

M E M O R A N D U M

TO: Council, SSC, and AP members  
FROM: Jim H. Branson  
Executive Director  
DATE: June 19, 1986  
SUBJECT: Bering Sea Groundfish FMP

ACTION REQUIRED

Approve Amendment 10.

BACKGROUND

*App. Spec. bycatch Alts  
PT to → CALRIR ASAP +  
Initiate a new comment period.*

The public comment period on the Draft EA/RIR/IRFA for Amendment 10 ended on May 28, 1986 and all the comments were mailed to you in early June. Most of the comments addressed the vague nature of the proposals and some opposed frameworking PSC measures. NMFS stated their view that the public review requirements have not been met and that the Council should draft more specific alternatives (for the bycatch issue) and prepare a new Draft EA/RIR/IRFA. Under this approach final Council action on Amendment 10 would be delayed until the September 1986 meeting implementation would be expected around April 1987.

Although you could take final action at this meeting on the DAH reallocation proposal and perhaps "field order" authority, the team feels it would be best to delay action on the entire amendment until September. The team has concluded that a comprehensive bycatch framework is not feasible for this amendment cycle and may not be possible at all. They have drafted a series of alternatives to address the crab and halibut bycatch issue including closure of the Pot Sanctuary, reaffirmation of the emergency rule recommendations, the emergency rule with adjustable PSCs, and a more general framework approach. These are provided in the team report, which is found under Agenda D-5(a)(1). The team recommends that you approve this revised list of bycatch alternatives and a new Draft EA/RIR/IRFA.

With respect to inseason management ("field order") authority, it is apparent that the Central Office's reluctance to grant this authority still exists. NOAA General Counsel has drafted regulatory language which is being reviewed in D.C. now, and if this language is acceptable the team could support it with certain caveats. Basically the draft language says that the Regional Director may take inseason action to prevent overfishing. We would need to either define overfishing more clearly or specify at what point he would take action to make sure overfishing will not occur.

With respect to the DAP priority proposal, the team feels that they do not have specific enough information to produce an adequate RIR analysis. Therefore, they recommend dropping this proposal from Amendment 10.

**REPORT OF THE BERING SEA PLAN TEAM**

**REGARDING**

**BERING SEA FMP AMENDMENT 10**

**June 17, 1986**

## EXECUTIVE SUMMARY

The Bering Sea Plan Team has prepared a series of specific proposals to control bycatches of crabs and halibut. All the options address only crabs and halibut, and only in the areas addressed by the emergency rule. Option 1 is a framework that specifies an annual procedure (modeled along the lines of the TAC procedure) which includes an annual Bycatch Resource Assessment Document (Bycatch RAD). The Bycatch RAD would be the primary decision document and provide the starting point for determination of annual changes to the existing PSC limits, area closures, etc. Option 2 is the emergency rule as adopted by the Council, modified slightly to extend beyond 1987. It is not a framework proposal. Option 3 would permanently close the Pot Sanctuary to all groundfish fishing. Option 4 is the Council's emergency rule with annually adjustable PSC limits. Three alternatives are listed to adjust PSCs, and the Council should choose which to incorporate into the proposal. Alternative B most closely echoes the TAC/OY mechanisms. Option 4 follows the same annual procedure specified in Option 1, but since it allows less Council discretion the Bycatch RAD would not be as comprehensive. Specific FMP language is provided for each option, including reference to FMP chapter and section.

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Bering Sea Plan Team Report  
June 17, 1986

Individual members of the Bering Sea/Aleutian Islands Plan Team met in Anchorage to discuss Amendment 10 comments and problems identified with the Draft EA/RIR/IRFA for Amendment 10. Loh-Lee Low and Jim Glock held a conference call with the Regional Office concerning the NMFS comments on the approvability of the amendment in its current form. The NMFS review and evaluation of the draft document identified several major flaws which, in the official NMFS opinion, are serious enough to require substantial redrafting and initiation of an additional public comment period. The primary shortcoming of the document is the lack of specific management alternatives for dealing with bycatch.

The Team held a teleconference on June 12 and has concluded that a comprehensive bycatch framework which deals with all fully utilized species cannot be prepared in time for consideration this year. Given the NMFS Central Office's demand for specificity, such a framework may not even be possible. However, the Team believes that measures to address the bycatch of king crab, Tanner crab and halibut can be implemented during this amendment cycle. In order to accomplish this, though, the Team recommends delaying final action on the amendment until September. The Team believes that at this meeting the Council could take final action on the DAH reallocation proposal and possibly on the Field Order proposal in June, but we recommend keeping the amendment package intact.

This Team report is intended to provide the Council with specific management alternatives to evaluate and control bycatches of crabs and halibut in the eastern Bering Sea, as well as some comments on the draft EA/RIR/IRFA. The Team has prepared four specific alternatives to address bycatch issues and recommends that the Council review these and direct staff and the Team to prepare a more detailed draft EA/RIR/IRFA. The new draft will be sent out for an additional public comment period during August with final action scheduled for September.

CRAB AND HALIBUT BYCATCH MEASURES RECOMMENDED FOR COUNCIL CONSIDERATION

The bycatch measures recommended by the Plan Team address only crabs and halibut.

I. Problem Description

Traditional fisheries for crabs, halibut, salmon, and other species are impacted by groundfish fisheries which take these species incidentally to their normal operations. In the past, foreign fisheries were responsible for the vast majority of bycatches of these species, but over a period of several years their bycatches have been reduced substantially. While implementing restrictions to control foreign bycatches was relatively easy, controlling bycatches by U.S. vessels may be much more difficult. Bycatch rates of U.S. vessels, as demonstrated by joint venture data, are often much higher than those of foreign vessels, and as foreign operations are replaced by U.S. catcher boats the total bycatch levels could continue to increase unless restrictions are applied. Associated with this is the lack of bycatch data



for fully U.S. operations. There is currently no data base to determine bycatch rates for DAP fisheries and to evaluate whether these operations are having a significant impact on non-groundfish species. Some form of monitoring program for DAP vessels is necessary to establish and maintain the data base as well as to determine when PSC limits are reached.

II. Objectives (note: these objectives could apply to each of the three alternatives presented below. However, Options 2 and 4 include objectives approved as part of the Council's emergency rule.)

- A. Set bycatch limits of halibut, king crab, and Tanner crab at negotiated levels and maintain bycatch at or below that level.
- B. More equitably distribute depressed stock conservation burdens.
- C. Preserve, to the extent possible, traditional crab and halibut fisheries.
- D. Develop a monitoring (i.e. observer) program for DAP vessels.
- E. Where possible, minimize the costs to groundfish fisheries in accomplishing objectives A - D above.

### III. The Alternatives

The plan team has drafted three specific options from the general alternatives identified in the Draft EA/RIR/IRFA. Option 1 is a general framework that encompasses the Council's emergency rule recommendations but allows modification of the particular details without requiring plan amendment. Option 2 is identical to the emergency rule as approved by the Council for 1986. Option 3 is the outright year-round closure of the Bristol Bay Pot Sanctuary. Option 4 combines the Council's emergency rule with framework measures to adjust the PSC values as needed on an annual basis. The framework options (1 and 4) include a new Zone 3 which encompasses that portion of the Winter Halibut Savings Area outside of Zones 1 and 2.

#### Option 1. The Framework Approach

The Council may respond to bycatch problems in several different ways. These include prohibiting the retention of a species, setting bycatch limits, establishing gear restrictions, and closing areas for all or part of the fishing year. The proposed framework outlines the options available to the Council and the Secretary to address any given set of circumstances. The framework leaves the Council flexibility to weigh biological and socioeconomic factors which will most certainly vary from year to year. However, the framework establishes the conditions under which the Council may take action and indicates the nature of the action that must be taken. The flexibility is primarily in the severity of the management response rather than the nature of that response. Regardless of condition of the halibut and crab stocks, all catches of these species from the BS/AI FMP fisheries are non-retainable. They are unconditionally designated PSC species.

This framework is limited to crab and halibut bycatch problems, and any management measures implemented through this framework are limited to Zones 1 and 2 (Figure 1) established by the Council's January and March 1986 decisions, and a new Zone 3 which encompasses a portion of the Winter Halibut Savings Area. Any measures not identified in the framework can be implemented

only by emergency rule or FMP amendment. PSCs may be set for the entire Bering Sea/Aleutians with incremental closures within Zones 1, 2, and 3 to be implemented at specific trigger points.

In general, the framework contains two main parts:

- (a) An annual procedure to determine the need for management adjustments. This includes a requirement to provide a Bycatch Resource Assessment Document (Bycatch RAD) on an annual basis to update the status of crab and halibut populations and fisheries, consequences of previous bycatch restrictions, and recommendations for future bycatch restrictions consistent with the framework identified in (b) below.
- (b) A set of guidelines (in matrix form) to be followed for determining the appropriate management response to changes in the resources or fisheries. This matrix identifies the management options available for combinations of bycatch species condition and the relative importance of the areas to groundfish fisheries.

A. Area affected by this framework

Bycatch Zone 1: The area east of 165°W, south of 58°N, and bounded by the Alaska Peninsula with inclusion of the western tip of the Pot Sanctuary Area.

Bycatch Zone 2: The area drawn by connecting the following geographical coordinates in the order listed:

(54°30' N., 165°00' W.),  
(58°00' N., 165°00' W.),  
(58°00' N., 171°00' W.),  
(60°00' N., 171°00' W.),  
(59°25' N., 179°20' W.),  
(54°30' N., 167°00' W.), and  
(54°30' N., 165°00' W.).

Bycatch Zone 3: The area drawn by connecting the following geographical coordinates in the order listed:

(54°30' N., 165°00' W.),  
(52°48' N., 170°00' W.),  
(53°30' N., 170°00' W.),  
(56°00' N., 165°00' W.), and  
(54°30' N., 165°00' W.).

B. Procedure for establishing annual bycatch restrictions

1. September. Plan Team prepares draft Bycatch RAD; if appropriate, recommends changes to bycatch restrictions.
2. September Council meeting. Council approves preliminary bycatch limits, closures, etc., and releases Bycatch RAD for 30 day public review.
3. October 1. Secretary of Commerce publishes notice of preliminary limits and restrictions in **Federal Register**, begins 30 day public comment period.
4. December. Plan Team prepares Final Bycatch RAD.

5. December Council meeting. Council reviews public comments, holds public hearing, makes final decision on annual bycatch measures. If the Council does not recommend bycatch measures by December 15, the measures already established shall constitute the Council's recommendation to the Regional Director.
6. December 15. Secretary publishes a notice of final bycatch measures in **Federal Register**.
7. January 1. Annual bycatch measures implemented.  
(note: after the first year, changes will only be made if a need is demonstrated or a significant change in the fisheries or resources has occurred.)

C. Description of Bycatch RAD.

1. Crab and halibut information
  - A. Biomass and stock condition of each bycatch species of concern
  - B. Distribution of bycatch species and identification of critical or sensitive areas
  - C. Change in stock condition from previous year or from that anticipated the previous year
  - D. Change in biological and socioeconomic characteristics of the fishery.
2. Groundfish species information
  - A. Identification of target groundfish fisheries associated with bycatches of each species.
  - B. Expected change in target groundfish biomass and catch
  - C. Change in biological and socioeconomic characteristics of the fishery.
3. Other
  - A. Potential changes in impacts on crab or halibut stocks or fisheries.
  - B. Other biological and socioeconomic factors that affect the appropriateness of specific bycatch measures in terms of FMP objectives.

D. The Framework: Basis for Council Determinations and Secretarial Action

The Council will base its recommendations on the Bycatch RAD, public testimony during the public comment periods, results of industry negotiations, and any other pertinent information available.

1. Circumstances that will trigger examination of potential changes in management. If any of these criteria are met, it is necessary to go to step 2 below.
  - A. A statistically significant change in the biomass of the bycatch species
  - B. A statistically significant change in the biomass of the target groundfish species
  - C. A 30% change in the yield (i.e. catch or expected catch) in the crab or halibut fisheries
  - D. A 20% change in the expected yield of groundfish species associated with bycatch of crab or halibut
  - E. A 20% change or expected change in bycatch rate

- F. A significant change in prices or markets of crab, halibut or associated groundfish species
  - 2. Criteria to be considered in determining the need for change
    - A. Biological condition of the groundfish and bycatch species
    - B. Socioeconomic factors relating to the fishing industry
    - C. Potential impact of groundfish operations on bycatch species
    - D. Alternative fishing areas available to groundfish fishermen
    - E. Other pertinent socioeconomic or biological information
  - 3. Criteria for determining management responses to identified problems
- Should PSC limits be set under this section, the Council will recommend apportionment of these limits, for implementation by the Regional Director, according to steps 4 and/or 5 below.

Table 1. Framework for Determination of Management Responses to Various Bycatch Conditions. The numbers refer to the available management responses, which are listed following the table.

Importance of Area To Groundfish Fishery	Relative Status of Bycatch Species			
	High	Average	Low	Depressed
Important	1	1-3	1-4	2-5
Moderately Important	1-3	1-4	2-5	2-5
Unimportant	1-5	1-5	2-5	2-5

Available Management Responses

1. PSC designation: no specified limits for DAP vessels, but all bycatch must be recorded and immediately returned to the sea. A statistically valid observer program for DAP vessels may be required to monitor DAP catches and to provide baseline DAP bycatch data.
2. PSC limits in all or part of the area which, when reached, trigger moderated additional restrictions. These could include gear restrictions or limited time and area closures. A limited closure means less than 50% of Zone 1 or 2 and/or all of Zone 3. A statistically valid DAP observer program is mandated.
3. Year-round prohibition of bottom trawling in specified areas. A statistically valid DAP observer program is mandated.
4. Year-round closure of less than 50% of Zone 1 or 2.
5. PSC limits which, when taken, trigger closure of 50% or more of Zone 1 or 2 (or both). A statistically valid DAP observer program is mandated.

Definitions:



1. Importance of the Area to Groundfish Fishery is based on the following:
  - (a) historical fishing pattern
  - (b) CPUE and \$CPUE
  - (c) availability of alternative productive fishing areas
  - (d) costs, safety, and other considerations
  
2. Relative Stock Status of Bycatch Species
  - (a) Crabs:
    - high = >75% of historical high; no identified recruitment or stock problems
    - average = 50-74% of historical high; generally healthy stock
    - low = 25-49% of historical high; moderate recruitment or abundance problems identified
    - depressed = below 25% of historical high; severe recruitment or abundance problems identified
  
  - (b) Halibut:
    - high = > MSY x 1.5 where MSY = 1.5 million pounds
    - average = MSY to (MSY x 1.5) [i.e., 1.5 - 2.25 million pounds]
    - low = (MSY x 0.67) to MSY [i.e., 1.01 - 1.49 million pounds]
    - depressed = < MSY x 0.67 [i.e., less than 1.01 million pounds]
  
4. Apportionment of Prohibited Species Catch limits.  
 By the end of the preceding fishing year, the Regional Director shall, after consultation with the Council, make the following determinations:
  - A. The areas and species for which PSCs will be established.
  - B. The number of PSCs per area and fishery.
  - C. The level of each PSC.
  - D. The time period of each PSC.
  - E. Whether PSCs will be allocated to individual operation.
  - F. The methods of allocation to be used.
  - G. The types of gear or modes of operation to be prohibited once a PSC is taken.
  - H. The area to be closed when a PSC is taken.
  
5. Additional Guidelines for Halibut PSCs
  - A. If a total Bering Sea/Aleutian Islands PSC is designated, Zone 1 will be closed to all bottom trawling when 50% of PSC has been taken.
  - B. When 75% of the total BSAI halibut PSC has been taken, Zone 3 will be closed to all bottom trawling.
  - C. When 90% of the total BSAI halibut PSC has been taken, Zone 2 will be closed to all bottom trawling.
  
6. Inseason adjustment of measures established by the framework

When the JVP or DAP vessels to which a PSC applies have reached that limit, the Regional Director will prohibit that type of operation unless it can be demonstrated that there is minimal risk of biological harm to the species of concern and of socioeconomic harm to authorized users of that species by continued fishing by these vessels. In addition, the RD will consider the following information when determining whether to allow continued fishing:

- A. The risk of biological harm to Tanner crab, king crab and halibut stocks and of socioeconomic harm to authorized crab users posed by authorizing continued or resumed directed fishing for yellowfin sole and "other flatfish";
- B. the extent of incidental catches of Tanner crab, king crab, and halibut in specific areas;
- C. the accuracy of the estimates of incidental catches of Tanner crab, king crab, and halibut;
- D. whether adherence to the prescribed conditions can be assured in light of available enforcement resources; and
- E. whether or not continued directed fishing for yellowfin sole and "other flatfish" will lead to overfishing of prohibited species.

Draft FMP Text (to be added at the end of Annex I -- Content of RADs)

ANNEX I -- "Content of Bycatch Resource Assessment Documents"

The Bycatch Resource Assessment Documents (Bycatch RADs) will be prepared annually by the Plan Team with the assistance of the NMFS Northwest and Alaska Fisheries Center, other agencies, or other scientists noted for their expertise in biology or harvest of marine species. The Bycatch RAD will identify bycatch species of concern and provide the biological information base necessary to determine the need for measures to protect species taken as bycatch by groundfish fishing operations.

The Bycatch RAD will provide information on the historical catch and bycatch trends; assessments of the stock condition of individual bycatch species; assessments of the impacts on bycatch species by groundfish operations, including, where appropriate, consideration of rebuilding depressed stocks; significant change in stock status or economic conditions and alternative management and harvesting strategies and related effects on bycatch species status and fisheries.

The Bycatch RAD will annually update the biological information base necessary for bycatch management. It will also provide readers and reviewers with knowledge of the factual basis for bycatch decisions and illustrate the manner in which new data and analyses are used in the estimation of biologically sound bycatch limitations."

- E. Overview of how bycatch measures will be set for 1987 and modified in subsequent years

In September of each year the Plan Team will prepare a Draft Bycatch Species Resource Assessment Document which will identify bycatch species of concern. Resource assessment data will be provided in this document, including historical trends in abundance of each species; current population status; historical fishery trends with respect to groundfish, crab and halibut fisheries; and bycatch rates by area, time, user group, gear and target species. Critical areas and/or times for bycatch species and target fisheries will be identified. To avoid duplicating effort, the RAD will be the primary document for groundfish information.

The Plan Team will call upon scientific personnel from NMFS, IPHC, ADF&G and other resource agencies for biological data on the various species and socioeconomic data on the various fisheries. In 1986, the Plan Team will make recommendations for initial bycatch restrictions for Council consideration. In later years the Plan Team will recommend adjustments to existing regulations only if they determine that a significant change (as described in the framework) has occurred. The Council will review the Team's recommendations and make a preliminary determination of the need for adjustment of existing bycatch regulations. They will then make preliminary recommendations to the Secretary for changes; if the Council chooses not to make an adjustment, the existing regulations will constitute their recommendations. The Draft Bycatch RAD will then be released for public review for a period of not less than 30 days. A concurrent federal public comment period will be initiated with a notice in the **Federal Register** on or about October 1. Any additional data that becomes available during the 30 day review will be assessed by the Plan Team and included as deemed appropriate (by the Plan Team) into the Final Bycatch RAD which will be presented to the Council prior to or during the December meeting. All public comments, whether incorporated into the final draft or not, will be presented to the Council for their review. The Council will use the Bycatch RAD as a starting point in its deliberations on specific regulations for the following year, but will not be limited to the recommendations in the Bycatch RAD. The Council will allow additional public testimony at the December meeting and may recommend that industry representatives attempt to negotiate an acceptable settlement for all affected parties. The Council will then make their final decision on bycatch restrictions. As indicated above, after the first year changes to existing bycatch restrictions will be made only where a need has been demonstrated or the resource or fisheries have changed significantly.

The Secretary, after consultation with the Council, will specify the total allowable bycatch for each species for each calendar year and any other restrictions to be implemented. As soon as is practicable after October 1 of each year, the Secretary shall publish a notice in the **Federal Register** specifying preliminary bycatch limits and other restrictions for each species for the next calendar year. Public comment on these amounts will be accepted by the Secretary for a period of 30 days after the notice has been filed. The Secretary shall respond to all timely comments received by his office and, after additional consultation with the Council, shall publish a notice of final bycatch restrictions in the **Federal Register** as soon as practicable after December 15. These final determinations shall also be made available to the public through other suitable means by the Regional Director.

#### A Likely Scenario for 1986-87

For purposes of the RIR for this Amendment 10, the bounds on the Secretary's authority must be specified in order to determine the socioeconomic impacts which could occur under the proposed regulation. The framework is specifically limited to crab and halibut bycatch and management measures are restricted to Zones 1 and 2 of the Council's emergency rule request. Thus the maximum allowable impacts on the groundfish industry are (1) no restriction other than PSC designation of crab and halibut, and (2) closure of either or both Zones 1 and 2. The Plan Team will make recommendations for the first year this framework takes effect, which is assumed to be 1987. Although total closure of the combined areas would be authorized, this would only occur if

the crab or halibut resource reached such a depressed level that the Secretary would have no choice other than to prevent overfishing regardless of the socioeconomic impacts. It must be recognized that crab resources are currently in the "depressed" category and that it may be necessary to impose substantial short term costs on trawlers in order to allow rebuilding. The Plan Team does not feel that it is necessary to analyze this extreme in the RIR because such action would be mandated even in the absence of Amendment 10. Therefore, the range of probable impacts is less than total closure of the two areas. A more likely regulation for 1987 is the specific recommendation made by the Council at their January and March 1986 meetings. This is Option 2 identified above. Using this as a baseline or point of departure is much more realistic even though some details will undoubtedly be modified through industry negotiations and Council deliberation. The Team therefore believes at this time that their recommendation for 1987 will be the details of Option 2, unless significant information becomes available prior to September. It should also be recognized that in future years regulatory changes will only be made if significant changes (as identified in the framework) occur in the resources or fisheries.

The Team's recommendations and the Draft Bycatch RAD will come out in September, possibly not until the Council meeting. Groundfish stock status information, contained in the RAD, would have been available for nearly two months already. The annual NMFS crab survey preliminary results will also become available at the September meeting. Based on historical bycatch rates and other information, the Team will be able to make preliminary estimates of bycatch levels given the TACs under consideration for the coming year. The Council will review the crab survey report, the Team's RAD and Bycatch RAD, take public testimony regarding the fisheries and make a preliminary determination of bycatch restrictions for the coming year. Again, after 1986, if no significant changes have occurred no action will be taken.

In December, after the public review and redrafting of the Draft Bycatch RAD by the Team, the Council will make their final determination and forward this recommendation to the Regional Director for implementation.

**Option 2:** The emergency rule as adopted by the Council for 1986 for controlling bycatch of (a) king crab and halibut in the yellowfin sole/flounder joint venture and DAP cod fisheries (adopted at the January 1986 Council meeting), and (b) Tanner crab in yellowfin sole/flounder joint venture and DAP cod fisheries (adopted at the March 1986 Council meeting). This option appears to be an acceptable means of controlling bycatch of prohibited species in domestic fisheries for it represents the eventual outcome and compromise of industry and Council workgroups. This is not a framework measure and the specific restrictions and limits would therefore remain in effect until modified by plan amendment. All reference to 1986 have been deleted except in the policy statement. Proposed draft FMP language follows:

#### 14.4.2 Prohibited Species

(Modify the Objective section to read as follows:)

##### B. Objectives

"The overall objective of this section is to provide an environment which is supportive of domestic harvesting of groundfish with an awareness of principles and techniques for minimizing incidental catches of Pacific halibut, salmon, Tanner crab, king crab, and other species the fishery for which in the area governed by this FMP is governed by another FMP. An immediate objective is to manage groundfish fishing activity in the Bering Sea in a manner which emphasizes conservation and rebuilding of the crab resources while, to the extent possible, allowing both bottom flatfish trawling and crab pot fishery activity."

##### D. Policy (add the following text at the end of this section:)

"In determining the bycatch levels the Council extrapolated an anticipated number of bairdi animals in the Bering Sea by reducing the 1986 population to 60% of the 1985 population. This extrapolation resulted in an anticipated number of animals in 1986 of approximately 72 million.

Having determined the total number of assumed animals in 1986, the Council then applied the same bycatch rate in effect in 1985 to the 1986 flatfish allocation in order to determine the total number of animals which could be removed from the fishery without theoretically harming the status of the stock. That number is 1,253,000 animals. The Council then extrapolated the percentage of the number of animals taken in 1985 by directed foreign fishing operations, joint venture operations, and directed crab fishing operations (see Table 2), as adjusted for the relative decreases of TALFF and the increases of JVP allocations.

As regards DAP flatfish trawl operations, the Council anticipates the harvest levels in Zones 1 and 2 to be diminuous (7,000 mt). The Council likewise anticipates bycatch amounts to be negligible. However, the Council expects DAP operations to voluntarily move and/or modify their operations in the event their activity results in bycatch rates greater than those applicable for JVP operations in that particular zone. The Council recommends DAP flatfish trawl operations be monitored closely to ensure compliance and that necessary action be taken in the event they fail to adhere to this agreement. The Council recognizes that DAP operations are new to this fishery and may encounter start-up difficulties.

TABLE 1. RECOMMENDED BAIRDI CATCH AMOUNTS (IN ANIMALS) for 1986 and Beyond

Directed Pot Fishery	783,0000 1/
DAP - Trawl	
JVP - Trawl	406,000 2/
TALFF - Trawl	<u>64,000</u>
TOTAL	1,253,000

- 1\_/ Assumes 1986 NMFS Summer Trawl Survey is 72 million animals.  
 2\_/ The JVP bycatch breakdown is 80,000 animals in Zone 1 and 326,000 animals in Zone 2.

TABLE 2. 1985 BAIRDI CATCH AMOUNTS (IN ANIMALS)

Directed Pot Fishery	1,283,000
DAP - Trawl	?
JVP - Trawl	522,000
TALFF - Trawl	<u>287,000</u>
TOTAL	2,092,000"

"E. Prohibited Species Catch Limits

The Fishery Conservation Zone east of 162°W longitude and south of 58°N latitude, bounded on the south by the Alaska Peninsula and on the east by 160°W longitude be closed to all commercial fishing except that:

a) Domestic (DAH) trawling on Pacific cod shall be allowed in waters of 25 fathoms or less in the area described, provided that a statistically valid DAP observer program is in effect and NMFS approved observers are on all JVP processing vessels engaged in the fishery. Measures to close the fishery shall be implemented by NMFS if catches exceed 2 red king crab per ton of fish caught, as measured per 1000 mt of groundfish taken.

b) In the area defined as that portion of the Pot Sanctuary west of 162°W longitude, there shall be a PSC limit of 25,000 halibut on all yellowfin sole/flounder joint venture operations. In the area east of 160°W longitude there shall be a PSC limit of 15,000 halibut in the yellowfin sole/flounder fishery. The total catch of halibut in all yellowfin sole/flounder joint ventures in the Bering Sea may not exceed 250,000 fish.

c) The incidental catch (PSC) of red king crab in all yellowfin sole/flounder joint venture fisheries in the Bering Sea in the area east of 165°W longitude and south of 58°N latitude shall not exceed 135,000 crab and shall not exceed a cap (in number of crab) of 1 red or blue king crab per metric ton multiplied by the JVP allocation tonnage of flounder/yellowfin sole caught outside the aforementioned area.

d) Joint venture bottom trawling for yellowfin sole and flounder in Zone 1 will cease when a cap of 80,000 Tanner crab (C. bairdi) (based upon an



average of two animals per metric ton and a groundfish harvest of 40,000mt) is taken.

e) Joint venture bottom trawling for yellowfin sole and flounder in Zone 2 will cease when a cap of 326,000 Tanner crab (C. bairdi) (based upon an average of 2.25 animals per metric ton and a groundfish harvest of 145,000mt) is taken.

f) Caps on halibut, red and blue king crab and C. bairdi Tanner crab catches shall apply to yellowfin sole/flounder joint ventures in the aggregate. When the cap for any of the 3 species is reached in any of the areas described, all yellowfin sole/flounder joint venture operations will end in that area for the remainder of the fishing year.

g) These C. bairdi caps are based on a total population size of 72 million animals. The bycatch limits for both JVP and TALFF operations shall be reduced proportionately to the difference between this figure and the results of the annual summer trawl survey.

h) If a DAP fishery for yellowfin sole and flounder should develop the Council intends that measures as similar as possible as those applying to joint ventures, with provision for NMFS approved observers, if necessary, be developed by NMFS.

i) In the area east of 160°W longitude all DAP fishing vessels and all JVP processing vessels engaged in the groundfish fisheries shall carry NMFS approved observers.

Rationale -- The female bairdi population is extremely low and requires protection in accordance with the stated objective. Information of critical importance (e.g. stock recruitment, gear impact, and predator-prey relationships) is insufficient for estimation of impacts of current management decisions on future bairdi populations."

#### "14.4.3.1 General (restrictions)

A. 'Halibut/Crab Bycatch Restriction Zones 1, 2 and 3' (as described in Appendix III and Figure 27):

#### "APPENDIX III. Description of Closed Areas

#### Area G -- Halibut/Crab Bycatch Restriction Zones

Zone 1: The area east of 165°W, south of 58°N, and bounded by the Alaska Peninsula with inclusion of the western tip of the Pot Sanctuary Area.

Zone 2: The area drawn by connecting the following geographical coordinates

(54°30' N., 165°00' W.),  
(58°00' N., 165°00' W.),  
(58°00' N., 171°00' W.),  
(60°00' N., 171°00' W.),  
(59°25' N., 179°20' W.),  
(54°30' N., 167°00' W.), and  
(54°30' N., 165°00' W.).

Area H -- Crab/Halibut Protection Zone

That portion of the EEZ between 160°00' W. longitude and 162°00' W. longitude, south of 58°00' N. latitude south to the Alaska Peninsula is closed to groundfish fishing."

"14.5.2 Prohibited Species (foreign management measures)

(The current Section E becomes Section F, F becomes G, etc.)

E. Reducing the PSC of Tanner Crab (*C. bairdi*)

The *C. bairdi* PSC limit is 64,000 animals."

**Option 3:** Year-round closure of Bristol Bay Pot Sanctuary to all groundfish fishing. This is not a framework measure and the closure would therefore remain in effect until modified by plan amendment.

Proposed draft FMP language follows:

"14.4.3.1 General Area Restrictions

A. Area A. -- "Bristol Bay Pot Sanctuary" (as described in Appendix III and Figure 27) -- CLOSED."

**Option 4:** A combination of the Council's emergency rule recommendations and a framework. The specific restrictions and limits would be implemented for the 1987 season and framework measures would allow modifications after 1987. Additional halibut measures are included. Proposed draft FMP language follows:

#### 14.4.2 Prohibited Species

(Modify the Objective section to read as follows:)

#### B. Objectives

"The overall objective of this section is to provide an environment which is supportive of domestic harvesting of groundfish with an awareness of principles and techniques for minimizing incidental catches of Pacific halibut, salmon, Tanner crab, king crab, and other species the fishery for which in the area governed by this FMP is governed by another FMP. An immediate objective is to manage groundfish fishing activity in the Bering Sea in a manner which emphasizes conservation and rebuilding of the crab resources while, to the extent possible, allowing both bottom flatfish trawling and crab pot fishery activity."

#### D. Policy (add the following text at the end of this section:)

"In determining the bycatch levels the Council extrapolated an anticipated number of bairdi animals in the Bering Sea by reducing the 1986 population to 60% of the 1985 population. This extrapolation resulted in an anticipated number of animals in 1986 of approximately 72 million.

Having determined the total number of assumed animals in 1986, the Council then applied the same bycatch rate in effect in 1985 to the 1986 flatfish allocation in order to determine the total number of animals which could be removed from the fishery without theoretically harming the status of the stock. That number is 1,253,000 animals. The Council then extrapolated the percentage of the number of animals taken in 1985 by directed foreign fishing operations, joint venture operations, and directed crab fishing operations as adjusted for the relative decreases of TALFF and the increases of JVP allocations.

As regards DAP flatfish trawl operations, the Council anticipates the harvest levels in Zones 1 and 2 to be diminimous (7,000 mt). The Council likewise anticipates bycatch amounts to be negligible. However, the Council expects DAP operations to voluntarily move and/or modify their operations in the event their activity results in bycatch rates greater than those applicable for JVP operations in that particular zone. The Council recommends DAP flatfish trawl operations be monitored closely to ensure compliance and that necessary action be taken in the event they fail to adhere to this agreement. The Council recognizes that DAP operations are new to this fishery and may encounter start-up difficulties.

The framework is intended to respond to changes in both the target groundfish fishery and the status of the crab and halibut resources. For example, if the yellowfin sole TAC goes up, the total crab bycatch could also increase by using the same bycatch rate as the previous year. If the Council felt that the crab mortality should stay the same or go down, a lower bycatch rate could

be used in calculating the PSC. The Council realizes and stresses that a degree of human discretion is necessary to balance the competing interests and conflicting goals of the various users, and that a purely mechanical approach to annual PSC adjustments is not advisable.

E. Management Measures for 1987

The Fishery Conservation Zone east of 162°W longitude and south of 58°N latitude, bounded on the south by the Alaska Peninsula and on the east by 160°W longitude be closed to all commercial fishing except that:

a) Domestic (DAH) trawling on Pacific cod shall be allowed in waters of 25 fathoms or less in the area described, providing NMFS approved observers are on all DAP fishing and all JVP processing vessels engaged in the fishery. Measures to close the fishery shall be implemented by NMFS if catches exceed 2 red king crab per ton of fish caught, as measured per 1000 mt of groundfish taken.

b) In the area defined as that portion of the Pot Sanctuary west of 162°W longitude, there shall be a PSC limit of 25,000 halibut on all yellowfin sole/flounder joint venture operations. In the area east of 160°W longitude there shall be a PSC limit of 15,000 halibut in the yellowfin sole/flounder fishery. The total catch of halibut in all yellowfin sole/flounder joint ventures in the Bering Sea may not exceed 250,000 fish.

c) The incidental catch (PSC) of red king crab in all yellowfin sole/flounder joint venture fisheries in the Bering Sea in the area east of 165°W longitude and south of 58°N latitude shall not exceed 135,000 crab and shall not exceed a cap (in number of crab) of 1 red or blue king crab per metric ton multiplied by the JVP allocation tonnage of flounder/yellowfin sole caught outside the aforementioned area.

d) Joint venture bottom trawling for yellowfin sole and flounder in Zone 1 will cease when a cap of 80,000 Tanner crab (C. bairdi) (based upon an average of two animals per metric ton and a groundfish harvest of 40,000mt) is taken.

e) Joint venture bottom trawling for yellowfin sole and flounder in Zone 2 will cease when a cap of 326,000 Tanner crab (C. bairdi) (based upon an average of 2.25 animals per metric ton and a groundfish harvest of 145,000mt) is taken.

f) Caps on halibut, red and blue king crab and C. bairdi Tanner crab catches shall apply to yellowfin sole/flounder joint ventures in the aggregate. When the cap for any of the 3 species is reached in any of the areas described, all yellowfin sole/flounder joint venture operations will end in that area for the remainder of the fishing year.

g) These C. bairdi caps are based on a total population size of 72 million animals. The bycatch limits for both JVP and TALFF operations shall be reduced proportionately to the difference between this figure and the results of the annual summer trawl survey.

h) If a DAP fishery for yellowfin sole and flounder should develop the Council intends that measures as similar as possible as those applying to joint ventures, with provision for NMFS approved observers, if necessary, be developed by NMFS.

i) In the area east of 160°W longitude all DAP fishing vessels and all JVP processing vessels engaged in the groundfish fisheries shall carry NMFS approved observers.

\*\* j) When 50% of the Bering Sea/Aleutian Islands halibut PSC has been taken, Zone 1 shall be closed to all bottom trawling.

\*\* k) When 75% of the Bering Sea/Aleutian Islands halibut PSC has been taken, Zone 3 shall be closed to all bottom trawling.

\*\* m) When 90% of the Bering Sea/Aleutian Islands halibut PSC has been taken, Zone 2 shall be closed to all bottom trawling.

Rationale -- The female bairdi population is extremely low and requires protection in accordance with the stated objective. Information of critical importance (e.g. stock recruitment, gear impact, and predator-prey relationships) is insufficient for estimation of impacts of current management decisions on future bairdi populations."

F. Annual Adjustments of PSC Limits

1. Circumstances that will trigger examination of potential changes in management. If any of these criteria are met, it is necessary to go to step 2 below.
  - A. A statistically significant change in the biomass of the bycatch species
  - B. A statistically significant change in the biomass of the target groundfish species
  - C. A 30% change in the yield (i.e. catch or expected catch) in the crab or halibut fisheries
  - D. A 20% change in the expected yield of groundfish species associated with bycatch of crab or halibut
  - E. A 20% change in bycatch rate
  - F. A significant change in prices or markets of crab, halibut or associated groundfish species
2. Criteria to be considered in determining the need for change
  - A. Biological condition of the groundfish and bycatch species
  - B. Socioeconomic factors relating to the domestic fishing industry
  - C. Potential impact of groundfish operations on bycatch species
  - D. Alternative fishing areas available to groundfish fishermen
  - E. Other pertinent socioeconomic or biological information
3. Adjustments of PSC limits
  - Alternative A. PSC limits will be adjusted in proportion to changes in the crab and halibut stock status, as determined in the annual Bycatch RAD,  $\pm 10\%$ .
  - Alternative B. PSC limits will be based on bycatch rates which will fall within the following ranges. It is understood that in general a change in the crab or halibut resource status will lead to a similar change in the PSC limits. Likewise, a change

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in the groundfish TACs will generally lead to a similar change in PSCs. However, when conflicting changes occur, the Council will work through the open public process to achieve a balance between these conflicting interests.

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King Crab Red and Blue total.....	0.8 - 3.5	(all are animals/mt of flatfish)
King Crab (DAH 160-162) .....	1.8 - 4.5	
C. Bairdi .....	1.8 - 4.5	
Zone 1 .....	1.8 - 4.5	
Zone 2 .....	2.0 - 5.0	
Halibut		
East of 160 .....	4,000-20,000	(total for joint ventures only!
West of 162 .....	9,000-30,000	Additional PSC limits are
Total BSAI .....	50,000-325,000	necessary for DAP and TALFF.)

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Alternative C. PSC limits will be based on bycatch rates in the following table:

Relative Status of Bycatch Species\*\*

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	High	Average	Low	Depressed
King Crab Red and Blue total	1.5 - 3.5	1.0 - 2.5	.8 - 1.5	.8 - 1.2
King Crab (DAH 160-162)	2.5 - 4.5	2.0 - 3.5	1.8 - 2.5	1.8 - 2.2
C. Bairdi	2.5 - 4.5	2.0 - 3.5	1.8 - 2.5	1.8 - 2.2
Zone 1	2.5 - 4.5	2.0 - 3.5	1.8 - 2.5	1.8 - 2.2
Zone 2	2.5 - 5.0	2.2 - 4.0	2.0 - 3.0	2.0 - 2.5
Halibut***				
East of 160	10,000-20,000	8,000-15,000	6,000-12,000	4,000-10,000
West of 162	20,000-30,000	15,000-25,000	12,000-20,000	9,000-18,000
Total BSAI	1200,000-325,000	150,000-275,000	100,000-225,000	150,000-175000

(crab = number/mt flatfish; halibut = total fish)

\*\*NOTE: the stock status values from Option 1 will be used

\*\*\*NOTE: for JVP only. Additional PSCs needed for DAP and TALFF.

"14.4.3.1 General (restrictions)

A. 'Crab/Halibut Protection Zone' (as described in Appendix III and Figure 27): CLOSED.

B. 'Halibut/Crab Bycatch Restriction Zones 1 and 2' (as described in Appendix III and Figure 27):

"APPENDIX III. Description of Closed Areas

Area G -- Halibut/Crab Bycatch Restriction Zones

Zone 1: The area east of 165°W, south of 58°N, and bounded by the Alaska Peninsula with inclusion of the western tip of the Pot Sanctuary Area.

Zone 2: The area drawn by connecting the following geographical coordinates in the order listed:

(54°30' N., 165°00' W.),  
(58°00' N., 165°00' W.),  
(58°00' N., 171°00' W.),  
(60°00' N., 171°00' W.),  
(59°25' N., 179°20' W.),  
(54°30' N., 167°00' W.), and  
(54°30' N., 165°00' W.).

Zone 3: The area drawn by connecting the following geographical coordinates in the order listed:

(54°30' N., 165°00' W.),  
(52°48' N., 170°00' W.),  
(53°30' N., 170°00' W.),  
(56°00' N., 165°00' W.), and  
(54°30' N., 165°00' W.).

Area H -- Crab/Halibut Protection Zone

That portion of the EEZ between 160°00' W. longitude and 162°00' W. longitude, south of 58°00' N. latitude south to the Alaska Peninsula is closed to groundfish fishing."

"14.5.2 Prohibited Species (foreign management measures)

(The current Section E becomes Section F, F becomes G, etc.)

E. Reducing the PSC of Tanner Crab (C. bairdi)

The 1987 C. bairdi PSC limit is 64,000 animals unless modified under F below."

NOTE: Section F (Annual Review and Adjustment of PSCs) provides the Council with the authority to modify foreign PSCs on an annual basis. Specific regulatory language should be included in the final amendment.

EVALUATION OF ALTERNATIVES SET FORTH IN THE DRAFT EA/RIR/IRFA

**Proposal 1.** Authorize reallocation within the domestic annual harvest (DAH)

Current regulations authorize reallocation of unneeded DAH (including DAP) to TALFF but do not address reallocation to JVP. Thus under the status quo it might be necessary to release unneeded DAP to foreign fishermen rather than U.S. fishermen who are willing and able to harvest it. The Team finds this an unacceptable situation. If the federal government can continue to reallocate unneeded DAP to JVP in the absence of specific authority then the status quo is acceptable. Otherwise the specific authority should be provided.

Withholding unneeded DAP (i.e. not reallocating to anyone) does not appear to be an option under the MFCMA because it could prevent the attainment of OY.

The Team feels that the analysis of this proposal in the Draft EA/RIR/IRFA is adequate to allow the Council to take final action at the June meeting. Some technical editing may be necessary.

**Proposal 2.** Authorize the Secretary of Commerce to adjust harvest levels, seasons, and time and area closures via Federal Register notice.

The Council has attempted to implement Field Order authority twice in the past, first in Amendment 1 (the Council withdrew the provision) and again in Amendment 4 (the Secretary disapproved the provision). NMFS believes that the Environment Assessment for this provision does not meet NEPA requirements and has not provided the required public review. In addition, draft language prepared by NOAA General Counsel is being reviewed in Washington, D.C. at this time. That language, if approved, should provide the needed authority for inseason management. The Team has some strong reservations about the language, however, because it is driven by the term "overfishing." Either a more specific definition will be required or else specific guidelines must be established to define when it is appropriate to take action to prevent overfishing. The Team feels strongly that some form of inseason management authority must be provided.

**Proposal 3:** Establish measures to limit bycatches of fully utilized species in domestic fisheries

There are currently two categories of fully utilized species: (a) prohibited species (halibut, king crab, Tanner crab, salmon) that are not retainable and (b) fully utilized groundfish species that are normally retainable in the BSAI groundfish fisheries. The immediate concern is bycatch of king crab, Tanner crab, and halibut by domestic (JVP and DAP) fisheries on the eastern Bering Sea shelf. Bycatch of fully utilized groundfish species by non-target fisheries has generally not been a problem, but problems are anticipated for some species, such as sablefish, that are becoming fully utilized by domestic fisheries.

The April 1986 draft EA/RIR/IRFA for Amendment 10 to the BSAI FMP (page 10) proposed 7 alternatives to control the bycatch of all fully utilized species.

Based on public and staff comments received, the plan team would like to provide more details on how some of the alternatives would work and to comment on some of the options.

Alternative 1: Status quo.

This alternative would be satisfactory if the emergency regulations proposed for controlling the bycatch of king and Tanner crabs in the yellowfin sole/flounder fishery and the DAP cod fishery could be extended to 1987 and future years. Emergency regulations, however, cannot be extended indefinitely. Therefore, maintaining the status quo is not satisfactory.

For fully utilized groundfish species, a secretarial regulatory amendment has been proposed to make these species prohibited when their TACs are reached. If the amendment is implemented, maintaining the status quo is satisfactory at least for 1987.

Alternative 2: Establish PSC limits for all fully utilized species in the domestic and foreign fisheries.

PSC limits were established for the foreign fisheries in Amendment 3 to the BSAI FMP and are only indirectly at issue here. The use of PSC limits alone in domestic fisheries appears to be an unsatisfactory way for controlling bycatch because, under current regulations, the entire BSAI would close upon reaching a PSC. The preferred option seems to be a combination of PSC limits that would trigger specific time/area closures or other restrictions. The discussion of Alternative 7 addresses this alternative with respect to the bycatches of crabs and halibut.

Alternative 3: Establish retainable harvest limits, but assess fees for fully utilized species in domestic and foreign fisheries.

Specific details on how the system will work have not been worked out. The concept may prove workable and should be explored in greater detail as a future amendment alternative. The Team feels that until this development is much further along, the Council should not consider adoption of this alternative.

Alternative 4: Establish retainable bycatch quota that are assigned to each vessel, company, or other entity. The retention quota would be transferable, and when eventually reached, fishing shall be stopped for the affected entity.

As with Alternative 3, the concept is sound but details have not been fully worked out. It should be explored as a future option rather than considered for final adoption in this cycle.

Alternative 5: Establish a framework to implement time/area closures.

This alternative is encompassed in Alternative 7 in combination with Alternative 2 (establish PSC limits). The implementation of time/area closures alone may also have merit under certain circumstances. The plan team recommends consideration of a non-frameworked year-round closure in the eastern Bering Sea, specifically the area south of 58°N and east of 165°W.



Alternative 6: Implement gear restrictions.

Technical information is incomplete to evaluate the full range of potential gear restrictions in specific areas and fisheries. However, prohibition of trawls which come in contact with the ocean floor would greatly reduce or eliminate the bycatch of bottom dwelling animals such as crabs but would also eliminate target fisheries for yellowfin sole and other flatfish. Bottom trawl modifications might reduce potential bycatches but still be effective for catching target species. In addition, prohibition of longline gear and pots in halibut areas would reduce halibut bycatches by those gears. At present, Alternative 6 appears to have limited merit by itself but could be included in a broader framework. This has been done in the framework prepared under Alternative 7.

Alternative 7: Establish a general framework that would be a combination of PSC, time/area closures, and gear restrictions to control bycatch.

The plan team feels that this general alternative has the most merit for Council consideration. The team's draft framework specifies the range of management responses available to the Council. The framework addresses a range biological and socioeconomic conditions that are foreseen at this time.

Proposal 4. Establish priority access to important stocks for DAP fishermen through the use of time and area closures.

The Plan Team fully supports the concept of DAP priority but does not have sufficient information at its disposal to conduct the type of analysis necessary for approval and implementation of this rule. It is extremely difficult to clearly demonstrate the need for additional regulation or to anticipate the impacts of such action. It is not likely that the Secretary would approve and implement such regulatory measures based on only the current JVP and DAP data available.

BSAI Plan Team Conference Call  
Thursday, June 12, 1986

<u>Phone Sites</u>	<u>Team Members Present</u>
NPFMC Office, Anchorage	Jim Glock
NWAFCC, Seattle	Loh-Lee Low, Bob Trumble
NMFS Regional Office, Juneau	Jay Ginter, (Bill Robinson)
Sea Grant Office, Fairbanks	Abby Gorham, (Ron Rogness)

Public in Attendance (at NWAFCC)

Bob Alverson	Kris Poulsen
William P. Woods, Jr.	Stever Hughes
Chis Hansen	Clint Atkinson
Thorn Smith	Steve Dickinson
Mike Hyde	Joe Terry

Bering Sea/Aleutian Islands Plan Team  
Report

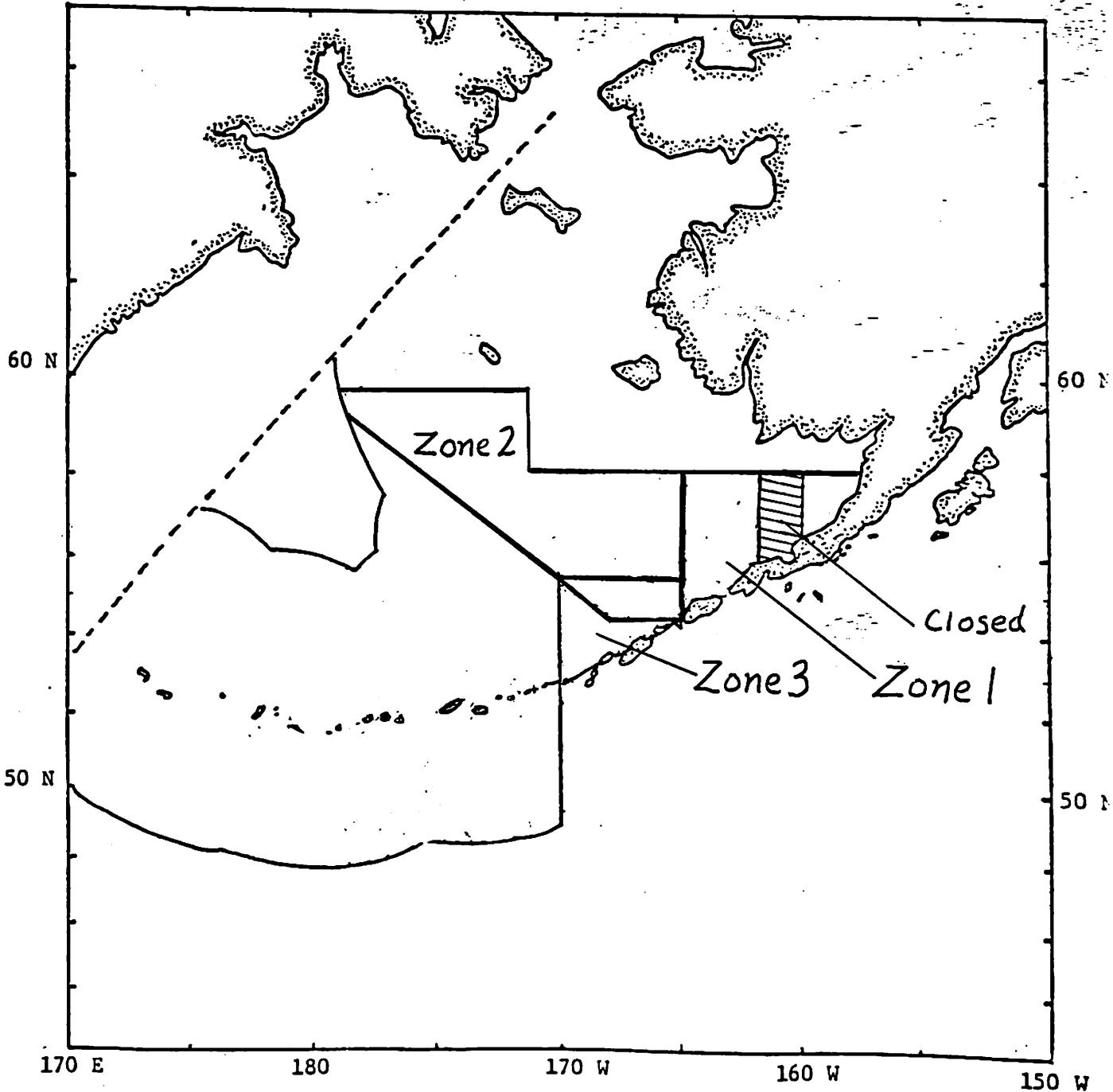


Fig. 27a. Areas with special restrictions on domestic fisheries in the Bering Sea and Aleutian Islands Groundfish Plan area.



DRAFT: PJTRAVERS: ~~5/19/1986~~ 6/23/1986 (rev.)

DRAFT INSEASON MANAGEMENT AUTHORITY FOR THE TWO ALASKA  
GROUNDFISH FMPS (language in brackets would be included  
in the socioeconomic alternative)

The Secretary shall [open or] close fishing in all or part of a regulatory  
area, or [authorize or] restrict the use of any type of fishing vessel or  
gear, or change any previously specified TAC or PSC limit, when this is  
necessary to prevent one of the following occurrences:

(1) the overfishing of any species or stock of fish;

(2) the harvest of a TAC for any groundfish, or the taking of a PSC  
limit for any prohibited species, <sup>which on the basis of currently available information</sup> [the previous specification of which is  
*is found by the Secretary to be too high;*  
plainly erroneous;]

(3) the closure of any fishing for groundfish based upon the harvest  
of a TAC or the taking of a PSC limit <sup>which on the basis of currently available information</sup> [the previous specification of which  
*is found by the Secretary to be too low*  
is plainly erroneous][.][;]

[(4) the failure to harvest a TAC for any groundfish as a result of  
weather conditions or the unavailability of facilities for the processing  
of that groundfish;]

[(5) the failure to maximize the quantity or quality of roe extracted  
from any groundfish of which roe is a principal product.]