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Alaska Board of Fisheries
Bering Sea/Aleutian Islands
Crab Fisheries Pot Limits Finding

The Alaska Board of Fisheries (Board) met March 3-5, 1992 in Anchorage at the Anchorage Hilton Hotel to discuss gear limitations for Bering Sea/Aleutian Islands (BS/AI) king and Tanner crab fisheries. The Board had generated an agenda change request on March 20, 1991 to hear this issue out of cycle, in response to a request submitted by the industry. This request was supported with preliminary Alaska Department of Fish and Game (ADF&G) data which indicated that the levels of gear deployed in these fisheries were creating conservation and management difficulties.

The March 1992 public meeting was publicly noticed consistent with Alaska Administrative Procedures Act and well attended by members of the industry and other concerned parties (Fishery Management Plan for the king and Tanner crab fisheries in the Bering/Aleutian Islands (FMP) Sec. 7.2.6., 9.2). In addition, representatives from the National Marine Fisheries Service (NMFS), the North Pacific Fishery Management Council (NPFMC), State of Alaska Attorney General's Office (AG), the ADF&G and Fish and Wildlife Protection were in attendance. The AG representative maintained communications with NOAA General Counsel during the proceedings.

The Board considered the following reports and presentations prior to their deliberations.

1. Bering Sea/Aleutian Islands (BS/AI) Shellfish Fisheries and Gear Utilization (Ken Griffin, ADF&G).

2. Norton Sound Harvest Evaluation
(Charles Lean and Fred Bue, ADF&G).

3. Review of Existing Regulations, Gear Loss and Pot Usage in BS/AI (William Nippes, ADF&G).

4. Economic Impacts of Alternative Pot Limits to Bristol Bay Red King Crab and Bering Sea C. opilio Fishermen, Executive Summary (27 pp) and draft document (115 pp.)
(Dr. Joshua Greenberg, University of Alaska-Fairbanks
Dr. Mark Herrmann, University of Alaska-Fairbanks
Dr. Paul J. Hooker, ADF&G/NOAA).

5. Report illustrating the State/Federal responsibilities frameworked in the FMP, and evaluation of the Crab Fisheries by Type-Indicating Options for Management Within the FMP process (Dr. Ray Baglin, NMFS and Earl Krygier, ADF&G).

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6. Overview of FMP Criteria and Magnuson Act (Bonnie Harris, Alaska Attorney General Office).

7. Enforcement Considerations and Options for Crab Pot Sticker Identification (Captain Phil Gilson, Division of Fish and Wildlife Protection).

The Board considered public testimony from over 30 individuals, industry representatives and organizations, plus Advisory Committees, representatives from the Pacific Northwest crab industry, Dutch Harbor, and Kodiak.

Public input was also incorporated into the Board's decision by the formation of a ten member committee whose composition represented large and small vessel owners and operators, processors and catcher processors. Members were: Kevin Koldestad, Phil Chitwood, Dick Powell, Chris Fanning, Louie Lowenberg, Earling Skar, Jerry Nelson, Bart Eaton, Larry Hendricks, Peter Liske, and Jack Hill. As the Board weighed alternatives for management, this industry group was able to comment and respond. It is noteworthy that the Board took no action on issues/fisheries that were substantially advised against by this group.

During public testimony, many people expressed concern that the imposition of pot limits in these fisheries, in the absence of a vessel limitation, would be an exercise of questionable value. The Board acknowledged their concern. However, they clarified to the public that under the FMP (8.1), a moratorium decision is solely the authority of the NPFMC. The State can not limit entry into the fisheries of the EEZ. The BOF informed the public that, considering the magnitude of the problem at hand, and the fact that the NPFMC's moratorium may not provide a solution, the BOF would address this conservation issue within the regulatory avenues available to them.

Board scheduling was also an issue which emerged during public testimony. It is understood that BS/AI crab fisheries will be before the Board in their entirety February of 1993 (FMP 7.2.6). With this in mind, the Board had the option to defer any action until that time, or could choose to implement some program of gear restrictions for the 1992/1993 season and look to refining or redesigning it, if necessary, in 1993.

Under status quo, goals and objectives of the FMP are not being met or are in jeopardy, therefore the current conduct of the fishery is inconsistent with these goals and the National Standards of the Magnuson Act (FMP Chapter 7 and Appendix B). The Board found the following facts identified in staff reports and through public

testimony to be specific issues of concern:

1. The Bristol Bay king crab fishery was identified as a high value, high effort fishery in which increases in the number of vessels and pots, combined with moderate Guideline Harvest Levels (GHLs), have led to derby-style fishing with increasingly shorter seasons which are increasingly more difficult to manage in-season.

   This fishery is being conducted on a rebuilding stock which dictates conservative management. Since the 1983 closure of the Bristol Bay red king crab fishery due to depressed stocks, the fishery has started a slow recovery and is the only Bering Sea red king crab fishery to re-open after a closure.

   In the Bristol Bay red king crab fishery, the following historic performance data indicate the trend of the fishery to increased effort since reopening in 1984:

	1984	1991
Season Length	15 days	7 days
Number of Vessels	89 vessels	302 vessels
Harvest in millions/lbs	4.1 mil/lbs	17.1 mil/lbs
Number of Pots	21,762 pots	89,068 pots
Number of Pot Lifts	112,556	227,555

   Although the presence of observers on catcher-processor vessels has allowed better estimates of in-season harvest, effort relative to GHL continues to increase at a rate which jeopardizes the ability of management to prevent overfishing. In 1991, the catching ability of the fleet was <u>estimated</u> at over 2 million lbs/day. <u>Actual</u> harvest indicated a rate in excess of 2.4 million lbs/day.

   Extending season lengths in the future was identified to the Board as an important management objective with respect to this fishery. The ADF&G staff indicated to the Board that an optimal season length would be at least two weeks in length. This would allow for in-season adjustments to GHL to reflect CPUE information which can validate or invalidate preseason stock estimates. Seasons shorter than two weeks increase the probability of over or under harvesting the resource.

2. The Norton Sound red king crab, Pribilof Islands red and blue king crab, and St. Matthew blue king crab were all identified to the Board as fisheries that would not likely occur, despite the presence of a harvestable surplus, due to the currently

uncontrolled fishing capacity. The potential level of effort was so high in relation to GHL, that the ability to manage these fisheries and prevent overfishing had been lost.

3. Fast moving ice conditions in C. opilio fisheries have been causing excessive pot loss which results in intolerable levels of increased crab mortality and habitat degradation.

The Board heard repeated public testimony that the department estimate of 100,000 pots on the Bering Sea grounds in 1991 was low and that actual pots on the grounds likely numbered in excess of 120,000.

Industry non-compliance with minimum cotton twine size in the biodegradable escape panel was reported to be widespread by both Fish and Wildlife Protection and industry; this exacerbates mortality associated with lost pots.

Testimony from fisherman, confirmed with survey information, indicated crab are not evenly distributed over the fishing grounds; rather they are found in concentrated amounts in discrete areas. Thus, once crab locations are determined, intensive gear deployment occurs in those areas. Sheer numbers of pots on the grounds have exacerbated gear conflicts, increasing gear loss and creating conflicts over grounds pre-emption. Density of buoys and floating lines creates a hazard to navigation to the conscientious vessel operator. The Board heard repeated testimony that gear is so dense that it is difficult to operate vessels in a manner that will not run over gear and cause increased pot losses. Lost pots continue to capture and kill crabs. Such fisheries can no longer be identified as orderly.

Additionally, lost pots conflict with activities of bottom trawl fishermen, thereby increasing the trawlers costs of operation and decreasing their fishing efficiency.

Public testimony indicated that historically, fishery execution relied on a combination of luck, skill, and experience in finding crab and keeping gear on them. This style of fishing has been replaced by a new style of fishing in which large areas are saturated with gear. The Board heard testimony to the effect that large numbers of pots are being abandoned or not maintained by vessel operators, a condition not previously seen in the fishery.

Only three individuals testified during public testimony against adopting gear restrictions in the form of pot limits. Every other vessel owner, operator, processor and catcher processor present and testifying, supported some concept of pot limits. Support for pot limits was qualified by whether or not an enforceable program could

be implemented, and most fishermen wanted an avenue whereby lost pots could be replaced.

The Board began deliberations with these identified concerns in mind. The industry committee was appointed and the Board reviewed the following management options with their input. In part, the board considered the following:

1. Close fisheries where status quo did not allow prevention of over fishing. This option was rejected. Industry and Board would rather see change to allow utilization of harvestable surplus.

2. Change dates of fisheries to force redistribution of effort. Rejected as a management option available at this meeting since public notice spoke specifically to pot limitations. Identified as a management option to be considered in February 1993.

3. Imposition of trip limits. This option was rejected. Opposed by segments of industry as counter-productive to free market and competition in fisheries. Identified as an option for future consideration, especially if tied to vessel length.

4. Exclusive or super-exclusive registration areas. Identified as an option for action at this meeting, but did not receive much industry support. Board expressed concern that the written findings, including an economic analysis, required in FMP 8.2.8 would be difficult to generate within time constraints of the meeting. Rejected as option for this meeting.

5. Determine GHL for fishery, require vessels to pre-register; divide GHL among participants evenly or use a sliding scale. A variation of #3 above, this was also rejected for lack of industry support.

6. Proportional pot limits based on vessel length. The Board engaged in an extensive discussion of this topic. The impacts of a fixed versus a proportional limit were weighed in terms of enforceability, discrimination between vessel classes, and achievement of FMP objectives. The Board rejected this option and specifically discussed:

   A. The Board found that the pot limits which require buoy stickers and affidavits signed by the crew and skipper for replacement of lost pots (stickers), were enforceable. They noted that a fixed limit would be more easily enforced, since all participants would have the same

number. Beyond that, the Board found that proportional limits presented no distinct enforcement difficulties different from those which might be encountered in a straight fixed pot limit program.

B. Proportional limits might achieve FMP objectives as well as fixed limits, but several Board members felt the 4th standard of the Magnuson Act could be violated by imposition of proportional limits. They felt that proportional limits could be discriminatory in assigning varying levels of fishing capacity to individual vessels. On the other hand, fixed pot limits provided equal opportunity for all fishermen; treating the crab fleet as a whole and providing equal access to the fishery, and the harvest, for all vessels equally.

C. The Board found that a pot limit based on vessel size would not be less discriminatory than a fixed pot limit for all participants for the following reasons:

i. Larger vessels will still maintain a competitive advantage under a fixed pot limit; since they carry more pots. For example, some vessels can carry a full compliment of 250 pots safely in all weather conditions. They are advantaged over a smaller vessel which must make multiple trips to move the same number of pots. This, combined with their greater speed and larger crews, allows them to deploy their gear over productive fishing grounds more effectively.

ii. ADF&G information indicated that the numbers of pots fished by vessels greater than 90 ft., which most full-time crabbers have, do not track robustly with vessel length. (see attached Fig. 4)

iii. Presently, small and medium size vessels utilize wet storage areas to allow them to deploy a large number of pots if they choose to fish in this manner.

iv. Presently, vessels are provided very liberal hours to deliver their catch to port after a season closure. This allows small and mid-sized vessels to remain competitive by fishing large numbers of pots despite weather variables.

v. Some large vessels are able to fish smaller numbers of pots competitively due to skill and experience of operators.

vi. Data presented in the Economic Impacts Study Draft document, for years 1986-1990, forecast that fixed pot limits may pose some disproportional impacts to the largest vessels, but that vessels in every size category are impacted. But in contrast to the forecast model, experience with the Kodiak Tanner crab pot limit indicates that under a fixed pot limit larger vessels maintain their competitive advantage over smaller vessels.

vii. Public testimony indicated that a minimum pot soak time of 18 - 24 hours was required to reach acceptable harvest levels. Since even the largest vessels do not normally turn over 250 pots within a 24 hour period, no vessel would be restricted to unacceptable soak times while constantly working their gear. Since this is not optimal soak time, two outcomes occur: 1) in the red king crab fishery it is anticipated that vessels would move to optimize their soaks and thus extend the fishery; 2) in the C. opilio fishery, turning gear at a normal rate, CPUE would drop to a level which would facilitate sorting and releasing live sublegal C. bairdi crab.

7. At this point, the Board determined fixed pot limits would be the preferred management alternative to discuss with industry. The Board then focused its discussion on determining the appropriate number of pots to apply to the Bristol Bay red king crab fishery.

   For discussion purposes, after input from the industry committee, the Board adopted 250 pots per vessel as a reasonable number to focus on.

   The Board engaged in a lengthy discussion of enforcement issues and found the following:

   A. An important benefit of imposing any fixed pot limit would be to generate accurate numbers of how many pots are actually being fished and how many pots are actually being lost. Industry saw that attainment of real numbers would greatly improve ADF&G's ability to determine the catch per unit effort.

   B. A sticker program enforceable from the surface of the water could be implemented consistent with existing state regulations.

C. Replacement of lost pots could be provided for in the 1992/1993 fishery.

D. Division of Fish and Wildlife Protection may experience difficulty proving cases if replacement pots are allowed. The Board considered non-replacement of lost pots and double sticker requirements. However, the Board found that hardship to industry by not providing some replacement program would be unnecessarily burdensome, especially in light of a first year program of gear limitation. Special conditions regarding replacement were included to accommodate the concerns of Fish and Wildlife Protection. The Board, at the recommendation of Fish and Wildlife Protection, rejected the double sticker standard.

E. Board discussed the manner in which it could provide for pots fishing cod for bait. There may be future need for coordinated regulation or cod pot definition between NPFMC and the Board.

In their final summations, Board members found that establishment of 250 fixed pot limit for the Bristol Bay red king crab fishery would be desirable for several reasons. In addition, this management option would be consistent with Magnuson Act standards and would achieve objective of FMP in the following ways:

1. Pot limits would likely lengthen season and would provide for greater management precision and prevent over harvest of stocks.

2. Pot limits would decrease crab mortality by increasing incentive to retrieve lost gear.

3. Pot limits would allow for greater level of maintenance of gear in terms of better quality lines and buoys, thereby decreasing pot loss.

4. Pot limits will result in greater ability to maintain biodegradable twine, thereby decreasing crab mortality due to ghost fishing of lost pots.

5. Pot limits encourage vessel operators to fish more efficiently thus decreasing capitalization costs relative to value of harvested species.

6. Pot limits will minimize gear conflict within and between fisheries.

7. Pot limit of 250 is an appropriate level which will not result in a significant increase in mortality due to handling relative to increased pot limits, when weighed against the savings in crab mortality presently incurred by the lost pot problem.

8. Pot limit of 250 is the mid-point of the range of values considered in the economic study, and is close to the 275 pots per vessel average currently being fished.

9. With the exception of a representative of the catcher processor fleet, the industry committee indicated they could "live with" a 250 pot limit.

10. Pot limits with the pot sticker requirements and with the special replacement conditions can be enforceable, but it may take time to work out ideal implementation.

11. Pot limit of 250 would not unduly discriminate against any component of the fleet and should not result in a reallocation of harvest between historic components of fishery to a significant degree.

12. Pot limit of 250 for Bristol Bay red king crab will result in a more orderly fishery.

With respect to C. bairdi, the Board discussed whether similar concerns existed in that fishery which were identified in the red king crab fishery. Hearing that this was indeed the case, and with concurrence of the industry committee, the Board extended the 250 pot limit to the Bering Sea C. bairdi Tanner crab fishery as well. Similar administrative procedures for the stickers and replacement were also approved.

Moving to the Bering Sea C. opilio fishery, the Board found the following identified concerns.

1. The fishery is distinguished by fast moving ice conditions which are causing, in some years, intolerably high levels of pot loss which degrade habitat and increase crab mortality and gear conflicts (pot and trawl fisheries).

2. If pot limits are implemented, they would cause greater vigilance in gear placement and would decrease the number of pots being lost.

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3. Pot replacement should be provided for under special conditions to accommodate Fish and Wildlife Protection's concerns.

The Board found that benefits of this limit are similar to those of the Bristol Bay red king crab fishery but recognized increasing season length as not the compelling reason necessary in this fishery at this time. The Board also found that benefits outweigh projected hardship to industry. However, if during their review at the 1993 Board meeting they find Board objectives are not met under this regime, the Board can take corrective measures based on information available and industry recommendations.

After lengthy discussion with the industry committee and among itself, the Board chose to apply the 250 pot limit to the Bering Sea C. opilio fishery, for the 1992-1993 season.

The Board considered the Norton Sound red king crab, Pribilof blue king crab, and St. Matthew blue king crab fisheries and established a 100 pot limit for each, based upon the following reasons:

1. Industry support for fixed limit, over any other option reviewed during the red king crab fishery discussion.

2. Department recommended a 50 pot limit, but the Board liberalized this to decrease possible handling mortality which would occur through increased pot lifts.

3. Those fisheries would have remained closed, or have been closed, if a pot limit was not instituted.

In 1993, the Board may revise this level downward or consider other options if overfishing occurs in 1992/1993.

Regulations for the remaining Bering Sea/Aleutian Island crab fisheries (Dutch Harbor and Adak) remained status quo, as the Board found no pressing concerns requiring regulatory change for those fisheries at this time.

Michael R. Martin

Vote: 7 yes

Mike Martin, Chair
Alaska Board of Fisheries

Adopted: October 25, 1992 at Soldotna, AK

Attachments:

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