Annual Yield (million lbs.)			Mean Time to Rebuild (yr.)
	Random Recruitment									
Scenario	10%	50%	90%	5 yr.	10 yr.	20 yr.	5 yr.	10 yr.	20 yr.	
No Fishing Mortality	5	7	11	0.97	0.66	0.34	1.6	29.3	57.0	7.8
New Harvest Strategy	6	8	14	<0.01	<0.01	<0.01	22.4	44.1	64.1	9.2
Status Quo	6	8	17	0.07	0.04	0.02	27.1	56.7	81.0	10.0
Autocorrelated Recruitment										
Scenario	10%	50%	90%	5 yr.	10 yr.	20 yr.	5 yr.	10 yr.	20 yr.	
No Fishing Mortality	6	11	23	>0.99	0.85	0.56	0.0	13.1	39.0	13.2
New Harvest Strategy	7	12	28	0.06	0.05	0.03	16.6	30.0	50.3	15.1
Status Quo	7	13	29	0.32	0.18	0.10	19.2	38.2	65.8	15.7

¹ Fishery closed when SB<230.4 million pounds.

EBS *Opilio* Rebuilding Plans: Harvest Strategy

Recap on new harvest strategy:

- Protects against overfishing as defined in FMP
- Low exploitation rate on mature males at low stock levels
- Addresses manageability with minimum GHL
- Limited modeling indicates new harvest strategy:
 - Promotes rebuilding relative to old strategy
 - More effective in avoiding overfished state during ^{expected} recruitment failures
 - Reduction in time to rebuilding slight (1 year)
 - Reduces long-term harvest to 80% of old strategy

EBS *Opilio* Rebuilding Plans: Bycatch controls

Background:

- opilio fishery accounts for >90% of annual estimated opilio bycatch
 - Estimated 33-million to 69-million annually in 1995-1999
- Characteristics of opilio bycatch
 - legal males (≥ 3.1 " CW) smaller than 4" industry standard are estimated to account for 70% to 98% of annual bycatch
 - predominately mature males
 - estimated 25% to 40% of captured legals discarded annually
- Pre-existing bycatch controls for opilio fishery:
 - Four 3.75-inch diameter rings installed on vertical surface of pot
 - or –
 - Five-inch stretched mesh on 1/3 of one vertical surface of pot
 - Not sufficiently ~~x~~ to allow for escape of males 3.75" to 4" CW
 - Did not stipulate placement of rings to facilitate escape

Table. Estimated catch per pot (CPUE) of snow and Tanner crabs from pot lifts sampled by observers deployed on catcher-processors during the 1995 through 1999 Bering Sea snow crab fisheries. (Source: ADF&G Mandatory Shellfish Observer Program)

	Fishery season				
	1995	1996	1997	1998	1999
<u>Snow crabs</u>					
retained legal males	110.00	117.90	133.92	167.19	125.60
non-retained legal males	65.20	75.35	91.95	60.62	47.00
sublegal males	26.25	11.06	4.96	2.41	0.92
females	1.25	0.42	1.35	0.09	0.11
<u>Tanner crabs</u>					
males	7.30	4.68	5.10	5.16	1.41
females	2.82	1.47	0.89	0.58	0.60

EBS *Opilio* Rebuilding Plans: Bycatch controls

New gear regulations adopted by BOF, March 2000:

A pot must have:

- Four 4-inch rings within one mesh of bottom of pot on each of two sides of the pot

-or-

- One half of one side panel fit with 5¼-inch stretched mesh



Alaska Marine Conservation Council

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April 12, 2000

Chairman Richard Lauber
North Pacific Fishery Management Council
605 West 4th Avenue
Anchorage, Alaska 99501

RE: D-2 Crab Rebuilding Plans

Dear Chairman Lauber,

In the Fall of 1999, NMFS declared two more Bering Sea crab populations 'overfished': St. Matthew Blue King Crab, and Bering Sea Opilio Crab. These crab populations are at significantly low levels.

Responsible fisheries management must ensure that any fisheries conducted will not exacerbate the precipitous decline recently experienced with these crab. Uncertainty abounds in our understanding of the basic biology of crab and their habitat requirements. A precautionary approach to rebuild crab stocks includes at least three elements: a revised harvest strategy, bycatch reduction, and habitat protection measures.

St. Matthew Blue King Crab

We support the following elements of the proposed rebuilding plan for St. Matthew blue king crab. 1) A revised harvest strategy that reflects more conservative harvest rates at low population levels, 2) bycatch reduction in both the directed crab fisheries and in the groundfish trawl fisheries with the establishment of a PSC limit in the groundfish fisheries, and 3) habitat protection in state waters, and we encourage additional habitat analysis to detect any vulnerable blue king crab habitat that may warrant protection outside the state's three-mile waters.

Bering Sea Opilio Crab

The opilio crab population is at a significantly low level of abundance. Scientific knowledge about these crabs is greater than ever, yet we must accept that there may be important understanding that we don't yet have. It is this level uncertainty surrounding the population and the effects of changing natural conditions on it that mandate a precautionary approach to assure rebuilding

On p. 4, the document describes the serious nature of opilio crab's decline:

This stock is currently near historical low abundance. The 1999 estimates of total stock abundance is the second lowest in the history of the NMFS bottom trawl survey. The near term outlook for the stock is bleak, as the 1999 survey encountered very few crab of any size.

Even if these crab are capable of a huge rebound as was thought to occur in the mid-1980s, there are no guarantees that this will happen. In order for the opilio population to recover now, can we count on similar environmental influences, and *no effect* from any of the groundfish fisheries?

Fisheries management is constantly making decisions in the face of limited scientific information. When populations are in high abundance, the risk of erring in overharvest is minimal. When the population are in low abundance or at the near-recorded low abundance, than the risk of excessive harvest or other human-induced mortality increases significantly.

Bycatch and Habitat Considerations for Opilio Crab

The analysis discusses levels of bycatch mortality induced both in the directed crab fishery and in the groundfish fisheries. AMCC supports measures to minimize all bycatch in all fisheries. We agree that reduction must occur, and they must be meaningful.

The maps showing bycatch by year and type of fishery should be broken down by month and directed fishery. The tables showing bycatches suggest that highest levels occur in the flatfish, yellowfin sole, and cod trawl fisheries, mostly in statistical areas 509 and 513. A more refined analysis of the existing data may help illuminate areas and season where opilio-crabs are vulnerable to trawling.

Under Bycatch Controls, Option 2 eliminates the minimum PSC cap of 4.5 million opilios, but allows the same upper level of 13 million opilios. We suggest adding an option make an effective reduction of bycatch that remove the minimum PSC cap, *and* adjust PSC cap levels to overall opilio abundance levels.

The analysts admit that, "Bycatch caps, particularly in fisheries that use gear that is potentially destructive to habitat, *may be the most effective means to protect the habitat of stocks from fishery impacts when habitat requirements and vulnerability are poorly understood*" (p. 37-emphasis added).

We appreciate the greater attention given to habitat in the analysis. In considering habitat protection for opilio crab, the analysts looked closer at the bycatch in different types of fisheries. While this was an important step, we recommend taking the analysis to another level of detail that would look at bycatch data (rate and amount) in the groundfish fisheries by target fishery, by month, by area for the last five years. This information should be cross-referenced to directed crab fishery data. It would make sense to begin with those groundfish fisheries already identified as having amounts of opilio crab bycatch. The analysis names groundfish trawl fisheries, primarily the

yellowfin sole and rock sole fisheries, as being responsible for "between 89% and 96% of the total observed bycatch of snow crab from 1995-1999" (p. 26).

RECOMMENDATIONS:

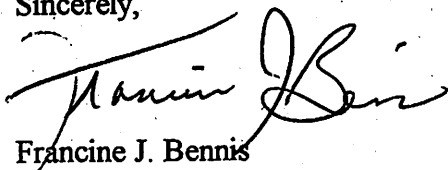
Support the following elements in Alternative 2:

- Harvest Strategy: **Option 2** that accepts the ADFG's revised harvest strategy that would reduce harvest rates at lower biomass levels and incorporates new threshold abundance levels.
- Bycatch Controls: **Reduce the snow crab PSC limit in a meaningful way.** The current limits were established in 1996 when the abundance estimate was 5.2 billion crabs. The 1999 abundance estimate is roughly 1.4 billion crabs, or slightly more than 25% of the 1996 levels. **The snow crab PSC limit should be lowered when crab biomass is at a low level.**
- Habitat Protection: Expand the habitat component of the rebuilding plans to provide more in-depth analysis for informing management decisions to better protect crab habitat during recovery period:
 - **ADD Option 3:** Expand analysis to a comprehensive look at existing data. Create maps to overlay groundfish bycatch data, survey data, and crab fishery data by month and area for the last five years.
 - Expand description of habitat, including prey composition. Analyze which fisheries overlap with this habitat that adversely affect these prey assemblages.

The uncertainty that surrounds the state of knowledge for opilios coupled with a depleted stock requires us to be very precautionary in managing this fishery and other fisheries that can affect opilios. The law requires a rebuilding plan. In this plan must be measures to modify harvest rates, reduce bycatch in both in target and non-target fisheries, and protect habitat that is important for sensitive life stages of these crab.

Prudent measures taken now may well support future fisheries, and the people that depend on them.

Sincerely,



Francine J. Bennis



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March 14, 2000

Preliminary Draft Legislative Proposal

As you know, the ACC has been actively participating in the committee process led by David Fluharty and Kevin O'Leary aimed at the development of a plan to address the crisis confronting the Bering Sea crab fisheries and dependent communities. This process has stimulated a great deal of constructive thinking, and the ACC deeply appreciates the contributions of the Co-Chairmen and members of those committees.

The ACC has prepared, for the consideration of all concerned, a preliminary draft legislative proposal, which is attached. In deciding to take this step, the ACC was driven by the fact that congressional action must begin to take shape very soon, if anything is to be achieved this year for our fisheries and affected communities. We were also aware of the fact that other fisheries and communities are already being addressed by Congress, and that delay on the part of the BSAI crab industry and dependent communities would put us at a comparative disadvantage. The question is not one of whether Congress will address fisheries issues before the fall elections, but rather, of which fisheries will be the subjects of what legislative action.

You will see that also included in the draft legislation are provisions aimed at providing a solution to the crisis facing the West Coast groundfish fisheries and the dependent communities in California, Oregon, and Washington. These provisions were developed by the FVOA and DSFU, taking into account, among other things, certain proposals already submitted to Congress by those States and the Pacific States Marine Fisheries Commission. The reason for the ACC developing a joint package with the FVOA and DSFU was the need to present key congressional delegations with a package that could be viewed as presenting a balanced and otherwise realistic response to the similar sorts of problems facing fisheries constituents, while taking into account the differing circumstances in the North Pacific and Pacific Council areas.

The draft legislation reflects some very difficult choices, including a number of proposed compromises. The ACC fully expects that these choices will provoke controversy, and that tough negotiations will be necessary. However, it is hoped that the draft will be viewed as containing constructive treatment of the elements that should be addressed expeditiously by the affected industries and communities, and by Congress in legislation this year.

You will note that there are areas that are not addressed in the draft. The ACC felt that these were better addressed, in the first instance, by others. You will also find language in square brackets. The brackets are intended to signify important unresolved issues.

We hope that you will take the time to review this draft. We would be grateful to have your comments.

Arni Thomson
Executive Director

PRELIMINARY DRAFT

3-14-00
1300

A BILL

To provide for the emergency relief and sustained recovery of certain fisheries and fishery dependent communities, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SEC. 1. SHORT TITLE.

This Act may be cited as the "American Fisheries Recovery Act".

SEC. 2. FINDINGS AND PURPOSES.

(a) **FINDINGS.**—The Congress finds and declares the following:

- (1) Fish harvesting and processing capacity greatly exceeds the sustainable level of fishing and processing in major fisheries.
- (2) Excessive investments in both harvesting and processing have been, and continue to be, stimulated by government programs initiated when the nation's fisheries were underutilized by its citizens.
- (3) Excessive harvesting capacity leads to intense fishing in short fishing seasons, with adverse consequences for the safety of fishermen, the conservation of resources, and the economic viability of the affected industry and fishery dependent communities.
- (4) Excessive processing capacity, which correlates directly with excessive harvesting capacity, leads to inefficiencies, depressed revenues, and economic dislocation in fishery dependent communities.
- (5) Communities dependent on major fisheries that are in depressed or declining condition are suffering increasingly serious hardship.
- (6) To reduce excessive capacity and, thus, to promote improved safety, conservation, and economic benefits, the federal government must

fundamentally redirect fishery-related financial programs from stimulating increased investment to encouraging reduced investment.

- (7) Uncertainties regarding the impact of excessive harvesting capacity on interrelated fishery resources reduce management effectiveness and thereby contribute to conservation failures.
- (8) Reduction of harvesting and processing capacity is necessary, but not sufficient, to achieving sustainable fisheries and restoring the economic and social health of fishery dependent communities; emergency relief assistance, improved scientific research, increased utilization of fisheries observers, and additional management tools, including where appropriate, individual fishing quota programs and fishery cooperatives, are also needed.
- (9) The federal government should accord a high priority to addressing major fisheries that are in seriously depressed or declining condition, because they present the greatest risks to the safety of fishermen, the conservation of fishery resources, and the economic viability of fishery dependent communities.

(b) PURPOSES.—It is therefore declared to be the purposes of the Congress in this Act—

- (1) to provide for the reduction of excess harvesting and processing capacity through the appropriate utilization of fishery-related federal loans to buy out harvesting licenses; the reform of certain tax incentives in order to discourage investments that increase harvesting capacity and to encourage the downsizing of fishing fleets; and the selective authorization of individual fishing quotas and the establishment of innovative fishery cooperatives to achieve improved safety, conservation, efficiency, and increased economic contributions to fishery dependent communities;
- (2) to provide emergency relief assistance to, and longer term programs for sustained economic and social recovery of, those fishery dependent communities most severely affected by depressed and declining major fisheries;

- (3) to increase public investment in fisheries research, and to authorize the establishment of, and to provide for adequate funding for, fisheries observers; and
- (4) otherwise to provide for the return of major fisheries to sustainable levels of fishing and processing and for the relief and long-term economic and social recovery of fishery dependent communities.

SEC. 3. DEFINITIONS.

As used in this Act—

- (1) the term “catcher vessel” means a vessel used for harvesting crab but does not process crab onboard;
- (2) the term “catcher/processor vessel” means a vessel that is used for harvesting and processing crab;
- (3) the term “Crab Fishery Management Plan Fishery” means the fishery management plan, and amendments thereto, established under section 303 of the Magnuson-Stevens Act (16 U.S.C. 1853) for crab fisheries of the Bering Sea/Aleutian Islands;
- (4) the term “Crab License Limitation Program” means the license limitation program for Bering Sea/Aleutian Islands crab fisheries recommended by the North Pacific Council and approved by the Secretary;
- (5) the term “harvest” means to commercially engage in the catching, taking, or harvesting of fish or any activity that can reasonably be expected to result in the catching, taking, or harvesting of fish.
- (6) the term “Magnuson-Stevens Act” means the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.);
- (7) the term “North Pacific Council” means the North Pacific Fishery Management Council established under section 302(a)(1)(G) of the Magnuson-Stevens Act (16 U.S.C. 1852(a)(1)(G));
- (8) the term “Pacific Council” means the Pacific Fishery Management Council established under section 302(a)(1)(F) of the Magnuson-Stevens Act (16 U.S.C. 1852(a)(1)(F));

- (9) the term "Secretary" means the Secretary of Commerce; and
- (10) the term "shoreside processor" means any person or vessel that receives unprocessed fish (including vessels in Alaska State waters), except catcher/processors, buying stations, restaurants, or persons receiving fish for personal consumption or bait.

TITLE I—PACIFIC COAST GROUND FISH FISHERIES

SEC. 101. AUTHORIZATION OF INDIVIDUAL FISHING QUOTAS.—

Notwithstanding section 303(d)(1) of the Magnuson-Stevens Act (16 U.S.C. 1853(d)(1)), the Pacific Council may recommend and the Secretary may approve and implement a system of individual fishing quotas for any groundfish fishery under the authority of such Council as provided by section 302(a)(1)(F) of the Magnuson-Stevens Act (16 U.S.C. 1852(a)(1)(F)).

SEC. 102. OBSERVER PROGRAM

(a) Strike section 313 of the Magnuson-Stevens Act (16 U.S.C. 1862) and insert in lieu thereof the following:

"SEC. 313. FISHERIES OBSERVER PLANS.

(a) IN GENERAL.—The North Pacific Council or the Pacific Council may prepare, in consultation with the Secretary, a fisheries research plan for any fishery under the appropriate Council's jurisdiction, except salmon fisheries, which—

- (1) requires that observers be stationed on fishing vessels engaged in the catching, taking, or harvesting of fish and on United States fish processors fishing for or processing species under the jurisdiction of the Council, including as appropriate, the Northern Pacific halibut fishery, for the purpose of collecting data necessary for the conservation, management, and scientific understanding of any fishery under the Council's jurisdiction; and

(2) establishes a system of fees to pay for the costs of implementing the plan.

(b) STANDARDS.—

(1) Any plan or plan amendment prepared under this section shall be reasonably calculated to—

(A) gather reliable data, by stationing observers on all or a statistically reliable sample of the fishing vessels and United States fish processors included in the plan, necessary for the conservation, management, and scientific understanding of the fisheries covered by the plan;

(B) be fair and equitable to all vessels and processors;

(C) be consistent with applicable provisions of law; and

(D) take into consideration the operating requirements of the fisheries and the safety of observers and fishermen.

(2) Any system of fees established under this section shall—

(A) provide that the total amount of fees collected under this section not exceed the combined cost of (i) stationing observers on board fishing vessels and United States fish processors, (ii) the actual cost of inputting collected data, and (iii) assessments necessary for a risk-sharing pool implemented under subsection (e) of this section, less any amount received for such purpose from another source or from an existing surplus in the North Pacific Fishery Observer Fund or the Pacific Fishery Observer Fund, as appropriate, established in subsection (d) of this section;

(B) be fair and equitable to all participants in the fisheries under the jurisdiction of the Council, including as appropriate, the Northern Pacific halibut fishery;

(C) provide that fees collected not be used to pay any costs of administrative overhead or other costs not directly incurred in carrying out the plan;

(D) not be used to offset amounts authorized under other provisions of law;

(E) be expressed as a percentage, not to exceed 2 percent, of the unprocessed ex-vessel value of the fish and shellfish harvested under the jurisdiction of the Council, including as appropriate, the Northern Pacific halibut fishery;

(F) be assessed against all fishing vessels and United States fish processors, including those not required to carry an observer under the plan, participating in fisheries under the jurisdiction of the Council, including as appropriate, the Northern Pacific halibut fishery;

(G) provide that fees collected will be deposited in the North Pacific Fishery Observer Fund or the Pacific Fishery Observer Fund, as appropriate, established under subsection (d) of this section;

(H) provide that fees collected will only be used for implementing the plan established under this section; and

(I) meet the requirements of section 9701 (b) of title 31, United States Code.

(c) ACTION BY SECRETARY.—

(1) Within 60 days after receiving a plan or plan amendment from the North Pacific Council or the Pacific Council under this section, the Secretary shall review such plan or plan amendment and either—

(A) remand such plan or plan amendment to the appropriate Council with comments if it does not meet the requirements of this section, or

(B) publish in the Federal Register proposed regulations for implementing such plan or plan amendment.

(2) During the 60-day public comment period, the Secretary shall conduct a public hearing in each State represented on the appropriate Council for the purpose of receiving public comments on the proposed regulations.

(3) Within 45 days of the close of the public comment period, the Secretary, in consultation with the appropriate Council, shall analyze the public comment received and publish final regulations for implementing such plan.

(d) **FISHERY OBSERVER FUND.**—There are established in the Treasury a North Pacific Fishery Observer Fund and a Pacific Fishery Observer Fund. Each Fund shall be available, without appropriation or fiscal year limitation, only to the Secretary for the purpose of carrying out the provisions of this section, subject to the restrictions in subsection (b)(2) of this section. Each Fund shall consist of all monies deposited into it in accordance with this section. Sums in each Fund that are not currently needed for the purposes of this section shall be kept on deposit or invested in obligations of, or guaranteed by, the United States.

(e) **SPECIAL PROVISIONS REGARDING OBSERVERS.**—

(1) The Secretary shall review--

(A) the feasibility of establishing a risk sharing pool through a reasonable fee, subject to the limitations of subsection (b)(2)(E) of this section, to provide coverage for vessels and owners against liability from civil suits by observers, and

(B) the availability of comprehensive commercial insurance for vessel and owner liability against civil suits by observers.

(2) If the Secretary determines that a risk sharing pool is feasible, the Secretary shall establish such a pool, subject to the provisions of subsection (b)(2) of this section, unless the Secretary determines that--

(A) comprehensive commercial insurance is available for all fishing vessels and United States fish processors required to have observers under the provisions of this section, and

(B) such comprehensive commercial insurance will provide a greater measure of coverage at a lower cost to each participant.”

(f) **INTERIM FEDERAL FUNDING.**— There are authorized to be appropriated \$[4.5] million in each of the fiscal years 2001, 2002, 2003 and 2004, for the purposes of

conducting an observer program for groundfish fisheries under the authority of the Pacific Council.

SEC. 103. AUTHORIZATION FOR RESEARCH; STUDIES; STATE PROGRAMS.—

There are authorized to be appropriated for fiscal year 2001 with respect to groundfish fisheries under the authority of the Pacific Council:

- (a) \$7,700,000 for scientific research;
- (b) \$2,500,000 for studies; and
- (c) \$700,000 for State programs.

SEC. 104. BUYOUT OF GROUND FISH LICENSES.

(a) **PLAN.**—Subject to the provisions of this section, the Secretary shall approve and fully implement any plan submitted jointly by the Governors of California, Oregon, and Washington and the Pacific States Marine Fisheries Commission for a buyout of licenses in groundfish fisheries under the authority of the Pacific Council.

(b) **FEDERAL LOAN.**—Under the authority of sections 1111 and 1112 of Title XI of the Merchant Marine Act, 1936 (46 U.S.C. App. 1279f and 1279g) and notwithstanding the requirements of section 312 of the Magnuson-Stevens Act (16 U.S.C. 1861a), the Secretary shall, subject to the availability of appropriations for the cost of the direct loan, provide up to \$100 million through a direct loan obligation for the buyout of licenses in accordance with this section.

(c) **INDUSTRY FEE SYSTEM.**—Notwithstanding the requirements of sections 304(d) and 312 of the Magnuson-Stevens Act (16 U.S.C. 1854(d) and 1861a), the Secretary of Commerce shall establish a fee for the repayment of the loan obligation provided by subsection (b) which—

- (1) shall be [];
- (2) shall begin on or after January 1, 2005, and continue without interruption until any portion of such loan remaining outstanding is fully repaid; and
- (3) shall be collected in accordance with section 312(d)(2)(C) of the Magnuson-Stevens Act (16 U.S.C. 1861a(d)(2)(C)) and in accordance with such other conditions as the Secretary establishes.

(d) **FEDERAL APPROPRIATION.**—Under the authority of section 312(c)(1)(B) of the Magnuson-Stevens Act (16 U.S.C. 1861a(c)(1)(B)), there are authorized to be appropriated for fiscal year 2000, \$3 million for the planning and implementation of the buyout provided by this section, and in each of the fiscal years 2001, 2002, 2003, 2004, \$15 million for the retirement of all or a portion of the loan provided under subsection (b).

(e) **REQUIREMENTS FOR BUYOUT.**—The following conditions and procedures shall apply to a buyout pursuant to this section--

- (1) All holders of licenses in any groundfish fishery covered by the plan referred to in subsection (a) shall be eligible to participate in the buyout provided by this section.
- (2) Any license holder eligible under paragraph (1) may submit to the Secretary an offer to relinquish, for a specified sum of money, a license for permanent revocation.
- (3) The Secretary shall require that each offer in accordance with paragraph (2) shall be accompanied by a statement of the catch for the years [] of the vessel for which the license was issued.
- (4) The Secretary shall conduct a buyout in such a manner that the payments made in accordance with subsection (g) result in the permanent revocation of those licenses that represent cumulatively the highest level of production for the years reported pursuant to paragraph (3).
- (5) By receiving payment for relinquishment of a license in accordance with this section, a holder relinquishes any claim associated with the license and vessel used to harvest groundfish under the license that could qualify such holder for any present or future limited access system license in any groundfish fishery to which the plan referred to in paragraph (a) applies.
- (6) Participation in the buyout shall be voluntary, but the Secretary shall ensure compliance by all who do participate.

(f) **PAYMENTS BY THE SECRETARY.**—Subject to the availability of appropriations for the cost of the direct loan under subsection (b) and funds under subsection (d), the Secretary shall, by not later than 90 days after receipt of the plan

referred to in paragraph (a), make payments pursuant to a buyout in accordance with this section.

(g) PROGRAM DEFINED; MATURITY.—For the purposes of section 1111 of Title XI of the Merchant Marine Act, 1936 (46 U.S.C. App. 1279f), the buyout in this section shall be within the meaning of “program” as defined and used in such section. Notwithstanding section 1111(b)(4) of such Act (46 U.S.C. App. 1279f(4)), the debt obligation under subsection (a) may have a maturity not to exceed 30 years, except that the maturity may be extended one year for each season that groundfish fishery to which this section applies is closed.

(h) REDISTRIBUTION OF CATCH HISTORY.—The catch history of all vessels with respect to which a license has been permanently revoked under this section shall be distributed to the license holders who remain in the fishery to which that history applied. The distribution of such catch history to such license holder shall be in proportion to the percentage of the total catch of such fishery during the years [] for a vessel owned by such license holder.

SEC. 105. COMMUNITY RECOVERY.

(a) AUTHORIZATION.—There are authorized for fiscal year 2000 \$3,500,000 for the Economic Development Administration for assistance to communities adversely affected by the depressed groundfish fisheries under the authority of the Pacific Council.

(b) [RESERVED].

SEC. 106. SEVERABILITY.—If any provision of this title, an amendment made by this title, or the application of such provision or amendment to any person or circumstance is held to be unconstitutional, the remainder of this title, the amendments made by this title, and the application of the provisions of such to any person or circumstance shall not be affected thereby.

TITLE II—BERING SEA/ALEUTIAN ISLANDS CRAB FISHERIES

SEC. 201. BUYOUT OF CRAB LICENSES.

(a) **FEDERAL LOAN.**—Under the authority of sections 1111 and 1112 of Title XI of the Merchant Marine Act, 1936 (46 U.S.C. App. 1279f and 1279g) and notwithstanding the requirements of section 312 of the Magnuson-Stevens Act (16 U.S.C. 1861a), the Secretary shall, subject to the availability of appropriations for the cost of the direct loan, provide up to \$100 million through a direct loan obligation for the buyout of Bering Sea/Aleutian Islands crab licenses in accordance with this section.

(b) **INDUSTRY FEE SYSTEM.**—Notwithstanding the requirements of sections 304(d) and 312 of the Magnuson-Stevens Act (16 U.S.C. 1854(d) and 1861a), the Secretary of Commerce shall establish a fee for the repayment of the loan obligation provided by subsection (a) which—

- (1) shall be one cent for each pound of all crab harvested [and retained] from each Crab Fishery Management Plan Fishery to which the buyout under this section applies;
- (2) shall begin with such crab harvested [and retained] on or after January 1, 2001, and continue without interruption until any portion of such loan remaining outstanding is fully repaid; and
- (3) shall be collected in accordance with section 312(d)(2)(C) of the Magnuson-Stevens Act (16 U.S.C. 1861a(d)(2)(C)) and in accordance with such other fair and reasonable conditions as the Secretary establishes.

(c) **AUTHORIZATION.**—Under the authority of section 312(c)(1)(B) of the Magnuson-Stevens Act (16 U.S.C. 1861a(c)(1)(B)), there are authorized to be appropriated for fiscal year 2001 \$[60] million for retirement of all or a portion of the loan provided pursuant to subsection (a).

(d) **FEDERAL CREDIT REFORM ACT COST.**—The cost previously appropriated in Public Law 105-277 for a loan of up to \$100 million under section 312 of the Magnuson-Stevens Act (16 U.S.C. 1861a), shall not be so applied, but shall be applied to the direct loan obligation provided for in subsection (a) and shall remain available until expended.

(e) **REQUIREMENTS FOR BUYOUT.**—The following conditions and procedures shall apply to a buyout pursuant to this section—

- (1) All holders of licenses in any Crab Fishery Management Plan Fishery to which the buyout under this section applies shall be eligible to participate in such buyout.
- (2) Any license holder eligible under paragraph (1) may submit to the Secretary an offer to relinquish, for a specified sum of money, a license for permanent revocation.
- (3) The Secretary shall require that each offer in accordance with paragraph (2) shall be accompanied by a statement of the catch for the years 1988 through 1999 of the vessel for which the license was issued.
- (4) The Secretary shall conduct a buyout in such a manner that the payments made in accordance with subsection (f) result in the permanent revocation of those licenses that represent cumulatively the highest level of production for the years reported pursuant to paragraph (3).
- (5) By receiving payment for relinquishment of a license in accordance with this section, a holder relinquishes any claim associated with the license and vessel used to harvest crab under the license that could qualify such holder for any present or future limited access system license in any Crab Fishery Management Plan Fishery.
- (6) Participation in the buyout shall be voluntary, but the Secretary shall ensure compliance by all who do participate.

(f) **IMPLEMENTATION BY THE SECRETARY.**—Subject to the availability of appropriations for the cost of the direct loan under subsection (a) and funds under subsection (c), the Secretary shall conduct the buyback under this section so that bought out licenses will be permanently revoked by not later than December 1, 1999.

(g) **PROGRAM DEFINED; MATURITY.**—For the purposes of section 1111 of Title XI of the Merchant Marine Act, 1936 (46 U.S.C. App. 1279f), the buyout in this section shall be within the meaning of “program” as defined and used in such section. Notwithstanding section 1111(b)(4) of such Act (46 U.S.C. App. 1279f(4)), the debt obligation under subsection (a) may have a maturity not to exceed 30 years, except that the maturity may be extended one year for each season that a Crab Fishery Management Plan Fishery to which the loan applies is closed.

(h) **REDISTRIBUTION OF CATCH HISTORY.**—The catch history of all vessels with respect to which a license has been permanently revoked under this section shall be distributed to the license holders who remain in the fishery to which that history applied. The distribution of such catch history to each such license holder shall be in proportion to the percentage of the total catch of such fishery during the years 1988 through 1999 for a vessel owned by such license holder.

SEC. 202. BERING SEA/ALEUTIAN ISLANDS AREA CRAB FISHERY COOPERATIVES.

(a) **ANTITRUST IMMUNITY.**—The Fisherman's Collective Marketing Act of 1934 (15 U.S.C. 521) shall apply to fishery cooperatives that are subject to this title.

(b) **REQUIREMENTS AND LIMITATIONS.**—Subject to the following requirements and limitations, fishery cooperatives may be established between catcher vessels, whether owned independently or by shoreside processors, between such catcher vessels and catcher/processor vessels, and between catcher/processor vessels, that participate in any Crab Fishery Management Plan Fishery:

(1) **PUBLIC NOTICE.**—Any contract implementing a fishery cooperative under the Fisherman's Collective Marketing Act of 1934 (15 U.S.C. 521) and this title, and any material modifications to any such contract, together with a copy of a letter from a party to the contract requesting a business review letter on the fishery cooperative from the Department of Justice and any response to such request, shall be filed with the North Pacific Council and the Secretary not less than 30 days prior to the start of fishing under the contract. Notwithstanding section 402 of the Magnuson-Stevens Act (16 U.S.C. 1881a) or any other provision of law, but taking into account the interest of parties to any such contract in protecting the confidentiality of proprietary information, the North Pacific Council and the Secretary shall—

(A) make available to the public such information concerning the contract, material modifications thereto, or the fishery

cooperative, as the North Pacific Council and Secretary deem appropriate, provided that such information shall include a list of the parties to the contract, a list of the vessels to which the contract applies, and the amount of crab [and other fish] to be harvested by each party to such contract; and

(B) make available to the public in such manner as the North Pacific Council and Secretary deem appropriate the harvest [(including bycatch)] of each vessel in the fishery cooperative to which the contract applies.

- (2) **LICENSE LIMITATION AND LANDING REQUIREMENT.**—A participant in a fishery cooperative subject to this Act must hold a license under the Crab License Limitation Program and have made at least one landing during the period January 1, 1996 through February 7, 1998, in [any/the] Crab Fishery Management Plan Fishery [to which the fishery cooperative applies].
- (3) **ALLOCATION OF HARVEST SHARES.**—The allocation of harvest shares for each crab species among the participants in any fishery cooperative subject to this title shall be determined solely on the basis of the average annual catch during the years 1988 through 1999 by each participant from the applicable Crab Fishery Management Plan Fishery, as adjusted in accordance with section 201(h).
- (4) **TRANSFER OF HARVEST SHARES.**—Participants in a fishery cooperative subject to this Act may lease or otherwise transfer harvest shares to other participants in that fishery cooperative.
- (5) **PROCESSING RIGHTS OF SHORESIDE PROCESSORS AND CATCHER/PROCESSOR VESSELS.**—Shoreside processors and catcher/processors may not transfer processing rights in any cooperative contract under this title without the prior consent of all catcher vessel owners who are party thereto.
- (6) **LIMITS ON HARVEST SHARES FOR PARTICIPANTS IN FISHERY COOPERATIVES.**—No participant in a fishery cooperative subject to this

title shall have a share of more than 17.5 percent of the Guideline Harvest Level in any Crab Fishery Management Plan Fishery, provided that any individual or entity that, prior to the date of enactment of this title, harvested a percentage greater than such share shall be allowed to continue to harvest such percentage, except that such percentage shall be reduced if the percentage decreases, until the percentage is below such share.

(7) CATCHER VESSELS TO SHORESIDE PROCESSORS.—

(A) HARVEST LIMITS.—Effective January 1, 2001, upon the filing of a contract implementing a fishery cooperative under paragraph (1) which—

- (1)** applies to no fewer than five catcher vessels;
- (2)** is signed by the owners the catcher vessels that will deliver crab from the Crab Fishery Management Plan Fishery to which the fishery cooperative applies for processing by a shoreside processor; and
- (3)** specifies, except as provided in subparagraph (F), that such catcher vessels will deliver such crab in the applicable Crab Fishery Management Plan Fishery only to such shoreside processor during the year in which the fishery cooperative will be in effect and that such shoreside processor has agreed to process such crab,

the Secretary shall allow only such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to subparagraph (B)) to harvest the aggregate percentage Guideline Harvest Level in the year in which such fishery cooperative will be in effect that is equivalent to the aggregate total amount of crab harvested by such catcher vessels (and by such catcher vessels whose owners voluntarily participate pursuant to subparagraph (B)) in the applicable Crab Fishery Management Plan Fishery during the years 1988 through 1999, relative to the aggregate total amount of crab harvested in such fishery during such years, as adjusted in

accordance with section 201(h), and shall prevent such catcher vessels (and catcher vessels whose owners voluntarily participate pursuant to subparagraph (B)) from harvesting in aggregate in excess of such percentage.

(B) VOLUNTARY PARTICIPATION.--Any contract implementing a fishery cooperative under subparagraph (A) must allow the owners of other catcher vessels to enter into such contract after it is filed and before the calendar year in which fishing will begin under the same terms and conditions as the owners of the catcher vessels who entered into such contract upon filing.

(C) QUALIFIED CATCHER VESSELS.--For the purposes of this paragraph, the term "catcher vessel" means a vessel for which a license has been issued.

(D) FAIR AND EQUITABLE CONTRACT TERMS AND CONDITIONS.--The terms and conditions of any contract implementing a fishery cooperative under subparagraph (A) shall be fair and equitable to all participating vessel owners.

(E) OPEN ACCESS.--A catcher vessel the catch history of which has not been attributed to a fishery cooperative under subparagraph (A) or paragraph 8(A) may be used to deliver crab harvested by such vessel (other than crab reserved under subparagraph (A) or paragraph (8)(A) for a fishery cooperative) to any shoreside processor [eligible under subsection (c)] or to any catcher/processor vessel [eligible under subsection (d)]. A catcher vessel the catch history of which has been attributed to a fishery cooperative under subparagraph (A) during any calendar year may not harvest any crab from the Crab Fishery Management Plan Fishery to which that fishery cooperative applies in such calendar year other than the crab reserved under such subparagraph for such fishery cooperative.

(F) **TRANSFER OF FISHERY COOPERATIVE HARVEST.**—A contract implementing a fishery cooperative under subparagraph (A) may, notwithstanding the other provisions of this section, provide for up to 50 percent of the crab harvested under such fishery cooperative to be processed by a shoreside processor [eligible under subsection (c)] other than the shoreside processor to which crab will be delivered under subparagraph (A) [or to a catcher/processor [eligible under subsection (d)]].

(8) **[CATCHER/PROCESSOR VESSELS.**—

(A) **HARVEST LIMITS.**—Effective January 1, 2001, upon the filing of a contract implementing a fishery cooperative under paragraph (1) which is signed by the owners of catcher/processor vessels and by any owners of catcher vessels in a Crab Fishery Management Plan Fishery, the Secretary shall allow only such catcher/processor vessels and catcher vessels (and catcher/processor vessels and catcher vessels whose owners voluntarily participate pursuant to subparagraph (B)) to harvest the aggregate percentage Guideline Harvest Level in the year in which the fishery cooperative will be in effect that is equivalent to the aggregate total amount of crab harvested by such catcher/processor vessels and catcher vessels (and by such catcher/processor vessels and catcher vessels whose owners voluntarily participate pursuant to subparagraph (B)) in the applicable Crab Fishery Management Plan Fishery during the years 1988 through 1999, relative to the aggregate total amount of crab harvested in such fishery during such years, as adjusted in accordance with section 201(h), and shall prevent such catcher/processor vessels and catcher vessels (and catcher/processor vessels and catcher vessels whose owners voluntarily participate pursuant to subparagraph (B)) from harvesting in aggregate in excess of such percentage.

- (B) **VOLUNTARY PARTICIPATION.**—Any contract implementing a fishery cooperative under subparagraph (A) must allow the owners of other catcher/processor vessels and catcher vessels to enter into such contract after it is filed and before the calendar year in which fishing will begin under the same terms and conditions as the owners of the catcher/processor vessels and catcher vessels who entered into such contract upon filing.
- (C) **QUALIFIED CATCHER VESSELS.**—For the purposes of this paragraph, the term “catcher vessel” means a vessel for which a license has been issued.
- (D) **FAIR AND EQUITABLE CONTRACT TERMS AND CONDITIONS.**—The terms and conditions of any contract implementing a fishery cooperative under subparagraph (A) shall be fair and equitable to all participating vessel owners.
- (E) **OPEN ACCESS.**—A catcher vessel the catch history of which has not been attributed to a fishery cooperative under subparagraph (A) or paragraph (7)(A) may be used to deliver crab harvested by such vessel (other than crab reserved under subparagraph (A) or paragraph (7)(A)) for a cooperative) to any catcher/processor [eligible under subsection (d)] [or to any shoreside processor [eligible under subsection (c)]. A catcher vessel the catch history of which has been attributed to a fishery cooperative under subparagraph (A) during any calendar year may not harvest any crab from the Crab Fishery Management Plan Fishery to which the fishery cooperative applies in such calendar year other than the crab reserved under subparagraph (A) for such fishery cooperative.
- (F) **TRANSFER OF FISHERY COOPERATIVE HARVEST.**—A contract implementing a fishery cooperative under subparagraph (A) may, notwithstanding the other provisions of this section, provide for up to 50 percent of the crab harvested under such cooperative to be processed by a catcher/processor [eligible under

subsection (d)] other than the catcher/processor to which crab will be delivered under subparagraph (A) [or to shoreside processor [eligible under subsection (c)].

[(e) ELIGIBLE SHORESIDE PROCESSORS.—

(1) Effective January 1, 2001 and except as provided in subsection (d) and paragraph (2), catcher vessels may deliver crab from a Crab Fishery Management Plan Fishery only to—

(A) shoreside processors (including vessels in Alaska State waters) determined by the Secretary to have processed more than [] of crab harvested from [a/that] Crab Fishery Management Plan Fishery during []; and

(B) shoreside processors determined by the Secretary to have processed crab harvested from [a/that] Crab Fishery Management Plan Fishery in [], but to have processed less than [] of such crab in each year, [except that effective January 1, 2001, each such shoreside processor may not process more than [] of such crab in any year].

[(2) Upon recommendation by the North Pacific Council, the Secretary may approve measures to allow catcher vessels to deliver crab harvested from a Crab Fishery Management Plan Fishery to shoreside processors not eligible under paragraph (1) if the Guideline Harvest Level for such fishery increases by more than [] percent above the Guideline Harvest Level for such fishery in [], or in the event of the actual total loss or constructive total loss of a shoreside processor eligible under paragraph (1).]

[(d) ELIGIBLE CATCHER/PROCESSOR VESSELS.—

(1) Effective January 1, 2001 and except as provided paragraph (2), a catcher/processor vessel may process crab from a Crab Fishery Management Plan Fishery only if--

(A) such vessel is determined by the Secretary to have processed more than [] of crab harvested from [a/that] Crab Fishery Management Plan Fishery during []; or

(B) if such vessel is determined by the Secretary to have processed crab harvested from [a/that] Crab Fishery Management Plan Fishery in [], but to have processed less than [] of such crab in each year, [except that effective January 1, 2001, each such catcher/processor vessel may not process more than [] of such crab in any year.]

[(2) Upon recommendation by the North Pacific Council, the Secretary may approve measures to allow catcher/processor vessels not eligible under paragraph (1) to process crab harvested from a Crab Fishery Management Plan Fishery, if the Guideline Harvest Level for that fishery increases by more than [] percent above the Guideline Harvest Level for such fishery in [], or in the event of the actual total loss or constructive total loss of a catcher/processor vessel eligible under paragraph (1).]

(e)DURATION.—The provisions of this section shall remain in effect until—

- (1) [individual fishing quotas are authorized and implemented for Crab Fishery Management Plan Fisheries; or]
- (2) [by no earlier than January 1, 2005], the North Pacific Council recommends and the Secretary approves conservation and management measures that expressly supersede those provided by this section.]

(f) EXISTING AUTHORITY.—Except for the measures required by this section, nothing in this section shall be construed to limit the authority of the North Pacific Council or the Secretary under the Magnuson-Stevens Act.

(g)REPORT TO CONGRESS.—Not later than October 1, 2002, the North Pacific Council shall submit a report to the Secretary and to Congress on the implementation and effects of this Act, including the effects on fishery conservation and management, on bycatch levels, on fishing communities, on business and employment practices of participants in any fishery cooperatives, on the western Alaska community development quota program, on any fisheries outside of the authority of the North Pacific Council, and such other matters as the North Pacific Council deems appropriate.

(h) TECHNICAL PROVISIONS.—

- (1) Notwithstanding any other provision of law, licenses may be combined, and catch histories may be combined, for the purposes of utilization by a catcher vessel or by a catcher/processor vessel, provided that catcher vessels may not combine licenses or catch histories with the licenses or catch histories of catcher/processor vessels.
- (2) Deadloss shall not be included in any determination of catch history, or of any matter related thereto under this title.

SEC. 203. RATIONIZATION OF CRAB PROCESSING CAPS.—Notwithstanding section 211(c)(2)(A) of the American Fisheries Act, there shall be no limitations on the processing of opilio crab during the season opening on or about April 1, 2000.

[**SEC. 204. PROTECTION FOR OTHER FISHERIES; CONSERVATION MEASURES.—**]

SEC. 205. COMMUNITY RECOVERY.

(a) **WESTERN ALASKA COMMUNITY DEVELOPMENT PROGRAM.—**Effective on the date of enactment of this Act, 7.5 percent of the total allowable catch of crab in the Bering Sea and Aleutian Islands Management Area shall be allocated as a directed fishing allowance to the western Alaska community development quota program established under section 305(i) of the Magnuson-Stevens Act (16 U.S.C. 1855(i)).

(b) [RESERVED].—

SEC. 206. SEVERABILITY.—If any provision of this title, an amendment made by this title, or the application of such provision or amendment to any person or circumstance is held to be unconstitutional, the remainder of this title, the amendments made by this title, and the application of the provisions of such to any person or circumstance shall not be affected thereby.

SEC. 207.—LICENSE DEFINED.—For the purposes of this title, the term “license” means a permanent, but not an interim, license issued under the Crab License Limitation Program.

TITLE III—REFORM OF CAPITAL CONSTRUCTION FUND TO PROMOTE SUSTAINABLE FISHERIES

SEC. 301. QUALIFIED WITHDRAWALS TO PROMOTE SUSTAINABLE FISHERIES.—

(a) [Qualified withdrawals from capital construction accounts shall include a one-time withdrawal each by the buyer and the seller of a vessel for the purposes of the permanent retirement of such vessel from the fisheries of the United States.]

(b) [RESERVED].

ALASKA CRAB COALITION

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N.P.F.M.C

March 30, 2000

The Honorable Ted Stevens
Hart Senate Building 522
Washington D.C 20510

(Agenda Item D-2 (b))
Total pages: 3

Dear Senator Stevens:

On behalf of the members of the Alaska Crab Coalition (ACC), I wish to thank you for taking the time to meet with our members yesterday, Kris Fanning and Edward Poulsen and our Legal Counsel, Ted Kronmiller. They have reported to me that it was a very productive meeting in that you exchanged ideas on the various problems related to development of crab cooperatives and you clarified the status quo budgetary situation within the U.S. Congress as it relates to the Bering Sea crab industry's request for funding of a new buyback program. We also appreciate your candor in regards to the need for Congressional consensus in order for legislation of a much needed fisheries cooperative program for Bering Sea and Aleutian Islands king and tanner crab fisheries to occur.

As you know from past experiences with the ACC, we are hard at work explaining to all sectors of the industry in Washington, Oregon and Alaska, the potential benefits of our proposed legislation program. Unlike some in the industry, we are confident the Congressional process will give us a fair shake. Given the resource and economic crisis confronting the crab industry, the Congressional process is the only expedient route to pursue. The North Pacific Fishery Management Council has an increasing load of pressing conservation and environmental priorities facing it, that promise to forestall equally demanding, but not often recognized, conservation oriented programs to reduce overcapitalization in fisheries.

I noticed in an article in the Anchorage Daily News on March 29th that you would be seeking approval from the NPFMC if a buyout is necessary for the crab industry. The NPFMC recommended the development of a buyout program in a letter of October 10, 1997 to Mike Grable. Since then conditions with the resource and the industry have deteriorated significantly and there is not a sufficient resource base to pay back a loan of the magnitude needed to reduce the fleet to a level commensurate with sustainability of the resources. A comprehensive capacity reduction program linking a buyout with implementation of cooperatives is now needed.

Best regards,


Arni Thomson
Executive Director

cc: Rick Lauber, Chair, NPFMC



MSNBC
NEWS
KTUU-ALASKA

Snow crab fishery faces crisis

Anchorage, April 3- Snow crab used to be one of the biggest cash catches in Alaska, but now it's in a state of crisis. Even the industry acknowledges there are too many boats going after too few crabs. Crabbers want to change that and they want Washington, D.C., to put up the money.

EXPERTS ARE SO ALARMED by the sudden drop in the numbers of young Bering Sea snow crabs, the limit that can be taken has been slashed this year by 85 percent. But one number hasn't changed: the number of boats. The industry says some 250 boats will be going after the crab.

"Actually it's amazing because fewer than 25 boats could fish this entire quota," said Edward Poulsen, a Seattle-based crabber.

Poulsen is helping lead a campaign to convince Congress to reduce the fleet by buying back crab boats. "The buyback it'll definitely help this industry but we're talking about such a decline in the resource that well

over \$100 million will be necessary to really make an impact on this fishery," he said.

Poulsen is finding the idea a tough sell. Despite the problems with the snow crab, there is plenty of competition for federal aid from fisheries in other parts of the country. But that doesn't mean there isn't sympathy. Alaska Sen. Ted Stevens once lost money investing in crab boats himself.

"I do know a little bit about it," Stevens said, pointing above his desk to a picture of his son Ben, a captain on a crab boat for many years.

But Stevens says Congress isn't going to want to spend taxpayers' dollars just to bail out crabbers who made bad investments. "I don't think that there's taxpayer assistance available just to buy down the fleet." He said. "If it's a matter of temporary respite for those who have taken a risk on fishing, that's the difference."

Stevens says boat buyback money could be available, if it can be shown it would restore the crab. But that's not easy to do. The industry says the ultimate answer is better management of the species. In the meantime, Poulsen says the situation is only likely to get worse.

"Fishermen are eternal optimists and if there's a quota to be had they're going to be out there fishing until they're bankrupt, just because they think they can double the average," Poulsen said.

Sen. Stevens says he is hoping to get some relief for Alaska's crabbers included in an emergency spending bill now before Congress. It would be somewhere in the neighborhood of \$10 million and he says even that isn't guaranteed.

Last month, Gov. Tony Knowles asked the U.S. Department of Commerce for an official finding that would allow federal relief for the city of St. Paul and the neighboring island of St. George.

Wednesday, March 29, 2000

Crabbers seek cut in fleet \$100 million buyout would stem 'crisis'

By WESLEY LOY
Daily News reporter

Bering Sea commercial crab fishermen, hit by a devastating crash in the snow crab population, are asking Congress for \$100 million to buy out part of the fleet.

Meanwhile, Alaska Gov. Tony Knowles is supporting a plea by the city of St. Paul for federal disaster relief.

It's all to stave off mass bankruptcies and economic calamity for fishermen and communities that have become dependent on snow crab. The poor man's version of king crab, snow crab in recent years has ranked as the third most valuable fishery in Alaska after pollock and salmon.

Last year the Bering Sea snow crab catch limit was 196 million pounds worth almost \$175 million. Government biologists, alarmed by a sudden and unexplained drop in young crab, cut this year's limit to only 28.5 million pounds. The fishery is to begin at noon Saturday.

St. Paul, with about 650 mostly Aleut residents on an island in the middle of the Bering Sea, is heavily dependent on crab landed there for processing in three plants. St. Paul projects it will collect about \$2.4 million in crab taxes this year compared to \$8 million in recent years.

Knowles this month asked U.S. Commerce Secretary William Daley to declare a fishery failure to trigger relief funds not only for St. Paul but for the neighboring island of St. George. The governor's letter does not state a dollar figure.

The industry thinks the fleet is far too big for the crab available. An association of crab boats, the Seattle-based Alaska Crab Coalition, has drafted a sample law seeking \$100 million to retire part of the 250-boat fleet and also a new system for managing the remaining boats. The coalition is circulating the draft in Washington, D.C.

Like farmers who receive government relief for crop failures, the crab industry is in a "state of crisis" and needs help, said Arni Thomson, the coalition's executive director. Of the requested \$100 million, taxpayers would contribute \$60 million in the 2001 federal budget with the rest to be paid back by the crab industry, according to the draft law.

The law outlines a system whereby boats not bought out of the fishery could then form cooperatives that would assign each boat a share of the catch. That would allow many boats to simply remain at the dock and lease their share to other boats that would actually do the fishing, Thomson said. The result would be a greatly reduced and more efficient fleet.

John Iani, vice president of UniSea Inc., a major snow crab processor, said the buyout is critical to the economic health of the industry.

"Without a buyback or without some sort of help there's simply going to be a death spiral of boats going into bankruptcy," he said. "What happens in bankruptcy, unfortunately, is the fisherman goes away but the boat stays. So somebody else comes along and buys the boat for 10 cents on the dollar and the boat keeps fishing. But there aren't enough crabs to support all those boats."

Mitch Rose, chief of staff for U.S. Sen. Ted Stevens, R-Alaska, said Congress will pay attention to the crab industry's plight but only after seeing industry consensus about what to do.

Stevens, author of major fishery management laws, believes the federal council that regulates commercial fishing off Alaska should decide if a buyout is necessary, Rose said.

* Reporter Wesley Loy can be reached at wloy@adn.com or 257-4590

**PACIFIC NORTHWEST CRAB INDUSTRY ADVISORY COMMITTEE
(PNCIAC) MEETING MINUTES**

March 1, 2000

AREA AND FISHERIES: Bering Sea and Aleutian Islands, king and tanner crab fisheries, as identified under the NPFMC king and tanner crab Fisheries Management Plan (FMP).

The Pacific Northwest Crab Industry Advisory Committee convened at 9:15 am on Wednesday, March 1, 2000, at Leif Erickson Hall, 2245 N.W. 57th Street, Seattle, WA.

PNCIAC PRESENT: Garry Loncon, Chair, Clyde Sterling, Dave Benson, Gary Painter, Kevin Kaldestad; Rob Rogers, via teleconference, Dutch Harbor; and Arni Thomson, Secretary, (non-voting). **ABSENT:** Phil Hanson, Gary Stewart, Larry Hendricks (fishing), Lance Farr (fishing).

ADF&G PRESENT: Earl Krygier, Pete Probasco, Wayne Donaldson, Forrest Bowers, Doug Pengilly.

NMFS PRESENT: Dr. Bob Otto, Gretchen Harrington.

NPFMC: David Fluharty, present for opening discussions on overfished stocks.

INDUSTRY PRESENT: There were 45 persons from industry present. See attached sign-up sheets.

ELECTION OF CHAIR: Nominations for the chair were Gary Painter and Garry Loncon. Kevin Kaldestad nominated Gary Painter, this was seconded by Rob Rogers. Clyde Sterling nominated Garry Loncon and this was seconded by Dave Benson. There was a tie vote, 3 and 3. The Chair made a motion to defer election of chair until a time at which he could poll all the committee members.

DISCUSSION OF OVERFISHED STOCK STATUS, AND REBUILDING PLANS FOR OPILIO CRABS:

Doug Pengilly from ADF&G led off with a presentation. He presented several memorandums on the opilio and St. Matthew blue king crab rebuilding plans that he referred to throughout the day's discussions. These are available from ADF&G at the Kodiak Westward Regional Office, 907 486 1840.

Pengilly started by reconfirming to the industry that the St. Matthew king crab and Bering Sea opilio stocks were below the Minimum Stock Size Threshold (MSST) as defined in National Standard One (NS 1) of the Magnuson-Stevens Act and that this triggers the need for development of rebuilding plans on an expedited basis. The MSST for opilio is 460.8 million pounds of Spawning Biomoass (SB), mature males and females. This is one half of the mean of 1983-1997 annual SB estimates. The target

goal for rebuilt status is 921.6 million pounds of SB and the maximum rebuilding period is 10 years.

In 1999, the Board of Fisheries and the NPFMC developed and approved a rebuilding plan for bairdi and it is in effect now.

The interim harvest strategy and rebuilding plan for opilio (and St. Matthew) must be completed for adoption by the Board of Fisheries at the March 17th meeting. During the very lengthy presentation and discussion, Pengilly explained that the plan would require a reduction in the harvest rate from the present rate of 58% to 22.5% during the rebuilding period. In addition, when the stock is rebuilt, the harvest rate would be capped at 50%. This will result in reducing the overall GHL considerably during peak biomass periods.

Pengilly provided an overhead projection of how the proposed harvest strategy would have effected prior years in the opilio fishery, had it been in place. Several members of PNCIAC indicated a concern as to how the harvest strategy impacted low GHL years and high GHL years. For example, in 1986, the GHL was approximately 60 million pounds and the harvest hit 100 million pounds. Under the proposed harvest strategy, the fishery would have been closed. In 1994, the GHL was approximately 110 million pounds and the harvest exceeded 140 million pounds. Under the proposed harvest strategy, the GHL would have been 70 million pounds, a reduction of 50% of the actual harvest.

This extremely conservative harvest strategy applied in an historical perspective raises several questions regarding future fishery performance. The Chair asked Pengilly if modeling had been performed, in an attempt to recast actual fishery performance if the new harvest strategy had been in place. In other words, would the new harvest strategy have reduced the cyclical swings (highs and lows) of the resource and the fishery. Pengilly responded that no modelling had been performed.

Dr. Otto was questioned regarding what impact on fisheries recovery would there be, if in 2000, the GHL would have remained unchanged at approximately 76 million pounds (under the old 58% exploitation rate). Otto responded that impact on stock recovery "would be minimal." Otto further advised that under a study he was involved in regarding the natural mortality of 4" male opilio, natural mortality was approximately 66%. This means that the population of 4" males (commercial quality opilio) is reduced up to 66% each year due to natural causes. This raises an interesting question, why such a conservative harvest strategy fails to move with particular year classes, when the majority of commercial population will die the following year if not harvested? In plain language, according to Dr. Otto, you can not "bank" opilio and in essence save the stock for the following year. Therefore, under the new harvest strategy, quotas would be drastically cut in high biomass years, and fisheries could be closed in low biomass years. The new harvest strategy lacks scientific evidence to support the need for rebuilding of the stock, due to "overfishing."

The potential economic implications of the harvest rate reductions raised a lot of concern amongst industry members present at the meeting. Several voiced objections to the

expedited process with sparse scientific information on the actual status of the stocks. They also recommended to ADF&G and NMFS that adoption of the rebuilding plan be postponed until after completion of the 2000 Bering Sea crab survey. Both agencies made it very clear that they were bound by the MSFCMA (Magnusen-Stevens Fisheries Conservation and Management Act) to implement a rebuilding plan within one year of the declaration of overfished status. The target date for implementation is the fall of 2000, but this means the Secretary of Commerce must approve the Plan by July or August of this year.

Industry members and PNCLAC members repeatedly expressed frustration over the inflexibility of NS 1 and the overfishing definitions and formulas that do not take into allowance the fluctuating nature of some fish stocks, particularly shellfish stocks.

Tom Casey noted that the shark fishermen in Florida, last year filed suit against the NMFS on the overfished status of sharks and they were successful in overturning the overfished designation. Casey then announced that Gary Painter was going to file suit against the NMFS on the overfished status of the opilio stocks within ten days.

During the course of the discussion, Committee member Kevin Kaldestad presented copies of press articles from the New York Times illustrating how environmental groups, led by the Audubon Society, are now publishing environmenally safe seafood menu guides, that also identify overfished species that should be avoided. Bering Sea king and snow crabs are going to be placed on the list of seafoods to be avoided. There are now negative market impacts for Bering Sea king and snow crabs developing over the overfished status of the stocks.

At the conclusion of the morning discussion, the PNCLAC adopted a motion.

PNCLAC MOTION ADOPTED UNANIMOUS:

PNCLAC requested that ADF&G and the Board of Fisheries delay adoption of the Rebuilding Plan for the opilio crab, until such time as ADF&G can complete a thorough and extensive analysis of the status of the stocks. Further, in the event the BOF adopts a rebuilding plan, that it automatically sunset in one year's time in order to force ADF&G to re-evaluate the plan and the status of stocks following the 2000 survey.

A sunset provision will bind ADF&G to conduct more scientific modeling with the proposed strategy that has yet to be addressed. In essence, the committee and industry members are deeply concerned with the adoption of an ultra-conservative opilio harvest strategy, that is mandated under MSFCA, but is not rooted in scientific research regarding the proper exploitation rate, and incorporating the rate of natural mortality of 4" males. It also fails to address sudden shifts in the population.

The rebuilding plan also includes recommendations for reduction of bycatch in the directed fishery. ADF&G provided estimates of overall opilio bycatch and bycatch mortality. 90% of the total bycatch of opilio in the period 1995-1999 is accounted for in

the directed pot fishery. Similarly, 75% of the bycatch mortality of opilio also occurs in the directed fishery. The total bycatch is estimated at 33-69 million animals annually in the period 1995-1999. Legal males greater than 3.1 inches are estimated to account for 70-98% of annual bycatch.

ADF&G RECOMMENDATIONS TO THE BOF FOR REDUCTION OF BYCATCH IN THE OPILIO FISHERY:

ADF&G is recommending increasing the ring size to 4 inches and placement of them no more than 2 inches from the bottom of the pot. Or, alternative escape mesh can be used equivalent to a 4 inch opening. This would be 5 ¼ inch stretched mesh.

ADF&G is concerned with the present escape ring size and location. Presently, escape rings are 3 ¾", and ADF&G is proposing 4" ring size. The concern is that mesh regulations are not sufficiently large enough to allow for escape of bycaught males greater than 3.1 inches in width. Regarding ring location, at present escape ring regulations do not stipulate where they are to be placed. ADF&G is proposing that all 4 escape rings be placed near the bottom of the pot.

Fisherman in the audience questioned the need for these regulatory changes. ADF&G advised that limited testing of baird crab in the summer months near Kodiak revealed the need to modify ring size and location. Fisherman advised that increasing the ring size to 4" represents legal commercial grade crab, and that already a 4" crab is capable of escaping from a 3 ¾" opening. With respect to the location, one fisherman's view was shared by most attending. If the pot is 1/3 full, then crab entering the pot will not have access to the escape rings, if all four are located on the bottom. ADF&G advised under limited testing (bairdi only, opilio was not tested in the lab or field), full pots and partially full pots were not tested. So fisherman concluded that with only a few crab in the pot, escaping crab utilize the bottom rings, but in good fishing the pot may be near full and the latest juvenile crab entering the pot may be precluded from exiting near the bottom of the pot.

PNCIAC MOTION ADOPTED UNANIMOUS:

PNCIAC remains committed to minimizing bycatch, however ADF&G's recommendations regarding modifications to ring size and location lack proper research and further study is warranted to evaluate the effects on bycatch with changes to current gear.

DELAYED OPENING OF THE OPILIO FISHERY, AND OPENING CRITERIA:

ADF&G announced that if 75% of the opilio grounds are ice free on March 15th, they will make an announcement to open on April first. On April first, provided that 50% of the grounds are ice free, then the fishery will open. Once the opening is announced then, ADF&G says the fishery will open. If for some reason, the criteria is not met, then ADF&G will review criteria every three days, based on the most recent weather and ice forecast and keep the industry informed by press releases. An advisory

notice will be made on March 7 or 8th about the status of the opening. There will be a minimum 14 day notice of the season opening.

Another ongoing potential restriction developing on fishery opening criteria, is related to the USCG concern and responsibility for safety of fishermen and vessels and the need to minimize rescue missions. USCG has recently told ADF&G that they cannot guarantee a rotor craft search and rescue response if winds are at or above 45 knots. Thus, the USCG is discussing implementation of such a limit as part of the criteria for opening the Bristol Bay king crab and opilio fisheries.

It was stated, and noted in a memo distributed at the meeting, "Delay Opening Due To Severe Weather," that whatever criteria are implemented in regards to wind velocity, would be applied from the beginning of tank inspection until 24 hours after the fishery opens.

ADF&G and the USCG are seeking industry comments on the USCG opening criteria on maximum wind velocity of 45 knots as fishery opening criteria.

PNCIAC RECOMMENDATION REAFFIRMED:

Garry Loncon, Chair of PNCIAC clarified for the record that the PNCIAC in November of 1998 when it took a position that any weather criteria developed on openings should be the jurisdiction of the USCG, not ADF&G. In addition, PNCIAC recommended that the criteria should only apply from the time of tank inspection until the fishery opening time, not for an additional 24 hours.

BAIRDI SEASON DATE CHANGE:

(Reference ADF&G Proposal #12 memorandum.)

ADF&G made a presentation about this proposal, that has been carried over to this season. Two years ago, ACC submitted a proposal requesting that bairdi become a bycatch fishery in the Bristol Bay king crab fishery, no directed fishery following and then reopening it as a bycatch in the opilio fishery.

ADF&G noted that due to the situation of low GHLL and no fishery possibilities for opilio, along with the future possibility of bairdi being open with a large GHLL, this proposal creates enforcement problems and it will likely require new gear restrictions.

One of the alternatives suggested by ADF&G for implementing this season change included a proposal for changing the opilio season date for GHLLs under 50 million pounds, to 10 days following the directed bairdi fishery, that follows the Bristol Bay king crab season. This would be a combined opilio and Pribilof bairdi fishery.

PNCIAC MOTION ADOPTED UNANIMOUS: NO CHANGE IN THE OPENING OF THE OPIILIO SEASON DATE, JANUARY 15TH; SUPPORT STATUS QUO.

PNCIAC decided to postpone consideration of additional recommendations regarding the change of bairdi season dates until it reconvenes prior to the Board of Fisheries.

AMERICAN FISHERIES ACT (POLLOCK – CRAB VESSELS) MANAGEMENT PLAN FOR BERING SEA KING AND TANNER CRAB:

In a letter dated February 29, 2000 to the PNCIAC, (enclosure) the United Catcher Boats (UCB) presented their recommendations for an alternative management plan to the ADF&G proposal for equal trip limits and 100% observer coverage to manage the boats to stay within the 12.8% Bristol Bay king crab cap. The Bristol Bay fishery is the only one with a cap. UCB notes in their letter to PNCIAC that an equal trip limit type of management program is unfair to vessels with significant catch history (or any vessel whose catch history is above the fleet average), and dependence on this fishery. Also, equal trip limits sets a precedent for any future crab cooperatives.

UCB has proposed managing the catches of the 40 vessels by monitoring catches with Sea State electronic catch reporting every six hours. UCB is having discussions with the ADF&G and with industry associations on their proposed management plan.

It was also pointed out during the meeting, that the AFA cooperative contracts require that all vessels adhere to the allocation provisions of the AFA and NPFMC sideboard regulations, including the king crab cap, under penalty of fines. The cooperative contracts could be modified to include an express provision for enforcement and fines for exceeding the BBRKC cap. (For an example of how this could, work see the Mothership Fleet Cooperative Membership Agreement, page 4, section b and page 6, section 5.)

In its proposal, UCB recommends ADF&G establish a penalty for vessels that refuse to carry an observer when required and a penalty for vessels substantially underreporting or failing to report on the timely basis required by ADF&G.

Steve Hughes, representing UCB at the PNCIAC meeting further explained that UCB is now considering that when 80% of the 12.8% cap is aboard the vessels, vessels will be assigned a set amount of pounds, on a vessel by vessel basis, and when that is caught, each vessel must quit fishing and leave the grounds.

PNCIAC MOTION ADOPTED UNANIMOUS: Delay PNCIAC action on ADF&G trip limit proposal and UCB alternative management proposal for the Bristol Bay cap, until the UCB proposal is further developed. However, PNCIAC conceptually supports the non-trip limit UCB proposal.

Steve Hughes agreed to coordinate UCB developments on this issue with the Chair. Once the UCB position is fully developed, PNCIAC will vote on the measure via poll.

THIRTY DAY BRISTOL BAY KING AND BAIRDI CRAB SEASON GEAR EXCLUSION REQUIREMENTS:

The UCB letter to the PNCIAC also contained recommendations on the 30 day pot and trawl gear restriction as follows:

1. Reduce the length of gear exclusion to 14 days;
2. Reduce the area size of the gear exclusion;
3. Require 100% observer coverage for pollock vessels for 14 days prior to the king crab fishery while vessels are fishing east of 164 degrees W. longitude.
4. Require all BBRKC trawler/crabber boats to utilize VMS (position location) electronic monitoring to indicate the vessels' exact location while fishing groundfish prior to the BBRKC fishery opening.
5. Exempt AFA catcher vessels making offshore deliveries where there is already 100% observer coverage.

A NPFMC statistical analysis (presented to the PNCIAC), of pollock/crabbers "longitudinal proximities" for 1997, 1998 and 1999, during the month of October, based on groundfish tickets, showed little coordination between those proximities and the vessels' locations during the king crab seasons. The analysis also shows king crab catch comparisons between pollock/crabbers and crabber only vessels for 1997, 1998 and 1999.

Arni Thomson presented a recommendation on the 30 day gear exclusion for the Alaska Crab Coalition (ACC). The ACC recommends as follows:

1. Maintain the length of the gear exclusion to 30 days.
2. Reduce the area of the gear exclusion to that portion of the BBRKC Registration Area east of 164 W. longitude. No fishing east of 164 W. longitude for 30 days prior to the season opening date.
3. Apply the gear restriction to all gear types, including longline gear, previously excluded (exclude jig gear).

Following a request by Thomson for ADF&G to repeat the information they presented to the Board of Fisheries/NPFMC Committee meeting in January on freezer longline catches, ADF&G related that two of these vessels caught 90% of their catch in the same area where they were fishing cod in the 30 day period immediately preceding the BBRKC season. In addition, one of the vessels had the largest catch of any vessel in this fishery in the last eight years.

Thomson noted that this was the rationale for the ACC Board to drop ACC's previous support for the longline gear exemption and to support the gear exclusion for the three major gear types.

PNCIAC, NO ACTION. PNCIAC WILL REVISIT THIS ISSUE PRIOR TO THE BOARD OF FISHERIES MEETING.

HARVEST STRATEGY, REBUILDING PLANS, HABITAT PROTECTION AND BYCATCH PROTECTION PROPOSALS FOR ST. MATTHEW ISLAND BLUE KING CRABS:

Due to time constraints, ADF&G was unable to complete the presentations for recommendations on the St. Matthew Island blue king crab fishery. Memorandums were presented on the harvest strategy, habitat protection, and bycatch protection. These are available from ADF&G at the Kodiak office. Suffice it to say, ADF&G intends to make the following recommendations to the Board of Fisheries:

Harvest Strategy:

- MSST: 2.9 million pounds SB
- Minimum GHL: 2.5 million pounds
- No fishery when SB below 2.9 million lbs. SB
- 10% harvest rate when SB above 2.9 million lbs. SB and increases to 20% depending on the SB increases
- Cap on legal harvest rate: 40%

Habitat Protection:

- Habitat essential for maintaining stock productivity
- Jurisdiction: Inside 3 miles, Board of Fisheries and ADF&G; Federal waters, NPFMC
- ADF&G Proposal to BOF: Close areas within 3 nautical miles of St. Matthew, Hall and Pinnacle Islands to fishing and any activity of fishing gear.
 - Generally corresponds to area of depths less than 20 fathoms that have been found to be important to ovigerous females, at least during the summer and fall.
 - Historically, little catch and effort in the area; 5% of total catch and effort, 1990-1998 came from state-waters statistical areas.

Bycatch Protection:

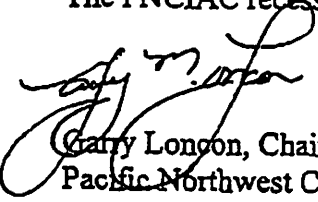
- Rationale, need to consider all sources of fishing mortality in rebuilding plan
- St. Matthew blue king crab fishery virtually accounts for all bycatch and bycatch mortality of blue king crab
- Estimated annual bycatch of 1.7-4.8 million animals in 1992-1998, compared to annual legal harvest of 0.6-0.9 million animals in 1992-1998
- Bycatch, typically, more than ½ are females; the rest are sublegal males
- ADF&G Proposals to BOF:
 - Revise escape ring/mesh requirements to allow undersize male and females to escape
 - 5.8 inch (inner diameter) escape rings; 4 per side panel; establish minimum distance from bottom of panel to facilitate escape
 - OR—escape mesh to provide 5.8 inch opening.

- **OPTION**, for BOF consideration/discussion: short soak times in St. Matthew fishery do not appear to be sufficient to allow for escape of bycatch crabs. BOF may want to consider ways to slow down fishery, and extend soak times.

PNCIAC, NO ACTION. PNCIAC WILL REVISIT THIS ISSUE PRIOR TO THE BOARD OF FISHERIES MEETING.

At the conclusion of the meeting, the Chair noted that the Committee would recess for the time being and then reconvene prior to the Board of Fisheries meeting to consider positions on: BBRKC opening date, BBRKC AFA sideboards for pollock vessels; bairdi season opening date, St. Matthew Blue King Crab harvest strategy, and the 30 day gear exclusion.

The PNCIAC recessed at 5:00 p.m, until further notice.



Garry Longon, Chair
Pacific Northwest Crab Industry Advisory Committee
C/o Royal Aleutian Seafoods Inc.
701 Dexter ave. N., Suite 403
Seattle, WA 98109
Tele: 206 283 6605
Fax: 206 282 4572

Pacific Northwest Crab Industry Advisory Committee

Sign-in Sheet
Wednesday, March 1, 2000
Leif Erikson Hall, Ballard, WA

NAME	VESSEL/COMPANY
Garry Loncon	Royal Attention Seafoods
Steve Hughes	UCB
Tom Gray	AFCB
Jan Lafemere	Pro Surveyor
Chris Thompson	BCC (PNCIAC)
Keis NOROSZ	Iceberg Seafoods
Mike Martin	E.F. Inc.
Robert Scott	NMFS
John Spang	
Creston Casada	Notorious
Daniel J. Dean	AMATULLI
Gary Painter	FV Trailblazer

NAME	VESSEL/COMPANY
STEVE LEE	Fick Seafoods.
Doug Wells	BREANOF
Ed GLOTTI	YDFDA
Rick Skufford	ALEUTIAN CAPY
David Finkoff	KW.
Steve Toomey	Exito
Haukur Johannesson	Debra D
John Gramer	Northwest Sids
R. Morton	Viking Queen
Gretchen Harrington	NMFS
Douglas Pensilly	ADFEC
Bert Eaton	TRIDENT
Clyde Sterling	Peter Pan
Ken Tippett	AK. BOAT CO.
GORDON KRISTJANSON	ALEUTIAN MARINER

NAME	VESSEL/COMPANY
Walt Casto	FINNACHIE
Jevon Valdetad	Valdetad Industries Ltd
J. Valdetad	Obsession Fisheries Ltd
David Benson	Trident
J. P. Pinner	Winn N. Kelly
Pat Dwyer	Jenni Fo-A
Gudjon Gudjonsson	Autumn Dawn
Staal Brekka	SILVER DOLPHIN
Don Mattsett	Shaner
John R. Boyer	Karin Lynn
Ed Paulsen	North Sea
Wm. LeBow	Lady Ann
Rick Mouch	Fierce Allegiance
Tom Suryan	Bristol Marine
LANCE A. Nylander	Dungeness Gear Works

VESSEL/COMPANY

NAME

J. Powell

PATRICIA LEE

C. LOWENBERG

ARCTIC SUN FISHERIES

Walter Rose

Beverly Star

Dennis Stora

Trudrak

Bob Wane

Seattle - Pacific Fishing

Alvin Czapka

Weyburn Wines

Loft Myhre

SEA ERN

Lynn Walton

Access Unlimited, Inc.

Dennis Thompson

Myster Bay

Donna Furker

Sea Storm

Pat [unclear]

COXAGEOUS SEAFLOORS

J. M. [unclear]

TOWAR SEA

Pacific Northwest Crab Industry Advisory Committee

from the desk of

Garry M. Lonson, Chairman

Date: Thursday, February 10, 2000
To: Committee Members
Cc: Industry Participants
RE: Meeting Notice

Meeting Notice:

Place: Leif Erikson Hall Conference Room (Ballard)
Date: Wednesday, March 1, 2000
Time: 9:00 am meeting

The meeting will be attended by members of the Alaska Department of Fish & Game.

The following items will be discussed:

Review proposals before the Alaska Board of Fish concerning crab. The BOF meeting is scheduled to begin March 17, 2000.

Discussion of "Overfishing Definition" and implications for management and marketing.

Review criteria for opening the delayed 2000 Opilio season.

General committee business:

- Fund raising for meeting expenses
- Election of a chairman

Secondary Notice:

PNCIAC members and industry participants are welcomed to a crab coop meeting co-chaired by Dr. Dave Fluharty and Kevin O'Leary on Thursday, March 2, 2000 at 9:00am to 4:00 pm.

IN THE KODIAK AREA:

- 2) Consider a herring management plan for conservation and development and allocation among beneficial uses.

IN THE KUSKOKWIM AREA:

- 3) Consider a herring management plan for conservation and development and allocation among beneficial uses.

F. Scheduled for February 9, 2000 – Cook Inlet Coho Conservation Management Plan – Girdwood, AK

IN THE COOK INLET AREA:

- 4) Consider an area-specific conservation plan for coho salmon management focusing on the time period after July 31.
- 5) Consider the Kenai River early run chinook salmon management plan.

ALASKA BOARD OF FISHERIES: (Agenda Changes Approved)
G. Scheduled for March 17, 2000 – Statewide Dungeness Crab, Shrimp, Miscellaneous Shellfish

(except SE and Yakutat), Commercial Pacific Cod, and Supplemental Issues – Anchorage, AK
STATEWIDE SUSTAINABLE SALMON FISHERIES POLICY:

- 6) Consider elements of a sustainable salmon fisheries policy for Alaska.

IN THE KOTZEBUE AREA:

- 7) Consider allowing a subsistence char fishery in portions of the Noatak and the Kelly rivers.

IN THE EASTERN SUBDISTRICT OF BERING SEA:

- 8) Consider the opening date of the directed C. bairdi Tanner crab fishery in specified waters of the Eastern Subdistrict.

IN THE BERING SEA AND WESTWARD AREAS:

- 9) Consider rebuilding plans for St. Matthews (Area Q) blue king crab and Bering Sea (Area J) opilio Tanner crab; consider American Fisheries Act guidelines and coordination of management measures with federal government for Bering Sea king and Tanner crab.

IN THE BERING SEA AND BRISTOL BAY KING AND TANNER CRAB FISHERIES:

- 10) Consider fishing seasons, periods, opening and closing times; harvest levels, harvest limits, or quotas; districts, subdistricts, sections, subsections, areas, and other management boundaries; locations open and closed to fishing; methods and means; gear and vessel restrictions; registration areas (including exclusive and super exclusive registration areas), and operating restrictions, requirements and definitions; preseason operation restrictions; management plans for conservation, development and allocation among beneficial uses; restrict or prohibit the retention, sale, or purchase of fish; onboard observer requirements.

IN THE KODIAK AREA:

- 11) Consider allocation among beneficial uses of state-water Pacific cod quota.

IN THE BRISTOL BAY AREA:

- 12) Consider in the Nushagak Salmon District the period when the allocation percentages end.

IN THE LOWER KUSKOKWIM AND LOWER YUKON AREAS:

- 13) Consider rod and line as a subsistence gear.

IN THE KUSKOKWIM AREA COMMERCIAL SALMON FISHERIES:

- 14) Consider gear and vessel marking, operational requirements, registration and permit requirements; permits, harvest record, harvest marking requirements.

IN THE KUSKOKWIM AREA SPORT AND GUIDED SPORT FISHERIES:

- 15) Consider fishing seasons, periods, opening and closing times; bag, possession, size, and harvest limits, harvest levels or quotas; locations open and closed to fishing; methods and means; gear and vessel restrictions, marking, definitions, operational requirements, registration and permit requirements; permits, harvest record, harvest marking requirements; management plans for conservation, development and allocation among beneficial uses; restrict or prohibit the retention,

EBS *Opilio* Rebuilding Plans: Bycatch Control Proposals to BOF

Background:

- opilio fishery accounts for:
 - majority of annual estimated opilio bycatch (>90% in 1995-99)
 - majority of annual estimated opilio bycatch mortality (>75% in 1995-99)
 - estimated 33-million to 69-million bycatch opilio annually in 1995-1999
- Characteristics of opilio bycatch
 - legal males (≥ 3.1 " CW) smaller than 4" industry standard are estimated to account for 70% to 98% of annual bycatch
 - predominately mature males
 - estimated 25% to 40% of captured legals discarded annually
- Biggest concern is effect of temperature/windchill on bycatch mortality
 - Laboratory studies showing severe effects not yet corroborated with fishery data
- Present ring and escape mesh in regulations not sufficiently large to allow for escape of bycatch males ≥ 3.1 " CW
- Present escape-ring regulations do not stipulate placement of rings to facilitate escape

ADF&G proposal to BOF:

- Change ring requirements to:
 - Four 4-inch (inside diameter) rings per side panel of pot
 - Maximum distance for rings from bottom margin of side panel (e.g., 2 inches or within one mesh)
- Change escape-mesh requirements to equivalent for 4-inch opening.

Option for BOF consideration/discussion:

- Open opilio fishery 10 days after closure of EBS bairdi fishery when $GHL < 50$ million pounds
 - Move "derby fisheries" away from coldest months
 - Consideration in conjunction with Proposal 12
 - Not considered a key element of rebuilding plan
 - Allocative considerations and costs/benefits to resource/industry need to be evaluated by BOF

ADFG review of opilio rebuilding plan options: bycatch controls.

PNCLAC meeting, 1 March '00, Seattle

D/BOF March 2000/Opilio rebuilding/PNCLAC March 00_ opilio rebuilding plans_bycatch controls.doc

EBS *Opilio* Rebuilding Plans: Bycatch Control Proposals to BOF

Reason to consider bycatch:

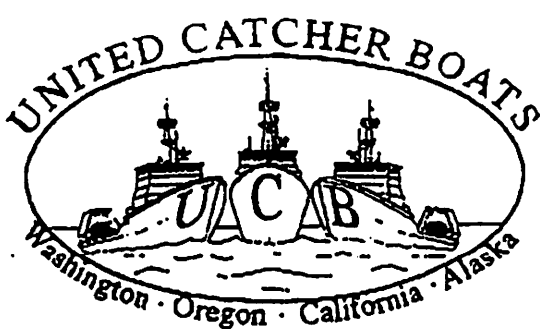
- Need to consider all sources of fishing mortality in rebuilding plan

Jurisdiction on bycatch controls:

- Inside state waters (within 3 miles): Alaska Board of Fish/ADF&G
- Federal waters:
 - Crab fisheries: Alaska Board of Fish/ADF&G
 - Scallop fisheries: Board of Fish/ADF&G
 - Groundfish fisheries: North Pacific Fisheries Management Council/NMFS

Existing bycatch controls:

- Crab: Gear requirements in regulation for opilio fishery
 - Four 3.75-inch diameter rings installed on vertical plane – or –
 - Five-inch stretched mesh on 1/3 of one vertical surface of pot
- Groundfish: Bycatch limits (BS/AI G'fish FMP Ammendment 40)
 - PSC Limit of 0.113% of total snow crab population index
 - from minimum limit of 4.5 million animals (when stock index is at 3.982 billion animals)
 - to maximum limit of 13 million animals (when stock index is at 11.504 billion animals)
- Scallops: Bycatch limits
 - 300,000 animals (including hybrids) when opilio above MSST
 - 150,000 animals (including hybrids) when below MSST, but have a fishery
 - 75,000 animals (including hybrids) when below MSST and have no fishery



Brent C. Paine
Executive Director

Steve E. Hughes
Technical Director

Jeffrey R. I
Washington D.C. Representative

FAX COVER PAGE

To: David Benton
Garry Loncon / PNCIAC
Ami Thomson

From: Steve Hughes

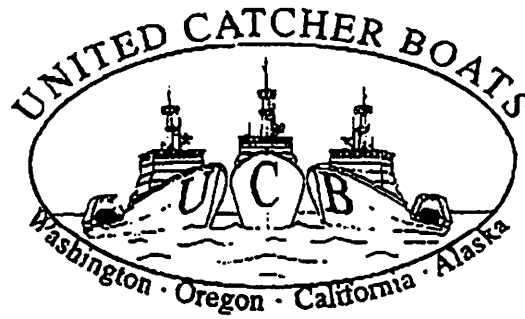
Date: March 8, 2000

Total Pages: 5

Revised,
For PNCIAC
Consideration
BBRKE
PLAN,
AFA
VESSELS
AH

FYI - Please see attached.
This was sent to addressees today.

Call 206/282-2599 and speak to Devonn if all pages do not transmit correctly.



Brent C. Paine
Executive Director

Steve E. Hughes
Technical Director

Jeffrey R. Pike
Washington D.C. Representative

March 8, 2000

Mr. Earl Krygier
Alaska Department of Fish and Game
Post Office Box 25526
Juneau, Alaska 99802

Mr. Pete Probasco
Alaska Department of Fish and Game
211 Mission Road
Kodiak, Alaska 99615-6399

Mr. Wayne Donaldson
Alaska Department of Fish and Game
211 Mission Road
Kodiak, Alaska 99615-6399

RE: Updated Crab Management Proposal for BBRKC AFA Combination Vessels

Dear Earl, Pete and Wayne:

Thanks to you and your staff for meeting with UCB members at Sand Point on February 29, 2000, and for your report to PNCIAC on March 1, 2000 at Leif Erickson Hall, regarding our mutual efforts to establish a crab management system for the BBRKC AFA combination vessels.

When we completed the Sand Point meeting, I suggested that UCB members develop a more detailed plan to address ADF&G's expressed concerns about the AFA fleet not exceeding the 12.8% cap - i.e. management of the last 24-hours of the fishery. To address this concern, we would propose the following as further detail to our February 17, 2000 proposal to David Benton, Deputy Commissioner, ADF&G:

- A UCB or AFA co-op manager will be responsible for managing the

UCB Crab Management Proposal
March 8, 2000
Page 2

AFA BBRKC fleet, including the securing of vessel contractual agreements with established rules and penalties.

- During the BBRKC fishery, the manager will monitor AFA vessel crab catches, summarize catch data in aggregate against the cap and report to ADF&G as requested (once/day, twice/day, etc.)
- When the AFA fleet's cumulative catch reaches 80% of the AFA fleet cap, we will calculate a "not to exceed" (NTE) poundage limit per vessel for the fishery duration and notify the fleet of that limit to ensure completion of the fishery under the cap. This approach coupled with the vessel co-op contracts and penalties will, we believe, insure that the cap is not exceeded while still providing for an 80% GHL open access fishery with a NTE closure component for the final 24-hours.
 - Direct communication with the AFA fleet will be from the AFA manager stationed shoreside in Dutch for the crab season. All AFA BBRKC vessels have either inmarstat C or cell phones with nearly all vessels having inmarstat C. Shorebased to vessel and vessel to shorebased reporting will be primarily by inmarstat C backed up by cell or cell-tag phones when necessary. A specific communication process will be established by the manager with each AFA BBRKC vessel/preseason.
 - As an example, GHL = 15,000,000 lbs.
 - AFA BBRKC cap = 12.8% X 15,000,000 = 1,920,000 lbs.
 - AFA fleet = 40 vessels under contract/registered.
 - November 1, 2000, 1200 hours, BBRKC opens for all.
 - AFA fleet, day one catch, 320,000 lbs.
 - AFA fleet, day two catch, 340,000 lbs. (660,000 lbs. total).
 - AFA fleet, day three catch, 400,000 lbs. (1,060,000 lbs. total).
 - AFA fleet, day four catch, 350,000 lbs. (1,410,000 lbs. total).

- AFA day five (0800 hour report) catch, 120,000 lbs. (1,530,000 lbs. total).
- Day five 0800 hour report 1,530,000 lbs. ÷ 1,920,000 lbs. = 79.7% cap taken).
- Day five report to fleet, post 0800 hour vessel catch limit imposed for fishery duration.

⊖	1,920,000 lbs. Cap	
	<1,530,000> lbs.	Harvested
	390,000 lbs.	Remaining under cap
	<u><11,700> lbs.</u>	3% hold back
	378,300 lbs.	For harvesting

⊖ NTE cap = 378,300 lbs./40 vessels

⊖ NTE cap = 9,457 lbs./vessels
= 1,575 crab/vessel

⊖ AFA vessels would terminate their fishery when their NTE amount was taken or when ADF&G closed the open access fishery, which ever comes first.

As we have earlier agreed and as clarified by ADF&G at our meetings, all AFA BBRKC vessels wishing to participate in the BBRKC fishery must agree to the AFA sideboard rules via contract. There will be no exceptions. All costs of the AFA BBRKC fishery, manager and equipment will be born by UCB or the co-op management entity. The co-op management entity will be legally established and subject to NMFS/ADF&G approval. Results will be reported annually to NPFMC/NMFS/ADF&G. AFA vessels will pay for any certified crab observers to a level requested by ADF&G. We understand that this level is likely about 10%.

We also appreciate PNCIAC's support of the UCB proposed BBRKC management program. At the March 2, 2000 PNCIAC meeting, I suggested that UCB's further work on the management proposal would be shared with PNCIAC chairman, Garry Loncon, for their input and hopefully to receive their support at the BOF meeting. Accordingly, we are now providing Garry with a copy of this letter.

We thank you again for your meeting with industry and your input to UCB's BBRKC management proposal. Please provide us with your further comments as

UCB Crab Management Proposal
March 8, 2000
Page 4

soon as possible with the goal of jointly presenting our proposal to the BOF in a form supportable by ADF&G.

Sincerely,
UNITED CATCHER BOATS




Steven E. Hughes

SEH:las

cc: David Benton, ADF&G
Brent Paine, UCB
UCB Membership
Garry Loncon, PNCIAC
Arni Thomson, ACC

To: Joint Board/Council Committee

From: Clarence Pautzke
Executive Director 

Date: January 26, 2000

Subject: Crab Management

Proposed revisions to crab FMP

Council member Dennis Austin wrote a letter to the Council last September (attachment 1), seeking a move of the "other" rule change from Category 3 to Category 1, thus requiring a plan amendment for any rule change characterized as such. He also is seeking clarification of the jurisdiction of the Board of Fisheries which authorizes them to adopt rules impacting fisheries and fishers outside the bounds of the seasons and areas identified for the harvesting of crab. If the Council agrees in February that the plan should be revised, they could task the staff to begin work on that revision. Categories of management measures are shown in attachment 2.

Rebuilding plans for Bering Sea opilio crab and St. Matthew blue king crab

The 1999 NMFS Bering Sea survey indicated that two crab stocks (snow crab and St. Matthew blue king crab) were below the minimum stock size thresholds (MSST) established for these stocks. Consequently, these stocks were declared "overfished" on September 24, 1999. The Magnuson-Stevens Act requires that in the case of overfished stocks, rebuilding plans must be developed within one year. In October, the Council recommended that the analyses for these rebuilding plans be structured like the rebuilding plan developed for C. bairdi last year. Hence, harvest strategy, bycatch controls, and habitat protection would be examined as possible components of the rebuilding plans. The Council also requested that the analysis examine existing habitat information to identify discrete areas important to mating, pre-mating/molting adults, and juvenile opilio crabs. It is hoped that methodology developed for the spatial analysis may serve as a template for analysis of other crab species in the future.

Staff from NMFS, ADF&G, and Council have been drafting the analysis for the opilio rebuilding plan (Amendment 14) and for the St. Matthew blue king crab rebuilding plan (Amendment 15). To meet the one year deadline, rebuilding plan analyses will need to be ready for initial review in April, 2000, with final action at the June Council meeting. In addition, the Board will be considering revised harvest strategies for these two crab stocks during its upcoming March meeting. Staff will be on hand to discuss details and answer questions regarding proposed contents of the rebuilding plans.

Crab co-ops

Management of the BSAI crab fisheries through some type of co-op structure (similar to how pollock fisheries are now managed) has been the focus of several industry discussions over the past few months. Council members Dave Fluharty and Kevin O'Leary have facilitated meetings with industry and we have offered administrative assistance through the Council offices. Discussions to date have focused on some type

of Congressional action to either establish such co-ops, or to provide authority for the Council to implement them. It is still unclear at this time whether the current congressional moratorium on IFQs would prohibit the Council from developing such co-ops.

Attachment 3 summarizes the December 1999 industry meeting, where a problem statement and list of initial alternatives and options were developed (also attached). As is evident from that list of alternatives, there will be many difficult decision points around which industry consensus must be formed in order for a co-op program to move forward. An informational and status report meeting is being scheduled for Wednesday, February 9 at 7:00 pm in the Aleutian Room of the Anchorage Hilton. There is also a meeting being planned for mid-late February in Seattle (time and location not yet determined).

A series of legal, policy, allocative, and legislative issues must be addressed before this program can move forward. Some of these involve management issues for the Council and/or Board. A tremendous amount of effort is being devoted to this effort on the part of several persons in the crab industry, with some of those persons taking on specific tasks. Attachment 4 contains a series of letters and suggestions written by Jeff Stephan which outline some of the issues requiring resolution. Of particular interest at this time is the issue of GHL vs TAC; i.e., how would a co-op type system work in a fishery that is managed with a GHL as opposed to a TAC? As this and other issues are explored in the letters, they are attached as informational items. At some point in time, ADF&G, the Council, and NMFS will be required to devote significant attention and staff resources if these issues are to be resolved. However, it seems that further industry work, and perhaps legislative direction, are required first.

Regulating crab sideboards

Last June the Council approved 'sideboard limits' which would limit the participation of AFA pollock qualified vessels in the BSAI crab fisheries. For Bristol Bay red king crab (BBRKC), the sideboard limit essentially limits those vessel (about 40 vessels) to their aggregate historical catch in that fishery, which amounts to about 12% of the total available GHL. Federal regulation defers to the State in terms of managing this sideboard limit. Initial reports from ADF&G last July indicated a plan to simply divide the available poundage by the number of participating vessels, and establish that as an equal trip limit for each vessel. In December our Council discussed this issue and requested an update from ADF&G at this time regarding possible management approaches for this fishery. In addition to being of interest to the affected vessels, how this fishery is managed could affect the necessity or form of management measures related to the standdown issue under agenda item 1.

Earl Krygier will explain the State's approach to managing the crab sideboard limits. His draft plan is under attachment 5.